

Reviewed on 10/16/95 Jay Clark

**CET Environmental
Services, Inc.**

5845 Doyle Street, Suite 104
Emeryville, California 94608
Telephone: (510) 652-7001
Fax: (510) 652-7002

August 11, 1995

Ms. Amy Leech
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

**Subject: Second Quarter 1995 Groundwater Monitoring Report
186 East Lewelling Boulevard, San Lorenzo, California
(CET Project No. 3679)**

Dear Ms. Leech:

The following letter report, compiled by CET Environmental Services Inc. (CET), describes field activities and includes laboratory analytical results associated with quarterly groundwater monitoring at the subject site. The groundwater monitoring described below was performed to comply with the requirements of the Alameda County Health Care Services Agency (ACHCSA). These requirements are described in the January 31, 1995 ACHCSA letter to Ms. Wai Yee Young, and Mr. and Mrs. Graffenstatte.

INTRODUCTION

Site Location and Description

The subject property is located at 186 East Lewelling Boulevard in San Lorenzo, California. The location of the site is shown on Plate 1 (Attachment A) and specific site features are shown on Plate 2 (Attachment A). The subject property contains one building which was until recently utilized as an auto repair and maintenance shop but is now vacant. The subject property is enclosed by a security fence made of metal bars. The subject property lies approximately 0.5 miles east of Interstate Highway 880 and approximately 0.25 miles south of Highway 238.

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TVE



Background

On September 5, 1990, three (3) underground storage tanks (USTs) were removed from the subject property. The three USTs included two 4,000-gallon capacity gasoline tanks each, and one 350-gallon capacity waste oil tank. The approximate locations of the former underground tank excavations and former fuel pump island are shown on Plate 2, Attachment A. During tank closure activities, four soil samples were collected from locations under the former gasoline UST and one soil sample was collected from under the former waste oil UST. Analytical results, from samples collected under both the former gasoline USTs, indicated elevated levels of gasoline and aromatic compounds.

Groundwater monitoring wells MW1, MW2, and MW3 were installed on June 14 and 15, 1994 under the direction of CET personnel. The completed monitoring wells were developed by CET field personnel on June 21, 1994. The top of the well casing (TOC) elevations were surveyed relative to mean sea level (msl) on June 21, 1994 by a California-licensed surveyor. On June 23, 1994, CET personnel collected the first set of groundwater samples from the newly completed and developed monitoring wells. Drilling, monitoring well installation activities, and quarterly groundwater monitoring activities for the Second Quarter 1994 are described in the July 26, 1994 CET Report addressed to the ACHCSA. Quarterly groundwater monitoring activities were not performed again until the First Quarter 1995.

Hydrogeologic Setting and Site Hydrogeology

According to the Alameda County Flood Control and Water Conservation District (ACFCWCD) Report entitled *Geohydrology and Groundwater - Quality Overview, East Bay Plain Area, Alameda County, California* (report 205j dated 1988), the subject property is located on alluvial fan deposits of clay, silt, and sand interbedded with coarser sands and minor gravels.

The following description of the subsurface hydrogeologic conditions encountered in monitoring wells MW1, MW2, and MW3 is based on CET's soil boring logs. Asphalt was encountered from the surface to approximately 0.2 feet below the ground surface (bgs) and was underlain by gravel and soil base fill (boreholes MW1 and MW3). The gravel base is underlain by silty fine sand (possibly engineered fill) to approximately 4.0 feet bgs, and silty clay to approximately 6 feet bgs in borehole MW2. These strata are underlain by a zone of clayey fine sand to approximately 14 feet (borehole MW1) and 12 feet bgs (boreholes MW2 and MW3). This zone was underlain by a layer of clean fine sand to a depth of approximately 15 feet bgs in borehole MW1 and to approximately 14 feet bgs in borehole MW2.



A zone of silty clay was encountered in borehole MW1 from approximately 15 feet to 21 feet bgs with a thin stringer of wet fine sand at approximately 18 feet bgs. A zone of clayey fine sand to sandy clay was encountered in borehole MW2 from approximately 14 feet to 21 feet bgs, with a very moist to wet zone beginning at approximately 19 feet bgs. A zone of fine sandy clay was encountered in borehole MW3 from approximately 12 feet to 21 feet bgs with a thin lens of saturated fine sand from approximately 20.5 feet to 21 feet bgs. These zones were underlain by a zone of very stiff to hard fat clay of high plasticity to depths of 22.5 feet bgs in borehole MW1 and 23.5 feet in boreholes MW2 and MW3 (the total depths explored).

During drilling and well installation activities, groundwater was first encountered at approximately 18 feet bgs in borehole MW1, 20 feet bgs in borehole MW2, and 21 feet bgs in borehole MW3. On June 21, 1994, one week following the wells installation, the equilibrated depth to groundwater ranged from approximately 17 feet to 18 feet bgs, which is only approximately one to four feet above the groundwater levels first encountered during drilling and well installation activities. These conditions are indicative of an unconfined or partially confined water bearing zone. The water bearing zone appears to consist of a lens or lenses of clean fine sand, clayey fine sand to sandy clay, and/or silty clay with thin lenses or stringers of saturated clean fine sand to clayey fine sand at depths ranging from approximately 17 feet to 21 feet bgs.

GROUNDWATER MONITORING SUMMARY

Groundwater Elevation Monitoring

Groundwater elevations for all site monitoring wells were measured by CET field personnel on June 1, 1995. Cumulative groundwater elevation data for these wells are presented in Table 1 (Attachment B). Groundwater elevations and contours for data recorded on June 1, 1995 are shown on Plate 3 (Attachment A). The calculated groundwater flow direction on June 1, 1995 was towards the west northwest at an approximate gradient of 0.0062 feet per foot (ft/ft).

Groundwater Sample Collection

On June 1, 1995 a set of groundwater samples was collected from monitoring wells MW1, MW2, and MW3 by CET field personnel. The samples were submitted to a California Department of Health Services (DHS) accredited laboratory in accordance with CET chain-of-custody protocol. Copies of the sample collection records are presented in Attachment C.



Laboratory Analytical Methods

The groundwater samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (TPH-G), and for benzene, toluene, ethyl benzene, and total xylenes (BTEX) using United States Environmental Protection Agency (USEPA) analytical Method Numbers 5030/8015 and 602/8020, respectively.

Groundwater Sample Analytical Results

The cumulative groundwater analytical results for monitoring wells MW1, MW2, and MW3 are shown in Table 2 (Attachment B). Copies of the signed laboratory analytical reports and chain-of-custody records are presented in Attachment D.

Groundwater sample MW1 contained 0.10 mg/L TPH-G, and no BTEX analytes were detected in at or above the test method detection limits. Groundwater sample MW2 contained 49 mg/L TPH-G, 210 $\mu\text{g/L}$ benzene, 1,300 $\mu\text{g/L}$ toluene, 2,900 $\mu\text{g/L}$ ethyl benzene, and 11,000 $\mu\text{g/L}$ total xylenes. Milligrams per liter (mg/L) are equivalent to parts per million (ppm) and micrograms per liter ($\mu\text{g/L}$) are equivalent to parts per billion (ppb). Groundwater sample MW3 contained 42 mg/L TPH-G, 270 $\mu\text{g/L}$ benzene, 230 $\mu\text{g/L}$ toluene, 3,400 $\mu\text{g/L}$ ethyl benzene, and 10,000 $\mu\text{g/L}$ total xylenes.

These sample analytical results are consistent with the results from the Second Quarter 1994 and First Quarter 1995. Except in well MW-1 where TPH-G declined significantly from 3.6 mg/L detected upon its first sampling to less than 0.05 mg/L (not detected) in the First Quarter 1995. There was a slight increase in TPH-G in sample MW1 between the first and second quarters of 1995 (BTEX analytes were not detected). During the current quarter, TPH-G and BTEX analytes increased slightly in sample MW2 compared to the First Quarter 1995. In sample MW3, TPH-G, benzene, and ethyl benzene decreased slightly, toluene increased slightly, and xylenes remained unchanged in MW3 compared to the First Quarter 1995 results.

PLANNED ACTIVITIES

Groundwater monitoring activities, including groundwater level measurements and groundwater sample collection from the site monitoring wells, sample analysis, and reporting will be performed during the third quarter 1995.

It is anticipated that a remedial subsurface investigation will be performed during the third quarter 1995 in accordance with the CET February 27, 1995 Workplan and June 7, 1995 Workplan Addendum. Two letters requesting off-site access to private property, and one letter



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requesting an encroachment permit from Alameda County Public Works, were mailed on August 4, 1995. CET will schedule the field work for the investigation after off-site access has been granted. Limitations and uncertainties regarding this report are presented in Attachment E.



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Alameda County Health Care Services Agency

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Page 6

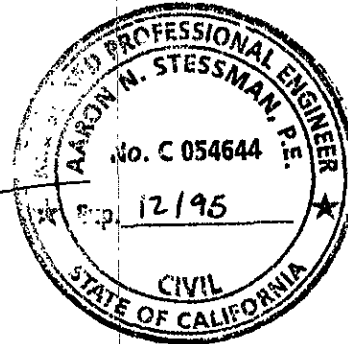
Please contact us if you have any questions or comments regarding the contents of this report at 510-652-7001.

Sincerely,

CET ENVIRONMENTAL SERVICES, INC.

Benjamin Berman
Staff Scientist

Aaron N. Stessman, P.E.
Project Manager



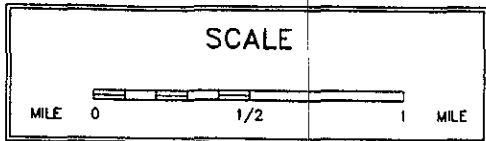
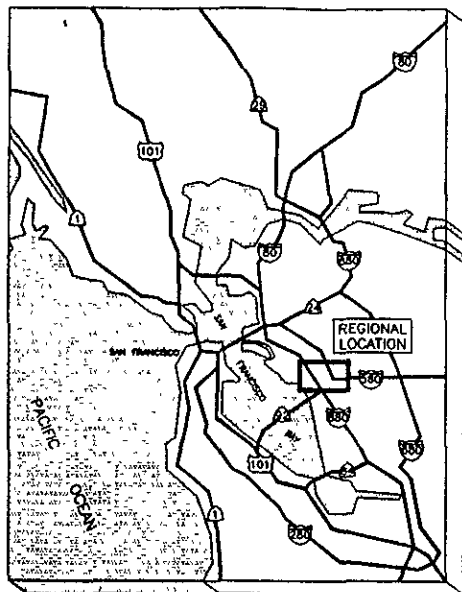
Attachments

cc: Ms. Wai Yee Young
c/o Ms. Eva Young

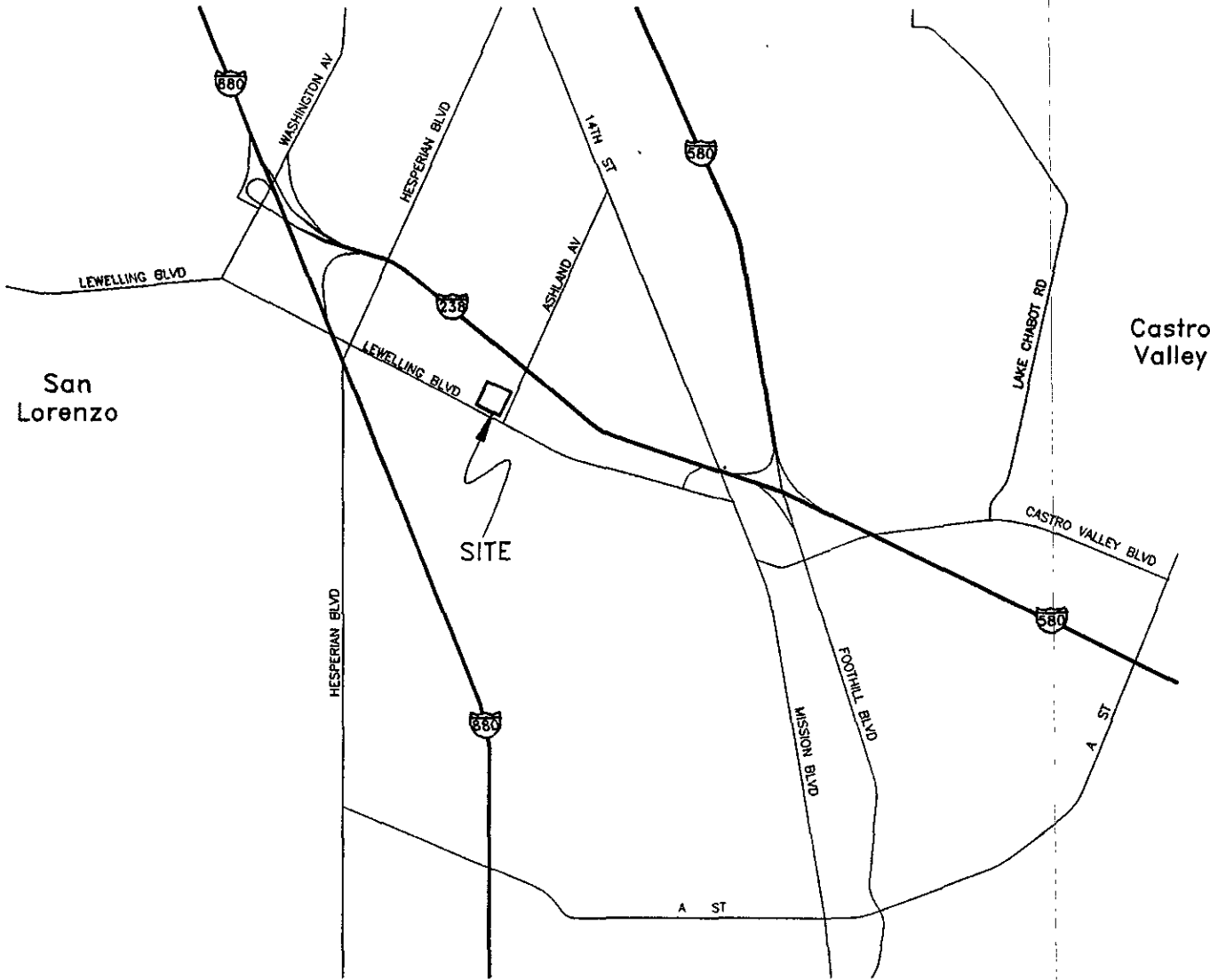


APPENDIX A

Plates



San Leandro



San Lorenzo

Castro Valley



CET Environmental Services, Inc.

SITE LOCATION

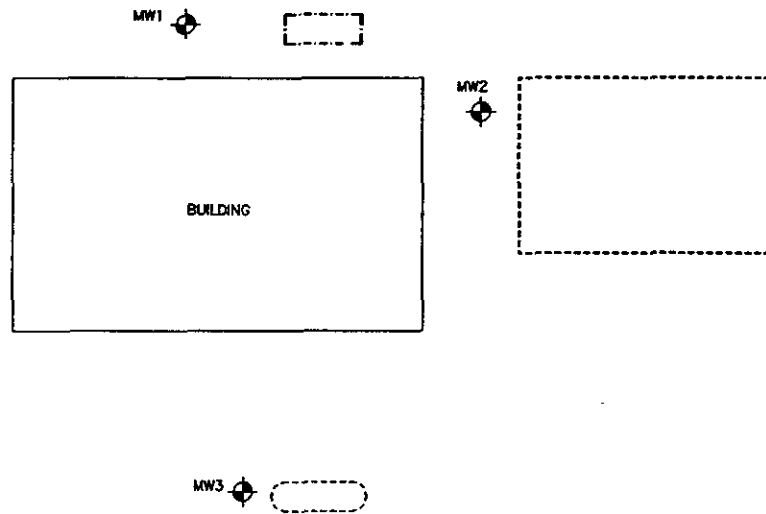
186 E. LEWELLING BLVD
SAN LORENZO, CALIFORNIA

PLATE

1

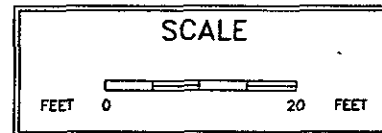
JOB NUMBER	DATE	DRAWING	BY	REVISED
3679	08/95	LOC	LONG	08/08

As







LEWELLING

BLVD



LEGEND

-  GROUNDWATER MONITORING WELL LOCATION
-  FORMER TANK EXCAVATION-GASOLINE (APPROXIMATE)
-  FORMER TANK EXCAVATION-WASTE OIL (APPROXIMATE)
-  FORMER FUEL PUMP ISLAND (APPROXIMATE)



CET Environmental
Services, Inc.

SITE PLAN

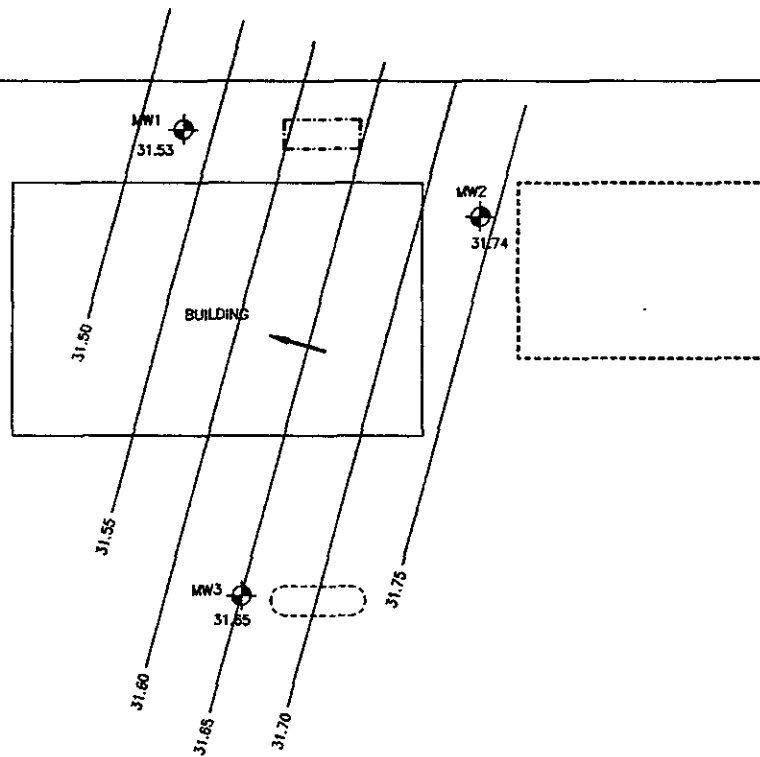
186 E. LEWELLING BLVD
SAN LORENZO, CALIFORNIA

JOB NUMBER	DATE	DRAWING	BY	REVISED
3679	08/95	PLAN	LONG	08/08

PLATE

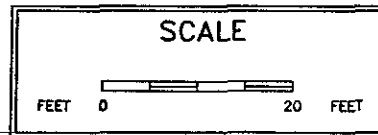
2

4



LEWELLING

BLVD



LEGEND

- GROUNDWATER MONITORING WELL LOCATION
- FORMER TANK EXCAVATION-GASOLINE (APPROXIMATE)
- FORMER TANK EXCAVATION-WASTE OIL (APPROXIMATE)
- FORMER FUEL PUMP ISLAND (APPROXIMATE)
- LINE OF EQUAL GROUNDWATER ELEVATION (FEET)
INTERVAL: 0.05 FT
- DIRECTION OF GROUNDWATER FLOW
GRADIENT = 0.006 FT/FT N75W



CET Environmental Services, Inc.

GROUNDWATER ELEVATIONS AND GRADIENT
MEASURED JUNE 1, 1995

186 E. LEWELLING BLVD
SAN LORENZO, CALIFORNIA

PLATE

3

JOB NUMBER	DATE	DRAWING	BY	REVISED
3679	08/95	GWL6-95	RASCHKE	08/08



APPENDIX B

Tables



**Table 1 - Summary of Groundwater Elevation
Data for Property Located at
186 E. Lewelling Boulevard
San Lorenzo, California
Project No. 3679**

Well I.D.	TOC^a Elevation (ft)	Measurement Date	Groundwater Depth^b (ft)	Groundwater Elevation^c (ft)	Direction of Groundwater Flow
MW1	44.88	06/23/94	17.37	27.51	NW
		03/15/95	13.47	31.41	W-SW
		06/01/95	13.35	31.53	W-NW
MW2	45.26	06/23/94	16.75	28.51	NW
		03/15/95	13.74	31.52	W-SW
		06/01/95	13.52	31.74	W-NW
MW3	45.81	06/23/94	16.55	29.26	NW
		03/15/95	14.43	31.38	W-SW
		06/01/95	14.16	31.65	W-NW

- a. TOC = top of well casing, TOC elevation was determined by a California licensed surveyor relative to a known benchmark referenced to mean sea level (msl).
- b. Groundwater depth is measured from the TOC at the marked survey point.
- c. Groundwater elevation is determined by subtracting the groundwater depth from the TOC elevation.



**Table 2 - Summary of Groundwater Sample Analytical
Results from Monitoring Wells MW1, MW2, & MW3
at Property Located at 186 E. Lewelling Boulevard
San Lorenzo, California
Project No. 3679**

Well Sample/I.D.	Sample Collection Date	TPH-G^a (mg/L)^c	B^b (µg/L)^d	T^b (µg/L)	E^b (µg/L)	X^b (µg/L)
MW1	06/23/94	3.6	<0.5	<0.5	7.2	2.6
	03/15/95	<0.05	<0.5	<0.5	<0.5	<0.5
	06/01/95	0.10	<0.5	<0.5	<0.5	<0.5
MW2	06/23/94	71	310	710	2600	4600
	03/15/95	35	150	1,000	2,100	10,000
	06/01/95	49	210	1,300	2,900	11,000
MW3	06/23/94	93	550	130	3300	7500
	03/15/95	46	330	94	3,800	10,000
	06/01/95	42	270	230	3,400	10,000

- a. TPH-G = Total Petroleum Hydrocarbons as Gasoline
- b. BTEX = Benzene, Toluene, Ethyl Benzene, Total Xylenes
- c. mg/L = Milligrams per Liter or parts per million
- d. µg/L = Micrograms per Liter or parts per billion



APPENDIX C
Sample Collection Records

RECORD OF GROUNDWATER LEVEL MEASUREMENTS

Page of

Date Measured: 6 - 1 - 95

Job No.: 3679

Site Location: YOUNG PROP

Well location map attached? Yes No

Method of Measurement: Electric well sounder,
 Other:

Weather/Visibility: CL

Notes:

Well I.D.	Time (24 hr)	G.W.L. (1/100 ft)	G.W.L. 3x's?	B.O.W. (1/2ft)	Remarks
MW3	13:53	1416	✓		
MW2	13:57	1352	✓		
MW1	14:00	1335	✓		

Measured by (Signature): 

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6 - 1 - 95 Sample I.D.: MW1 Job No.: 3679

Site Location: YOUNG

No. of Containers: 2 / (Check one): Well Samples;
 Duplicates from well ; Travel Blanks; Field Blanks;
 Other (explain)

W.L. (1/100'): 1355 Date: 6/1 Time: B.O.W.(1/2): 235

Method: Electric Well Sounder, Other/

Meters Calibrated: Date: 5/31 By: ALW

Calculated Purge Volume (4 casing volumes): 7 Gallons

Purging Method: Disposable Bailer, Teflon Bailer;
 Whale SuperSub 920 submersible pump; Other/Specify


Time Start Purging (24 hr): 15:10, Product: Y / N, Sheen: Y / N,
 Odor: Y / N, Vapor: ppm / %LEL, Color: CC

Time Stop Purging (24 hr): 15:25, Product: Y / N, Sheen: Y / N,
 Odor: Y / N, Vapor: ppm / %LEL, Color: CC

Time (24 hr)	H ₂ O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
<u>15:15</u>	<u>52</u>	<u>18.3</u>	<u> </u>	<u>1313</u>	<u>905</u>	<u> </u>	<u> </u>
<u>15:21</u>	<u>4</u>	<u>18.1</u>	<u> </u>	<u>1348</u>	<u>930</u>	<u> </u>	<u> </u>
<u>15:25</u>	<u>6</u>	<u>18.1</u>	<u> </u>	<u>1323</u>	<u>912</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Sample Collection Time (24 hr): 15:21

Notes:

Collected By (signature): 

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-1-95 Sample I.D.: MW7 Job No.: 3679

Site Location: YOUNG

No. of Containers: 2 / (Check one): Well Samples;
 Duplicates from well ; Travel Blanks; Field Blanks;
 Other (explain)

W.L. (1/100'): 1352 Date: 6/1 Time: B.O.W.(1/2'): 23.5

Method: Electric Well Sounder; Other/

Meters Calibrated: Date: 5/30 By: AL

Calculated Purge Volume (4 casing volumes): 7 Gallons

Purging Method: Disposable Bailer; Teflon Bailer;
 Whale SuperSub 920 submersible pump; Other/Specify

Time Start Purging (24 hr): 14:40, Product: Y / N, Sheen: Y / N,
 Odor: Y / N, Vapor: ppm / %LEL, Color:

Time Stop Purging (24 hr): , Product: Y / N, Sheen: Y / N,
 Odor: Y / N, Vapor: ppm / %LEL, Color:

Time (24 hr)	H ₂ O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
<u>14:45</u>	<u>2</u>	<u>19.5</u>	<u>7.02</u>	<u>1587</u>	<u>1108</u>	<u> </u>	<u> </u>
<u>14:52</u>	<u>4</u>	<u>19.2</u>	<u>6.92</u>	<u>1527</u>	<u>1056</u>	<u> </u>	<u> </u>
<u>14:59</u>	<u>6</u>	<u>19.1</u>	<u>6.90</u>	<u>1544</u>	<u>1044</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Sample Collection Time (24 hr): 15:00

Notes:

Collected By (signature):

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-1-95 Sample I.D.: MW3 Job No.: 3679

Site Location: YOUNG

No. of Containers: 2 / (Check one): Well Samples;
 Duplicates from well _____; Travel Blanks; Field Blanks;
 Other (explain) _____

W.L. (1/100'): 1416 Date: 6/1 Time: _____ B.O.W.(1/2'): 235

Method: Electric Well Sounder; Other/ _____

Meters Calibrated: _____ Date: 5/20 By: AV

Calculated Purge Volume (4 casing volumes): 6 Gallons

Purging Method: Disposable Bailer; Teflon Bailer;
 Whale SuperSub 920 submersible pump; Other/Specify _____

Time Start Purging (24 hr): 14:15, Product: Y / N, Sheen: Y / N,
 Odor: Y / N, Vapor: _____ ppm / %LEL, Color: CC

Time Stop Purging (24 hr): 14:30, Product: Y / N, Sheen: Y / N,
 Odor: Y / N, Vapor: _____ ppm / %LEL, Color: C/

Time (24 hr)	H ₂ O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
<u>14:30</u>	<u>2</u>	<u>20.5</u>	<u>6.50</u>	<u>1563</u>	<u>1080</u>	_____	_____
<u>14:25</u>	<u>4</u>	<u>21.0</u>	<u>6.41</u>	<u>1556</u>	<u>1081</u>	_____	_____
<u>14:30</u>	<u>6</u>	<u>21.0</u>	<u>6.38</u>	<u>1550</u>	<u>1077</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

Sample Collection Time (24 hr): 14:30

Notes: _____

Collected By (signature): [Signature]



APPENDIX D

Laboratory Analytical Reports

CHROMALAB, INC.

Environmental Services (SDB)

RECEIVED

JUN 22 1995

CET - EMERYVILLE

Submission #: 9506025

June 17, 1995

CET ENVIRONMENTAL SERVICES, INC

Atten: Aaron Stessman

Project: YOUNG PROP
Received: June 2, 1995

Project#: 3679

re: 3 samples for Gasoline and BTEX analysis.

Matrix: WATER

Sampled: June 1, 1995

Run: 7120-J

Analyzed: June 13, 1995

Method: EPA 5030/8015M/602/8020

Spl #	CLIENT SMPL ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
90829	MW2	49	210	1300	2900	11000
	Note:	GAS DET.LIMIT=2.5mg/L, BTEX DET.LIMIT=25ug/L				
90830	MW3	42	270	230	3400	10000
	Note:	GAS DET.LIMIT=5.0mg/L, BTEX DET.LIMIT=50ug/L				

Matrix: WATER


Sampled: June 1, 1995

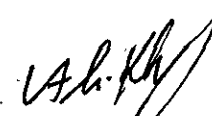
Run: 7120-J

Analyzed: June 13, 1995

Method: EPA 5030/8015M/602/8020

Spl #	CLIENT SMPL ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
90828	MW1	0.10	N.D.	N.D.	N.D.	N.D.
	Reporting Limits	0.05	0.5	0.5	0.5	0.5
	Blank Result	N.D.	N.D.	N.D.	N.D.	N.D.
	Blank Spike Result (%)	99	103	103	103	99


Jack Kelly
Chemist


Ali Kharrazi
Organic Manager

025/90828-90830

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

FORM NO. 2500025 REV. 11/01
EPA 608-001
REV. 06/10/95
MFG. #322240

22246

Chain of Custody

DATE 6/2/95 PAGE 1 OF 1

PROJ MGR	<u>AARON STESSMAN</u>
COMPANY	<u>CETENV</u>
ADDRESS	<u>Alu Way 652-7001</u>
SAMPLERS (SIGNATURE)	(PHONE NO.)
	(FAX NO.)

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	ANALYSIS REPORT													NUMBER OF CONTAINERS							
					TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel, TEPH (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)		PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				
MW1	6/1	15:30	H ₂ O	HCl		✓																			2
MW2	6/1	15:00	"	"		✓																			2
MW3	6/1	14:30	"	"		✓																			2

PROJECT INFORMATION		SAMPLE RECEIPT				
PROJECT NAME <u>YOUNG PROP</u>		TOTAL NO OF CONTAINERS	<u>10</u>			
PROJECT NUMBER <u>3679</u>		HEAD SPACE				
P.O. #		REC'D GOOD CONDITION/COLD	<u>Y</u>			
		CONFORMS TO RECORD	<u>Y</u>			
TAT	STANDARD 5-DAY	24	48	72	OTHER	

RELINQUISHED BY 1		RELINQUISHED BY 2		RELINQUISHED BY 3	
<u>Alu Way</u> (SIGNATURE)	(TIME)		(TIME)		(TIME)
<u>ALEX WOM</u> (PRINTED NAME)	<u>6/2/95</u> (DATE)		(DATE)		(DATE)
<u>CETENV</u> (COMPANY)			(COMPANY)		(COMPANY)
RECEIVED BY 1		RECEIVED BY 2		RECEIVED BY (LABORATORY) 3	
<u>Roger Lohr</u> (SIGNATURE)	<u>9:03</u> (TIME)		(TIME)		(TIME)
<u>KEVIN SUB</u> (PRINTED NAME)	<u>6/2/95</u> (DATE)		(DATE)		(DATE)
<u>CHROMALAB INC</u> (COMPANY)			(COMPANY)		(LAB)

SPECIAL INSTRUCTIONS/COMMENTS:
10 DAY TAT



APPENDIX E
Limitations & Uncertainties



LIMITATIONS AND UNCERTAINTY

This report was prepared in general accordance with the accepted principals and standards of practice of environmental consulting which exists in northern California at the time the investigation was conducted and within the scope of service outlined in our proposal. It should be recognized that the definition and evaluation of surface and subsurface environmental conditions is a difficult and inexact science. Judgements leading to conclusions and recommendations generally are made with an incomplete knowledge of the conditions present. Any opinions presented apply to site conditions existing at the time of the inspection and those reasonably foreseeable; they cannot necessarily apply to site changes made of which the inspector could not observe and has not had the opportunity to evaluate.

Changes in the conditions of the subject property can occur with time, because of the natural processes or the works of man, on the subject site or on adjacent properties. It is further possible that variations and/or changes in the soil and/or groundwater conditions could exist beyond the points explored for this investigation. Also, changes in groundwater conditions could occur sometime in the future due to variations in tides, rainfall, temperature, local or regional water use or other factors. Changes in applicable engineering and construction standards can also occur as the result of legislation or from the broadening of knowledge. Accordingly the data presented in the assessment may be invalidated, wholly or in part, by changes beyond the control of the consultant. If the client wishes to reduce the uncertainty beyond the level associated with this study, CET Environmental Services, Inc. should be notified for additional consultation.

The discussion and recommendations presented in this report are based on information which may include: 1) information and data provided by third party consultants, 2) the exploratory test borings drilled at the site, 3) the observations of field personnel, 4) the results of laboratory analyses, and 5) interpretations of federal, state, and local regulations and/or ordinances. Any conclusions presented are based on the assumption that conditions do not deviate from those observed during the assessment. It is recognized that the assessment is not intended to be a definitive study of environmental conditions at the site. It is understood that other conditions may exist at the site which could not be identified from the limited information discovered within the scope of the assessment.

Chemical analytical data, if included in this report, have been obtained from state certified laboratories. The analytical methods employed by the laboratories were in accordance with procedures suggested by the U. S. Environmental Protection Agency and/or State of California. CET Environmental Services, Inc. is not responsible for laboratory errors in procedures or reporting.

CET has conducted this investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the environmental consulting profession currently practicing under similar conditions in northern California. CET has prepared this report for the client's (and assigned parties) exclusive use for this particular project. No other warranties, expressed or implied, as to the professional advice provided are made.