PHASE II

ENVIRONMENTAL SITE ASSESSMENT REPORT

VACANT LOT
4311-4333 MACARTHUR BOULEVARD
OAKLAND, CA 94619

PREPARED FOR

Mr. ALEX HAHN
80 GRAND AVENUE, SUITE M
OAKLAND, CA 94612

March 31ST, 2003

PROJECT JMK-SII-12010

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March 31st, 2003

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This report contains the procedures, findings, conclusions, and limitations of the Phase II Environmental Site Assessment performed at the subject property. The purpose of this assessment was to delineate the potential contamination on the subject property through subsurface investigation involving drilling, sampling and analysis.

MR. ALEX HAHN, 80 GRAND AVENUE, SUITE M, OAKLAND, CA 94612 has retained our service to perform Phase II Environmental Site Assessment on the property located at 4311-4333 MacArthur Boulevard, CA 94619. We appreciate the opportunity to serve you with our professional services in environmental assessment. Please feel free to contact us at (800) 900-1511 or (818) 363-4919, if you have any questions.

This phase II environmental site assessment report is,

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1.0 INTRODUCTION

1.1 Site Description and Background

The subject site is located near the southwest corner of Mac Arthur Boulevard and High Street. According to Mr. Roberts, in 1999 a geophysical survey was coordinated by The Windsor Group, a property development firm representing a potential buyer ; however, the actual client was the Roberts family. The survey was designed specifically to evaluate the presence or likely location of USTs. According to the report, potential on-site USTs are indicated by historical Sanborn Fire Insurance Zonation map; those maps were not available for review. A 3-foot-square grid was established over the entire portion of the site not covered with buildings, as well as a portion of MacArthur Boulevard and a magnetometer was used to identify metal-bearing objects (magnetic anomalies). A copy of the survey report is located in the Stellar Environmental Solutions, Inc. (Stellar) report included in the Appendix (Stellar, 2002).

There were three magnetic anomalies detected-one beneath MacArthur Boulevard, one in the central portion of the property, and one adjacent to the building. According to Mr. Roberts, the property had been larger at one time, and the subsequent widening of MacArthur Boulevard took under eminent domain a portion of the property (and the portion potentially containing USTs) (Stellar, 2002).

On December 7, 2000, a shallow subsurface investigation was conducted on the subject property including 6 on-site exploratory borings. One groundwater sample per borehole was analyzed for volatile-range petroleum hydrocarbons (gasoline) and extractable-range (diesel and motor oil); benzene, toluene, ethylbenzene and xylenes (collectively BTEX compounds); methyl tertiary-butyl ether (MTBE); and halogenated volatile organic compounds (HVOCs or solvents). Results of the groundwater samples are included in the Stellar report in Appendix E (Stellar, 2002).

Additional information given to Stellar by Mr. Roberts includes that the property has been owned by the Roberts family since the 1930s. Historical occupants have included a Signal gasoline station (which reportedly ceased operation in the 1960s); a tire and auto repair facility; and a paint shop. Approximately three USTs have been associated with the facility. The locations of the USTs are unknown, although Mr. Roberts believes that one or more may be located beneath the present-day MacArthur Boulevard (which was widened some time ago). Mr. Roberts has no knowledge or documentation of UST installation, permits, maintenance, or removal (Stellar, 2002).

There was a Pacific Gas & Electric (PG&E) parcel adjacent to (west of) the subject property undergoing remediation. Excavated and off-site disposal of near-surface soils contaminated with lead conducted both on the PG&E parcel and on a portion of the subject site. The subject site was identified as the source of the lead contamination. The lead regulatory agency for the remediation of lead contamination was the California Department of Toxic Substances Control (DTSC). The DTSC apparently retained and paid for the contractors to conduct the remediation work. The approximate cost of the work was $100,000, which the DTSC will reportedly recover from the Roberts family (possibly through an environmental lien on the property) (Stellar, 2002).

1.2 Regional Geological and Hydrogeological Setting

The subject site is located approximately 4-miles northeast of the San Leandro Bay, and 3-miles northeast of Alameda, at an elevation of approximately 180 feet above mean sea level (MSL). The site is bounded on the east (approximately one mile) by the Leona Heights Park with a peak of 800 feet above MSL, and to the south by another peak of approximately 280 feet above MSL. Groundwater beneath the site is at expected at approximately 10 feet bgs. Groundwater is expected to be flowing to the west, towards the San Leandro and San Francisco Bays. Sediment beneath the site consists of mixtures of unconsolidated silts, sands, and fine gravels.

1.3 Scope of Work

- Advance seven borings (B-1 to B-7) on the subject site with a Directpush rig. Borings B-1 through B-7, were to be drilled to an approximate depth of 20 feet below ground surface (bgs).

- Soil samples will be collected at five-foot intervals for soil logging and description in accordance with Unified Soil Classification System (USCS) guidelines. One grab groundwater sample per boring is to be taken.

- All soil samples from each boring are to be analyzed for total purgeable petroleum hydrocarbons (TPHg, gasoline) and extractable (TPHd, diesel) using the EPA Method 8015M; and for benzene, toluene, ethylbenzene, total xylenes, (collectively BTEX compounds), and methyl tertiary butyl ether (MTBE) using EPA Method 8020, and for lead using EPA Method 6010B.

- All groundwater samples were to be analyzed for TPHg and TPHd using EPA Method 8015M; BTEX compounds and MTBE using EPA Method 8020, and for the presence of lead.

- All borings will be backfilled with hydrated bentonite chips and finished even with surface grade.

2.0 PHASE II SITE ASSESSMENT

2.1 Boring Locations & Depths

Site assessment activities following work elements outlined in Section 1.3 were performed on 3/14/03 and 3/15/03. Tom Price Environmental of San Jose, CA was contracted to install the borings. Descriptions of the borings and boring depths are on the boring logs included as Appendix B. Locations of all borings are presented on the Site Plot Plan included as Figure 2.

2.2 Boring Drilling and Soil Sampling

Soil samples were collected at approximate five-foot intervals and logged in accordance with USCS guidelines. All soil samples were field screened for the presence of hydrocarbons using a photoionization detector-organic volatile analyzer (PID-OVA). The sample descriptions, depths, and the PID-OVA readings were recorded on boring logs (included as Appendix B).

Soil samples were collected in 2-foot acetate liners. A six-inch sample was cut from the acetate liners, then sealed with Teflon lining and plastic end caps. No headspace was present in the sealed sample. Upon retrieval the sample was labeled, sealed in plastic Ziploc bags, and packed on ice to minimize potential volatilization prior to delivery to the laboratory. Gloves were changed after each sample, and all sampling equipment was washed in a non-phosphate detergent and double rinsed to prevent cross contamination of the soil samples.

Fourteen soil samples were submitted on March 17th, 2003, to Entech Analytical Labs, Inc. of Santa Clara, CA for analysis. An EPA approved chain-of-custody was submitted with the soil samples in order to keep track of the possession of soil samples from the time they were taken in the field until the time they were analyzed (included as Appendix C).

Upon completion of sampling to return the site to its original condition, each boring was backfilled with hydrated bentonite chips and finished even with surface grade.

2.3 Sample Analysis

All soil samples submitted to the laboratory were analyzed for the presence of TPHg and TPHd using EPA Method 8015M, and for BTEX compounds and MTBE using EPA Method 8020B, and for lead using EPA Method 6010B. JMK was unable to take a groundwater sample for Boring B-5 due to lack of water in boring. Borings B-4 and B-6 did not yield sufficient water for analysis of TPH-extractable and lead. Therefore, Borings B-4 and B-6 were only analyzed for TPHg, BTEX compounds, and MTBE. All other groundwater samples (B-1, B-2, B-3, and B-7) were analyzed for TPHg, TPHd, BTEX compounds, MTBE, and lead. Soil analytical data is presented in tabulated for in Table 1, and groundwater analytical data is presented in tabulated form in Table 2. The laboratory analytical report for soil and groundwater, along with chain-of-custody documentation, is included as Appendix D.

3.0 FINDINGS

3.1 Subsurface Stratigraphy

The shallow subsurface stratigraphy of the site, identified in Borings B-1 through B-7, primarily consists of lean clays, sandy silts, silty sands, sand, and silty gravels to a total depth explored of 21 feet bgs. Groundwater was encountered at approximately 7 feet bgs in each of the borings. Boring logs are included as Appendix B.

3.2 Analytical Results of Soil and Groundwater Samples

Lead concentrations in soil ranged from 3.0 to 8.9 milligrams per kilogram (mg/kg) (B-4-10.5 and B-6-20.5, respectively). TPHd concentrations in soil ranged from non-detect to 17 mg/kg (B-2-11). TPHg concentrations in soil ranged from non-detect to 120 mg/kg (B-1-11 and B-2-11). Benzene concentrations in soil ranged from non-detect to 0.54 mg/kg (B-1-11). TPH as hydraulic oil (TPH-ho) was detected in one sample at a concentration of 15 mg/kg (B-4-10.5. TPH-ho has a similar carbon range as TPHd and was, therefore, detected when the samples were run for TPH as extractables. MTBE was not detected in any of the soil samples analyzed.

Lead concentrations in groundwater ranged from 0.21 to 1.2 milligrams per liter (mg/L) (B-3 and B-7). TPHd concentrations in groundwater ranged from 290 to 4,000 micrograms per liter (ug/L) (B-7 and B-3). TPHg concentrations in groundwater ranged from non-detect to 42,000 ug/L (B-1). Benzene concentrations ranged from non-detect to 5,800 ug/L (B-4). MTBE was not detected in any of the groundwater samples analyzed. Laboratory analytical data for analyzed soil and groundwater samples are presented as Tables 1 and 2, and attached as Appendix D.

4.0 CONCLUSIONS & RECOMMENDATIONS

- A total of seven borings (B-1 through B-7) were drilled at the subject site March 14th and 15th, 2003.

- Borings B-1 through B-7 were advanced to a total depth of approximately 20-feet bgs. Groundwater was encountered at approximately 7 feet bgs. Groundwater gradient is believed to flow from east to west.

- Soil samples were collected at approximate five-foot intervals for logging purposes. A total of 14 soil samples were submitted for chemical analysis. One grab groundwater sample was collected from Borings B-1 through B-4, and Borings B-6 and B-7 (B-5 was not sample due to lack of water).

- Lead concentrations in soil ranged from 3.0 to 8.9 milligrams per kilogram (mg/kg) (B-4-10.5 and B-6-20.5, respectively). TPHd concentrations in soil ranged from non-detect to 17 mg/kg (B-2-11). TPHg concentrations in soil ranged from non-detect to 120 mg/kg (B-1-11 and B-2-11). Benzene concentrations in soil ranged from non-detect to 0.54 mg/kg (B-1-11). TPH as hydraulic oil (TPH-ho) was detected in one sample at a concentration of 15 mg/kg (B-4-10.5. TPH-ho has a similar carbon range as TPHd and was, therefore, detected when the samples were run for TPH as extractables. MTBE was not detected in any of the soil samples analyzed.

- Lead concentrations in groundwater ranged from 0.21 to 1.2 milligrams per liter (mg/L) (B-3 and B-7). TPHd concentrations in groundwater ranged from 290 to 4,000 micrograms per liter (ug/L) (B-7 and B-3). TPHg concentrations in groundwater ranged from non-detect to 42,000 ug/L (B-1). Benzene concentrations ranged from non-detect to 5,800 ug/L (B-4). MTBE was not detected in any of the groundwater samples analyzed.

- The soil at the site is vertically defined with at least ten feet of "clean" soil beneath each hydrocarbon concentration. However, due to high hydrocarbon concentrations in groundwater in Borings B-1, B-2, and B-3, and low concentrations of hydrocarbons in soil samples taken from the same borings, the site is not yet horizontally defined. According to the report written by Stellar, there are possibly two more USTs (metal anomalies) beneath present day MacArthur Boulevard (Site Plot Plan). There may be soil and groundwater contamination from these metal anomalies.

- JMK recommends that two soil borings be installed in MacArthur Boulevard near the two metal anomalies to assess if there is any hydrocarbon contamination associated with these possible USTs. Soil samples will be taken at approximate 5-foot intervals to a total depth of 20 feet bgs. One groundwater sample will be taken from each of the borings. These borings will be converted to groundwater monitoring wells to be used in quarterly groundwater monitoring program.

- Additionally, two wells must be installed on-site. One well near Boring B-1 for down-gradient analysis, and one between Borings B-6 and B-7 for cross-gradient data.

- The site must be put on a quarterly groundwater-monitoring program, to monitor groundwater conditions at the site over time.

- The degree of ground water impact is above Drinking Water Standard Level, and TPH-G, Benzene, TPH-D are subject to proposed monitoring and possible groundwater remediation. Soil samples in the saturation zone showed relatively low level of concentration proving volatile organic compounds and petroleum hydrocarbon due to lessened adsorption potential onto the soil grain pore spaces in saturation media. No vadose zone soil samples were analysis due to relatively shallow groundwater depth.

- Four groundwater monitoring wells on the subject property and on MacArthur Blvd. at former UST anomaly location shall be placed at the minimum as discussed above.

- Following groundwater installation, small scale pilot testing for vadose zone soil via vapor extraction and groundwater shall be implemented (dual phase high vacuum vapor extraction). Such pilot testing shall be preceded by proper level of study on remedial alternatives depending on soil strata, groundwater yield, flow rate, surveyed results, etc. DPHVE is one of many alternatives which include soil excavation & disposal, groundwater pump & treat, soil vapor extraction with groundwater air sparging, or injection of Oxygen Releasing Compounds.

- Please find the attached cost estimate sheet for monitoring well installation and pilot testing options. Once vapor phase contaminant level is confirmed, possible remedial design with accurate projection of contamination remediation may be obtained. Installation cost of monitoring wells would run as high as $17,000 plus actual remedial action pilot testing cost of roughly $40,000. Depending on the test results groundwater monitoring for an extended period of time roughly $2,500 per quarter is expected.

JMK ENVIRONMENTAL SOLUTIONS INC.
10441 Ruffner Avenue, Granada Hills, CA 91344, (818) 363-4919, Toll Free (800) 900-1511, FAX (818) 363-4894

Project Number 12010
Site Address 4311 MacArthur Blvd., Oakland, CA
Total Project Bid Proposal Amount

Item	Description	Unit	Q'ty	Rate	Subtotal	Total
1.0 Drilling and Well Installation						
	1.1 Drilling and Well Installation					
1	Notify Undergrund Service Alert	LS	1	$ -	$ -	
2	County DHS Well Permits	each	4	$ 200.00	$ 800.00	
3	Mob/DeMod Drill Rigs	hours	4	$ 120.00	$ 480.00	
4	Drill/Install Groundwater Monitoring Well (4)	hours	10	$ 145.00	$ 1,450.00	
6	Service Truck	days	2	$ 120.00	$ 240.00	
7	Ventilation Blower and Hoses	days	2	$ 150.00	$ 300.00	
8	Additional Crew Member (Welding, etc)	hours	0	$ 35.00	$ -	
9	Premium Time (After hours work)	man/hour	0	$ 25.00	$ -	
10	2" PVC Screen	foot	100	$ 7.50	$ 750.00	
11	2: PVC Blank	foot	100	$ 5.00	$ 500.00	
12	Sand (Montery No. 3)	bags	17	$ 11.00	$ 187.00	
13	Bentonite Chips	bags	15	$ 12.00	$ 180.00	
14	12-inch well box installation	each	4	$ 125.00	$ 500.00	
15	Concrete saw cutting	pad	4	$ 175.00	$ 700.00	
16	55-gallon D.O.T. drums	each	8	$ 45.00	$ 360.00	
17	Standby rate - Wart Hog/B61	hours	2	$ 145.00	$ 290.00	
18	Onsite Geologist	hours	12	$ 60.00	$ 720.00	
19	Project Manager	hours	18	$ 60.00	$ 1,080.00	
20	Travel and Equipment Expense (Truck and PID or FID)	days	2	$ 250.00	$ 500.00	
21	Traffic Control	hours	4	$ 50.00	$ 200.00	
	Task 1.1 Subtotal:				**$ 9,237.00**	
	1.2 Well Develpoment and Surveying					
1	State of CA licensed surveyor (X,Y,Z)	LS	1	$ 1,250.00	$ 1,250.00	
2	Hand-operated surge block/bailer	days	2	$ 30.00	$ 60.00	
3	12V Electric Submersible Pump	days	2	$ 40.00	$ 80.00	
4	Expendable Supplies	day	2	$ 60.00	$ 120.00	
5	Water Quality Meter (Temp, pH, EC, Turbidity)	days	2	$ 90.00	$ 180.00	
6	55-gallon D.O.T. drums	each	5	$ 40.00	$ 200.00	
7	Onsite Geologist	hours	10	$ 60.00	$ 600.00	
8	Travel Expense	days	2	$ 250.00	$ 500.00	
	Task 1.2 Subtotal:				**$ 2,990.00**	
	1.3 Well Sampling					
1	Water Quality Meter (Temp, pH, EC, Turbidity)	day	1	$ 90.00	$ 90.00	
2	55-gallon D.O.T. drums	each	3	$ 40.00	$ 120.00	
3	Water-level Sounder	each	1	$ 20.00	$ 20.00	
4	12V Electric Submersible Pump	day	1	$ 40.00	$ 40.00	
5	Expendable Supplies	day	1	$ 60.00	$ 60.00	
6	Onsite Geologist	hours	12	$ 60.00	$ 720.00	
7	Travel Expense	days	2	$ 250.00	$ 500.00	
	Task 1.3 Subtotal:				**$ 1,550.00**	
	1.4 Laboratory Analysis (5 soil, 5 well, 2 QA/QC, 2 waste profile samples)					
1	EPA 8260B - VOCs, TPH-D, TPH-G, Lead	each	14	$ 245.00	$ 3,430.00	
2	Others	LS	1	$ -	$ -	
	Task 1.4 Subtotal:				**$ 3,430.00**	
					Task 1.0 Total:	**$ 17,207.00**

2.0 12-hour Dual Phase Extraction Pilot Test (Alternative No. 1)

2.1 Pre-Test Instrumentation/Monitoring							
1	Hermit 3000B Data Logger	week	1	$	365.00	$	365.00
2	Pressure Transducers/Vent Blocks/Well Heads	week	3	$	370.00	$	1,110.00
3	Consumables/Traffic Cones/Cable Protection	LS	1	$	500.00	$	500.00
4	Downhole Water Quality Meter - Dissolved Oxygen	days	2	$	175.00	$	350.00
5	Shipping charges - In-Situ DO Meter	LS	1	$	200.00	$	200.00
6	Geologist (Install and check for proper operation)	hours	15	$	75.00	$	1,125.00
7	Field Technician	hours	15	$	50.00	$	750.00
8	Project Manager	hours	10	$	60.00	$	600.00
9	Travel Expense	days	2	$	250.00	$	500.00
	Task 2.1 Subtotal:					**$**	**5,500.00**
2.2 12-hour High Vacuum Dual Phase Extaction Test (170 SCFM, includes SCAQMD Mobile Permit to Operate)							
1	Mod/Demob	each	1	$	500.00	$	500.00
2	25 HP liquid ring blower rental	job	1	$	600.00	$	600.00
3	60 KW Generator rental	job	1	$	450.00	$	450.00
4	Delivery/Pickup of Vapor Phase GAC Vessels	each	2	$	125.00	$	250.00
5	55-Gallon Drum Vapor Phase GAC Vessels	each	4	$	300.00	$	1,200.00
6	GAC vessel profiling/disposal	each	4	$	100.00	$	400.00
7	Vapor Sample Analysis: EPA Test Method TO 14 - VOCs	each	3	$	350.00	$	1,050.00
8	Vapor Sample Analysis: ASTM D1946 - Fixed Gases	each	4	$	85.00	$	340.00
9	Expendable Supplies(Tygon tubing, tedlar bags, etc)	job	1	$	350.00	$	350.00
10	Magnehelic gauges	each	4	$	25.00	$	100.00
11	Flame Ionization Detector	days	1	$	75.00	$	75.00
12	Real-time Monitoring of Water-Level Drawdown	job	1	$	75.00	$	75.00
13	Geologist	hours	18	$	75.00	$	1,350.00
14	Field Technician	hours	18	$	50.00	$	900.00
15	Travel Expense	days	2	$	250.00	$	500.00
16	Project Manager	hours	15	$	75.00	$	1,125.00
	Task 2.2 Subtotal:					**$**	**9,265.00**
2.3 Recovery Phase Monitoring/Demobilization							
a	Geologist	hours	7	$	75.00	$	525.00
b	Travel Expense	days	1	$	250.00	$	250.00
	Task 2.1 Subtotal:					**$**	**775.00**
						Task 2.0 Total:	**$ 10,040.00**

3.0 Waste Containment/Disposal

1	Disposal of 55-gallon D.O.T. drums (soil, non-RCRA)	each	7	$	75.00	$	525.00
2	Vacuum Truck (to contain pilot test fluids and development water)	hours	13	$	95.00	$	1,235.00
3	Transport/unloa liquids to TSDF	hours	8	$	95.00	$	760.00
4	Non-RCRA disposal of waste liquids	gallons	2000	$	0.67	$	1,340.00
5	Geologist	hours	6	$	60.00	$	360.00
6	Travel Expense	days	2	$	250.00	$	500.00
7	Project Manager	hours	5	$	75.00	$	375.00
						Task 3.0 Total:	**$ 5,095.00**

4.0 Documentation/Reporting

	4.1 Health and Safety Plan	job	1	$	500.00	$	400.00
	4.2 Dual Phase Pilot Test Report						
a	Data Evaluation	hours	46.75	$	60.00	$	2,805.00
b	Report Preparation	each	1	$	2,000.00	$	2,000.00
	4.3 Preparation of Corrective Action Plan	each	1	$	2,000.00	$	2,000.00
						Task 4.0 Total:	**$ 7,205.00**

5.0 Overhead & Profit

Net Cost	LS	82%	of Total Proposed Bid Amount	$	39,547.00
Overhead	LS	5%	of Total Proposed Bid Amount	$	2,411.40
Contingency	LS	3%	of Total Proposed Bid Amount	$	1,446.84
Profit	LS	10%	of Total Proposed Bid Amount	$	4,822.80
Total				**$**	**48,228.05**

Total Proposed Bid Amount **$ 44,360.00**

2.0 8-hour Air Sparging Test (Alternative No. 2)

2.1 Pre-Test Instrumentation/Monitoring

1	Hermit 3000B Data Logger	week	1	$	325.00	$	325.00
2	Pressure Transducers/Vent Blocks/Well Heads	week	3	$	325.00	$	975.00
3	Consumables/Traffic Cones/Cable Protection	LS	1	$	350.00	$	350.00
4	Downhole Water Quality Meter - Dissolved Oxygen	days	2	$	175.00	$	350.00
5	Shipping charges - In-Situ DO Meter	LS	1	$	200.00	$	200.00
6	Geologist (Install and check for proper operation)	hours	10	$	75.00	$	750.00
7	Field Technician	hours	10	$	50.00	$	500.00
8	Project Manager	hours	5	$	75.00	$	375.00
9	Travel Expense	days	2	$	250.00	$	500.00
	Task 2.1 Subtotal:					**$**	**4,325.00**

2.2 8-hour Air Sparging Injection Test

1	Mod/Demob	each	1	$	250.00	$	250.00
2	Air Compressor Rental	days	1	$	250.00	$	250.00
3	Air Sparging Injection Manifold (incl filtration, regulator, flow meter, etc	days	1	$	500.00	$	500.00
4	Expendable Supplies (piping, well connections, tedlar bags, etc.)	each	1	$	350.00	$	350.00
5	Monitoring Equip (incl magnehelic gauges, PID, gastech, etc.)	days	1	$	200.00	$	200.00
6	Vapor Sample Analysis: EPA Test Method M8015 TPH gas	each	3	$	60.00	$	180.00
7	Vapor Sample Analysis: EPA Test Method 8260B BTEX + Fuel Oxyge	each	3	$	125.00	$	375.00
8	Air Sparging Operator/Technician	hours	16	$	60.00	$	960.00
9	Real-time Monitoring of Water-Level	days	1	$	75.00	$	75.00
10	Geologist	hours	14	$	75.00	$	1,050.00
11	Field Technician	hours	14	$	50.00	$	700.00
12	Project Manager	hours	10	$	75.00	$	750.00
13	Travel Expense	days	2	$	250.00	$	500.00
	Task 2.2 Subtotal:					**$**	**6,140.00**

2.3 Recovery Phase Monitoring/Demobilization

1	Geologist	hours	4	$	75.00	$	300.00
2	Field Technician	hours	4	$	50.00	$	200.00
3	Travel Expense	days	1	$	250.00	$	250.00
	Task 2.1 Subtotal:					**$**	**750.00**

Task 2.0 Total: $ 11,215.00

3.0 8-hour Vapor Extraction Pilot Test (Alternative No. 3)

3.1 8-hour Standard Vacuum Extraction Test (400 ACFM, includes SCAQMD Mobile Permit to Operate)

1	Mod/Demob	each	1	$	300.00	$	300.00
2	400 ACFM TCAT blower/oxidizer rental	days	1	$	600.00	$	600.00
3	60 KW Generator rental	days	1	$	300.00	$	300.00
4	Propane Consumption	days	1	$	125.00	$	125.00
5	SVE Operator/Technician	hours	12	$	50.00	$	600.00
6	Vapor Sample Analysis: EPA Test Method M8015 TPH gas	each	3	$	60.00	$	180.00
7	Vapor Sample Analysis: EPA Test Method 8260B BTEX + Fuel Oxyge	each	3	$	125.00	$	375.00
8	Vapor Sample Analysis: ASTM D1946 - Fixed Gases	each	4	$	125.00	$	500.00
9	Expendable Supplies(Tygon tubing, tedlar bags, etc)	LS	1	$	350.00	$	350.00
10	Magnehelic Gauges	each	5	$	25.00	$	125.00
11	Flame Ionization Detector	days	1	$	75.00	$	75.00
12	Geologist	hours	14	$	75.00	$	1,050.00
13	Field Technician	hours	14	$	50.00	$	700.00
14	Project Manager	hours	7	$	75.00	$	525.00
15	Travel Expense	days	1	$	250.00	$	250.00
	Task 2.2 Subtotal:					**$**	**6,055.00**

3.2 Recovery Phase Monitoring/Demobilization

1	Geologist	hours	0	$	60.00	$	-
2	Field Technician	hours	0	$	50.00	$	-
3	Travel Expense	days	0	$	60.00	$	-
	Task 2.1 Subtotal:					**$**	**-**

Task 2.0 Total: $ 6,890.00

4.0 Waste Containment/Disposal

1	Disposal of 55-gallon D.O.T. drums (soil, non-RCRA)	each	8	$	115.00	$	920.00
2	Disposal of 55-gallon D.O.T. drums (water, non-Haz)	each	2	$	135.00	$	270.00
3	Vacuum Truck (to contain pilot test fluids and development water)	hours	0	$	73.00	$	-
4	Transport/unloa liquids to TSDF	hours	6	$	73.00	$	438.00
5	Geologist	hours	6	$	75.00	$	450.00
6	Field Technician	hours	6	$	50.00	$	300.00
7	Project Manager	hours	3	$	75.00	$	225.00
8	Travel Expense	days	1	$	250.00	$	250.00

Task 3.0 Total: $ 2,853.00

5.0 Documentation/Reporting

5.1 a. Health and Safety Plan - Geologist	hours	5	$	75.00	$	375.00
b. Health and Safety Plan - Administrative/Technician	hours	5	$	35.00	$	175.00
5.3 AS/SVE Pilot Test Report						
a. Data Evaluation - Air Sparging	hours	40	$	75.00	$	3,000.00
b. Data Evaluation - Soil Vapor Extraction	hours	40	$	75.00	$	3,000.00
c. QAQC Review by 3rd Party Consultant	hours	10	$	75.00	$	750.00
d. Report Preparation - Geologist	hours	25	$	75.00	$	1,875.00
e. Report Preparation - Administrative/Technician	hours	10	$	35.00	$	350.00
f. Report Preparation - Project Manager	hours	5	$	60.00	$	300.00
5.4 a. Remedial Action Design - Geologist	hours	25	$	75.00	$	1,875.00
5.4 b. Remedial Action Design - Administrative/Technician	hours	10	$	35.00	$	350.00

Task 4.0 Total: $ 12,050.00

.0 Overhead & Profit

Net Cost	LS	82%	of Total Proposed Bid Amount	**$ 33,008.00**
Overhead	LS	5%	of Total Proposed Bid Amount	**$ 2,012.68**
Contingency	LS	3%	of Total Proposed Bid Amount	**$ 1,207.61**
Profit	LS	10%	of Total Proposed Bid Amount	**$ 4,025.37**
Total				**$ 40,253.66**

Total Proposed Bid Amount **$ 40,253.66**

5.0 LIMITATION

The opinion expressed herein is based on the information collected during our study, our present understanding of the site conditions and our professional judgment in light of such information at the time of preparation of this report. No warranty is either expressed, implied or made as to the conclusions, advice and recommendations offered in this report.

Our investigation was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable Engineers and Geologists practicing in this or similar localities. The samples taken and used for testing and the observations made are believed representative of the study area; however, soil and/or groundwater samples can vary significantly between borings, test pits, and/or test sample locations.

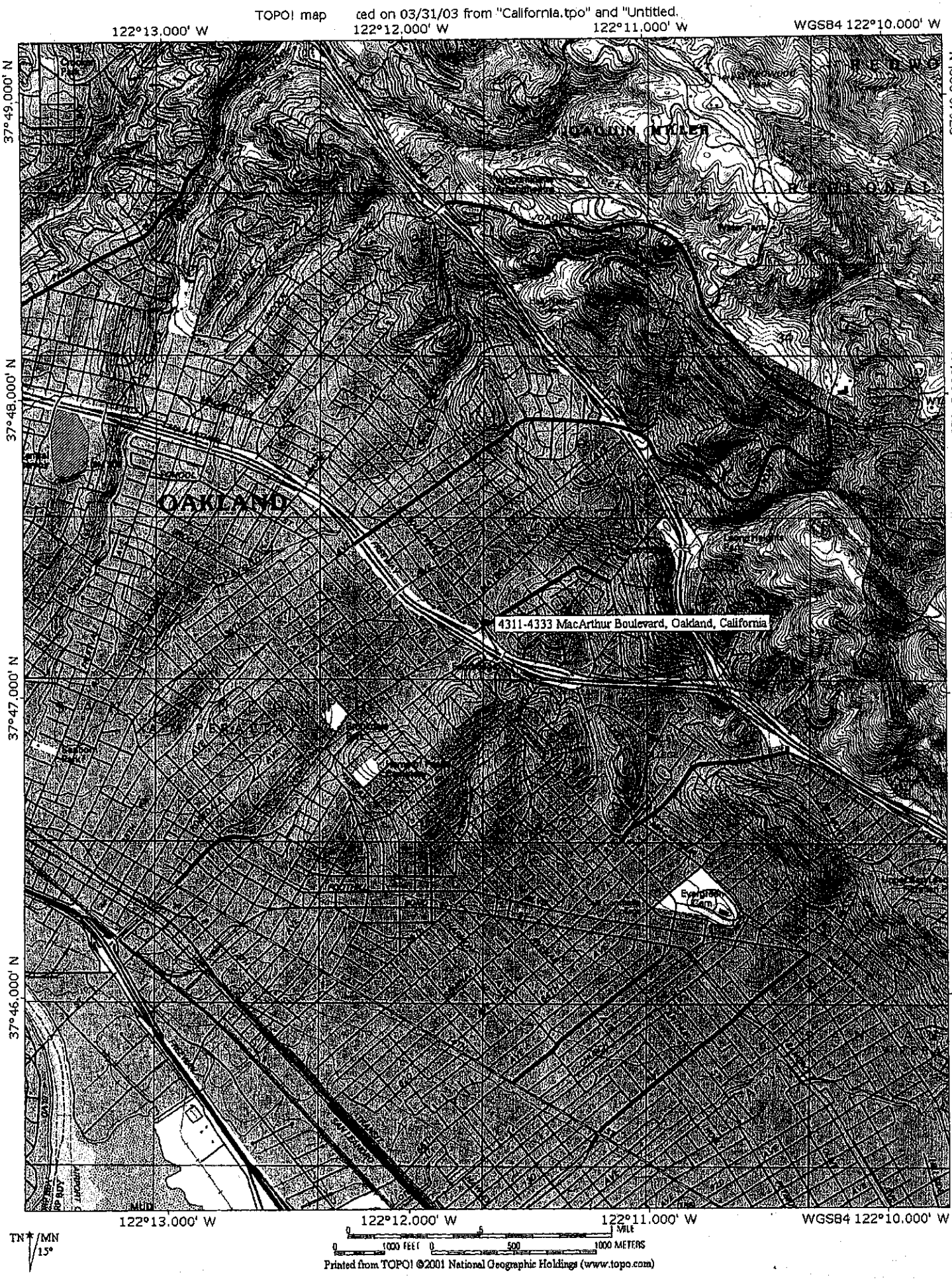
The interpretations and conclusions contained in this report are based on the results of laboratory tests and analysis intended to detect the presence and concentration of certain chemical constituents in samples taken from the subject property. Such testing and analysis have been conducted by an independent laboratory which is certified by the State of California to conduct such test analyses and which used methodologies mandated by the Environmental Protection Agency or the State Department of Health Services in the performance of such test and analyses. The consultant has no involvement in, or control over, such testing and analysis, and has no non-laboratory means of confirming the accuracy of such laboratory results. The consultant, therefore, disclaims any responsibility for any inaccuracy in such laboratory results.

The findings, conclusions and recommendations in this report are considered valid as of the present date. However, changes in the conditions of the property can occur with the passage of time, due to natural process or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur. Accordingly, portions of this report may be invalidated wholly or partially by the changes beyond our control.

REFERENCES

Stellar Environmental Solution, Inc. (Stellar), 2002, *Findings of Underground Storage Tank Assessment, 4311-4333 MacArthur Boulevard, Oakland, California*, November 15th, 2002.

APPENDICES


TOPO! map ced on 03/31/03 from "California.tpo" and "Untitled.
122°13.000' W
122°12.000' W
122°11.000' W
WGS84 122°10.000' W
37°49.000' N
37°48.000' N
37°47.000' N
37°46.000' N
OAKLAND
4311-4333 MacArthur Boulevard, Oakland, California
TN
MN
15°
1000 FEET
500
1000 METERS
Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

APPENDIX A

FIGURE 1

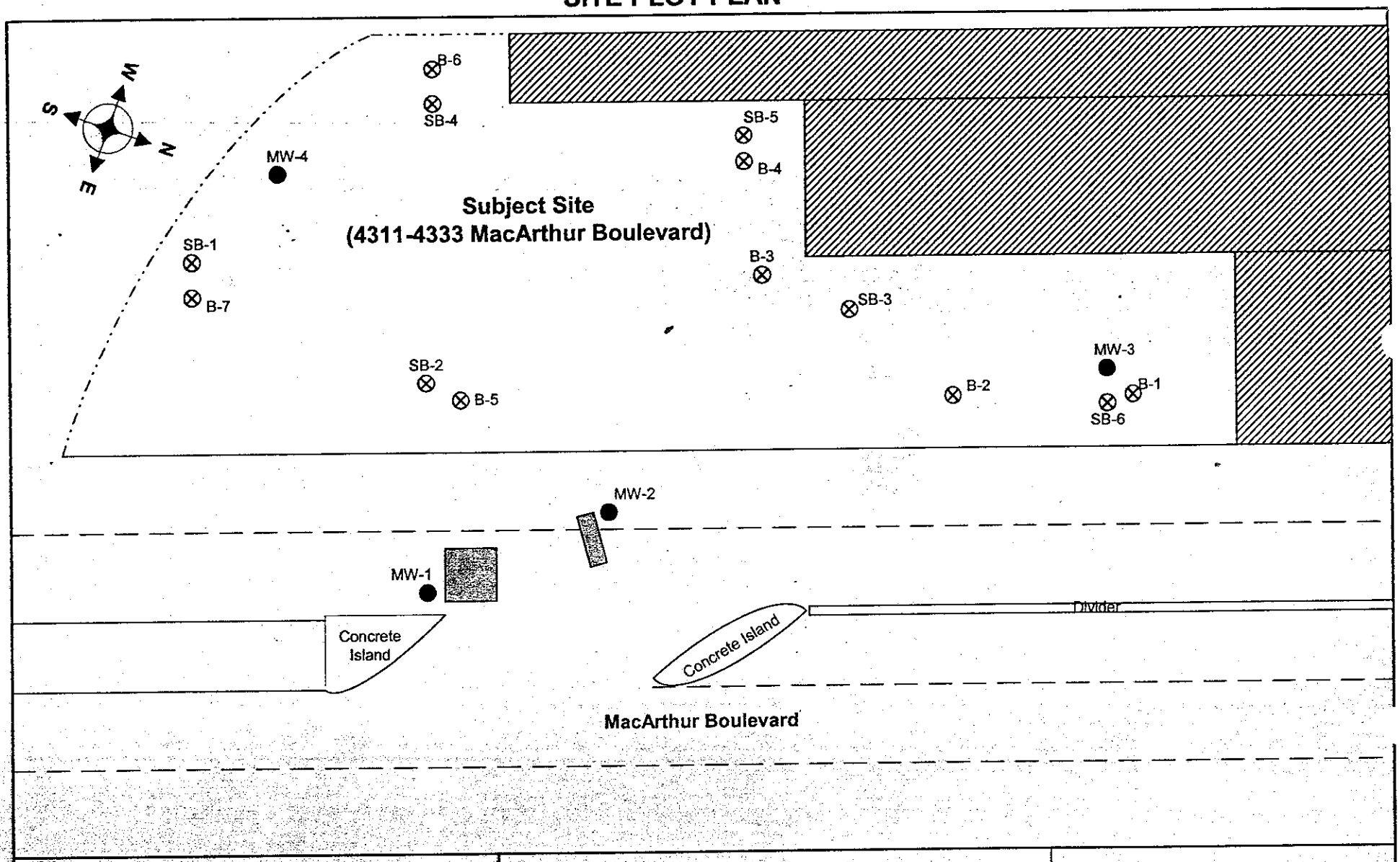
SITE LOCATION MAP

APPENDIX A

FIGURE 2

SITE PLOT PLAN SHOWING BORING LOCATIONS

SITE PLOT PLAN



JMK ENVIRONMENTAL **Environmental Engineering & Consulting Services** **10441 Ruffner Avenue, Granada Hills, CA 91344** **(818) 363-4919, FAX (818) 363-4894** **www.phase1report.com**	**Phase II Environmental Site Assessment** **4311-4333 MacArthur Boulevard, Oakland, CA** **Not to scale** March 2003 — **SII-12010**	**Lege nd** ⊗ B-1 JMK Soil Boring Possible UST Location ⊗SB-3 Clearwater Soil Boring ●MW-2 Proposed Grounwater Monitoring Well

APPENDIX A

TABLE 1

SOIL ANALYTICAL DATA

TABLE 1
SOIL ANALYTICAL DATA
4311-4333 MACARTHUR BOULEVARD
OAKLAND, CA

SOIL SAMPLE I.D.	SAMPLE DATE	SAMPLE DEPTH (feet bgs)	LEAD mg/kg EPA 6010B	TPH-ho mg/kg EPA 8015M	TPHd mg/kg EPA 8015M	TPHg mg/kg EPA 8015M	BENZENE mg/kg EPA 8020	ETHYL-BENZENE mg/kg EPA 8020	TOLUENE mg/kg EPA 8020	TOTAL XYLENES mg/kg EPA 8020	MTBE mg/kg EPA 8020
B-1-11	03/14/03	11	6.0	ND	9.7	120	0.54	2.5	4.6	ND	ND
B-1-21	03/14/03	21	6.0	ND	1.5	ND	ND	ND	ND	ND	ND
B-2-11	03/14/03	11	3.7	ND	17	120	0.53	2.3	3.4	3.7	ND
B-2-21	03/14/03	21	6.6	ND	ND	ND	ND	ND	ND	ND	ND
B-3-15.5	03/14/03	15.5	4.8	ND	ND	ND	ND	ND	ND	ND	ND
B-3-20.5	03/14/03	20.5	5.0	ND	ND	ND	ND	ND	ND	ND	ND
B-4-10.5	03/14/03	10.5	3.0	15	12	49	0.38	1.1	1.9	6.6	ND
B-4-20.5	03/14/03	20.5	6.6	ND	ND	ND	ND	ND	ND	ND	ND
B-5-11	03/15/03	11	5.6	ND	ND	ND	ND	ND	ND	ND	ND
B-5-21	03/15/03	21	4.6	ND	ND	ND	ND	ND	ND	ND	ND
B-6-11	03/14/03	11	6.8	ND	1.4	ND	ND	ND	ND	ND	ND
B-6-20.5	03/14/03	20.5	8.9	ND	1.9	ND	ND	ND	ND	ND	ND
B-7-10	03/15/03	10	7.3	ND	ND	ND	ND	ND	ND	ND	ND
B-7-19.5	03/15/03	19.5	6.3	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

bgs = Below ground surface
TPHg = Gasoline range petroleum hydrocarbons
TPHd = Diesel range petroleum hydrocarbons
TPH-ho = Hydraulic oil range petroleum hydrocarbons
MTBE = Methyl tertiary butyl ether
mg/kg = Milligrams per kilogram
ND = Non detect

TPH-ho analyzed in accordance with EPA Method 8015M.
Lead analyzed in accordance with EPA Method 6010B.
TPHg and TPHd anaylzed in accordance with EPA Method 8015M.
Benzene, toluene, ethylbenzene, total xylenes, and MTBE analyzed in accordance with EPA Method 8020.

APPENDIX A

TABLE 2

GROUNDWATER ANALYTICAL DATA

TABLE 2
GROUNDWATER ANALYTICAL DATA
4311-4333 MACARTHUR BOULEVARD
OAKLAND, CA

SOIL SAMPLE I.D.	SAMPLE DATE	LEAD mg/L EPA 6010B	TPHd ug/L EPA 8015M	TPHg ug/L EPA 8015M	BENZENE ug/L EPA 8020	ETHYL-ENZENE ug/L EPA 8020	TOLUENE ug/L EPA 8020	TOTAL XYLENES ug/L EPA 8020	MTBE ug/L EPA 8020
B-1	03/14/03	0.40	1900	42000	1400	1600	6600	8500	ND
B-2	03/14/03	0.58	2800	37000	1700	1200	5800	7100	ND
B-3	03/14/03	0.21	4000	17000	1300	6000	3000	3000	ND
B-4	03/15/03	NA	NA	34000	5800	920	3300	4800	ND
B-6	03/15/03	NA	NA	ND	1.2	0.71	5.0	4.1	ND
B-7	03/15/03	1.2	290	ND	ND	ND	0.53	ND	ND

Notes:

bgs = Below ground surface
TPHg = Gasoline range petroleum hydrocarbons
TPHd = Diesel range petroleum hydrocarbons
MTBE = Methyl tertiary butyl ether
mg/L = Milligrams per Liter
ug/L = Micrograms per Liter
ND = Non detect
NA = Non analyzed

Lead anaylzed in accordance with EPA Method 6010B.
TPHg and TPHd anaylzed in accordance with EPA Method 8015M.
Benzene, toluene, ethylbenzene, total xylenes, and MTBE analyzed in accordance with EPA Method 8020.

APPENDIX B

FIELD BORING LOGS

LOG OF EXPLORATORY BORING

Logged By:	Canaan Crouch	Sample Method:	Acetate Liners
Boring Start/End:	3/14/03	Depth to Water:	~7'
Drilling Contractor:	Tom Price Environmental	Total Depth:	21'
Drilling Method/Equipment:	Geoprobe/Geoprobe	Boring Diameter:	1.25
Borehole Location/Number:	See Plot Plan		

Remark:

Depth(ft)	Sample #	Sample Interval	Recovery	OVA (ppm)	Blows	USGS	Symbol	Lithologic Description (soil classification, color, moisture, density, grain size/plasticity, other)	Well/Boring Completion
0								3" Concrete	Concrete
5	S1	X	100 %	0.0	-	SM		(SM) Silty Sand, Brown (7.5YR 5/3), damp, fine sand, red oxidation, trace clay, some medium and coarse subangular sand, no hydrocarbon odor.	
						ML		(ML) Sandy silt, light yellowish brown (2.5Y 6/4), damp fine sand, red oxidation, black layers, white precipitation, some medium to coarse sand, subangular, faint hydrocarbon odor.	
10	S2	X	100 %	100	-	SM		(SM) Silty sand with gravel, yellowish brown (10YR 5/6), damp fine to coarse sand, fine gravel, subangular, red oxidation, faint hydrocarbon odor.	Hydrated Bentonite Chips
						ML		(ML) Sandy silt, light yellowish brown (2.5 YR 6/4), damp, fine sand, moderate toughness, slow dilatency, moderate plasticity, no hydrocarbon odor.	
15	S3	X	75 %	0.0	-	SM		(SM) Silty sand, light yellowish brown (2.5 YR 6/4), damp, fine to coarse sand, subangular to subrounded, some fine subangular gravel, trace clay, no hydrocarbon odor.	
	S4								
20		X	100 %	0.0	-	GM		(GM) Silty gravel, yellowish brown (10YR 5/6), moist, fine to coarse sand, fine to medium gravel, subangular to angular, metamorphic gravel, red oxidation, no hydrocarbon odor.	
25									
30									
35									

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Log of Borehole B-1 (Sheet 1 of 1)

4311-4333 MacArthur Boulevard, Oakland, CA

3/14/03 | SII-12010

LOG OF EXPLORATORY BORING

Logged By:	Canaan Crouch	Sample Method:	Acetate Liners
Boring Start/End:	3/14/03	Depth to Water:	~7'
Drilling Contractor:	Tom Price Environmental	Total Depth:	20.5'
Drilling Method/Equipment:	Geoprobe/Geoprobe	Boring Diameter:	1.25
Borehole Location/Number:	See Plot Plan		

Remark:

Depth(ft)	Sample #	Sample Interval	Recovery	OVA (ppm)	Blows	USGS	Symbol	Lithologic Description (soil classification, color, moisture, density, grain size/plasticity, other)	Well/Boring Completion
0								2" Asphalt	Concrete
5	S1	X	100 %	5	-	ML		(ML) Silt, dark greenish gray (5GY 4/1), damp, moderate toughness, moderate dilatency, low plasticity faint hydrocarbon odor.	
						SM		(SM) Silty Sand, dark greenish gray (5GY 4/1), damp, red oxidation, fine sand, white precipitate, some coarse sand, subangular, faint hydrocarbon odor.	
10	S2	X	0%	150	-	CL		(CL) Sandy lean clay, light brownish gray (2.5Y 6/2), damp, fine sand, high plasticity, no dilatency, moderate toughness, no hydrocarbon odor.	Hydrated Bentonite Chips
15	S3	X	75 %	0.0	-	SM		(SM) Silty sand, yellowish brown (10YR 5/8), damp, fine to medium sand, some coarse sand, subangular, no hydrocarbon odor.	
20	S4	X	75 %	0.0	-	GM		(GM) Silty gravel, dark yellowish brown (10YR 4/6), damp, fine to coarse sand, fine to medium gravel, subangular to angular, no hydrocarbon odor.	
25									
30									
35									

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Log of Borehole B-3 (Sheet 1 of 1)

4311-4333 MacArthur Boulevard, Oakland, CA

3/14/03 | SII-12010

LOG OF EXPLORATORY BORING

Logged By:	Canaan Crouch	Sample Method:	Acetate Liners
Boring Start/End:	3/14/03	Depth to Water:	~7'
Drilling Contractor:	Tom Price Environmental	Total Depth:	21'
Drilling Method/Equipment:	Geoprobe/Geoprobe	Boring Diameter:	1.25
Borehole Location/Number:	See Plot Plan		

Remark:

Depth(ft)	Sample #	Sample Interval	Recovery	OVA (ppm)	Blows	USGS	Symbol	Lithologic Description (soil classification, color, moisture, density, grain size/plasticity, other)	Well/Boring Completion
0								3" Concrete	Concrete
5	S1	X	100 %	5	-	SC		(SC) Clayey sand, yellowish brown (10YR 5/6), damp, fine and coarse sand, fine to medium gravel, subangular, red oxidation, black layers, no hydrocarbon odor. @ 5'-Greenish Gray (5GY 6/1). @ 10'-Strong odor.	
10	S2	X	100 %	200	-	SW		(SW) Well graded sand, pale olive (5Y 6/3), wet, fine to coarse sand, subangular to subrounded, strong hydrocarbon odor.	Hydrated Bentonite Chips
						ML		(ML) Sandy silt, pale olive (5Y 6/3) and yellowish brown (10YR 5/8) layers, fine sand, strong hydrocarbon odor.	
15	S3	X	100 %	5	-	SC		(SC) Clayey sand, greenish gray (5BG 6/1) and yellowish brown (10YR 5/8) layers, fine sand, some silt white precipitate, no hydrocarbon odor.	
20	S4	X	100 %	5	-	GM		(GM) Silty gravel, greenish gray (5GY 5/1), red oxidation, white precipitate, fine to coarse sand, fine to medium gravel, subangular to angular, no hydrocarbon odor.	
25									
30									
35									

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Log of Borehole B-2 (Sheet 1 of 1)

4311-4333 MacArthur Boulevard, Oakland, CA

3/14/03 | SII-12010

LOG OF EXPLORATORY BORING

Logged By:	Canaan Crouch	Sample Method:	Acetate Liners
Boring Start/End:	3/14/03	Depth to Water:	~7'
Drilling Contractor:	Tom Price Environmental	Total Depth:	20.5'
Drilling Method/Equipment:	Geoprobe/Geoprobe	Boring Diameter:	1.25
Borehole Location/Number:	See Plot Plan		

Remark:

Depth(ft)	Sample #	Sample Interval	Recovery	OVA (ppm)	Blows	USGS	Symbol	Lithologic Description (soil classification, color, moisture, density, grain size/plasticity, other)	Well/Boring Completion
0								3" Concrete	Concrete
5	S1	X	100 %	30	-	CL		(CL) Sandy lean clay, brown (10YR 5/3), damp, high plasticity, no dilatency, moderate toughness, fine sand, no hydrocarbon odor.	
						SC		(SC) Clayey sand with gravel, brown (10YR 5/3) with black staining, damp, fine to coarse sand, fine gravel, subangular to angular, no hydrocarbon odor.	
						SM		(SM) Silty sand, greenish gray (10GY 5/1) with black staining, wet, fine to coarse sand, subangular, strong hydrocarbon odor.	
10	S2	X	75 %	300	-			(SC) Clayey sand, brown (10YR 5/3) with green staining, moist, fine to coarse sand, subangular to subrounded, fine gravel, moderate odor.	Hydrated Bentonite Chips
						SC			
15	S3	X	25 %	20	-			@15'-Same as above	
	S4								
20		X	75 %	5	-	GM		(GM) Silty gravel, yellowish brown (10YR 5/6), damp, fine to coarse sand, fine to medium gravel, subangular to angular, no hydrocarbon odor.	
25									
30									
35									

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Log of Borehole B-4 (Sheet 1 of 1)

4311-4333 MacArthur Boulevard, Oakland, CA

3/14/03 | SII-12010

LOG OF EXPLORATORY BORING

Logged By:	Canaan Crouch	Sample Method:	Acetate Liners
Boring Start/End:	3/15/03	Depth to Water:	~7'
Drilling Contractor:	Tom Price Environmental	Total Depth:	21'
Drilling Method/Equipment:	Geoprobe/Geoprobe	Boring Diameter:	1.25
Borehole Location/Number:	See Plot Plan		

Remark:

Depth(ft)	Sample #	Sample Interval	Recovery	OVA (ppm)	Blows	USGS	Symbol	Lithologic Description (soil classification, color, moisture, density, grain size/plasticity, other)	Well/Boring Completion
0								2" Asphalt	Concrete
5	S1	X	50 %	0.0	-	ML		(ML) Silty, greenish black (GY 2.5/1), wet, rapid dilatency, low plasticity, low toughness, faint hydrocarbon odor.	
10	S2	X	100 %	0.0	-	SM		(SM) Silty sand, yellowish brown (10YR 5/6) with black staining, damp, fine sand, no hydrocarbon odor.	Hydrated Bentonite Chips
15	S3	X	100 %	0.0	-	SM		@15'-Same as above, some medium and coarse sand subangular to subrounded.	
20	S4	X	100 %	0.0	-	SM		@15'-Same as above, some fine subangular gravel.	
25									
30									
35									

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Log of Borehole B-5 (Sheet 1 of 1)

4311-4333 MacArthur Boulevard, Oakland, CA

3/15/03 | SII-12010

LOG OF EXPLORATORY BORING

Logged By:	Canaan Crouch	Sample Method:	Acetate Liners
Boring Start/End:	3/14/03	Depth to Water:	~7'
Drilling Contractor:	Tom Price Environmental	Total Depth:	21'
Drilling Method/Equipment:	Geoprobe/Geoprobe	Boring Diameter:	1.25
Borehole Location/Number:	See Plot Plan		

Remark:

Depth(ft)	Sample #	Sample Interval	Recovery	OVA (ppm)	Blows	USGS	Symbol	Lithologic Description (soil classification, color, moisture, density, grain size/plasticity, other)	Well/Boring Completion
0								3" Concrete	Concrete
5	S1	X	100 %	0.0	-	SC		(SC) Clayey sand, pale yellow (5Y 7/3), damp, fine to coarse sand, fine gravel, subanular to angular, red oxidation, no hydrocarbon odor.	
10	S2	X	100 %	0.0	-	CL		(CL) Lean clay, very dark greenish gray (5GY 3/1), damp, some coarse subangular sand, high plasticity, high toughness, no dilatency, faint hydrocarbon odor.	Hydrated Bentonite Chips
15	S3	X	50 %	0.0	-	GM		(GM) Silty gravel, yellowish brown (10YR 5/6), damp, fine to coarse sand, fine gravel, subangular to angular, no hydrocarbon odor.	
20	S4	X	100 %	0.0	-	GM		@15'-Same as above.	
25									
30									
35									

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Log of Borehole B-6 (Sheet 1 of 1)

4311-4333 MacArthur Boulevard, Oakland, CA

3/14/03 | SII-12010

LOG OF EXPLORATORY BORING

Logged By:	Canaan Crouch	Sample Method:	Acetate Liners
Boring Start/End:	3/15/03	Depth to Water:	~7'
Drilling Contractor:	Tom Price Environmental	Total Depth:	19.5'
Drilling Method/Equipment:	Geoprobe/Geoprobe	Boring Diameter:	1.25
Borehole Location/Number:	See Plot Plan		

Remark:

Depth(ft)	Sample #	Sample Interval	Recovery	OVA (ppm)	Blows	USGS	Symbol	Lithologic Description (soil classification, color, moisture, density, grain size/plasticity, other)	Well/Boring Completion
0								2" Asphalt	Concrete
5	S1	X	25 %	0.0	-	SP		(SP) Poorly graded sand, light olive brown (2.5Y 5/4), damp, fine sand, 10% silt, no hydrocarbon odor.	
10	S2	X	50 %	0.0	-	SC		(SC) Clayey sand, black (5Y 2.5/1), wet, fine sand, silt, some coarse subrounded sand, rootlets, red oxidation along rootlets.	Hydrated Bentonite Chips
15	S3	X	100 %	0.0	-	SM		(SM) Silty sand with gravel, dark yellowish brown (10YR 4/4) with black staining, wet, fine to coarse sand, fine gravel, subangular to subrounded, some red oxidation, no hydrocarbon odor.	
						GM		(GM) Silty gravel, light olive brown, (2.5Y 5/4), wet, fine to coarse sand, fine to medium gravel, subangluar to angular, no hydrocarbon odor.	
20	S4	X	25 %	0.0	-				
25									
30									
35									

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Log of Borehole B-7 (Sheet 1 of 1)

4311-4333 MacArthur Boulevard, Oakland, CA

3/15/03 | SII-12010

APPENDIX C

CHAIN-OF CUSTODY DOCUMENTATION

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Page 1 Of 1

COC# № 24026 GLOBAL ID _____ ELECTRONIC REPORT: ☐ EDF ☐ EDD ASL JOB# _____

Company: JMK Environmental	Project Name:	Report To: Conan Crouch	ANALYSIS REQUESTED
Address: 10441 Rutner Ave.		Address:	
Granada Hills, CA	Site Address: 4311-4333 MacArthur	Invoice To:	
Telephone: 818-363-9119	Oakland, CA	Address:	
Fax: 818-363-4824	Project ID: 1210		
Special Instruction:	Project Manager: Hung Kim	P.O.#:	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	8015 TPHg	8015 TPHd	8020 BTEX/MTBE	200.7 Lead	Remarks
		B-1	3/14/03	1120			water	Ice	X	X	X	X	
		B-2	↓	1235			↓	↓	↓	↓	↓	↓	
		B-3	3/15/03	1500									
		B-4	↓	1200									
		B-6	3/15/03	1515									
		B-7	3/15/03	1405			↓	↓	↓	X	↓	X	

Collected By: _____ Date 3/14/03 Time

Relinquished By: _____ Date 3/17/03 Time

Condition of Sample:

Relinquished By: _____ Date _____ Time _____

Received For Laboratory: _____ Date 3/17/03 Time 1455

TAT ☐ Normal ☒ Rush 72 Hour TAT

White - *Report*, Yellow - *Laboratory*, Pink - *Client*

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: Cameron Crouch	Phone No.: 818-363-4919	Purchase Order No (Reqd).:	Send Invoice to (if Different)	Phone
Company Name: SMK Environmental	Fax No.: 818-363-4824	Project Number: 1210	Company	
Mailing Address: 10441 Ruffner Ave.	email:	Project Name:	Billing Address (if Different)	
City: Granada Hills	State: CA Zip: 91344	Project Location: Oakland	City:	State Zip

Sampler: C Crouch
Field Org. Code:
Global ID:

Turn Around Time
- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☑ 3 Day
- ☐ 4 Day
- ☐ 5 Day
- ☐ Standard (10 Day)

Order ID:

Sampling

Client ID:	Field PT	Lab. No.	Date	Time	Matrix	Composite	Grab	Containers	Preservative	Volatile Organics by GC/MS: 601/602 ☐ 624 ☐ 8260 ☐ 8260B ☐	Fuel Oxygenates by 8260 ☐ 8260B ☐	MTBE by 8260B ☐	Pesticides-8081 ☐	PCBs - 8082 ☐	BTEX/MTBE 8260	TPH as Gas/BTEX ☐	TPH as Gas/BTEX/MTBE ☐	Base/Neutral/Acid Organics 8270 ☐	8270-SIM ☐	PNA ☐	Fuel Scan 8250 ☐	Extractable ☐ Purgeable ☐	Diesel ☐ w/ Si-gel Standard Cleanup ☐	Motor Oil ☐ w/ Si-gel Column Cleanup ☐	pH	CN	TRPH ☐ Oil & Grease ☐	Lead	Metals - Circle Below Total ☐ Dissolved ☐	STLC	TTLC	Remarks
B-7-10			3/15/03	1215	S				Ice						X			X									X				
B-7-11.5			↓	1430	↓				↓						X			X									X				

Relinquished by:	Received by:	Date:	Time:
		3/16/03	1455
Relinquished by:	Received by:	Date:	Time:
Relinquished by:	Received by:	Date:	Time:
Relinquished by:	Received by:	Date:	Time:

Special Instructions or Comments

- ☐ NPDES Detection Limits
- ☐ EDD Report Required
- ☐ EDF Report Required
- ☐ PDF File Required

Metals:
Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : RCRA-8 ☐ CAM-17 ☐ Plating ☐ PPM-13 ☐ LUFT-5 ☐

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara. CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: Cara Crouch	Phone No.: 818-363-4997	Purchase Order No (Reqd).:	Send Invoice to (If Different)	Phone	
Company Name: JMK Environmental	Fax No.: 818-363-4894	Project Number: 12010	Company		
Mailing Address: 10441 Ruffner Ave.	email:	Project Name:	Billing Address (If Different)		
City: Granada Hills, CA	State: CA Zip: 91344	Project Location: Oakland	City:	State	Zip

Sampler: C. Crouch
Field Org. Code:
Global ID:

Turn Around Time
- ☐ Same Day
- ☐ 1 Day
- ☑ 3 Day
- ☐ 2 Day
- ☐ 4 Day
- ☐ 5 Day
- ☐ Standard (10 Day)

Order ID:

Sampling

Client ID:	Field PT	Lab. No.	Date	Time	Matrix	Composite	Grab	Containers	Preservative	Volatile Organics by GCMS: 601/602 ☐ 624 ☐ / Fuel Oxygenates by 8260 ☐ MTBE by 8260B ☐ / Pesticides-8081 ☐ / PCBs - 8082 ☐ / TPH as Gas/BTEX ☐ / TPH as Gas/BTEX/MTBE ☐ / Base/Neutral/Acid Organics 8270 ☐ / 8270-SIM ☐ PNA ☐ / Fuel Scan Extractable ☐ Diesel ☐ Motor Oil ☐ / pH / CN / TRPH ☐ Oil & Grease ☐ / Metals - Circle Below Total ☐ Dissolved ☐ / STLC / TTLC	Remarks
B-1-11			3/14/03	[illegible]	S				Ice	X BTEX/MTBE 8020 / X 8015 Gas / X Lead	
B-1-21				1030							
B-2-11				1105							
B-2-21				1130							
B-3-5.5				1230							
B-3-20.5				1240							
B-4-10.5				1305							
B-4-20.5				1350							
B-5-11			3/15/03	1220							
B-5-21				1245							
B-6-11			3/14/03	1415							
B-6-20.5				1500							

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature] Machado	3/15/03	1455
Relinquished by:	Received by:	Date:	Time:
Relinquished by:	Received by:	Date:	Time:
Relinquished by:	Received by:	Date:	Time:

Special Instructions or Comments

- ☐ NPDES Detection Limits
- ☐ EDD Report Required
- ☐ EDF Report Required
- ☐ PDF File Required

Metals:
Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : RCRA-8 ☐ CAM-17 ☐ Plating ☐ PPM-13 ☐ LUFT-5 ☐

APPENDIX D

LABORATORY ANALYTICAL REPORT

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

March 20, 2003

Canaan Crouch
JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344

Order: 33669
Project Name:
Project Number: 12010
Project Notes:

Date Collected: 3/14/2003
Date Received: 3/17/2003
P.O. Number: 12010

On March 17, 2003, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas/BTEX/MTBE	EPA 8015 MOD. (Purgeable)
		EPA 8020
	Lead	EPA 200.7
	TPH as Diesel	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,

Patti Sandrock
QA/QC Manager

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33669 **Lab Sample ID:** 33669-001 **Client Sample ID:** B-1
Sample Time: 11:20 AM **Sample Date:** 3/14/2003 **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	0.40	1	0.015	0.015	mg/L	3/18/2003	3/18/2003	WM8419B	EPA 200.7

Order ID: 33669 **Lab Sample ID:** 33669-002 **Client Sample ID:** B-2
Sample Time: 12:35 PM **Sample Date:** 3/14/2003 **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	0.58	1	0.015	0.015	mg/L	3/18/2003	3/18/2003	WM8419B	EPA 200.7

Order ID: 33669 **Lab Sample ID:** 33669-003 **Client Sample ID:** B-3
Sample Time: 3:00 PM **Sample Date:** 3/15/2003 **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	0.21	1	0.015	0.015	mg/L	3/18/2003	3/18/2003	WM8419B	EPA 200.7

Order ID: 33669 **Lab Sample ID:** 33669-006 **Client Sample ID:** B-7
Sample Time: 2:05 PM **Sample Date:** 3/15/2003 **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	1.2	1	0.015	0.015	mg/L	3/18/2003	3/18/2003	WM8419B	EPA 200.7

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33669 **Lab Sample ID:** 33669-001 **Client Sample ID:** B-1

Sample Time: 11:20 AM **Sample Date:** 3/14/2003 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	1400		200	0.5	100	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Toluene	6600		200	0.5	100	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Ethyl Benzene	1600		200	0.5	100	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Xylenes, Total	8500		200	1	200	µg/L	N/A	3/19/2003	WGC42787	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	99.9	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		200	1	200	µg/L	N/A	3/19/2003	WGC42787	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	99.9	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	1900	x	2	50	100	µg/L	3/17/2003	3/20/2003	DW4326A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	22.0	21 - 142

Comment: Not a TPH as Diesel pattern. Possible gasoline compounds in the TPH as Diesel range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	42000		200	50	10000	µg/L	N/A	3/19/2003	WGC42787	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	105.2	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33669 **Lab Sample ID:** 33669-002 **Client Sample ID:** B-2

Sample Time: 12:35 PM **Sample Date:** 3/14/2003 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	1700		200	0.5	100	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Toluene	5800		200	0.5	100	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Ethyl Benzene	1200		200	0.5	100	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Xylenes, Total	7100		200	1	200	µg/L	N/A	3/19/2003	WGC42787	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		200	1	200	µg/L	N/A	3/19/2003	WGC42787	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	2800	x	2	100	200	µg/L	3/17/2003	3/20/2003	DW4326A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	64.0	21 - 142

Comment: Not a TPH as Diesel pattern. Possible gasoline compounds in the TPH as Diesel range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	37000		200	50	10000	µg/L	N/A	3/19/2003	WGC42787	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100.9	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33669 **Lab Sample ID:** 33669-003 **Client Sample ID:** B-3

Sample Time: 3:00 PM **Sample Date:** 3/15/2003 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	1300		250	0.5	125	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Toluene	3000		250	0.5	125	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Ethyl Benzene	6000		250	0.5	125	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Xylenes, Total	3000		250	1	250	µg/L	N/A	3/18/2003	WGC62786	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	81.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		250	1	250	µg/L	N/A	3/18/2003	WGC62786	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	81.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	4000	x	2	116	232	µg/L	3/17/2003	3/20/2003	DW4326A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	65.0	21 - 142

Comment: Not a TPH as Diesel pattern. Possible gasoline compounds and overlap from an unknown hydrocarbon (C16-C34) in the TPH as Diesel range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	17000		250	50	12500	µg/L	N/A	3/18/2003	WGC62786	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	74.9	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandroek, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33669 **Lab Sample ID:** 33669-004 **Client Sample ID:** B-4

Sample Time: 12:00 PM **Sample Date:** 3/15/2003 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	5800		200	0.5	100	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Toluene	3300		200	0.5	100	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Ethyl Benzene	920		200	0.5	100	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Xylenes, Total	4800		200	1	200	µg/L	N/A	3/18/2003	WGC62786	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.4	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		200	1	200	µg/L	N/A	3/18/2003	WGC62786	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.4	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	34000		200	50	10000	µg/L	N/A	3/18/2003	WGC62786	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	80.7	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33669 **Lab Sample ID:** 33669-005 **Client Sample ID:** B-6

Sample Time: 3:15 PM **Sample Date:** 3/15/2003 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	1.2		1	0.5	0.5	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Toluene	5.0		1	0.5	0.5	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Ethyl Benzene	0.71		1	0.5	0.5	µg/L	N/A	3/19/2003	WGC42787	EPA 8020
Xylenes, Total	4.1		1	1	1	µg/L	N/A	3/19/2003	WGC42787	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.8	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	3/19/2003	WGC42787	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.8	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L	N/A	3/19/2003	WGC42787	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.5	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33669 **Lab Sample ID:** 33669-006 **Client Sample ID:** B-7

Sample Time: 2:05 PM **Sample Date:** 3/15/2003 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Toluene	0.53		1	0.5	0.5	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	3/18/2003	WGC62786	EPA 8020
Xylenes, Total	ND		1	1	1	µg/L	N/A	3/18/2003	WGC62786	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	88.7	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	3/18/2003	WGC62786	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	88.7	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	290	x	2	112	224	µg/L	3/17/2003	3/20/2003	DW4326A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	14.0	21 - 142

Comment: Not a TPH as Diesel pattern; Value due to an unknown hydrocarbon (C20 - C40) and discrete peaks, in the Diesel quantitation range. Reporting limit increased due to limited sample volume.

Comment: Low surrogate recovery due to matrix (emulsion formed during extraction).

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L	N/A	3/18/2003	WGC62786	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	77.6	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel
Y	PQL is reported below MDL but verified against a standard analyzed at the client requested reporting limit of 0.5 ppb
C	Reported results affected by contaminated reagent materials. See narrative for futher explanation

Entech Analytical Labs, Inc.

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Quality Control Results Summary

QC Batch #: DW4326A
Matrix: Liquid
Units: µg/L
Date Analyzed: 3/19/2003

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Diesel											
TPH as Diesel	EPA 8015 M	ND		1000		865.33	LCS	86.5			51.7 - 126.0
	Surrogate			**Surrogate Recovery**		**Control Limits (%)**					
	o-Terphenyl			93.0		21 - 142					
Test: TPH as Diesel											
TPH as Diesel	EPA 8015 M	ND		1000		877.22	LCSD	87.7	1.36	25.00	51.7 - 126.0
	Surrogate			**Surrogate Recovery**		**Control Limits (%)**					
	o-Terphenyl			89.0		21 - 142					

Entech Analytical Labs, Inc.

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Quality Control Results Summary

QC Batch #: WGC42787
Matrix: Liquid
Units: µg/L
Date Analyzed: 3/19/2003

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		250		238.	LCS	95.2			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			78.5			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		8		7.92	LCS	99.0			65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		8		8.15	LCS	101.9			65.0 - 135.0
Toluene	EPA 8020	ND		8		7.96	LCS	99.5			65.0 - 135.0
Xylenes, total	EPA 8020	ND		24		24.6	LCS	102.5			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			97.4			65 - 135					
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		250		268.	LCSD	107.2	11.86	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			89.5			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		8		8.57	LCSD	107.1	7.88	25.00	65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		8		8.76	LCSD	109.5	7.21	25.00	65.0 - 135.0
Toluene	EPA 8020	ND		8		8.56	LCSD	107.0	7.26	25.00	65.0 - 135.0
Xylenes, total	EPA 8020	ND		24		26.4	LCSD	110.0	7.06	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			94.3			65 - 135					

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Quality Control Results Summary

QC Batch #: WGC62786
Matrix: Liquid
Units: µg/L
Date Analyzed: 3/18/2003

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		250		234.64	LCS	93.9			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			82.4			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		8		7.46	LCS	93.3			65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		8		7.7	LCS	96.3			65.0 - 135.0
Toluene	EPA 8020	ND		8		7.39	LCS	92.4			65.0 - 135.0
Xylenes, total	EPA 8020	ND		24		23.43	LCS	97.6			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			95.5			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		8		7.13	LCS	89.1			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			95.5			65 - 135					
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		250		230.57	LCSD	92.2	1.75	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			84.9			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		8		7.58	LCSD	94.8	1.60	25.00	65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		8		7.61	LCSD	95.1	1.18	25.00	65.0 - 135.0
Toluene	EPA 8020	ND		8		7.4	LCSD	92.5	0.14	25.00	65.0 - 135.0
Xylenes, total	EPA 8020	ND		24		22.82	LCSD	95.1	2.64	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			89.3			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		8		7.2	LCSD	90.0	0.98	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			89.3			65 - 135					

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Quality Control Results Summary

QC Batch #: WM8419B
Matrix: Liquid

Units: mg/L
Date Analyzed: 3/18/2003

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Lead	EPA 200.7	ND		0.5		0.5291	LCS	105.8			75.0 - 125.0
Lead	EPA 200.7	ND		0.5		0.5218	LCSD	104.4	1.39	25.00	75.0 - 125.0

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March 20, 2003

Canaan Crouch
JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344

Order: 33670
Project Name:
Project Number: 12010
Project Notes:

Date Collected: 3/14/2003
Date Received: 3/17/2003
P.O. Number: 12010

On March 17, 2003, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Fuel Scan	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020
	Lead	EPA 6010B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,

Patti Sandrock
QA/QC Manager

PART II

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-001 **Client Sample ID:** B-1-11
Sample Time: 10:00 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.0	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-002 **Client Sample ID:** B-1-21
Sample Time: 10:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.0	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-003 **Client Sample ID:** B-2-11
Sample Time: 11:05 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	3.7	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-004 **Client Sample ID:** B-2-21
Sample Time: 11:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.6	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-005 **Client Sample ID:** B-3-15.5
Sample Time: 12:30 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	4.8	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-006 **Client Sample ID:** B-3-20.5
Sample Time: 12:40 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	5.0	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-007 **Client Sample ID:** B-4-10.5
Sample Time: 1:05 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	3.0	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-008 **Client Sample ID:** B-4-20.5
Sample Time: 1:50 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.6	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-009 **Client Sample ID:** B-5-11
Sample Time: 12:20 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	5.6	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-010 **Client Sample ID:** B-5-21
Sample Time: 12:45 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	4.6	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-011 **Client Sample ID:** B-6-11
Sample Time: 2:15 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.8	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-012 **Client Sample ID:** B-6-20.5
Sample Time: 3:00 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	8.9	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-013 **Client Sample ID:** B-7-10
Sample Time: 1:15 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	7.3	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

Order ID: 33670 **Lab Sample ID:** 33670-014 **Client Sample ID:** B-7-19.5
Sample Time: 2:30 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.3	1	1	1	mg/Kg	3/19/2003	3/19/2003	SM8293	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-001 **Client Sample ID:** B-1-11

Sample Time: 10:00 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		10	0.25	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	0.54		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	4.6		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	2.5		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	3.0		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	9.0		10	0.05	0.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100.3	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		10	1	10	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	128.7	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	120		10	2.5	25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	128.7	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		10	2.5	25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	128.7	65 - 135

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10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-002 **Client Sample ID:** B-1-21

Sample Time: 10:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.8	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.6	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-003 **Client Sample ID:** B-2-11

Sample Time: 11:05 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		10	0.25	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	0.53		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	3.4		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	2.3		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	3.7		10	0.025	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	10		10	0.05	0.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104.5	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		10	1	10	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	122.7	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	120		10	2.5	25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	122.7	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		10	2.5	25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	122.7	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-004 **Client Sample ID:** B-2-21

Sample Time: 11:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.8	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.1	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.1	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.1	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-005 **Client Sample ID:** B-3-15.5

Sample Time: 12:30 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93.1	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93.1	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93.1	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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Project Name:
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Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-006 **Client Sample ID:** B-3-20.5

Sample Time: 12:40 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.2	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.5	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.5	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.5	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-007 **Client Sample ID:** B-4-10.5

Sample Time: 1:05 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		5	0.25	1.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	0.38		5	0.025	0.125	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	1.9		5	0.025	0.125	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	1.1		5	0.025	0.125	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	1.5		5	0.025	0.125	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	5.1		5	0.05	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	109.3	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		5	1	5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	113.2	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	49		5	2.5	12.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	113.2	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		5	2.5	12.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	113.2	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-008 **Client Sample ID:** B-4-20.5

Sample Time: 1:50 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93.9	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89.4	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89.4	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89.4	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-009 **Client Sample ID:** B-5-11

Sample Time: 12:20 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	94.1	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/Kg	3/18/2003	3/19/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89.6	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-010 **Client Sample ID:** B-5-21

Sample Time: 12:45 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.9	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.3	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.3	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.3	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
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Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-011 **Client Sample ID:** B-6-11

Sample Time: 2:15 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93.0	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.5	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.5	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.5	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-014 **Client Sample ID:** B-7-19.5

Sample Time: 2:30 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	0.25	0.25	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Toluene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Ethyl Benzene	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, o	ND		1	0.025	0.025	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020
Xylene, m+p	ND		1	0.05	0.05	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	94.6	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		1	1	1	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.0	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.0	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		1	2.5	2.5	mg/kg	3/18/2003	3/18/2003	SGC42785	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.0	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-001 **Client Sample ID:** B-1-11

Sample Time: 10:00 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	9.7	x	1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	50 - 126

Comment: Not a TPH as Diesel pattern. Possible gasoline compounds in the TPH as Diesel range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-001 **Client Sample ID:** B-1-11

Sample Time: 10:00 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-002 **Client Sample ID:** B-1-21

Sample Time: 10:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	1.5	x	1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	50 - 126

Comment: Reported TPH as Diesel value is a result of discrete peaks that are not typical of TPH as Diesel but are within the Diesel quantitation range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
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Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-002 **Client Sample ID:** B-1-21

Sample Time: 10:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/18/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	88.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-003 **Client Sample ID:** B-2-11

Sample Time: 11:05 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	17	x	1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	50 - 126

Comment: Not a TPH as Diesel pattern. Possible gasoline compounds and discrete peaks in the TPH as Diesel range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-003 **Client Sample ID:** B-2-11
Sample Time: 11:05 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-004 **Client Sample ID:** B-2-21

Sample Time: 11:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-004 **Client Sample ID:** B-2-21

Sample Time: 11:30 AM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-005 **Client Sample ID:** B-3-15.5

Sample Time: 12:30 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-005 **Client Sample ID:** B-3-15.5

Sample Time: 12:30 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-006 **Client Sample ID:** B-3-20.5

Sample Time: 12:40 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-006 **Client Sample ID:** B-3-20.5

Sample Time: 12:40 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-007 **Client Sample ID:** B-4-10.5

Sample Time: 1:05 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	12	x	1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	50 - 126

Comment: Not a TPH as Diesel pattern. Possible gasoline compounds in the TPH as Diesel range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	15		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-007 **Client Sample ID:** B-4-10.5

Sample Time: 1:05 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	86.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-008 **Client Sample ID:** B-4-20.5

Sample Time: 1:50 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-008 **Client Sample ID:** B-4-20.5

Sample Time: 1:50 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
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P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-009 **Client Sample ID:** B-5-11

Sample Time: 12:20 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

DF = Dilution Factor | ND = Not Detected | DLR = Detection Limit Reported | PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-009 **Client Sample ID:** B-5-11

Sample Time: 12:20 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-010 **Client Sample ID:** B-5-21

Sample Time: 12:45 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-010 **Client Sample ID:** B-5-21

Sample Time: 12:45 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-011 **Client Sample ID:** B-6-11

Sample Time: 2:15 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	1.4	x	1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	50 - 126

Comment: Reported TPH as Diesel value is a result of discrete peaks that are not typical of TPH as Diesel but are within the Diesel quantitation range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-011 **Client Sample ID:** B-6-11

Sample Time: 2:15 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

o-Terphenyl	90.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-012 **Client Sample ID:** B-6-20.5

Sample Time: 3:00 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	1.9	x	1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	50 - 126

Comment: Reported TPH as Diesel value is a result of discrete peaks that are not typical of TPH as Diesel but are within the Diesel quantitation range.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

JMK Environmental
10441 Ruffner Avenue
Granada Hills, CA 91344
Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-012 **Client Sample ID:** B-6-20.5

Sample Time: 3:00 PM **Sample Date:** 3/14/2003 **Matrix:** Solid

o-Terphenyl	76.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-013 **Client Sample ID:** B-7-10

Sample Time: 1:15 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-013 **Client Sample ID:** B-7-10

Sample Time: 1:15 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Attn: Canaan Crouch

Date: 3/20/03
Date Received: 3/17/2003
Project Name:
Project Number: 12010
P.O. Number: 12010
Sampled By: Canaan Crouch

Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-014 **Client Sample ID:** B-7-19.5

Sample Time: 2:30 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	50 - 126

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 33670 **Lab Sample ID:** 33670-014 **Client Sample ID:** B-7-19.5

Sample Time: 2:30 PM **Sample Date:** 3/15/2003 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		1	1	1	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	13	13	mg/Kg	3/17/2003	3/19/2003	DS4260A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	89.0	40 - 128

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel
Y	PQL is reported below MDL but verified against a standard analyzed at the client requested reporting limit of 0.5 ppb
C	Reported results affected by contaminated reagent materials. See narrative for futher explanation

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Quality Control Results Summary

QC Batch #: DS4260A
Matrix: Solid

Units: mg/Kg
Date Analyzed: 3/18/2003

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Diesel											
TPH as Diesel	EPA 8015 M	ND		25		17.191	LCS	68.8			52.9 - 116.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
o-Terphenyl			83.0			50 - 126					
Test: TPH as Diesel											
TPH as Diesel	EPA 8015 M	ND		25		19.402	LCSD	77.6	12.08	30.00	52.9 - 116.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
o-Terphenyl			73.0			50 - 126					

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Quality Control Results Summary

QC Batch #: SM8293
Matrix: Solid

Units: mg/Kg
Date Analyzed: 3/19/2003

rameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
											61.2 - 120.0
ead	EPA 6010B	ND		50		51.13	LCS	102.3			
ad	EPA 6010B	ND		50		49.72	LCSD	99.4	2.80	30.00	61.2 - 120.0

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Quality Control Results Summary

QC Batch #: SGC42785
Matrix: Solid

Units: mg/Kg
Date Analyzed: 3/18/2003

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		12.5		12.4	LCS	99.2			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			83.2			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		0.4		0.407	LCS	101.7			53.6 - 145.6
Ethyl Benzene	EPA 8020	ND		0.4		0.402	LCS	100.5			67.1 - 134.3
Toluene	EPA 8020	ND		0.4		0.405	LCS	101.3			45.3 - 157.2
Xylenes, total	EPA 8020	ND		1.2		1.209	LCS	100.8			79.0 - 125.6
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			96.5			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		0.4		0.38	LCS	95.0			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			96.5			65 - 135					
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		12.5		12.7	LCSD	101.6	2.39	30.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			80.3			65 - 135					
Test: BTEX											
Benzene	EPA 8020	ND		0.4		0.417	LCSD	104.3	2.43	30.00	53.6 - 145.6
Ethyl Benzene	EPA 8020	ND		0.4		0.409	LCSD	102.3	1.73	30.00	67.1 - 134.3
Toluene	EPA 8020	ND		0.4		0.409	LCSD	102.3	0.98	30.00	45.3 - 157.2
Xylenes, total	EPA 8020	ND		1.2		1.243	LCSD	103.6	2.77	30.00	79.0 - 125.6
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			97.4			65 - 135					
Test: MTBE by EPA 8020											
Methyl-t-butyl Ether	EPA 8020	ND		0.4		0.395	LCSD	98.8	3.87	30.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			97.4			65 - 135					

★ Stellar Environmental Solutions, Inc.
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Tel: (510) 644-3123 • Fax: (510) 644-3859
Geoscience & Engineering Consulting

November 15, 2002

Mr. Alex Hahn
80 Grand Avenue, Suite M
Oakland, CA 94612

Subject: Findings of Underground Storage Tank Assessment
4311-4333 MacArthur Boulevard, Oakland, California

Dear Mr. Hahn:

INTRODUCTION AND BACKGROUND

Stellar Environmental Solutions, Inc. (SES) is pleased to provide you with this report summarizing underground storage tank (UST) issues at the referenced site. We understand that you are considering purchasing the property which consists of six adjacent parcels at the following addresses: 4311, 4317, 4321, 4325, 4329, and 4333 MacArthur Boulevard, Oakland, Alameda County, California. The subject property is located near the southwest corner of MacArthur Boulevard and High Street. An additional address of 4339 MacArthur Boulevard was cited in the documentation we reviewed; this was reportedly an historical address for an add-on building occupied by a paint shop. The current owner and seller of the property is Mr. Glenn Roberts. We were informed at the proposal stage that the property may currently contain (and/or may in the past have contained) USTs, and that some previous environmental assessment work indicated the presence of site contamination. The following figures are attached: site location map, assessor's parcel map, and partial site plan showing UST-related investigation locations.

Our scope of work, as described in our November 4, 2002 proposal, included the following tasks: 1) review UST-related documents provided by Mr. Roberts and complete an interview with Mr. Roberts; 2) review available UST-related regulatory agency files and databases; 3) conduct a site inspection; and 4) prepare a report of findings. Our overall objective is to evaluate and provide you with data on the potential liability (and costs) associated with the former/current UST, to facilitate your decision about purchasing the property.

APPENDIX E

STELLAR ENVIRONMENTAL REPORT

DOCUMENT REVIEW AND OWNER INTERVIEW

Mr. Roberts provided us with the following UST-related documentation:

- 1999 onsite geophysical survey report for UST locating (Clearwater Group, Inc., 1999)
- Partial 2000 report regarding exploratory borehole water sampling (Clearwater Group, Inc., 2000)

According to Mr. Roberts, the 1999 geophysical survey was coordinated by The Windsor Group, a property development firm representing a potential buyer; however, the actual client was the Roberts family. The survey was designed specifically to evaluate the presence/location of USTs. According to the report, potential onsite USTs are indicated by historical Sanborn Fire Insurance Zonation maps; those maps were not available for our review. A 3-foot-square grid was established over the entire portion of the site not covered with buildings, as well as a portion of MacArthur Boulevard and a magnetometer was used to identify metal-bearing objects (a.k.a. magnetic anomalies. Attachment A contains a copy of the survey report with a figure showing the survey area and the magnetic anomalies discovered.

The survey report concluded that five magnetic anomalies were detected, three of which might be USTs—one beneath MacArthur Boulevard, one in the central portion of the property, and one adjacent to the building. According to Mr. Roberts, the property had been larger at one time, and the subsequent widening of MacArthur Boulevard took under eminent domain a portion of the property (and potentially the portion containing a UST[s].

The geophysical survey could not confirm whether these metal-bearing objects were USTs. Mr. Roberts indicated to SES that Clearwater Group was subsequently retained to conduct excavation activities in an attempt to determine if the metal-bearing objects were, in fact, USTs. While no report on this work was available to SES, Mr. Roberts informed SES that none of the onsite anomalies (referred to as objects "C", "D," and "E") were actually USTs, and that no excavation confirmation was conducted for objects "A" or "B," which are located beneath MacArthur Boulevard.

Mr. Roberts provided SES with some documentation regarding an onsite borehole drilling/ sampling investigation conducted in late 2000. The documentation consisted of several figures (including a borehole location and analytical results map); a tabular summary of analytical results; and the analytical laboratory report. Neither a text report nor a chain-of-custody record for the samples was provided. Mr. Roberts indicated that the investigation was conducted by Everett & Jones Barbecue (a potential buyer of the property) who provided only the referenced information to Mr. Roberts. The available data indicate the following:

- Six onsite exploratory boreholes were sampled on December 7, 2000.
- One groundwater sample per borehole was analyzed for volatile-range petroleum hydrocarbons (gasoline) and extractable-range hydrocarbons (diesel and motor oil); benzene, toluene, ethylbenzene and xylenes (BTEX); methyl *tertiary*-butyl ether (MTBE); and halogenated volatile organic compounds (HVOCs – a.k.a. solvents).
- As summarized in Table 1, all the above contaminants except MTBE and HVOCs were detected in excess of drinking water standards and/or Regional Water Quality Control Board (RWQCB) risk-based screening levels (RBSLs), at concentrations suggesting an onsite release of petroleum fuels and motor oils. While drinking water standards will likely not apply to this site, exceedance of the RBSLs indicates that the RWQCB will very likely require additional investigation, and possibly remediation, associated with the petroleum contamination.

In a brief interview with SES, Mr. Roberts indicated the following:

- The property has been owned by Mr. Roberts' family since the 1930s.
- Historical occupancies have included a Signal gasoline station (which reportedly ceased operation in the 1960s); a tire and auto repair facility; and a paint shop.
- Approximately three USTs have been associated with the facility. The locations of the USTs are unknown, although Mr. Roberts believes that one or more may be located beneath the present-day MacArthur Boulevard (which was widened some time ago).
- Mr. Roberts has no knowledge or documentation of UST installation, permits, maintenance, or removal.

Mr. Roberts also indicated that environmental remediation was conducted on the Pacific Gas & Electric (PG&E) parcel adjacent to (west of) the subject property. With regard to this issue, Mr. Roberts indicated the following:

- Excavation and offsite disposal of near-surface soils contaminated with lead was conducted both on the PG&E parcel and on a portion of the subject property.
- The subject property was identified as the source of the lead contamination.
- The lead regulatory agency for the remediation of lead contamination was the California Department of Toxic Substances Control (DTSC). The DTSC apparently retained and paid for the contractors to conduct the remediation work. The approximate cost of the work was $100,000, which the DTSC will reportedly recover from the Roberts family (possibly through an environmental lien on the property).

- Mr. Roberts is in possession of documentation associated with the remediation of the lead-contaminated soil, but received no "closure letter" nor other regulatory agency final requirements for the site.

Reviewing documentation and assessing this environmental issue was not specifically included in our scope of work; however, potential impacts of this issue are discussed in the Conclusions and Opinions section of this report.

REGULATORY STATUS

We contacted the following agencies and departments, which are responsible for either permitting the installation, operation, and removal of USTs, or are responsible for regulatory oversight of cases with petroleum UST releases:

- City of Oakland Office of Emergency Services (division of the Oakland Fire Department). This agency indicated that it had no UST-related files for the subject property addresses (Jain, 2002).
- California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB). This agency is responsible for regulatory oversight of cases with petroleum UST releases. None of the subject property street addresses are listed in the RWQCB's databases of reported UST releases (including the GeoTracker database and the older Leaking Underground Storage Tank Information System [LUSTIS] database].
- Alameda County Health Care Services Agency – Hazardous Materials Division (ACHCSA). This agency has no current jurisdiction for either UST installation, removal, or release oversight; however, sometimes UST information is copied to this agency by owners and/or other involved regulatory agencies. This agency had no UST-related files for the subject property (Garcia, 2002).
- State of California Department of Toxic Substances Control (DTSC). This department has no jurisdiction regarding petroleum UST issues. If a release was reported to the DTSC, the case would be referred to either the RWQCB and/or the City of Oakland.

Based on our review of the agency database files, no UST releases have been reported to the appropriate regulatory agencies. Furthermore, no regulatory records exist for the presence of the USTs (i.e. installation, repairs, removals, etc.). From the UST regulatory record perspective, no USTs ever existed at this site. Please note that our request for agency files did not include the historical subject property street address of 4339 MacArthur Boulevard, which was not provided to SES prior to our proposal, and was discovered by SES in documentation obtained after the

regulatory review requests were submitted. It is possible that UST-related documentation may be available for this additional address.

SITE INSPECTION

On November 13, 2002, Mr. Bruce Rucker of SES conducted a visual survey of the subject property. The primary objective of the survey was to identify any evidence of USTs (e.g., fill/vent pipes, manholes, asphalt patches indicative of UST removal) or previous environmental work. We found that the property is currently wholly undeveloped (no buildings), although the concrete pads of the former building(s) are evident. The remaining portion of the property is paved with asphalt except for a small unpaved (gravel covered) portion on the northwest corner. The exact boundaries of the subject property could not be determined by SES from the available information.

The subject property appears to be bounded by:

- MacArthur Boulevard, then commercial buildings and a U.S. Post Office (*to the east*);
- Undeveloped land, then Interstate 580 (*to the south and west*); and
- Undeveloped land (paved), then High Street (*to the north*).

We found no evidence of USTs. The site inspection revealed evidence of three of the six exploratory boreholes installed in 2000. Also noted was evidence of excavations (patches or absence of pavement) at the locations of magnetic anomalies "C", "D," and "E."

CONCLUSIONS AND OPINION

Evidence for existence of onsite USTs includes the recollection of the current property owner and a previous consultant's report stating that USTs are indicated on a historical Sanborn map(s). Mr. Roberts had no knowledge of UST removals at the time the service station was closed. No regulatory agency documentation exists of onsite usage of petroleum USTs or any removals of USTs. Based on the historical record suggesting the presence of USTs—but having no information regarding their potential locations, contents, and current status—a previous potential buyer commissioned a 1999 geophysical survey to evaluate the presence of any site USTs. That survey identified geophysical anomalies indicated to be possible locations of the USTs, two of which were located beneath what is now MacArthur Boulevard. The remaining three (all onsite) were reportedly excavated and determined not to be USTs. It is likely based on the development configuration of the property that any USTs would be/have been located on the undeveloped portion fronting MacArthur Street.

If any USTs are present at the site and could be located, their removal would be required before the property would meet 1998 State of California construction and monitoring requirements. If there are site-sourced USTs under MacArthur Boulevard, it is unlikely that regulatory agencies would require their removal; however, they may require that the presence/absence of USTs be confirmed.

A contaminant-related site investigation was conducted in 2000 by a potential property buyer that elected not to purchase the property. Residual hydrocarbon contamination of regulatory significance was reported in the groundwater. Maximum concentrations were reported at 13,000 μg/L gasoline, 14,000 μg/L diesel, 16,000 μg/L motor oil and 5,130 μg/L total BTEX. The contaminant distribution in groundwater suggests that there may be two sources of gasoline and diesel contamination in groundwater (i.e., there are elevated concentrations on the north and south ends of the property, and minor or no contamination in between). The direction of local groundwater flow has not been determined for this site, and is inferred by SES to be to the west (toward San Francisco Bay) in the absence of local influences.

Based on the likelihood that the detected contamination is the result of onsite USTs, RWQCB requirements stipulate that the release should be reported to the RWQCB, which would then determine what, if any, additional investigation/remediation should be conducted.

It is our professional opinion that the following steps would need to be conducted to bring the UST issue towards regulatory closure. This methodology would also address other known and potential environmental issues that might pose business environmental risk. Approximate costs and schedule are provided so that you can determine what additional assessment, if any, you choose to undertake in further evaluating this property.

- To satisfy your "due diligence" requirements, a Phase I Environmental Site Assessment (ESA) should be completed prior to purchase. This procedure is specifically designed (and may be required by lending institutions) to evaluate all potential environmental risk associated with the property, which might include issues additional to the USTs and the PG&E soil contamination. The ESA satisfy the following objectives: validate previous historical information on the location of USTs; evaluate local groundwater flow direction to allow for properly siting exploratory boreholes/monitoring wells; evaluate the PG&E soil remediation issue; and identify other sources of potential environmental liability; and satisfy potential lending institutions' requirements. The cost for this task would be approximately $3,000 (depending on the amount of PG&E-related documentation to review) and would take 2 to 3 weeks to complete.

- Following, or in tandem with, the Phase I ESA, an exploratory borehole drilling/sampling investigation should be conducted to confirm and further define the extent, magnitude, and potential source(s) of the contamination. The ultimate objective of this investigation would be to collect sufficient geologic and contaminant data to appropriately site and install groundwater monitoring wells. Depending on the scope of work, the cost to conduct such an investigation would likely range from $5,000 to $7,000, and would require approximately 4 to 6 weeks to complete.

- Following completion of a documentation report that summarizes environmental investigations conducted to date, the report should be submitted to the RWQCB. This is in accordance with state of California requirements for reporting environmental contamination. We recommend submitting with the investigation report a separate technical workplan that lays out a methodology to address the relevant issues. This approach has the added benefit of demonstrating to the regulatory agency your desire to move the site towards regulatory closure and eliminate the environmental liability it currently carries. The reporting of the site contamination should be conducted by the property owner; however, you may wish to be involved. Up to several weeks could be required for the RWQCB to respond. The cost for completing the workplan would likely range from $1,500 to $2,500.

- Our technical report and workplan will likely recommend (and the RWQCB will likely require) installation and regular sampling of onsite groundwater monitoring wells to monitor the distribution and stability of the contaminant plume over time. Based on the limited information available, it is likely that four wells are needed. The cost to install, develop, and survey the wells would likely range from $9,000 to $12,000. One year of quarterly groundwater monitoring and reporting would likely cost $10,000 to $14,000. Groundwater monitoring beyond one year may be required depending on the results of the initial year of monitoring. Well installations would likely require 4 to 6 weeks to complete, and would need to be conducted after the exploratory borehole investigation.

- Should the findings warrant it, corrective action may be required to prevent impacts to offsite receptors (e.g., contaminated groundwater reaching a drinking water well or surface water). The cost and schedule to conduct corrective action cannot be reasonably estimated at this time, but would certainly be in the range of tens of thousands of dollars.

As discussed above, the property owner has indicated that remediation of contaminated soil associated with the adjacent PG&E parcel was completed and that there may be outstanding fiscal and regulatory impacts. Until resolved, this issue should be considered a source of business environmental risk and potential long-term liability. Available technical documents

Table 1
Year 2000 Grab Groundwater Analytical Results
4311-4339 MacArthur Boulevard, Oakland, California[a]

Sample I.D.	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
SB-1	*<50*	**210**	**<676**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<5*
SB-2	*<50*	**340**	***<1,250***	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<5*
SB-3	*<50*	**380**	**580**	*<0.5*	2.5	0.79	4.4	*<5*
SB-4	**4,600**	**12,000**	**46,000**	<5	<5	13	**100**	***<50***
SB-5	*<50*	**390**	***<250***	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<5*
SB-6	**13,000**	**14,000**	***<1,250***	**410**	**1,400**	**420**	**2,900**	***<50***
RBSLs	100	100	100	1	40	30	13	5
Drinking Water Standards	None Published	None Published	None Published	1[b]	40[c]	30[c]	20[c]	5[c]

Notes:

[a] All concentrations are in µg/L, equivalent to parts per billion.
[b] California Primary Maximum Contaminant Level (MCL).
[c] California Secondary MCL – proposed.

All samples were analyzed for HVOCs; no HVOCs were detected.

Sample concentrations in bold are in excess of the RBSL and/or the drinking water standard, or the method reporting limit is above those criteria.

RBSLs = RWQCB Risk-Based Screening Levels
TPHg = Total petroleum hydrocarbons – gasoline range
TPHd = Total petroleum hydrocarbons – diesel range
TPHmo = Total petroleum hydrocarbons – motor oil range

should be reviewed to determine the extent and magnitude of any residual contamination, and to determine the current regulatory status of the case (including contacting the DTSC for its input). This task would be most cost- and time-effectively conducted in concert with a Phase I ESA, as discussed above. We further recommend that you determine (from the property seller and/or their agent) the status of any environmental liens or third-party cost recovery actions, and how that might affect your purchase and ownership of the property.

The total cost to bring the site to regulatory closure cannot be reasonably estimated because there is insufficient information on contaminant source, extent, and magnitude. Based on the preliminary data, it is our professional opinion that, at a minimum, the RWQCB would require the installation and monitoring of three groundwater monitoring wells for a period of one year. Other investigative/remedial requirements may be imposed by the RWQCB (e.g., locate and remove USTs, conduct an additional borehole investigation, install additional wells, implement corrective action).

We understand that your contract period for the property purchase ends in approximately late December 2002, and that two 30-day contract period extensions are available. It is highly unlikely that the site will be brought to regulatory closure within that time frame. Under best conditions, it is likely that the well installations and/or the exploratory borehole investigation could be completed within that time frame which would allow for a more focused assessment of long-term costs associated with the contamination.

We understand that the property is currently being offered by the owner on an "as-is" basis, with potential buyers being responsible for evaluating costs and liability associated with the contamination issues. Once the property is purchased, the new owner will assume part or all of the legal responsibility (and costs) for addressing the contamination. As an alternative to the "as-is" sale, the property owner could undertake part or all of the environmental activities, possibly through an escrow account established solely for environmental contamination issues.

We appreciate the opportunity to provide you with the requested technical services, and we look forward to assisting you as you move forward in evaluating/purchasing this property. At your request, we will provide you with a detailed cost proposal to implement any follow-on work that you would like us to conduct. If you have any questions, please contact the undersigned.

Sincerely,

Bruce M. Rucker

Bruce M. Rucker, R.G., R.E.A.
Project Manager

REGISTERED ENVIRONMENTAL ASSESSOR
BRUCE M. RUCKER
No. 02465
Expires: June 2003
STATE OF CALIFORNIA

Stellar Environmental Solutions

REFERENCES

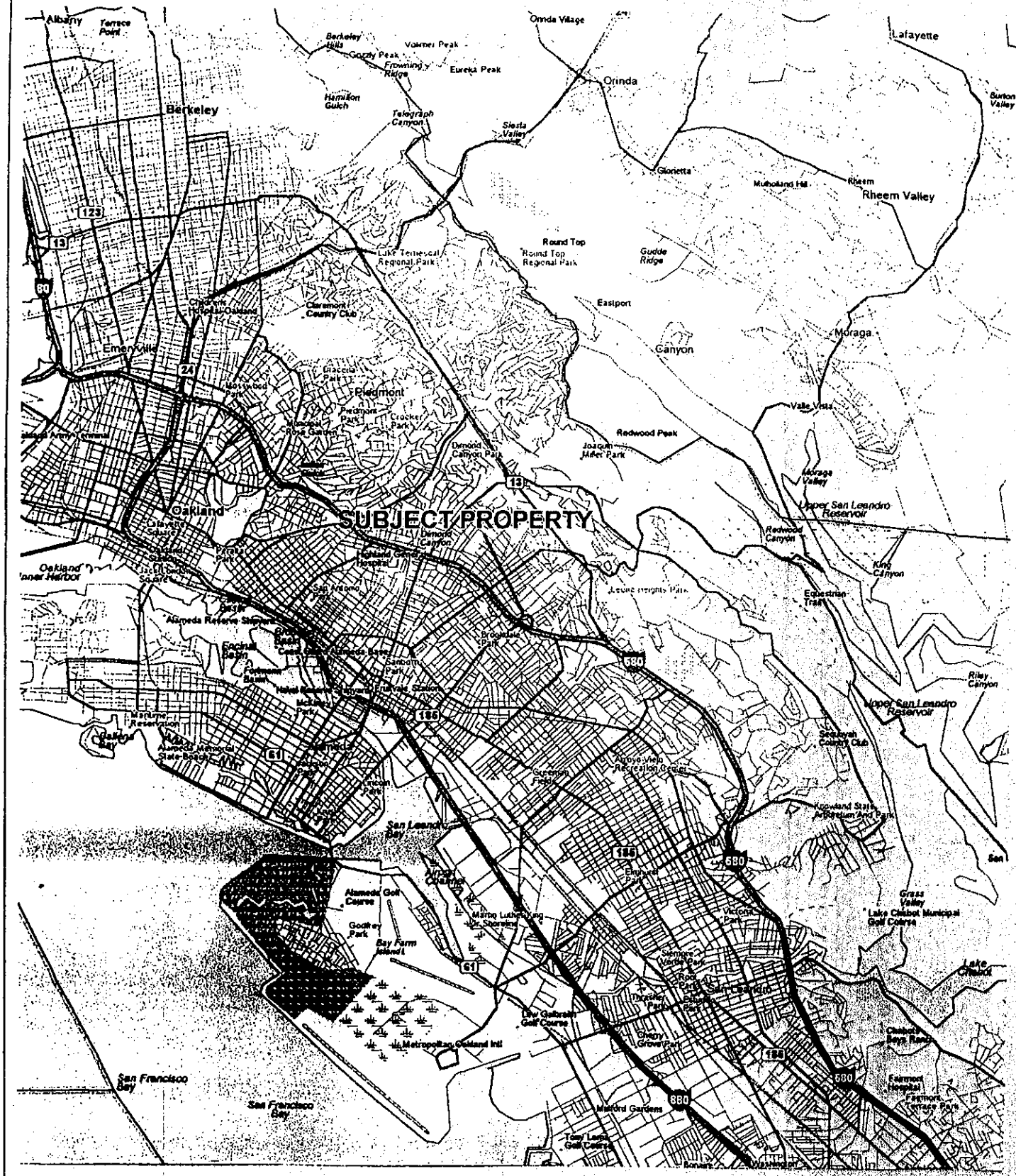
Clearwater Group, Inc., 2000. Figures, tables, and analytical laboratory report for groundwater samples collected at 4311-39 MacArthur Boulevard, Oakland, California.

Clearwater Group, Inc., 1999. 4331-39 MacArthur Blvd, Oakland, California – Magnetometer Survey Results. September 14.

Garcia, Roseanna, 2002. Case Officer, Alameda County Health Care Services Agency. Personal communication to Bruce Rucker of SES. November 12.

Jain, Vibhor, 2002. Representative, City of Oakland Office of Emergency Services. Personal communication to Bruce Rucker of SES. November 8.

FIGURES



N

SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

4311 - 4339 Macarthur Blvd. Oakland, CA	By: MJC	NOVEMBER 2002
	Figure 1	

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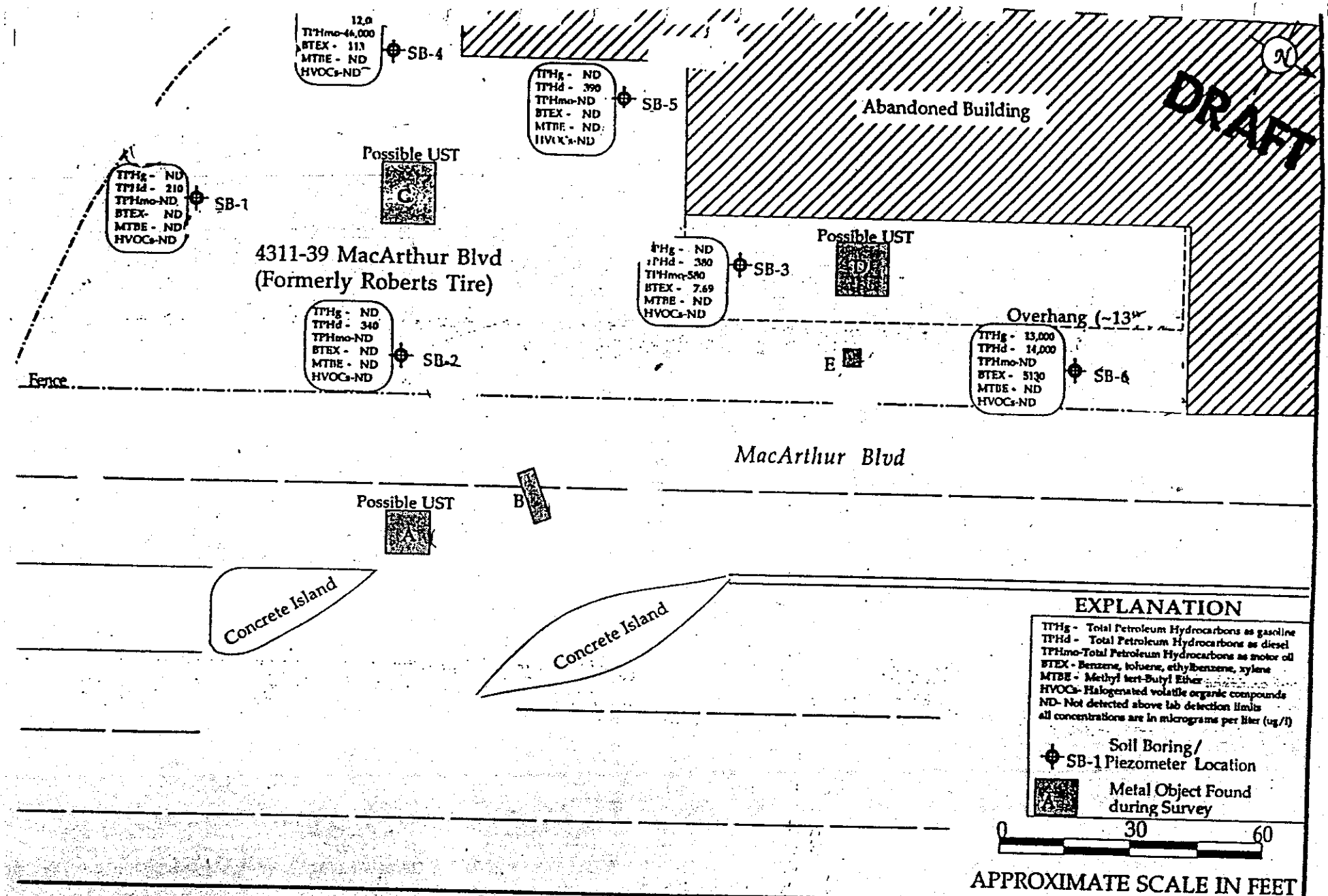
2002-82-01



Contaminant Distribution Map
4311-39 MacArthur Blvd,
Oakland, California

CLEARWATER GROUP, INC.		
Project No. AB046C	Figure Date 11/00	Figure 3

Measurements and Dimensions are Approximate