geo - logic

geotechnical and environmental consulting services 8

1140 - 5th Avenue, Crockett, CA 94525

(510) 787-6867 - Fax (510) 787-1457

June 30, 1999

Mr. Scott O. Seery Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, 2nd Floor, Rm. 250 Alameda, California 94502-6577

RE: Report of Soil Sampling following Additional Excavation Arco Station 15101 Freedom Blvd. San Leandro, California

Dear Mr. Seery:

Enclosed is the second sampling report for the above-referenced site. Should you have any questions regarding this report, please feel free to call me at (510) 787-6867.

Sincerely,

Geo-Logic, Inc.

Joel G. Greger, C.E.G.

Certified Engineering Geologist

License No. EG 1633 Exp. Date 8/31/2000

Joeln _

Attachments: Report

1140 - 5th Avenue, Crockett, CA 94525

(510) 787-6867 - Fax (510) 787-1457

June 30, 1999 Paradiso Job No. 99-444

Mr. Richard Hirsch Service Station Properties 640 S. Winchester Boulevard San Jose, California 95128

> RE: Report of Soil Sampling following Additional Excavation Arco Station 15101 Freedom Boulevard San Leandro, California

Dear Mr. Hirsch:

This report summarizes the results of soil sampling performed by Geo-Logic at the referenced site. All work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB), and Alameda County Environmental Health Services (ACEHS).

The scope of the work performed by Geo-Logic consisted of the following:

Coordination with the regulatory agencies

Collection of five soil samples from beneath of the three removed fuel tanks, and one soil sample from a portion of the tank pit that was extended to accommodate the new tanks

Delivery of soil samples with properly executed Chain of Custody documentation to a certified analytical laboratory

Technical review of data and preparation of this report

SITE HISTORY AND BACKGROUND

The subject site is located at 15101 Freedom Boulevard, between 151st Street and Fairmount Boulevard, just west of the 580 freeway in San Leandro, California. The site is an operating service station. A Site Plan (Figure 1) is attached to this report.

PREVIOUS FIELD ACTIVITIES

Geo-Logic's field work at the site began on May 20, 1999, when three 10,000-gallon gasoline tanks were removed from the Mr. Scott O. Seery of the ACEHS was present during removal of the first two tanks. Mr. Robert Weston of the ACEHS was present during the removal of the third tank and witnessed sampling of the tank pit and dispenser islands.

The three tanks were made of steel, and appeared to be in good condition, except for the middle tank, which had a small hole in the bottom directly beneath the fill port.

The excavation containing the three 10,000-gallon tanks was completed to a depth of about 12 to 14 feet below grade. The lateral dimensions of th3 excavation measured about 30 by 30 The excavated soil was stockpiled on-site pending the results of the laboratory analyses. The three tanks were transported from the site under proper manifest by ECI, Inc., of Richmond, California.

Six soil samples, labeled T1W (12.5'), T2W (14'), T3W (14'), T1E (12.5'), T2E (12.5'), and T3E (14') were collected from the bottom of the excavation beneath each end of the three tanks, at the depths indicated. An additional sample, labeled T1 (13.5), was collected one foot below the first sample at the west end of Tank 1. The locations of the sample points are shown on Figure 1.

Six soil samples, labeled P1 (2.5'), P2 (2.5'), P4 (3'), P5 (2.5'), P6 (2.5'), and P7 (2.5') were collected from beneath each of the dispenser locations, at the depths indicated. One sample, labeled P3 (2.5'), was collected from a product piping trench. The locations of these samples are shown on Figure 1.

The undisturbed samples from the tank pit were collected from bulk material excavated by backhoe. The samples from beneath the dispenser islands and from the product piping trench were collected by hand driving the liner with a mallet. The samples were each placed in clean, two-inch diameter brass tubes, sealed with teflon and plastic caps, and stored in a cooled ice chest for delivery to a certified laboratory.

On May 21, 1999 (the following day), Geo-Logic returned to the site to collect additional samples from the product piping trenches and from the soil stockpile. Mr. Scott O. Seery of the ACEHS witnessed the piping trench sampling. These samples, labeled P8 (3.5'), P9 (3.5'), P10 (3.5'), P11 (3'), P12 (3.5'), P13 (3'), and P14 (3'), were collected from beneath the piping intersections at the depths indicated. A composite soil sample was collected at various points approximately 1 foot below the surface of the stockpiled soil. The samples were handled as described above. The locations of the product piping trench samples are shown on Figure 1.

On June 2, 1999, Geo-Logic returned to the site when the area of the piping trench at sample point P12 (3.5') was overexcavated. One sample, labeled P12 (5'), was collected from the overexcavated area at the depth indicated. The excavated soils were stockpiled onsite. The location of the sample is shown on Figure 1.

Also on June 2, 1999, the area of sample point T1W (13.5') within the tank pit was further excavated to attempt to define the extent of hydrocarbon impacts vertically. Three samples, labeled T1W (16.5'), T1W (19.5'), and T1W (24.5'), were collected at the depths indicated. The samples were collected from bulk material excavated by backhoe and were handled as described above. The excavated soil was placed back in the tank pit and compacted.

The samples were analyzed by Calcoast Analytical in Emeryville, California, and were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline by EPA method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA method 8020. The highest detected concentrations of MTBE (by EPA Method 8020) were confirmed by EPA Method 8260. The composite sample from the soil stockpile was also analyzed for total lead. The results of the soil analyses are summarized in Table 1. This work was summarized in Geo-Logic's report dated June 11, 1999.

FIELD ACTIVITIES

On June 21, 1999, Geo-Logic returned to the site to perform additional sampling following further excavation of the tank pit in preparation for installation of new tanks. Mr. Scott O. Seery of the ACEHS was present during sampling. Five samples, labeled T1E (16'), T2E (16.5'), T2W (17.5'), T3E (17'), and T3W(16'), were collected below previous sample points, at the depths indicated. One sample, labeled A (18'), was taken in the portion of the tank pit that had been extended laterally to the south. The samples were collected from bulk material excavated by backhoe and were handled as described above. The locations of the samples are shown on the attached Figure 1.

SUBSURFACE CONDITIONS

The native soils encountered in the excavations beneath the surficial fill material consisted predominantly of dark grayish brown, hard clayey silt to a depth of approximately 6 to 7 feet below grade, underlain predominantly by green clayey silt to the total depth excavated. The excavated backfill material consisted predominantly of sand with gravel.

ANALYTICAL RESULTS

The samples were analyzed by Calcoast Analytical in Emeryville, California, and were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for TPH as gasoline by EPA method 8015, and BTEX and MTBE by EPA method 8020. The results of the soil analyses are summarized in Table 1. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

DISTRIBUTION

This report should be sent to Mr. Scott Seery of the ACHCSA.

LIMITATIONS

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this study are based on the data obtained from the field and laboratory analyses obtained from a state certified laboratory. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

Should you have any questions regarding this report, please feel free to call me at (510) 787-6867.

JOEL G. GREGER

No. EG 1633

CERTIFIED

ENGINEERING GEOLOGIST

Sincerely,

Geo-Logic

Joél G. Greger, C.E.G.

del 12

Certified Engineering Geologist

License No. EG 1633 Exp. Date 8/31/2000

Attachments: Table 1

Figure 1

Laboratory Analyses and

Chain of Custody documentation

TABLE 1 - SUMMARY OF LABORATORY ANALYSES - SOIL

	TPH			Ethyl-		semp 7
Sample/depth	<u>Gas</u>	Benzene	<u>Toluene</u>	<u>benzene</u>	<u>Xylenes</u>	MTBE
					10001	
	(Colle	ected on	May 20 ar	nd May 21,	1999)	
		4	10	22	19	0.22
T1W (12.5')	1,700		13 34	34	41	0.71/0.58
T1W (13.5')	3,960			19	20	0.28
T1E (12.5')	2,000		12	10	13	0.14
T2W (14')	1,300		6.5	23	26	0.19
T2E (12.5')	1,800		17		6.8	<0.005
T3W (14')	990	579	5.7	6.4	5.1	<0.005
T3E (14')	960	5 🕻 🗸	4.3	5.2		0.009
P1 (2.5)	5.2	0.015	0.009	0.019	0.021	<0.005
P2 (2.5 ¹)	1.4	<0.005	<0.005	0.011	0.020	<0.005
P3 (2.5')	0.76	<0.005	<0.005	<0.005	0.017	<0.005
P4 (3')	0.88	<0.005	<0.005	0.010	0.019	
P5 (2.5')	1.1	<0.005	<0.005	0.016	0.023	<0.005
P6 (2.5')	0.90	<0.005	<0.005	0.022	0.018	<0.005
P7 (2.5')	11	0.037	0.018	0.042	0.044	0.020/0.031
P8 (3.5)	6.1	0.041	0.040	0.052	0.062	0.011
P9 (3.5')	13	0.090	0.077	0.094	0.12	0.052
P10 (3.5')	7.2	0.034	0.044	0.061	0.058	<0.005
P11 (3')	48	0.4	0.27	0.38	0.56	0.28
P12 (3.5')	370	2.	1.4	3.0	2.9	0.93/0.70
P13 (3')	20	0.14	0.096	0.15	0.22	0.17
P14 (3')	2.9	<0.005	<0.005	0.017	0.030	<0.005
P15 (3.5')	13	0.079		0.099	0.16	0.066
Comp S1*	5.7	0.036	0.029	0.037	0.048	<0.005
comp ==						
		(Collect	ted on Jui	ne 2, 1999)	
marr /1/ 51)	390	1.0	0.73	1.1	1.7	0.089
T1W (16.5')		1.1	0.66	0.84	1.3	0.12
T1W (19.5')	340	12	9.7	12	15	0.78/0.55
T1W (24.5')	4,000		0.15	0.23	0.33	0.026
P12 (5')	110	0.16	0.10	0.23	3.23	
Det. Limit/	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
Method Blank						
Mechod Diam	•					

Total lead was detected at a concentration of 42 mg/kg.

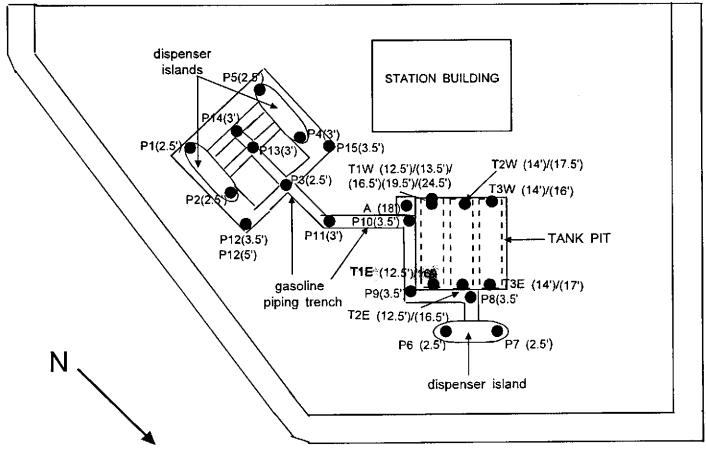
The concentrations of MTBE detected by EPA Method 8020 in T1W(13.5'), T1W(24.5'), P7(2.5'), and P12(3.5') were confirmed by EPA Method 8260.

Results are in milligrams per kilogram (mg/kg).

TABLE 1 - SUMMARY OF LABORATORY ANALYSES - SOIL (Continued)

Sample/depth	TPH <u>Gas</u>			Ethyl- benzene	Xylenes	MTBE
		(Collecte	d on Jun	e 21, 1999)	•	
T1E (16') T2W (17.5') T2E (16.5') T3W (16') T3E (17') A(18')	4,000 1,100 1,400 930 110 0.72	9.1 8.5 7.2 0.80 <0.005	19 9.2 7.7 7.5 0.59 <0.005	21 8.6 8.7 6.4 0.57 <0.005	37 10 9.6 7.3 0.93 <0.005	<0.005 <0.005 <0.005 <0.005 <0.005 <0.005
Det. Limit/ Method Blan	<0.1 k	<0.005	<0.005	<0.005	<0.005	<0.005

Results are in milligrams per kilogram (mg/kg).



Fairmount Blvd.

LEGEND

Sample (depth)

Samples collected on May 20-21 and June 2 and 21, 1999

SCALE: 1" = 30'

ARCO STATION
15101 FREEDOM BLVD.
SAN LEANDRO, CALIFORNIA

Figure No: Date: June 28, 1999

Drawn By: JG/Geo-Logic

Sample Location Map

Freedom Blvd.

CALCOAST ANALYTICAL

Materials Chemistry

Certified by

California Department of Health Services City of Los Angeles, Dept. of Building & Safety

June 24, 1999

Geo - Logic 1140 - 5th Avenue Crockett, CA 94525

Attn: Mr. Joel Greger

Ref: Lab File No. 0621-8A/F-99

1. SAMPLES:

Six (6) soil cores;

Project:

Arco Station, 15101 Freedom Blvd., San Leandro

Project No: 99 - 444

Samples:

A. T1E (16')

B. T2E (16.5') C. T2W (17.5') D. T3E (17')

E. T3W (16')

F. A (18')

Collected: June 21, 1999 / Received: June 21, 1999

2. ANALYSIS REQUIRED:

- A. Total Petroleum Hydrocarbons gasoline (TPH-g) by Gas Chromatography (GC).
- B. Benzene, Toluene, Ethylbenzene and Xylene (BTEX) by GC.
- C. Methyl-tert-butyl ether (MTBE) by GC.

3 METHODS OF ANALYSIS:

- A. EPA Method 8015; SW-846
- B. EPA Method 8020; SW-846
- C. EPA Method 8020: SW-846

COATINGS . BUILDING MATERIALS . HAZARDOUS WASTE SPECTROSCOPY · CHROMATOGRAPHY · MICROSCOPY

P.O. Box 8702 - EMERYVILLE, CA 94662

TELEPHONE (510) 652-2979 FAX (510) 682-3085

4072 WATTS STREET . EMERYVIILE, CA 94608

4. RESULTS:

A. TPH - gasoline

SAMPLE	TPH-G (MG/KG)
A. T1E (16')	4,000
B. T2E (16.5')	1,100
C. T2W (17.5')	1,400
D. T3E (17')	930
E. T3W (16')	110
F. A (18')	0.72

Method Blank/Detection Limit = <0.1mg/kg (none detected) Mean Spike Recovery = 107%

B. BTEX

Sample							
	Benzene	Toluene	Ethylbenzene	Xylene			
A. T1E (16')	32	19	21	37			
B. T2E (16.5')	9.1	9.2	8.6	10			
C. T2W (17.5')	8,5	7.7	8.7	9.6			
D. T3E (17')	7.2	7.5	6.4	7.3			
E. T3W (16')	0.80	0.59	0.57	0.93			
F. A (18')	<0.005(ND)	<0.005(ND)	<0.005(ND)	<0.005(ND)			
Method Blank	<0.005(ND)	<0.005(ND)	<0.005(ND)	<0.005(ND)			
Mean Spike	97%	105%	102%	111%			
Recovery							

C. MTBE

SAMPLE	MTBE (MEZKG) (IIII)
A. T1E (16')	< 0.005 (ND)
B. T2E (16.5')	< 0.005 (ND)
C. T2W (17.5')	< 0.005 (ND)
D. T3E (17')	< 0.005 (ND)
E. T3W (16')	< 0.005 (ND)
F. A (18')	< 0.005 (ND)

Method Blank/Detection Limit = < 0.005 mg/kg (none detected)

Ronald W. Shrewsbury Analytical Chemist

ALL SAMPLES SUBMITTED FOR TESTING WILL BE HELD 30 DAYS FROM REPORT DATE AT WHICH TIME THEY WILL BE RETURNED TO CLIENT OR DESTROYED. CLIENT WILL BE RESPONSIBLE FOR ALL SHIPPING, HANDLING, AND DISPOSAL CHARGES. SAMPLES WILL BE STORED UPON WRITTEN INSTRUCTIONS AND FEE ARRANGEMENTS.

This report was made at the request of and for the use only of the purchaser of said report. Any use of or dissemination of information contained herein or reference to Calcoast Labs, inc. without prior written consent of Calcoast Labs, inc. is strictly prohibited.

Calcoast Analytical, Inc.

Date 6/21/99 Chain of Custody
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