CET Environmental Services, Inc.

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

LETTER OF TRANSMITTAL

DATE: July 27, 1994

TO: Juliet Shin
Hazardous Materials Specialist
Department of Environmental Health
ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
80 Swan Way, Room 200
Oakland, CA 94621

FROM: Benjamin Berman BB
Staff Scientist

SUBJECT: Groundwater Monitoring Well Installations and
Second Quarter 1994 Groundwater Monitoring Report for the
Property Located at 186 E. Lewelling Boulevard
San Lorenzo, California
(CET Project No. 3602)

Transmitted herewith is a copy of the subject report. Please call me if you have any questions or comments regarding the subject report. Thank You.

3602/WIN.RPT

CET Environmental Services, Inc.

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

July 26, 1994

Ms. Juliet Shin
Hazardous Materials Specialist
Department of Environmental Health
ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
80 Swan Way, Room 200
Oakland, CA 94621

Subject: Groundwater Monitoring Well Installations and Second Quarter 1994 Groundwater Monitoring Report for the Property Located at 186 E. Lewelling Boulevard San Lorenzo, California (CET Project No. 3602)

Dear Ms. Shin:

The following report, compiled by CET Environmental Services, Inc. (CET), describes field activities and includes laboratory analytical results associated with the installation of groundwater monitoring wells at the subject site. The work described below was performed to comply with the requirements of the Alameda County Health Care Services Agency (ACHCSA) and the San Francisco Bay Region of the Regional Water Quality Control Board (RWQCB). All work was performed in accordance with the February 28, 1994 CET Workplan, which was approved by the ACHCSA. The scope of work included drilling three exploratory soil borings with subsequent completion of the borings as groundwater monitoring wells, and the collection and analysis of soil and groundwater samples.

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 site contains one building which is utilized as an auto repair and maintenance shop. The subject property is enclosed by a security fence made of metal bars. The site lies approximately 0.5 miles east of Interstate Highway 880 and approximately 0.25 miles south of Highway 238.

Background

On September 5, 1990, three (3) underground storage tanks (UST's) were removed from the subject property. The three UST's included two gasoline tanks of 4,000-gallon capacity 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 removal activities, four samples were collected from locations under the former gasoline UST's, and one sample was collected from under the former waste oil UST. Analytical results, from samples collected under both the former gasoline UST's, indicated elevated levels of gasoline and aromatic compounds.

Hydrogeologic Setting

According to the Alameda County Flood Control and Water Conservation District (ACFCWCD) report: "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.

Groundwater flow directions were obtained for the following sites during CET's February 23, 1994 file review at the ACHCSA offices:

- 44 Lewelling Boulevard located approximately 0.25 miles west of the subject site. Flow directions were obtained for 23 measurement events beginning August 1987 and ending June 23, 1993 (Applied GeoSystems, Du Pont Environmental Services, Ultramar Inc., RESNA, AEGIS Environmental Inc., and Delta Environmental Consultants Inc.). Flow directions ranged from northwest to southwest, and were predominantly towards the west - northwest during 1993

- 376 Lewelling Boulevard located approximately 0.5 miles west - northwest of the subject site. Flow directions were obtained for 11 measurement events beginning December 5, 1990 and ending September 9, 1993 (GeoStrategies Inc.). Flow directions ranged from northwest to west, and were predominantly towards the west during 1993

- 15599 Hesperian Boulevard located approximately 0.55 miles west northwest of the subject site. Flow directions were obtained for 7 measurement events beginning May 4, 1991 and ending October 28, 1992 (Kaprealian Engineering Inc.). Flow directions ranged from northwest to southwest

- 15526 Hesperian Boulevard located approximately 0.6 miles west - northwest of the subject site. Flow directions were obtained for 6 measurement events beginning June 4, 1992 and ending October 1, 1993 (Groundwater Technology). Flow directions ranged from northwest to west

- 15884 Hesperian Boulevard located approximately 0.6 miles west - southwest of the subject site. Flow directions were obtained for 6 measurement events beginning February 12, 1992 and ending August 19, 1993 (Hydro Environmental Technologies, Inc.). Flow directions ranged from northwest to west

- 15900 Hesperian Boulevard located approximately 0.6 miles west southwest of the subject site. Flow directions were obtained for 13 measurement events beginning December 8, 1989 and ending October 27, 1993 (GeoStrategies Inc., Alton Geoscience, Groundwater Technology, and Weiss Associates). Flow directions ranged from northwest to southwest, and were predominantly towards the west - southwest during 1993.

SITE INVESTIGATION

Drilling Procedures & Monitoring Well Construction/Development

The monitoring well locations are shown on Plate 2, Attachment A. Prior to drilling, the borehole locations were cleared for subsurface utilities by Underground Service Alert (USA), and by Cruz Brothers Locators, a private underground utility locating service. Exploration Geoservices, Inc., of San Jose, California, was contracted to provide drilling services. Exploration Geoservices is a California Licensed C-57 driller. Drilling and monitoring well installation activities began on June 14, 1994 and were completed on June 15, 1994.

A truck-mounted, custom made limited access drilling rig was utilized for all drilling, soil sampling, and monitoring well construction activities. The boreholes were drilled using 8.0-inch outside diameter (O.D.) hollow stem augers. All subsurface equipment was steam-cleaned prior to drilling and between each borehole.

Monitoring wells MW1, MW2, and MW3 were each installed to completed depths of approximately 22.0, 23.0, and 23.0 feet below ground surface (bgs), respectively. Each monitoring well was constructed using 2.0-inch inside

diameter (I.D.) PVC casing and screen. Monitoring well screens were installed from approximately 12 feet to 22 feet bgs (Well MW1), and from approximately 13 to 23 feet bgs (Wells MW2 and MW3) using 0.01-inch slot screen. Lonestar No. 2/12 sand was used as filter pack material for each well. 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 Forrest A. Reed of Greiner, Inc. in Pleasanton, California (Forrest Reed is a California licensed surveyor). Copies of the soil boring logs, well construction diagrams, well development records, and the signed survey report are presented in Attachment C.

Site Geology and Hydrogeology

The following description of the subsurface hydrogeologic conditions encountered in the vicinity of monitoring wells MW1, MW2, and MW3 is based on CET's soil boring logs (Attachment C). 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 6.0 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 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 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 to 21 feet bgs with a thin lens of saturated fine sand from approximately 20.5 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, the equilibrated depth to groundwater ranged from approximately 17 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 to 21 feet bgs.

On June 23, 1994, the direction of groundwater flow was calculated to be approximately due north at an approximate gradient of 0.04 feet per foot. Groundwater contours are shown on Plate 3, Attachment A, and groundwater elevation data is summarized in Table 1, Attachment B.

Soil and Groundwater Sample Collection

Soil samples were collected during drilling operations, using a MOSS continuous sampler. Soil samples were collected at approximate depths of 4.5, 9.5, 14.5, and 19.5 feet bgs. The sampler was advanced along with the hollow stem augers, no hammer was used and therefore no blow counts were obtained. For each sample collection drive, the sampler was lined with clean brass tubes. The sampler and tubes were cleaned before each sample drive, by scrubbing each in a solution of Alconox and potable water, followed by two purified water rinses.

On June 23, 1994, CET personnel collected a set of groundwater samples from the completed and developed monitoring wells. Soil and groundwater samples were transported to a California Department of Health Services (DHS) certified laboratory under CET's chain-of-custody documentation protocols. The bottom three soil samples from each borehole, and each set of groundwater samples were submitted for analysis. Copies of the groundwater sample collection records are presented in Attachment C.

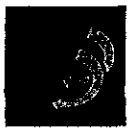
LABORATORY SAMPLE ANALYSES AND ANALYTICAL RESULTS

Copies of the signed laboratory analytical reports and chain-of-custody records are presented in Attachment D.

Soil Sample Analytical Methods

Soil samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-G) and benzene, toluene, ethyl benzene, and total xylenes (BTEX) using U.S. Environmental Protection Agency (EPA) Test Methods 5030/8015 and 8020, respectively.

Soil Sample Analytical results



The 9.5-foot soil sample from borehole MW1 contained 8.7 ug/Kg total xylenes. Micrograms per kilogram (ug/Kg) are equal to parts per billion or ppb. No other analytes were detected at or above the test method detection limits from borehole MW1 soil samples.

The 9.5-foot soil sample from borehole MW2 contained 12 ug/Kg total xylenes, and the MW2 soil sample from 14.5 feet contained 8.1 ug/Kg total xylenes. Soil sample MW2-19.5 (collected at a depth of 19.5 feet bgs) contained the following analytes: 13 ug/Kg benzene, 14 ug/Kg toluene, 120 ug/Kg ethyl benzene, and 50 ug/Kg total xylenes. In addition, 8.5 mg/Kg TPH-G was detected in the MW2-19.5 soil sample. Milligrams per kilogram (mg/Kg) are equal to parts per million or ppm. No other analytes were detected at or above the test method detection limits from borehole MW2 soil samples.

Soil sample MW3-9.5 contained the following analytes: 4.2 mg/Kg TPH-G, 5.1 ug/Kg benzene, 9.3 ug/Kg toluene, 63 ug/Kg ethyl benzene, and 100 ug/Kg total xylenes. Soil sample MW3-14.5 contained the following analytes: 120 mg/Kg TPH-G, 520 ug/Kg ethyl benzene, and 640 ug/Kg total xylenes. The following analytes were detected in soil sample MW3-19.5: 110 mg/Kg TPH-G, 870 ug/Kg ethyl benzene, and 2300 ug/Kg total xylenes. No other analytes were detected at or above the test method detection limits from borehole MW3 soil samples.

Groundwater Sample Analytical Methods

Groundwater samples were analyzed for TPH-G and BTEX using EPA Test Methods 5030/8015, and 602, respectively.

Groundwater Sample Analytical Results

A summary of groundwater sample analytical results is presented in Table 2, Attachment B. The following concentrations of TPH-G were detected in the groundwater samples from the three onsite monitoring wells: 3.6 mg/L (MW1), 71 mg/L (MW2), and 93 mg/L (MW3). Milligrams per liter (mg/L) are equal to parts per million or ppm. Benzene was detected at 310 ug/L in groundwater sample MW2, and 550 ug/L in groundwater sample MW3. Micrograms per liter (ug/L) are equal to parts per billion or ppb. Toluene was detected at 710 ug/L (MW2) and 130 ug/L (MW3). Ethyl benzene was detected at 7.2 ug/L (MW1), 2600 ug/L (MW2), and 3300 ug/L (MW3). Total xylenes were detected at 2.6 ug/L (MW1), 4600 ug/L (MW2), and 7500 ug/L (MW3).

CONCLUSIONS

The following conclusions are based on CET's investigation as outlined in this report:

- The equilibrated depth to groundwater ranged from approximately 17 to 18 feet below the ground surface on June 21, 1994
- The direction of groundwater flow was calculated to be towards the north at a gradient of 0.04 ft/ft on June 23, 1994
- Soil samples collected from borehole MW3 at 14.5 feet and 19.5 feet below the ground surface contained 120 and 110 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G), respectively
- Groundwater samples collected from monitoring wells MW2 and MW3 contained 310 and 550 parts per billion (ppb) benzene, respectively.

The ACHCSA and RWQCB will usually require the remediation of soils with total hydrocarbon concentrations in excess of 100 ppm, this concentration was exceeded in soil samples from borehole MW3 located adjacent to the former fuel pump island. The involved regulatory agencies may also require a soil investigation to define the vertical and horizontal extent of soil contamination (the 'zero line' of contamination).

Concentrations of BTEX in groundwater samples, notably in samples from wells MW2 and MW3, are in excess of State and Federal Maximum Contaminant Levels (MCL's, drinking water standards). The following are the MCL's for BTEX: 1 ug/L for benzene (California), 1,000 ug/L for toluene (Federal), 680 ug/L for ethyl benzene (California) and 1,750 ug/L for total xylenes (California). The ACHCSA and RWQCB may require groundwater remediation and continued groundwater monitoring.

At a minimum, the ACHCSA and RWQCB will require three additional sets of groundwater samples to be collected on a consecutive quarterly schedule, from monitoring wells MW1, MW2, and MW3. The groundwater samples should be analyzed for TPH-G and BTEX using the EPA Test Methods described above. The depth to groundwater should be recorded when groundwater samples are collected. Quarterly monitoring reports should be prepared and submitted to the ACHCSA and the RWQCB.

RECOMMENDATIONS

CET recommends conducting a soil boring investigation to determine the lateral

extent of soil contamination in the vicinity of monitoring well MW3, and to determine the lateral extent of groundwater contamination in the vicinity of monitoring wells MW2 and MW3. A zone of fat, plastic clay was encountered at a depth of approximately 21 feet below the ground surface, it is believed that this clay zone is a natural barrier to the vertical migration of contaminants. However, the thickness of this clay zone should be tested during the soil boring investigation. An investigation would likely involve the drilling of approximately five to eight exploratory soil borings, collection of soil samples and grab groundwater samples, sample analysis, and reporting.

Limitations and uncertainties for this report are in Attachment E.

Please contact us if you have any questions or comments regarding the contents of this report.

Sincerely,

CET Environmental Services, Inc.

Benjamin Berman
Staff Scientist

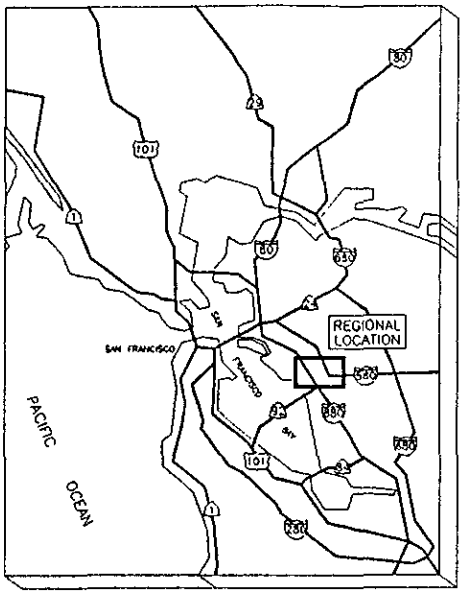
Grover S. Buhr, R.G.
Registered Geologist No. 5596

BB:

Attachments

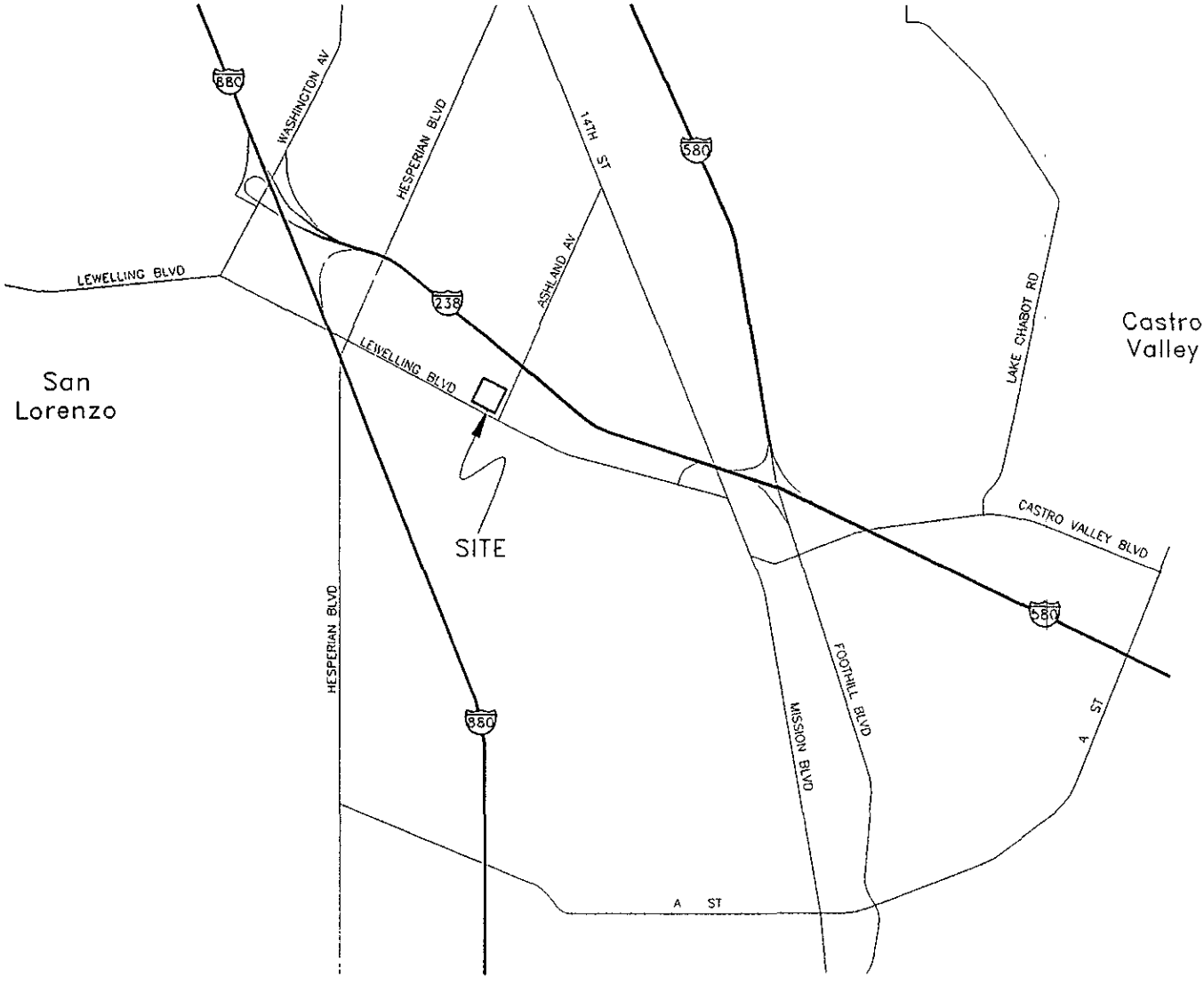
cc: Mr. Carl Graffenstatte
Ms. Eva Young

ATTACHMENT A



SCALE

MILE 0 1/2 1 MILE

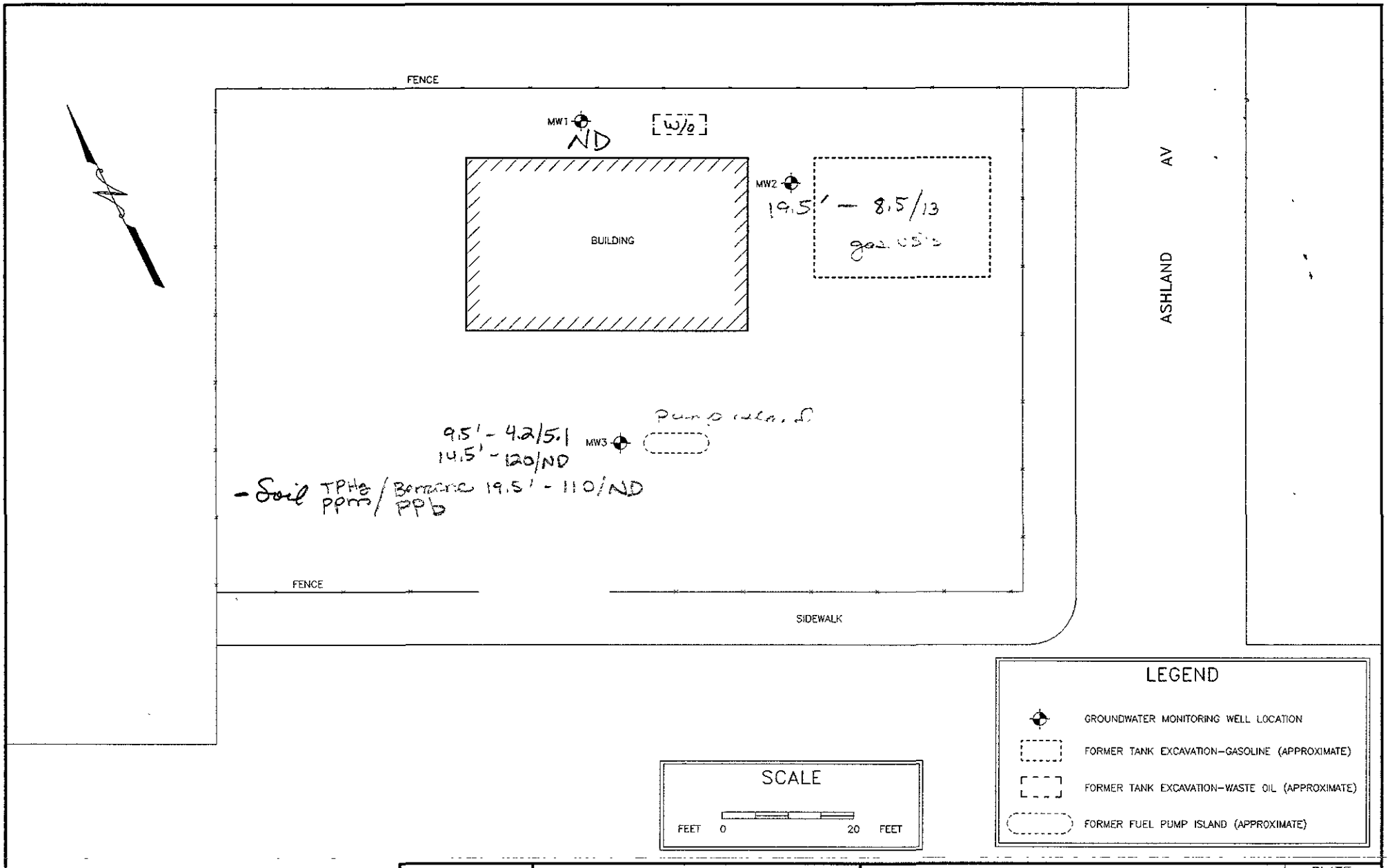


CET Environmental Services, Inc.

SITE LOCATION
GRAFFENSTATTE PROPERTY
186 E. LEWELLING BLVD
SAN LORENZO, CALIFORNIA

PLATE 1

JOB NUMBER	DATE	DRAWING	BY	REVISED
3602	06/94	3602LOC	A WONG	06/29

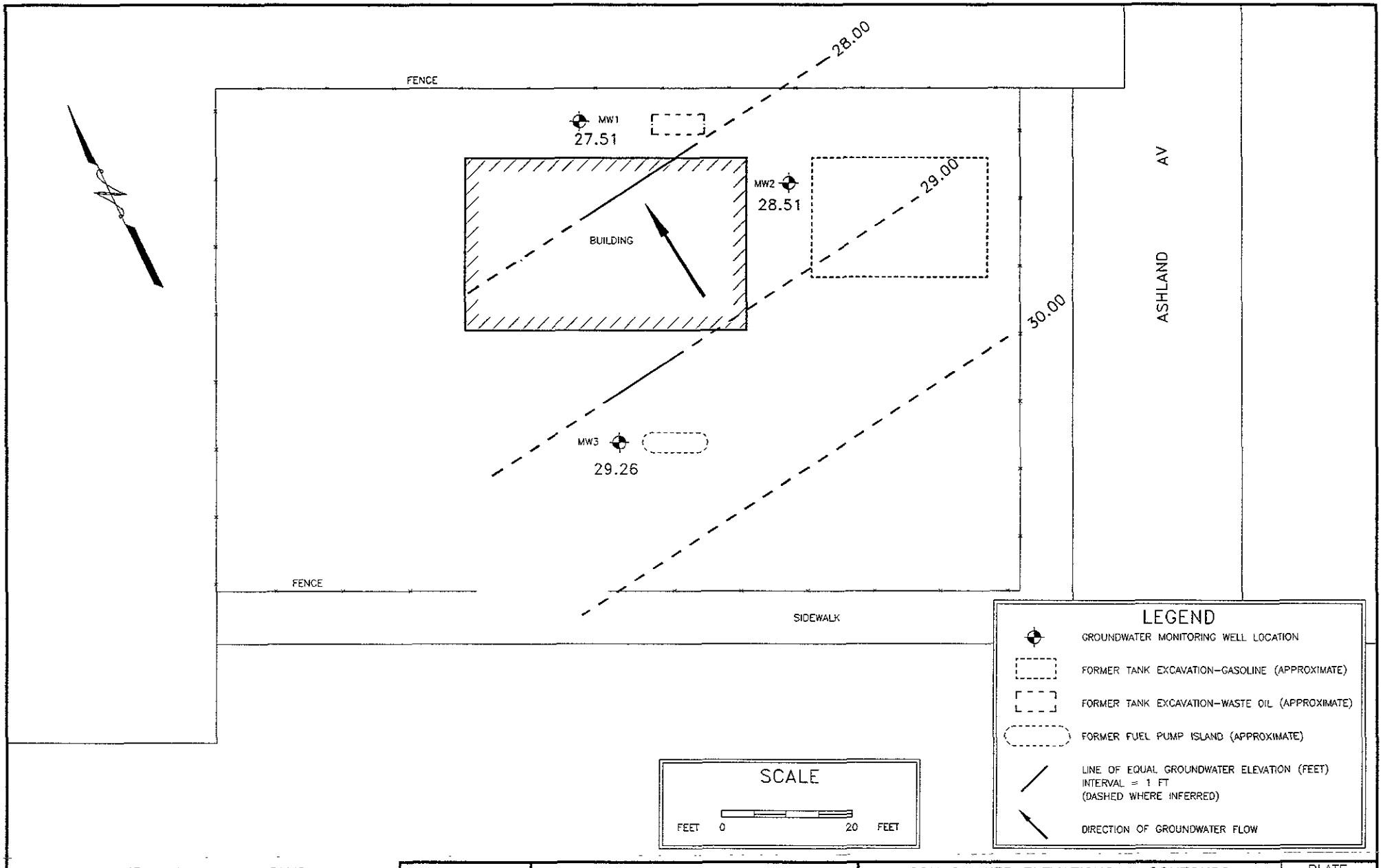


CET Environmental Services, Inc.

SITE PLAN
GRAFFENSTATTE PROPERTY
186 E. LEWELLING BLVD
SAN LORENZO, CALIFORNIA

JOB NUMBER	DATE	DRAWING	BY	REVISED
3602	07/94	PLAN	A WONG	07/14

PLATE 2



CET Environmental Services, Inc.

GOUNDWATER ELEVATIONS & CONTOURS
06/23/94
GRAFFENSTATTE PROPERTY
186 E. LEWELLING BLVD
SAN LORENZO, CALIFORNIA

PLATE 3

JOB NUMBER	DATE	DRAWING	BY	REVISED
3602	06/94	H20	A WONG	7/14

ATTACHMENT B

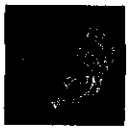


Table 1

Summary of Groundwater Elevation Data for Property Located at 186 E. Lewelling Boulevard San Lorenzo, California Project No. 3602

Well I.D.	TOC[a] Elevation (feet)	Measurement Date	Groundwater Depth[b] (feet)	Groundwater Elevation[c] (feet)
MW1	44.88	06/23/94	17.37	27.51
MW2	45.26	06/23/94	16.75	28.51
MW3	45.81	06/23/94	16.55	29.26

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.

6/23/94

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. 3602

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
MW2	06/23/94	71	310	710	2600	4600
MW3	06/23/94	93	550	130	3300	7500

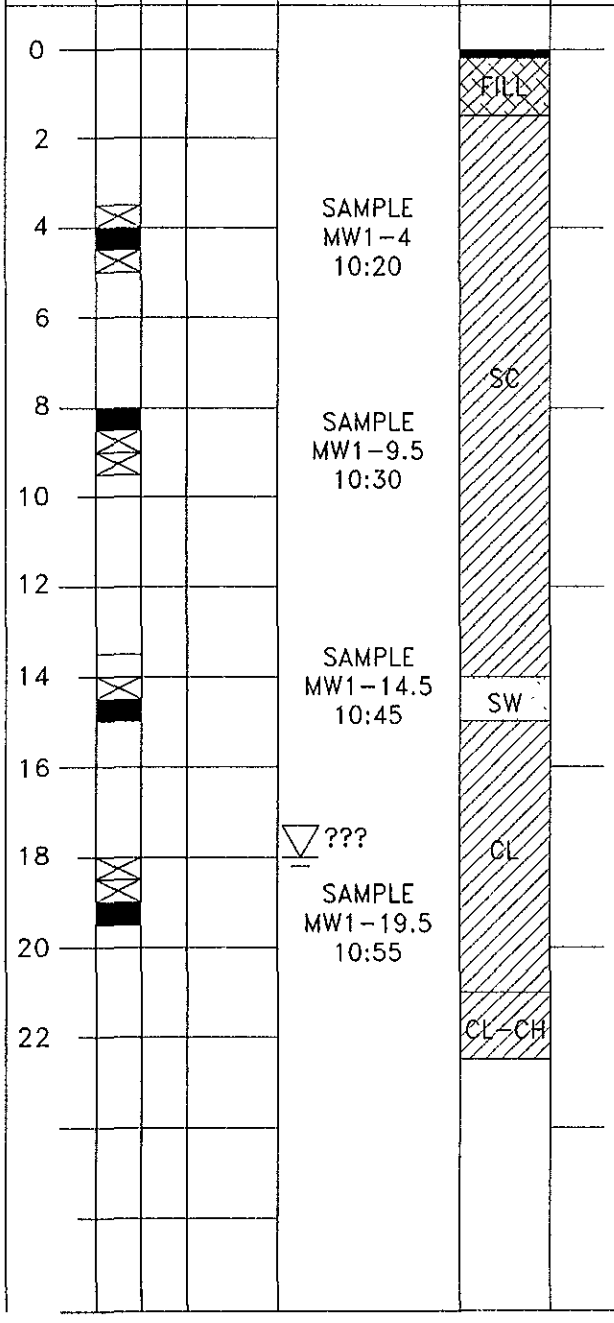
a. TPH-G = Total Petroleum Hydrocarbons as Gasoline
b. BTEX = Benzene, Toluene, Ethyl Benzene, Total Xylenes
c. mg/L = Milligrams per Liter or parts per million
d. μg/L = Micrograms per Liter or parts per billion

ATTACHMENT C

CET Environmental Services, Inc.
5845 Doyle Street, Suite 104
Emeryville, CA 94608
(510) 652-7001

BOREHOLE LOG

PROJECT NAME: GRAFFENSTATTE	PROJECT NUMBER: 3602-206	BOREHOLE NUMBER: MW1
PROJECT LOCATION: 186 E. LEWELLING BOULEVARD, SAN LORENZO, CALIFORNIA		
NOTES: NO HAMMER, NO BLOW COUNTS	LOGGED BY: BERMAN	DATE STARTED 06/15/94 TIME 09:45
*CUSTOM RIG: LIMITED ACCESS	EDITED BY: BERMAN	DATE COMPLETED 06/15/94 TIME: 11:05
	REVIEWED BY:	DATE BACKFILLED. TIME BY
	DRILLING CONTRACTOR: EXPLORATION GEOSERVICES	DRILL RIG TYPE: CUSTOM*
	TOTAL DEPTH [FT] 22.5	DEPTH TO WATER [FT]: DATE: TIME: NUMBER OF SAMPLES: 4
	SAMPLING METHOD: MOSS CONTINUOUS SAMPLER	BOREHOLE DIAMETER [IN]. 8



SOIL DESCRIPTION/CONDITIONS ENCOUNTERED/COMMENTS

0'-0.2'	ASPHALT
0.2'-1.5'	GRAVEL AND SOIL BASE FILL
1.5'-14'	CLAYEY SAND; DARK BROWN (10YR 3/3); 50% TO 70% VERY FINE SAND; MEDIUM DENSE; STIFF; MINOR ROOTLETS BEGINNING AT ~5'; SLIGHTLY DAMP.
14'-15'	SAND; DARK BROWN; ~99% VERY FINE TO FINE SAND; LOOSE TO MEDIUM DENSE; MINOR IRON STAINING; MOIST.
15'-21'	SILTY CLAY; DARK BROWN; MEDIUM PLASTICITY; FIRM TO STIFF; VERY MINOR IRON STAINING; SLIGHTLY DAMP. BEGINNING AT ~18'; VERY MINOR COMPONENT OF VERY FINE SAND; MINOR IRON STAINING; VERY MOIST TO WET.
21'-22.5'	SILTY CLAY; VERY DARK GRAY (5Y 3/1); VERY STIFF TO HARD; MEDIUM TO HIGH PLASTICITY; SLIGHTLY DAMP.
	B. O. H. @ 22.5'

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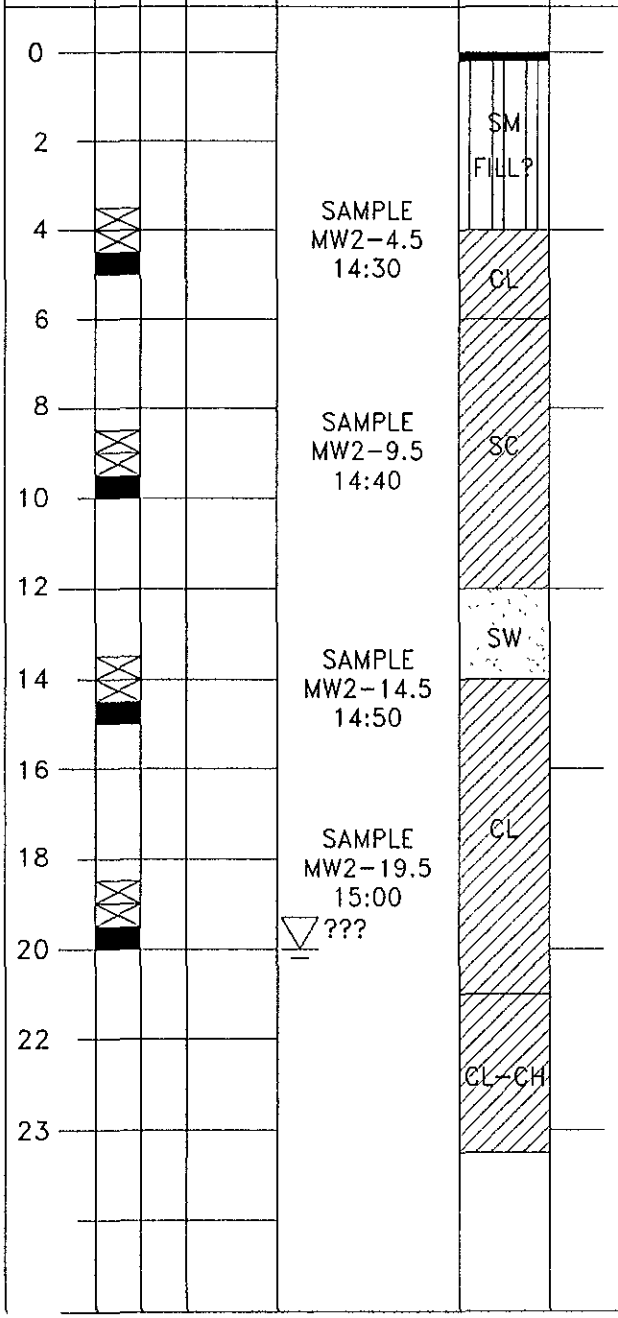
BOREHOLE LOG

PROJECT NAME: GRAFFENSTATTE		PROJECT NUMBER: 3602-206	BOREHOLE NUMBER: MW2
PROJECT LOCATION: 186 E. LEWELLING BOULEVARD, SAN LORENZO, CALIFORNIA			
NOTES: NO HAMMER, NO BLOW COUNTS	LOGGED BY: BERMAN	DATE STARTED: 06/14/94	TIME: 14:25
*CUSTOM RIG: LIMITED ACCESS	EDITED BY: BERMAN	DATE COMPLETED: 06/14/94	TIME: 15:00
	REVIEWED BY:	DATE BACKFILLED:	TIME: BY:
	DRILLING CONTRACTOR: EXPLORATION GEOSERVICES		DRILL RIG TYPE: CUSTOM*
	TOTAL DEPTH [FT]: 23.5	DEPTH TO WATER [FT]: DATE: TIME:	NUMBER OF SAMPLES: 4
	SAMPLING METHOD: MOSS CONTINUOUS SAMPLER		BOREHOLE DIAMETER [IN]: 8



SOIL DESCRIPTION/CONDITIONS ENCOUNTERED/COMMENTS

0'-0.2'	ASPHALT
0.2'-4'	SILTY SAND; VERY DARK BROWN (10YR 3/3); SLIGHTLY DAMP; ~50% TO 70% VERY FINE SAND(ENGINEERED FILL?).
4'-6'	SILTY CLAY; VERY DARK GRAYISH BROWN (2.5Y 3/2); MEDIUM PLASTICITY; SLIGHTLY DAMP.
6'-12'	CLAYEY SAND; DARK BROWN (10YR 3/3); 50% TO 70% VERY FINE SAND; SLIGHTLY DAMP.
12'-14'	SAND; BROWN (10YR 5/3); ~99% FINE SAND; MOIST.
14'-21'	CLAYEY SAND TO SANDY CLAY; DARK BROWN (10YR 3/3); ~20% TO 70% VERY FINE SAND.
	~19', AGED HYDROCARBON DISCOLORING, ODOR.
21'-23.5'	SILTY CLAY; VERY DARK GRAY (5Y 3/1); VERY STIFF TO HARD; MEDIUM TO HIGH PLASTICITY; SLIGHTLY DAMP.
	B. O. H. @ 23.5'

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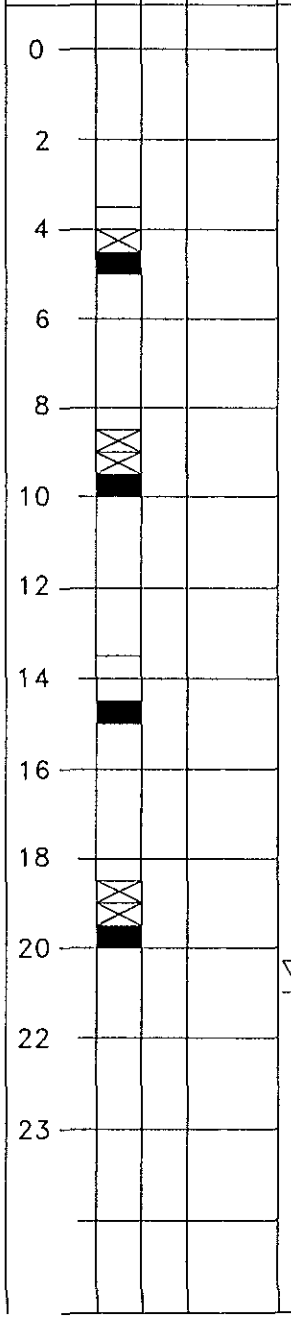
BOREHOLE LOG

PROJECT NAME: GRAFFENSTATTE	PROJECT NUMBER 3602-206	BOREHOLE NUMBER: MW3
PROJECT LOCATION: 186 E. LEWELLING BOULEVARD, SAN LORENZO, CALIFORNIA		
NOTES NO HAMMER, NO BLOW COUNTS	LOGGED BY BERMAN	DATE STARTED 06/14/94 TIME 09:00
*CUSTOM RIG: LIMITED ACCESS	EDITED BY: BERMAN	DATE COMPLETED 06/14/94 TIME 13:15
	REVIEWED BY.	DATE BACKFILLED TIME BY
	DRILLING CONTRACTOR: EXPLORATION GEOSERVICES	DRILL RIG TYPE CUSTOM*
	TOTAL DEPTH [FT] 23.5	DEPTH TO WATER [FT] DATE TIME: NUMBER OF SAMPLES. 4
	SAMPLING METHOD MOSS CONTINUOUS SAMPLER	BOREHOLE DIAMETER [IN]: 8



SOIL DESCRIPTION/CONDITIONS ENCOUNTERED/COMMENTS

0'-0.1'	ASPHALT
0.1'-1.5'	GRAVEL AND SOIL BASE FILL.
1.5'-12'	CLAYEY SAND; BLACK (10YR 2/1); ~60% VERY FINE TO FINE SAND; DAMP; DARK BLUISH-GRAY AGED HYDROCARBON DISCOLORING TO ~4'; HYDROCARBON ODOR CONTINUOUS.
12'-20.5''	SANDY CLAY; BLACK (10YR 2/1); ~20% TO 40% VERY FINE SAND; FIRM MATERIAL; DAMP TO MOIST.
20.5'-21'	SAND; DARK GRAY (5Y 4/1); ~95% VERY FINE SAND; SATURATED.
21'-23.5'	SILTY CLAY; DARK GRAY (5Y 4/1); VERY STIFF TO HARD; MEDIUM TO HIGH PLASTICITY; DAMP.
	B. O. H. @ 23.5'

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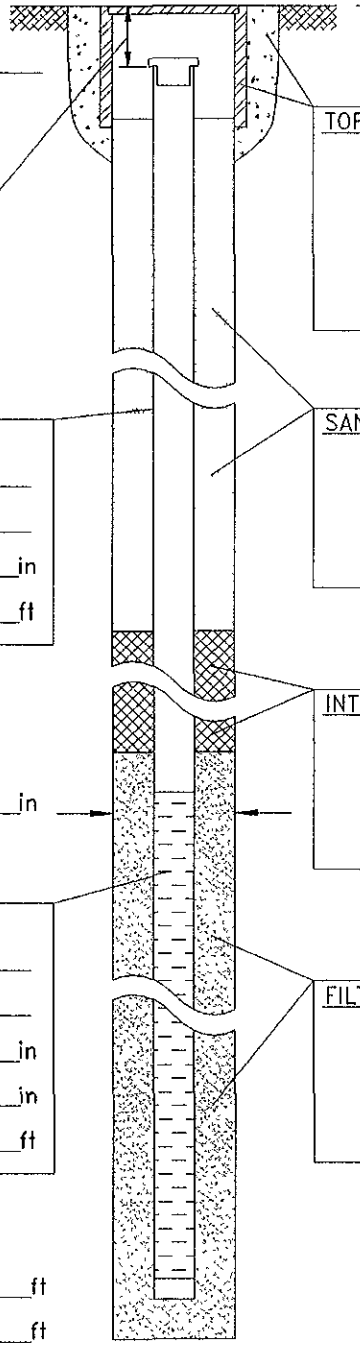
WELL CONSTRUCTION DIAGRAM

PROJECT NAME.	GRAFFENSTATTE	PROJECT NUMBER 3602-206	WELL ID MW1
PROJECT LOCATION.	186 E. LEWELLING BLVD, SAN LORENZO, CALIFORNIA		DATE INSTALLED 06/15/94



TOP OF CASING ELEVATION (rel. to MSL): 44.88 ft

DISTANCE FROM GROUND SURFACE TO TOP OF CASING: 0.67 ft

GROUND SURFACE ELEVATION (rel. to MSL): 45.55 ft

TOP OF CASING ENCLOSURE
- VAULT: CHRISTY TYPE
- MATERIAL: CONCRETE
- INTERVAL: 0 ft to ~1.0 ft

WELL CASING
- MATERIAL: PVC
- DIAMETER: 2.0 in
- INTERVAL: ~0.5 ft to 12.0 ft

SANITARY SEAL
- MATERIAL: NEAT CEMENT
- INTERVAL: ~1.0 ft to 8.0 ft

INTERVAL SEAL
- MATERIAL: BENTONITE PELLETS
- INTERVAL: 8.0 ft to 10.0 ft

BOREHOLE DIAMETER: 8.0 in

WELL SCREEN
- MATERIAL: PVC
- DIAMETER: 2.0 in
- SLOT SIZE: 0.01 in
- INTERVAL: 12.0 ft to 22.0 ft

FILTER PACK
- MATERIAL: SAND, LONESTAR #2/12
- INTERVAL: 10.0 ft to 22.5 ft

B. O. C.: 22.0 ft

B. O. H.: 22.5 ft

CET Environmental Services, Inc.
5845 Doyle Street, Suite 104
Emeryville, CA 94608
(510) 652-7001

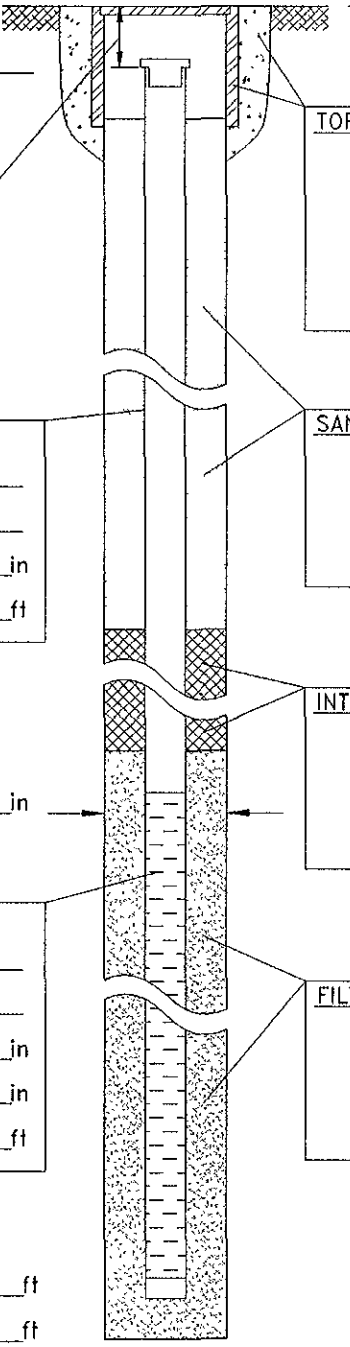
WELL CONSTRUCTION DIAGRAM

PROJECT NAME:	GRAFFENSTATTE	PROJECT NUMBER:	3602-206	WELL ID	MW2
PROJECT LOCATION:	186 E. LEWELLING BLVD, SAN LORENZO, CALIFORNIA			DATE INSTALLED	06/14/94

TOP OF CASING ELEVATION (rel. to MSL): 45.26 ft

DISTANCE FROM GROUND SURFACE TO TOP OF CASING: 0.56 ft

GROUND SURFACE ELEVATION (rel. to MSL): 45.82 ft



TOP OF CASING ENCLOSURE
- VAULT: CHRISTY TYPE
- MATERIAL: CONCRETE
- INTERVAL: 0 ft to ~1.0 ft

SANITARY SEAL
- MATERIAL: NEAT CEMENT
- INTERVAL: ~1.0 ft to 9.0 ft

WELL CASING
- MATERIAL: PVC
- DIAMETER: 2.0 in
- INTERVAL: ~0.5 ft to 13.0 ft

INTERVAL SEAL
- MATERIAL: BENTONITE PELLETS
- INTERVAL: 9.0 ft to 11.0 ft

BOREHOLE DIAMETER: 8.0 in

WELL SCREEN
- MATERIAL: PVC
- DIAMETER: 2.0 in
- SLOT SIZE: 0.01 in
- INTERVAL: 13.0 ft to 23.0 ft

FILTER PACK
- MATERIAL: SAND, LONESTAR #2/12
- INTERVAL: 11.0 ft to 23.5 ft

B. O. C.: 23.0 ft

B. O. H.: 23.5 ft

CET Environmental Services, Inc.
5845 Doyle Street, Suite 104
Emeryville, CA 94608
(510) 652-7001

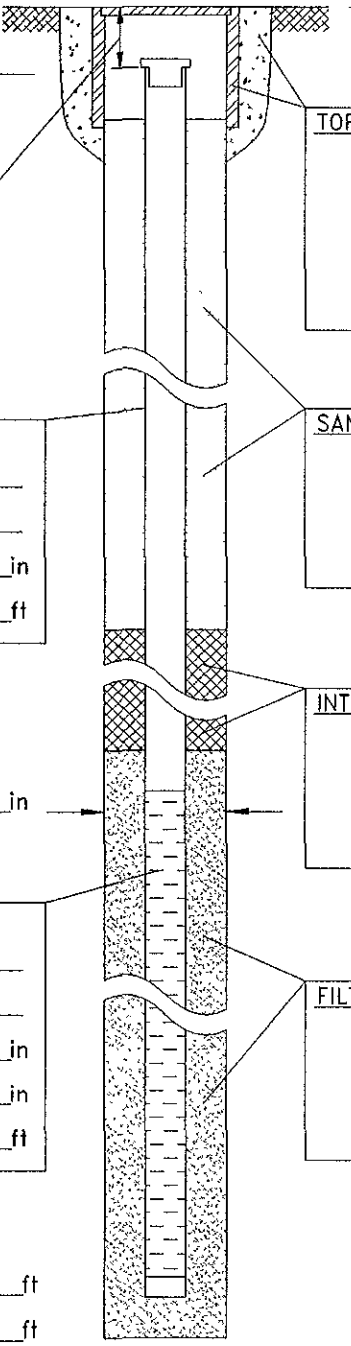
WELL CONSTRUCTION DIAGRAM

PROJECT NAME	GRAFFENSTATTE	PROJECT NUMBER	3602-206	WELL ID	MW3
PROJECT LOCATION.	186 E. LEWELLING BLVD, SAN LORENZO, CALIFORNIA			DATE INSTALLED.	06/14/94

TOP OF CASING ELEVATION (rel. to MSL): 45.80 ft

DISTANCE FROM GROUND SURFACE TO TOP OF CASING: 0.69 ft

GROUND SURFACE ELEVATION (rel. to MSL): 46.49 ft



TOP OF CASING ENCLOSURE
- VAULT: CHRISTY TYPE
- MATERIAL: CONCRETE
- INTERVAL: 0 ft to ~1.0 ft

WELL CASING
- MATERIAL: PVC
- DIAMETER: 2.0 in
- INTERVAL: ~0.5 ft to 13.0 ft

SANITARY SEAL
- MATERIAL: NEAT CEMENT
- INTERVAL: ~1.0 ft to 9.0 ft

INTERVAL SEAL
- MATERIAL: BENTONITE PELLETS
- INTERVAL: 9.0 ft to 11.0 ft

BOREHOLE DIAMETER: 8.0 in

WELL SCREEN
- MATERIAL: PVC
- DIAMETER: 2.0 in
- SLOT SIZE: 0.01 in
- INTERVAL: 13.0 ft to 23.0 ft

FILTER PACK
- MATERIAL: SAND, LONESTAR #2/12
- INTERVAL: 11.0 ft to 23.5 ft

B. O. C.: 23.0 ft

B. O. H.: 23.5 ft

Greiner, Inc.
5890 Stoneridge Drive
Pleasanton, California 94588-2702
(510) 463-2000
FAX: (510) 734-0127

Greiner

June 22, 1994

Job #N1145.68

Mr. Alex Wong
CET Environmental Services, Inc.
5845 Doyle Street, Suite 104
Emeryville, CA 94608

Re: 186 E. Lewelling Boulevard

Dear Alex:

The elevations for the monitoring wells on the subject site are as follows:

MW-1 Rim	45.55
MW-1 PVC	44.88
MW-2 Rim	45.82
MW-2 PVC	45.26
MW-3 Rim	46.49
MW-3 PVC	45.81
Bench Mark	Elev. 46.594
LEW-ASH-1	N.G.V.D. '29, M.S.L.
	1974 N.G.S. 1st ADJ.

A standard Alameda County surveyor bronze disk stamped LEW-ASH-1 1978 in the top center of the north concrete apron of a drop inlet (no curb) on the north side of Lewelling Blvd. at the intersection with Ashland Ave., 24± feet north of the centerline of Lewelling Blvd. and 47± feet east of the centerline of Ashland Ave.

This survey was performed under my supervision on June 21, 1994.

Forrest A. Reed, P.L.S. 6207

WELL DEVELOPMENT RECORD

Date: 6 - 21 - 94 Well I.D.: MW#1 Project No.: 3602

Project Name: GRAFFENSTATTE Project Manager: TERRY CARTER

Site location/address: SAN LORENZO

Pre-development data

W.L. (1/100"): 16.50 /Time: 11:00 B.O.W. (1/2'): 22.5

W.L. method: ✓ electric well sounder, _____ other/_____

Calculated purge volume (minimum 10 casing volumes): 11 gallons

Floating product: Y / (N) (if yes, record thickness here: _____)

Sheen: Y / (N) Odor: (Y) / N Vapor: _____ ppm / % LEL

Water description: ✓ clear, _____ slightly cloudy, _____ moderate sediment (color: _____),

_____ very muddy (color: _____)

Development data

Development method: _____ hand pump, ✓ bailer, _____ other/_____

Development began: date 6 - 21 - 94 time 11:20

	Purge Volume	Time	Temp.	pH	Cond.	Turb.	Yield (GPM)
FIRST:	4	11:40	18.7	7.07	1659	>1000	
SECOND:	8	12:00	18.6	7.00	1562	>1000	
THIRD:	11	12:20	18.6	6.94	1534	>1000	

Development ended: date 6 - 21 - 94 time 12:20

Total water removed during development: 11 gallons

Purged water discharged to; 1 drums, _____ tank truck, _____ other/_____

Post development data

W.L. (1/100"): 16.50 /time: 12:20 B.O.W. (1/2'): 22.5

Floating product: Y / (N) (if yes, record thickness here: _____)

Sheen: Y / (N) Odor: (Y) / N Vapor: _____ ppm / % LEL

Water description: _____clear, _____ slightly cloudy,_____ moderate sediment (color:_____),

✓ very muddy (color: BROWN)

Notes: NEW LOCKS

Developed by (signature): _____

WELLDVRD.PM3

WELL DEVELOPMENT RECORD

Date: 6 - 21 - 94 Well I.D.: MW #2 Project No.: 3602

Project Name: GRAFFENSTATE Project Manager: TERRY CARTER

Site location/address: SAN LORENZO

Pre-development data

W.L. (1/100'): 16.72 /Time: 2:37 B.O.W. (1/2'): 23.5

W.L. method: ____ electric well sounder, ____ other/____

Calculated purge volume (minimum 10 casing volumes): 12 gallons

Floating product: Y / (N) (if yes, record thickness here: ____)

Sheen: Y / (N) Odor: (Y) / N Vapor: ____ ppm / % LEL

Water description: ✓ clear, ____ slightly cloudy, ____ moderate sediment (color: ____),

____ very muddy (color: ____)

Development data

Development method: ____ hand pump, ✓ bailer, ____ other/____

Development began: date ____ - ____ - ____ time ____

	Purge Volume	Time	Temp.	pH	Cond.	Turb.	Yield (GPM)
FIRST:	4	2:54	20.0	7.10	1795	>1000	
SECOND:	8	3:09	19.7	7.14	1756	>1000	
THIRD:	12	3:22	19.6	7.19	1664	>1000	

Development ended: date 6 - 21 - 94 time 3:22

Total water removed during development: 12 gallons

Purged water discharged to; 1 drums, ____ tank truck, ____ other/____

Post development data

W.L. (1/100'): 17.06 /time: 3:25 B.O.W. (1/2'): 23.5

Floating product: Y / (N) (if yes, record thickness here: ____)

Sheen: Y / (N) Odor: (Y) / N Vapor: ____ ppm / % LEL

Water description: ____clear, ____ slightly cloudy, ____ moderate sediment (color: ____),

✓ very muddy (color: BROWN)

Notes: NEW LOCKS, BOX TODAY TO CLOSE

Developed by (signature): [signature]

WELLDVRD.PM3

WELL DEVELOPMENT RECORD

Date: 6 - 21 - 94 Well I.D.: MW #3 Project No.: 3602

Project Name: GRAFFENSTATTE Project Manager: TERRY CARTER

Site location/address: SAN LORENZO

Pre-development data

W.L. (1/100'): 17.32 /Time: 12:37 B.O.W. (1/2'): 23.5

W.L. method: ✓ electric well sounder, ____ other/____

Calculated purge volume (minimum 10 casing volumes): 11 gallons

Floating product: Y / (N) (if yes, record thickness here: ____)

Sheen: Y / (N) Odor: (Y) / N Vapor: ____ ppm / % LEL

Water description: ____ clear, ✓ slightly cloudy, ____ moderate sediment (color: ____),

____ very muddy (color: ____)

Development data

Development method: ____ hand pump, ✓ bailer, ____ other/____

Development began: date 6 - 21 - 94 time 12:47

	Purge Volume	Time	Temp.	pH	Cond.	Turb.	Yield (GPM)
FIRST:	4	1:43	21.4	7.08	1518	>1000	
SECOND:	8	1:58	21.0	7.13	1648	>1000	
THIRD:	11	2:12	21.1	7.04	1622	>1000	

Development ended: date 6 - 21 - 94 time 2:12

Total water removed during development: 11 gallons

Purged water discharged to; ✓ drums, ____ tank truck, ____ other/____

Post development data

W.L. (1/100'): 17.59 /time: 2:14 B.O.W. (1/2'): 23.5

Floating product: Y / (N) (if yes, record thickness here: ____)

Sheen: Y / (N) Odor: (Y) / N Vapor: ____ ppm / % LEL

Water description: ____ clear, ____ slightly cloudy, ____ moderate sediment (color: ____),

✓ very muddy (color: BROWN)

Notes: NEW LOCKS

Developed by (signature): [signature]

WELLDVRD.PM3

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-23-94 Sample I.D.: MW1 Job No.: 3602

Site Location: San Lorenzo

No. of Containers: 2 /(check one): ✓ Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 16.55 Time: 11:20 B.O.W.(1/2'): 22.5

Method: ✓ Electric Well Sounder; ___Other/_____

Meters calibrated: (Y) / N Well Loc. Map: (Y) / N

Calculated Purge Volume (4 casing volumes): 5 gallons

Purging Method: ✓ Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 12:45, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor:____ ppm / %LEL
Turbidity: heavy, Color: brown

Time Stop Purging (24 hr): 13:05, Product: Y / N
Sheen: Y / N, Odor: Y / N, Vapor:____ ppm / %LEL
Turbidity:_____, Color:_____

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
12:50	19.8	6.79	1596	2	>1000
12:55	19.7	6.79	1595	4	>1000
13:00	20.0	6.79	1605	5	>1000
:					
:					

Sample Collection Time (24 hr): 13:10

Notes: very slight odor @ start of purge

Collected By (signature): [signature]

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-23-94 Sample I.D.: MW2 Job No.: 3607

Site Location: San Lorenzo

No. of Containers : 2 /(check one): ✓ Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 16.75 Time : 11:30 B.O.W.(1/2'): 23.5

Method: ✓ Electric Well Sounder; ___Other/_____

Meters calibrated: (Y) / N Well Loc. Map: (Y) / N

Calculated Purge Volume (4 casing volumes): 5 gallons

Purging Method: ✓ Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 12:10, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor:____ ppm / %LEL
Turbidity: heavy, Color: brown

Time Stop Purging (24 hr): 12:30, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor:____ ppm / %LEL
Turbidity: heavy, Color: brown

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
12:15	20.0	6.84	1649	2	>1000
12:20	20.2	6.90	1646	4	>1000
12:25	20.5	6.84	1639	5	>1000
:					
:					

Sample Collection Time (24 hr): 12:35

Notes:_____

_____

_____

Collected By (signature): J. Long

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-23-94 Sample I.D.: MW3 Job No.: 3602

Site Location: San Lorenzo

No. of Containers: 2 /(check one): ✓ Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 17.37 Time: 11:15 B.O.W.(1/2'): 23.5

Method: ✓ Electric Well Sounder; ___Other/_____

Meters calibrated: (Y)/ N Well Loc. Map: (Y)/ N

Calculated Purge Volume (4 casing volumes): 5 gallons

Purging Method: ✓ Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 11:35, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor: — ppm / %LEL
Turbidity: heavy, Color: brown

Time Stop Purging (24 hr): 11:55, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor: — ppm / %LEL
Turbidity: heavy, Color: gray/brown

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
11:40	21.1	6.74	1558	2	>1000
11:45	20.7	6.78	1568	4	>1000
11:50	21.0	6.78	1560	5	>1000
:					
:					

Sample Collection Time (24 hr): 12:00

Notes:_____

_____

_____

Collected By (signature): J. Long

RECORD OF GROUNDWATER LEVEL MEASUREMENTS

Page 1 of 1

Date Measured: 6 - 23 - 94 Job No.: 3602

Site Location: San Lorenzo

Well location map attached? Yes ✓ No ____

Method of Measurement: ✓ Electric well sounder,

____Other: ____

Weather/Visibility: Clear, HOT!!

Notes: ____

Well I.D.	Time (24 hr)	G.W.L. (1/100 ft)	G.W.L. 3x's?	B.O.W. (1/2ft)	Remarks
MW1	11:20	17.37	✓	22.5	
MW2	11:30	16.75	✓	23.5	
MW3	11:15	[illegible]	✓	23.5	
		16.55			

Measured by (Signature): J. Log

rev.2/13/90

ATTACHMENT D

CHROMALAB, INC.

Environmental Services (SDB)

June 29, 1994 *Submission #:* 9406199

CET ENVIRONMENTAL SERVICES,INC

Atten: Benjamin Berman

Project: 3602-206
Received: June 16, 1994

re: 9 samples for Gasoline and BTEX analysis.

Matrix: SOIL
Sampled: June 14, 1994 *Lab Run#:* 3227 *Analyzed:* June 28, 1994
Method: EPA 5030/8015M/8020

Lab #	SAMPLE ID	Gasoline (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)
54980	MW2-9.5	N.D.	N.D.	N.D.	N.D.	12
54981	MW2-14.5	N.D.	N.D.	N.D.	N.D.	8.1
54982	MW2-19.5	8.5	13	14	120	50
54983	MW3-9.5	4.2	5.1	9.3	63	100
54984	MW3-14.5	120	N.D.	N.D.	520	640
Note: DETECTION LIMIT FOR BENZENE & TOLUENE IS 50ug/Kg						
54985	MW3-19.5	110	N.D.	N.D.	870	2300
Note: DETECTION LIMIT FOR BENZENE & TOLUENE IS 50ug/Kg						
54986	MW1-9.5	N.D.	N.D.	N.D.	N.D.	8.7
54987	MW1-14.5	N.D.	N.D.	N.D.	N.D.	N.D.
54988	MW1-19.5	N.D.	N.D.	N.D.	N.D.	N.D.
DETECTION LIMITS		1.0	5.0	5.0	5.0	5.0
BLANK		N.D.	N.D.	N.D.	N.D.	N.D.
BLANK SPIKE RECOVERY(%)		116	102	104	105	103

ChromaLab, Inc.

Jack Kelly
Chemist

Ali Kharrazi
Organic Manager

JACK 16:24:16

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

DOHS 1094

SUBN #: 9406199
CLIENT: CET
DUE: 06/30/94
22 REF: 16892

Order # 16892
199/54977-54988

Chain of Custody

DATE 6-14-94 PAGE 1 OF 2

results to
PROJ MGR. Benjamin Berman
COMPANY CET Environmental Services
ADDRESS Emeryville office

SAMPLERS (SIGNATURE) B. Ber
(PHONE NO.) 652-7001

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (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)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
MW2-4.5	6-14-94	14:30	Soil	ice																		Hold			1
MW2-9.5	6-14-94	14:40	Soil	ice		X																			1
MW2-14.5	6-14-94	14:50	Soil	ice		X																			1
MW2-19.5	6-14-94	15:00	Soil	ice		X																			1
MW3-4.5	6-14-94	12:45	Soil	ice																		Hold			1
MW3-9.5	6-14-94	12:50	Soil	ice		X																			1
MW3-14.5	6-14-94	13:00	Soil	ice		X																			1
MW3-19.5	6-14-94	13:15	Soil	ice		X																			1

PROJECT INFORMATION

PROJECT NAME:

PROJECT NUMBER: 3602-206

P.O. #:

TAT: STANDARD 5-DAY | 10-Day | 24 | 48 | 72 | OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
10-Day TAT

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

RELINQUISHED BY 1.
(SIGNATURE) B. Ber (TIME)
(PRINTED NAME) Benjamin Berman (DATE)
(COMPANY) CET Env.

RECEIVED BY 1.
(SIGNATURE) 1023 (TIME)
(PRINTED NAME) B Moran 6-16-94 (DATE)
(COMPANY) Chromalab

RELINQUISHED BY 2.
(SIGNATURE) (TIME)
(PRINTED NAME) (DATE)
(COMPANY)

RECEIVED BY 2.
(SIGNATURE) (TIME)
(PRINTED NAME) (DATE)
(COMPANY)

RELINQUISHED BY 3.
(SIGNATURE) (TIME)
(PRINTED NAME) (DATE)
(COMPANY)

RECEIVED BY (LABORATORY) 3
(SIGNATURE) (TIME)
(PRINTED NAME) (DATE)
(LAB)

Order # 16892

9406199

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

DATE 6-15-94 PAGE 2 OF 2

~~REPORT TO~~ Benjamin Berman
COMPANY CET Environmental
ADDRESS Emeryville office

SAMPLERS (SIGNATURE) B. B
(PHONE NO.) 652-7001

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (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)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
MW1-4	6-15-94	10:20	Soil	ice																		Hold			1
MW1-9.5	"	10:30	"	"		X																			1
MW1-14.5	"	10:45	"	"		X																			1
MW1-19.5	"	10:55	"	"		X																			1

PROJECT INFORMATION

PROJECT NAME:
PROJECT NUMBER: 3602-206
P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY	10-Day		24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
10-Day TAT

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3
(SIGNATURE) B. B (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
(PRINTED NAME) Benjamin Berman (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY) CET	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3**
(SIGNATURE) (TIME) 1023	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
(PRINTED NAME) B. Moreno (DATE) 6-16-94	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY) Chromalab	(COMPANY)	(LAB)

CHROMALAB, INC.

Environmental Services (SDB)

July 7, 1994 *Submission #:* 9406306

CET ENVIRONMENTAL SERVICES,INC

Atten: TERRY CARTER

Project: GRAFFEN STATTE *Project#:* 3602-209
Received: June 23, 1994

re: 3 samples for Gasoline and BTEX analysis.

Matrix: WATER
Sampled: June 23, 1994 *Lab Run#:* 3263 *Analyzed:* July 1, 1994
Method: EPA 5030/8015M/602

Lab # SAMPLE ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
55736 MW1	3.6	N.D.	N.D.	7.2	2.6
55737 MW2	71	310	710	2600	4600
55738 MW3	93	550	130	3300	7500
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 (%)	110	94	96	89	98

ChromaLab, Inc.

Jack Kelly
Chemist

Ali Kharrazi
Organic Manager

JACK 16:49:24

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

DOHS 1094

SUBM #: 9406306
CLIENT: CET
DUE: 07/08/94
REF: 17015

Order # 17015/306

Chain of Custody

DATE 6/23/94 PAGE 1 OF 1

PROJ. MGR TERRY CARTER
COMPANY CET ENV
ADDRESS
652-7001
SAMPLERS (SIGNATURE) (PHONE NO.)

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (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)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
MW1	6/23	12:30	H_2O	HCl		✓																			2
MW2	6/23	12:00	H_2O	HCl		✓																			2
MW3	6/23	11:30	H_2O	HCl		✓																			2

PROJECT INFORMATION

PROJECT NAME: GRAFFEN STATTE
PROJECT NUMBER: 3602 - 209
P.O. #

SAMPLE RECEIPT

TOTAL NO OF CONTAINERS	6
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:

10 DAY TAT

RELINQUISHED BY 1	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) 5:00 (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
ALEX WONG 6/23 (PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
CET ENV (COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) 1050 (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
B. Wong 6-24-94 (PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
Chromalab (COMPANY)	(COMPANY)	(LAB)

ATTACHMENT E

LIMITATIONS AND UNCERTAINTY

This report was prepared in general accordance with the accepted standard of practice which exists in northern California at the time the investigation was conducted and within the scope of services 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. It is possible that variations in the soil and/or groundwater conditions could exist beyond the points explored for this investigation. Also changes in 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. 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: 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 analysis by a California Department of Health Services (DHS) accredited laboratory, and 5) interpretations of federal, state, and local regulations and/or ordinances.

Chemical analytical data 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 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.