Delta
Environmental
Consultants, Inc.

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June 30, 2000

Mr. Larry Seto
Alameda County Environmental Health Services
Environmental Protection
1131 harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: *Summary of Site Conditions*
Chevron Station #20-6145 (Former Signal Oil Station #S0800)
800 Center Street
Oakland, California
Delta Project No. DG26-145

Mr. Seto:

At the request of Chevron Products Company, Delta Environmental Consultants Inc./Gettler-Ryan Inc. (GR) has prepared this response to your letter of May 22, 2000, requesting a status report on the air injection biosparge system at the subject site by June 6, 2000. GR requested an extension of the deadline until June 30, 2000, which was accepted by Alameda County Environmental Health Services (ACEHS) in a letter dated June 12, 2000. This site summary was prepared after reviewing files provided by Chevron.

Site Description

The subject site is a vacant lot located on the northeast corner of Center and Eighth Streets in the City of Oakland (Figure 1, Site Location Map, Pacific Environmental Group, Inc. [Pacific]). The subject site is situated in an area of mixed residential, commercial, industrial and transportation uses. Topography in the site vicinity is flat. The nearest surface water body appears to the Oakland Inner Harbor, situated approximately 2,200 feet south of the site.

This site was first developed as a service station in 1932. Four 1,000 gallon underground fuel storage tanks (USTs) and one waste oil UST, apparently installed in 1932 when the station was built, were reportedly removed in 1973 when the station was closed. A hydraulic hoist, two sumps, and the dispenser island were not removed. Locations of pertinent site features are shown on the attached Figure 1, Site Map (Pacific, 5/6/98).

Summary of Previous Environmental Investigations

The information discussed below was obtained from files provided by Chevron. Soil and groundwater analytical data are summarized in attached tables. Locations of the wells and borings are shown on Figure 1, Site Map and Figure 2.

Three subsurface investigations have been performed at the subject site. In 1989, Subsurface Consultants Inc. (Subsurface) drilled five soil borings (1 through 5) to depths between 4.5 and 26 feet below ground surface (bgs). Analytical tables compiled by Subsurface and laboratory reports prepared by Curtis & Tompkins, Ltd. are presented in Enclosure A. Temporary wells were installed in two of these borings. Borings 1 through 4 were installed in the vicinity of the former USTs, the dispenser island, and

sumps along the eastern property boundary. Concentrations up to 14,000 parts per million (ppm) of Total Petroleum Hydrocarbons as diesel (TPHd), up to 31,000 ppm of Total Petroleum Hydrocarbons as gasoline (TPHg) and up to 500 ppm of benzene were detected in soil samples collected from depths up to 15 feet bgs. One sample from 3.5 feet bgs in boring 5, situated near the hydraulic hoist, contained 16,000 ppm oil and grease. Grab groundwater samples were collected from borings 1 and 3. TPHd were not detected in either sample. The sample from boring 3 contained benzene at a concentration of 340 ppb.

In 1995, Groundwater Technology Inc. (GTI) drilled three soil borings (SB-1 through SB-3) to 12 feet bgs and installed four groundwater monitoring wells (MW-1 through MW-4) to 15 feet bgs. A table of analytical results by GTI is included in Enclosure B. Concentrations of TPHg (up to 14,000 ppm) and benzene (up to 120 ppm) were detected in soil samples collected at 5 and 10 feet bgs in borings SB-1, SB-2 and MW-1. Benzene or TPHg were not detected in soil samples from borings SB-3 or MW-2 through MW-4 with the exception of benzene at 0.24 ppm in the sample from boring MW-3 at 10 feet bgs.

In 1996, Pacific advanced nine GeoProbe borings (P-1 through P-9) to depths up to 26 feet bgs and installed three additional groundwater monitoring wells (MW-5 though MW-7) to 15 feet bgs. A table of analytical results prepared by Pacific is included in Enclosure C. Five soil vapor points were installed to depths of 6 feet bgs in 1997. Soil samples from borings P-1, P-7, P-8 and MW-5 through MW-7 did not contain detectable concentrations of gasoline or benzene. Borings P-2 and P-3 contained detectable concentrations of TPHg (up to 4,000 ppm) and benzene (up to 28 ppm). It appears that soil samples from borings P-4, P-5, P-6 and P-9 were not analyzed. Grab groundwater samples were collected from all GeoProbe borings. TPHg (58 to 800,000 ppb) were detected in every grab sample except the one collected from boring P-9. Benzene (460 to 13,000 ppb) was detected in grab samples from borings P-1 through P-7.

In 1997, Pacific installed 5 soil vapor points (SV-1 through SV-5) to depths up to 12 feet bgs. A table of analytical results prepared by Pacific is included in Enclosure D. Petroleum hydrocarbons were detected in soil samples collected from all of the soil borings at concentrations up to 8,000 ppm of TPHg and 52 ppm of benzene. Soil vapor samples from these borings contained TPHg up to 50,000 micrograms per liter (µg/l) and 65 µg/l of benzene. The highest hydrocarbon concentrations were detected in soil vapor samples collected between 6 and 10 feet bgs.

In 1999, Chevron contracted GR to remove the dispenser island, sumps, hydraulic hoist, building foundations, trash enclosure, yard lights and asphalt remaining at the site. This work was initiated in September 1999 by GR. At that time, GR encountered one 1,000 gallon UST in the area of the former fuel UST pit along the western property boundary, adjacent to Center Street. One 550-gallon waste oil UST was encountered in front of the existing station building situated along the eastern property boundary. One buried 55-gallon steel drum, apparently used as some sort of UST, was encountered in the vicinity of the hydraulic hoist inside the station building. At that time, work at the site was discontinued and discussions between Chevron and the property owner over UST ownership were initiated. The USTs were not removed, and compliance samples were not collected. Locations of the USTs are shown on the attached Figure 2, Site Plan.

Quarterly Monitoring

Quarterly monitoring and sampling at the site began in 1995. To date there have been a total of 16 sampling events. A table of analytical results prepared by Blaine Tech Services, Inc. is included in Enclosure E. TPHg and benzene have been consistently detected in wells MW-1 and MW-3. Data from the most recent available sampling event (January 2000) indicate TPHg in wells MW-1 and MW-3 at

concentrations of 7,270 and 1,650 ppb, respectively. Benzene concentrations in these wells were 366 and 496 ppb, respectively. A review of historical data for these wells did not reveal readily apparent decreasing concentration trends. Methyl tert butyl ether (MtBE) has been detected in wells MW-1, MW-3 and MW-4 by EPA Method 8020, but does not appear to have been confirmed by EPA Method 8260. Groundwater samples have not been analyzed for oxygenates other than MtBE. The dissolved hydrocarbon plume appears to be delineated to the east, south and west.

Subsurface Conditions

Soil encountered during the subsurface investigations consisted predominantly of silty sand grading downward in the borings to sand, with lesser amounts of sandy silt and sandy clay. Historical monitoring data indicate that depth to groundwater beneath the site varies from approximately 6 to 11 feet bgs. Groundwater flow has been predominantly toward the southwest, with a relatively flat gradient of approximately 0.002.

Sensitive Receptors

A sensitive receptor survey for this site was not present in the files provided by Chevron, a survey of wells in the site vicinity, or of subsurface utilities in the streets adjacent to the site that might act a preferential pathways were not available.

Discussion

Impacted soil beneath the site appears to be adequately defined. Impacted soil has been encountered under most of the site. Highest concentrations of residual hydrocarbons were encountered in the vicinity of the former UST pit and dispenser island, at depths between 7 and 12 feet bgs (groundwater fluctuation zone). Impacted soil was also encountered in the vicinity of both the hydraulic hoist and the sumps.

The dissolved hydrocarbon plume appears to be mostly defined. Hydrocarbons were not detected in wells MW-2 and MW-4 through MW-7. However, given the strong tendency toward a southwesterly flow direction, there appears to be a gap in the delineation downgradient of the dispenser island. Two groundwater samples collected downgradient of the dispense islands by Pacific in 1996 with GeoProbe borings contained concentrations of TPHg and benzene up to 2,100 and 530 ppb, respectively. In addition, there are no wells upgradient of the former UST pit along Center Street.

Remedial Activities

Pacific has previously proposed installation of a biosparge air injection system at this site. The Work Plan was approved by ACEHS in a letter dated April 19, 2000. Based on observations from the most recent site activities, it appears that this system was never installed. During demolition activities at the site in 1999, GR did not observe any indication that the air sparge piping or sparge points had been installed.

Recommendations

Based on our review of the data provided to GR, we propose the following recommendations:

1. Analyze groundwater samples from the next quarterly monitoring and sampling event for oxygenates (MtBE, TAME, DIPE, ETBE, ethanol, TBA), 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA Method 8260. Analysis of these compounds by EPA Method 8260 will be discontinued if they are not detected. No

Mr. Larry Seto
Alameda County Environmental Health Services
Environmental Protection
June 30, 2000

2. If elevated concentrations of oxygenates are detected by EPA Method 8260, evaluate the need for downgradient delineation of the dissolved plume by installing one offsite well across the intersection of Center and Eighth Streets from the subject site. O.K.

3. Perform a sensitive receptor survey. This should including a review of Department of Water Resources files for wells in the vicinity and a review of the subsurface utilities in the immediate vicinity of the site. O.K.

4. Complete removal of the USTs. During the course of these activities, impacted soil at the site could be excavated to groundwater (approximately 10 feet bgs) to remove the residual hydrocarbon mass that appears to continue to impact groundwater. O.K.

5. Monitor and sample the groundwater for a period of at least one year to evaluate concentration trends following removal of impacted soil. O.K.

Please contact us at 916.631.1300 if you have questions regarding this report.

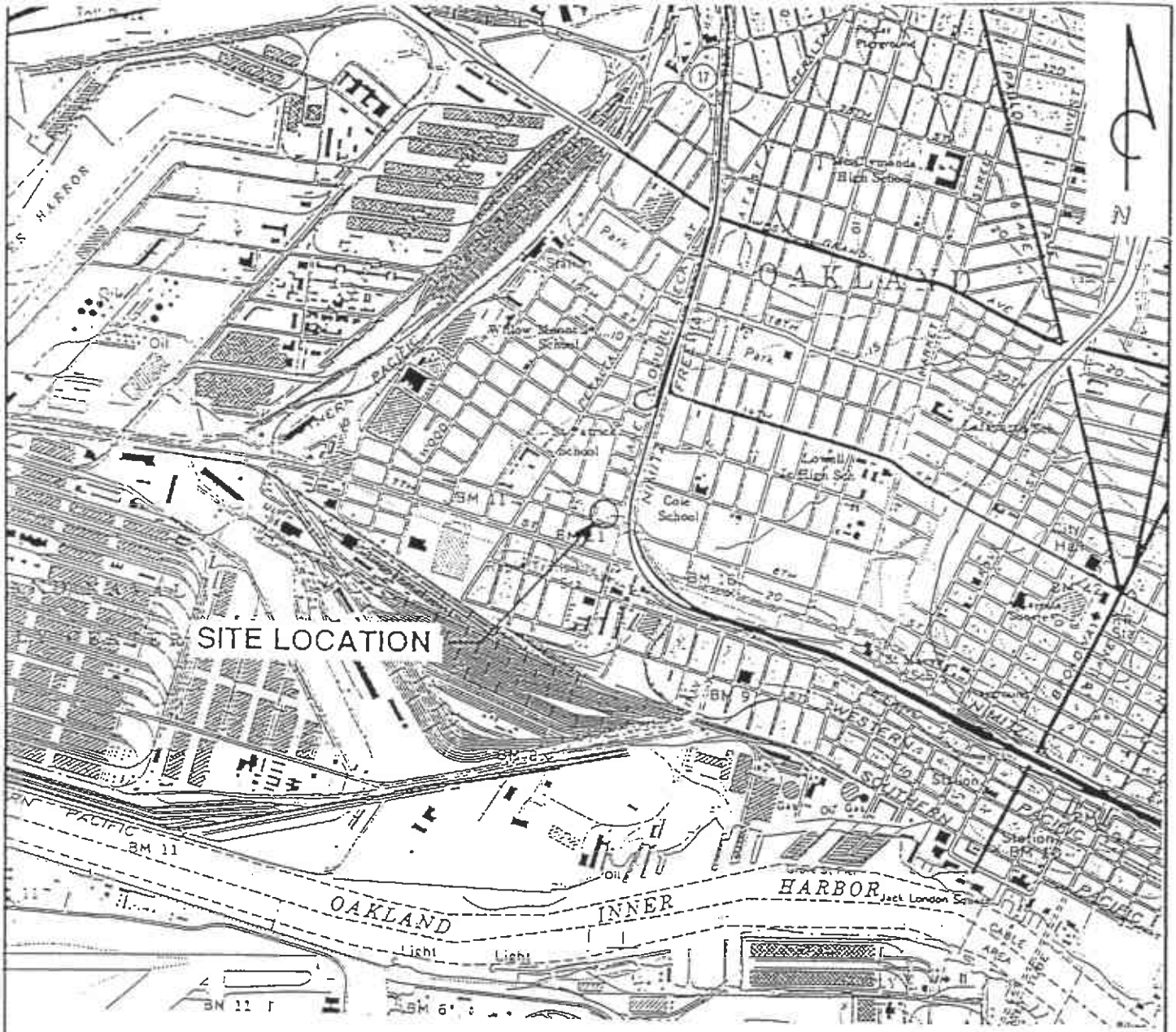
Sincerely,
Gettler-Ryan Inc.

Stephen J. Carter
Senior Geologist
R.G. 5577

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

Greg A Gurss
Sr. Project Manager

Attachments: Figure 1. Site Location Map
Figure 1. Site Map
Figure 2. Site Plan
Tables of Analytical Data

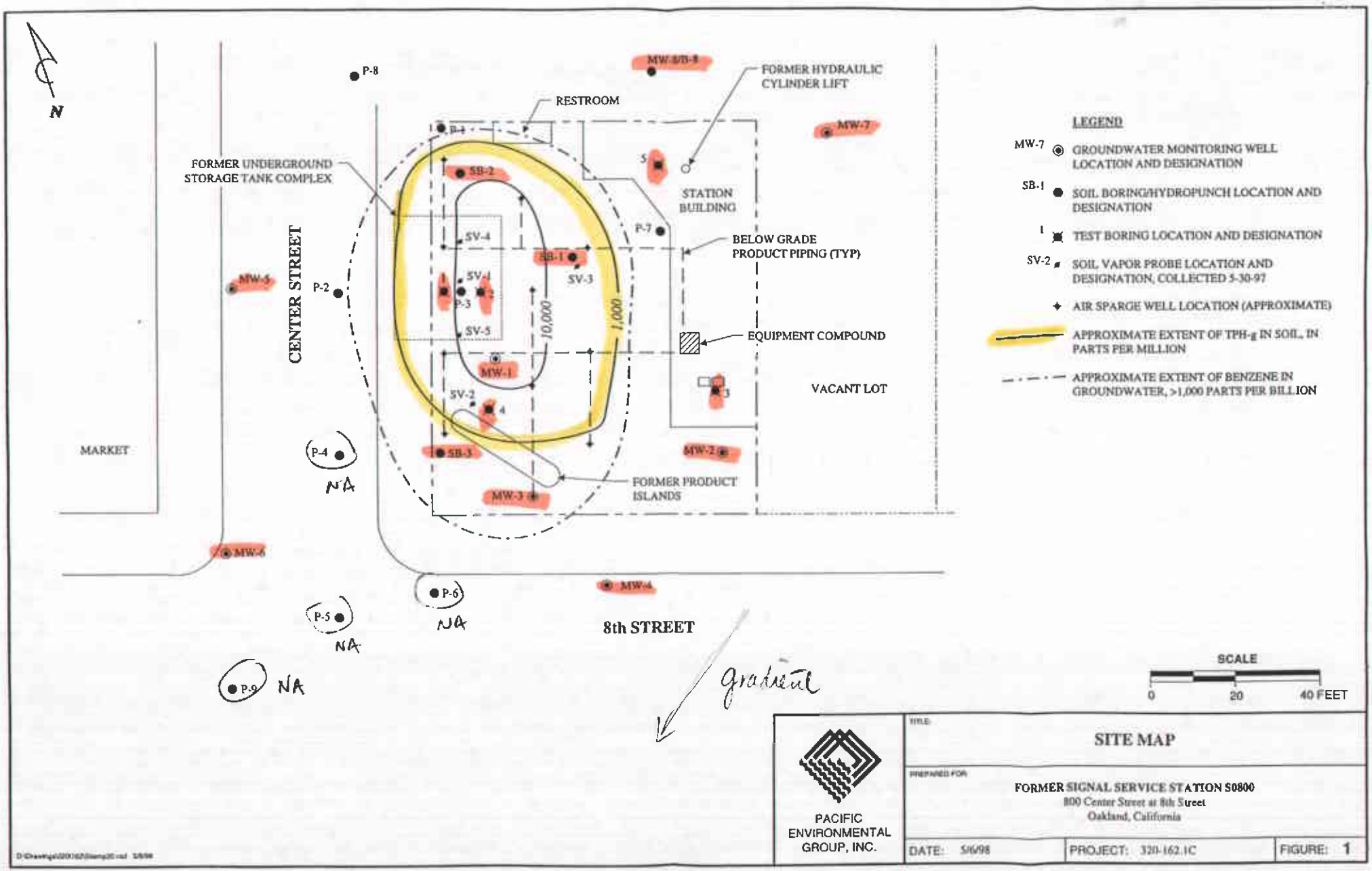


QUADRANGLE LOCATION

REFERENCES:
USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: OAKLAND WEST, CALIFORNIA
DATED: 1959 REVISED: 1980

SCALE IN FEET
2000 0 2000

PACIFIC ENVIRONMENTAL GROUP, INC.	CHEVRON U.S.A. SERVICE STATION S0800 800 Center Street at Eighth Street Oakland, California	FIGURE: 1
	SITE LOCATION MAP	PROJECT: 320-162.1A



PACIFIC ENVIRONMENTAL GROUP, INC.

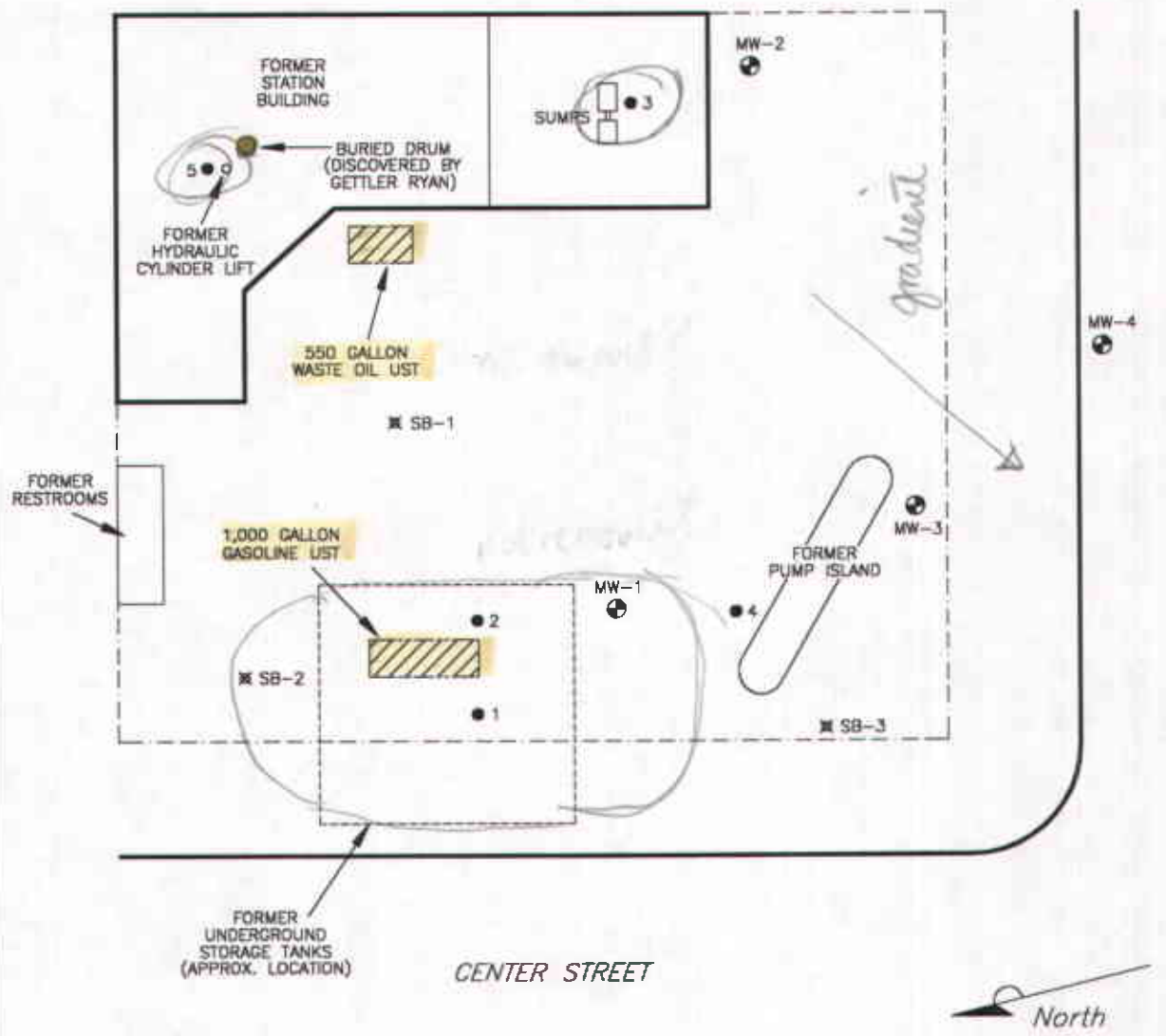
TITLE:

SITE MAP

PREPARED FOR:

FORMER SIGNAL SERVICE STATION S0800
800 Center Street at 8th Street
Oakland, California

DATE: 5/6/98	PROJECT: 320-162.1C	FIGURE: 1



LEGEND:

- ● 2 TEST BORING LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- ✖ SB-1 SOIL BORING LOCATION
- ▨ UST'S DISCOVERED BY GETTLER RYAN (SEPT. 1999)

0 20 FT

SCALE

NOTE: FIGURE ADAPTED FROM GROUNDWATER TECHNOLOGY SITE PLAN DATED 11/9/95.

FIGURE 2

SITE PLAN

FORMER CHEVRON SERVICE STATION NO. 206145

800 CENTER STREET

OAKLAND, CA.

PROJECT NO. DG26-145	DRAWN BY M.L. 6/30/00
FILE NO. DG26145B	PREPARED BY JRB
REVISION NO. 1	REVIEWED BY JRB 6/30/00

Delta Environmental Consultants, Inc.

ENCLOSURE A

Subsurface Consultants, Inc. Laboratory Analytical Tables
and
Curtis & Tompkins, Ltd. Laboratory Reports, 1989

The results of the analytical tests on the soil, sump sludge and groundwater samples are presented below.

Table 1. SOIL ANALYSES

Boring No.	Sample Depth (feet)	Total Petroleum Hydrocarbons (ppm)[1] TVH	TEH[2]	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Total Xylenes (ppm)
1	10	2100	6800	50	220	46	240
1	15	2400	NT	32	200	60	290
2	7	4100	14000	50	450	130	540
2	11.5	31000	NT[3]	500	2800	760	3700
3	10.5	100	ND	ND[4]	2	2	7
3	12.5	950	220	ND	44	32	130
4	7.5	5400	5100	57	250	140	610
4	10.5	5800	NT	92	360	1100	670

Boring No.	Depth feet	TOG (ppm)	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)	Zinc (ppm)
3	3.5	ND	0.7	18	18	19
5[5]	3.5	16,000	NT	NT	NT	NT

[1] Parts per million
[2] As gasoline
[3] NT = not tested
[4] ND = Not detected, see analytical test reports for detection limits
[5] Boring 5 identified as HA on Laboratory Test Reports

Table 2. GROUNDWATER ANALYSES

Boring No.	TVH (ppm)	TEH (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Total Xylenes (ppm)	Other EPA 624 Chemicals (ppm)
1	2600	ND	13	41	22	140	NT
3	43	ND	0.34	4.2	1.1	2.5	ND

Table 3. SUMP WASTE ANALYSES

Test	Concentration (ppb)[1]
Volatile Organics (EPA 8240)	ND
Semi Volatile Organics (EPA 8270)	
Pyrene	32
Butylbenzylphthalate	21
Other (EPA 8270 chemicals)	ND

Selected Heavy Metals	Concentration (ppm)[4]	TTLC[2] (ppm)	STLC[3] (ppm)
Cadmium	2.2	100	1
Chromium	10	2500	560
Lead	1400	1000	5
Zinc	180	5000	250

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1 Parts per billion
2 Total Threshold Limit Concentration
3 Soluble Threshold Limit Concentration
4 Parts per million

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154
CLIENT: SUBSURFACE CONSULTANTS
JOB NUMBER: 272.012
JOB LOCATION: CENTER STREET

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/11/89
DATE REPORTED: 09/13/89

Total Volatile Hydrocarbons (TVH) by EPA 8015
Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 602/8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	TVH AS GASOLINE (mg/L)	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
18154-1	BORING #1	2,600	13	41	22	140

QA/QC SUMMARY

%RPD	3
%RECOVERY	89

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154
CLIENT: SUBSURFACE CONSULTANTS
JOB NUMBER: 272.012
JOB LOCATION: CENTER STREET

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/11/89
DATE REPORTED: 09/13/89

Total Volatile Hydrocarbons (TVH) by EPA 8015
Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 602/8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	TVH AS GASOLINE (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
18154-4	BORING 1 @ 10	2,100	50	220	46	240
18154-5	BORING 1 @ 15	2,400	32	200	60	290
18154-6	BORING 2 @ 7	4,100	50	450	130	540
18154-7	BORING 2 @ 11.5	31,000	500	2,800	760	3,700
18154-8	BORING 3 @ 10.5	100	ND(1)	2	2	7
18154-9	BORING 3 @ 12.5	950	ND(5)	44	32	130
18154-11	BORING 4 @ 7.5	5,400	57	250	140	610
18154-12	BORING 4 @ 10.5	5,800	92	360	1,100	670

ND = None Detected; Limit of detection is indicated in parentheses.

QA/QC SUMMARY

%RPD	<1
%RECOVERY	96

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154
CLIENT: SUBSURFACE CONSULTANTS
JOB #: 272.012
LOCATION: CENTER STREET

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/07/89
DATE REPORTED: 09/13/89

Extractable Petroleum Hydrocarbons in Soils & Wastes
EPA 8015 (Modified)
Extraction Method: EPA 3550

LAB ID	CLIENT ID	GASOLINE (mg/Kg)	KEROSENE (mg/Kg)	DIESEL (mg/Kg)	OTHER (mg/Kg)
18154-4	BORING 1 @ 10	6,800	ND(100)	ND(100)	ND(100)
18154-6	BORING 2 @ 7	14,000	ND(100)	ND(100)	ND(100)
18154-8	BORING 3 @ 10.5	ND(10)	ND(10)	ND(10)	ND(10)
18154-9	BORING 3 @ 12.5	220	ND(10)	ND(10)	ND(10)
18154-10	BORING 3 @ 3.5	ND(10)	ND(10)	ND(10)	ND(10)
18154-11	BORING 4 @ 7.5	5,100	ND(100)	ND(100)	ND(100)

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference	11
Spike: % Recovery	95

Curtis & Tompkins, Ltd.

LAB NUMBER: 18154
CLIENT: SUBSURFACE CONSULTANTS
PROJECT # : 272.012
LOCATION: CENTER STREET

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/13/89
DATE REPORTED: 09/14/89

ANALYSIS: OIL AND GREASE
METHOD: SMWW 503E

LAB ID	SAMPLE ID	RESULT	UNITS	DETECTION LIMIT
18154-10	BORING 3 @ 3.5	ND	mg/Kg	50
18154-13	BORING HA @ 3.7	16,000	mg/Kg	50

ND = NONE DETECTED.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	82

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154-14
CLIENT: SUBSURFACE CONSULTANTS
JOB #: 272.012 - CENTER STREET
SAMPLE ID: SUMP PIT

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/13/89
DATE REPORTED: 09/14/89

EPA METHOD 8240: VOLATILE ORGANICS IN SOILS & WASTES

COMPOUND	Result ug/kg	Detection Limit ug/kg
chloromethane	ND	1000
bromomethane	ND	1000
vinyl chloride	ND	1000
chloroethane	ND	1000
methylene chloride	ND	500
trichlorofluoromethane	ND	500
1,1-dichloroethene	ND	500
1,1-dichloroethane	ND	500
trans-1,2-dichloroethene	ND	500
chloroform	ND	500
1,2-dichloroethane	ND	500
1,1,1-trichloroethane	ND	500
carbon tetrachloride	ND	500
bromodichloromethane	ND	500
1,2-dichloropropane	ND	500
cis-1,3-dichloropropene	ND	500
trichloroethylene	ND	500
dibromochloromethane	ND	500
1,1,2-trichloroethane	ND	500
benzene	ND	500
trans-1,3-dichloropropene	ND	500
2-chloroethylvinyl ether	ND	1000
bromoform	ND	500
1,1,2,2-tetrachloroethane	ND	500
tetrachloroethylene	ND	500
toluene	ND	500
chlorobenzene	ND	500
ethyl benzene	ND	500

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	1000
carbon disulfide	ND	500
2-butanone	ND	1000
vinyl acetate	ND	1000
2-hexanone	ND	1000
4-methyl-2-pentanone	ND	1000
styrene	ND	500
total xylenes	ND	500

QA/QC SUMMARY: SURROGATE RECOVERIES	
1,2-Dichloroethane-d4	99 %
Toluene-d8	99 %
Bromofluorobenzene	98 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154-14
CLIENT: SUBSURFACE CONSULTANTS
JOB #: 272.012
SAMPLE ID: SUMP PIT

DATE RECEIVED: 08/30/89
DATE EXTRACTED: 09/05/89
DATE ANALYZED: 09/08/89
DATE REPORTED: 09/14/89

EPA METHOD 8270: BASE/NEUTRAL AND ACID EXTRACTABLES IN SOILS & WASTES
EXTRACTION METHOD: EPA 3580 - WASTE DILUTION

ACID COMPOUNDS	RESULT mg/kg	LOD mg/kg
Phenol	ND	10
2-Chlorophenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	20
2,4,6-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
2-Methyl-4,6-dinitrophenol	ND	50
Pentachlorophenol	ND	50
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	10
Bis(2-chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl)ether	ND	10
N-nitrosodi-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
Bis(2-chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Dimethyl phthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
Acenaphthene	ND	10
2,4-Dinitrotoluene	ND	10
Fluorene	ND	10
Diethyl phthalate	ND	10
4-Chlorophenylphenyl ether	ND	10
N-Nitrosodiphenylamine	ND	10
1,2-Diphenylhydrazine	ND	10
4-Bromophenylphenyl ether	ND	10

LABORATORY NUMBER: 18154-14
SAMPLE ID: SUMP PIT

BASE/NEUTRAL COMPOUNDS	RESULT mg/kg	LOD mg/kg
Azobenzene	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutylphthalate	ND	10
Fluoranthene	ND	10
Benzidine	ND	10
Pyrene	32	10
Butylbenzylphthalate	21	10
Benzo (a) anthracene	ND	10
3,3'-Dichlorobenzidine	ND	50
Chrysene	ND	10
Bis (2-ethylhexyl)phthalate	ND	10
Di-n-octyl phthalate	ND	10
Benzo (b) fluoranthene	ND	10
Benzo (k) fluoranthene	ND	10
Benzo (a) pyrene	ND	10
Indeno (1,2,3-cd) pyrene	ND	20
Dibenzo (a,h) anthracene	ND	20
Benzo (ghi) perylene	ND	20
HSL COMPOUNDS		
Aniline	ND	10
Benzoic Acid	ND	50
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2,4,5-Trichlorophenol	ND	50
Aniline	ND	10
Benzyl Alcohol	ND	10
4-Chloroaniline	ND	10
2-Methylnaphthalene	ND	10
2-Nitroaniline	ND	10
3-Nitroaniline	ND	10
Dibenzofuran	ND	10
4-Nitroaniline	ND	10

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154-14
SAMPLE ID: SUMP PIT

EPA 8270

COMPOUND	RESULT mg/kg	LOD mg/kg
CHLORINATED PESTICIDES		
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHA	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
pp-DDE	ND	10
Dieldrin	ND	10
Endrin	ND	10
Endosulfan II	ND	10
pp-DDD	ND	10
Endrin Ketone	ND	10
Endosulfan Sulfate	ND	10
pp-DDT	ND	10
Chlordane	ND	50
Toxaphene	ND	50
Methoxychlor	ND	50
PCB 1016	ND	50
PCB 1221	ND	50
PCB 1232	ND	50
PCB 1242	ND	50
PCB 1248	ND	50
PCB 1254	ND	50
PCB 1260	ND	50

ND = None Detected, Limit of Detection (LOD) appears in far right column

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154-10
CLIENT: SUBSURFACE CONSULTANTS
PROJECT #: 272.012
LOCATION: CENTER STREET
SAMPLE ID: BORING 3 @ 3.5

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/05/89
DATE REPORTED: 09/14/89

Metals in Soils & Wastes
Digestion Method: EPA 3050

ANALYSIS	RESULT	UNITS	DETECTION LIMIT	METHOD
Cadmium	0.7	mg/Kg	0.5	EPA 6010
Chromium	18	mg/Kg	0.5	EPA 6010
Lead	18	mg/Kg	2.5	EPA 7420
Zinc	19	mg/Kg	0.5	EPA 6010

QA/QC:

	RPD, %	RECOVERY, %
Cadmium	<1	92
Chromium	<1	94
Lead	3	100
Zinc	3	90

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154-14
CLIENT: SUBSURFACE CONSULTANTS
PROJECT #: 272.012
LOCATION: CENTER STREET
SAMPLE ID: SUMP PIT

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/05/89
DATE REPORTED: 09/14/89
PAGE 14 OF 14

Metals in Soils & Wastes
Digestion Method: EPA 3050

ANALYSIS	RESULT	UNITS	DETECTION LIMIT	METHOD
Cadmium	2.2	mg/Kg	0.5	EPA 6010
Chromium	10	mg/Kg	0.5	EPA 6010
Lead	1,400	mg/Kg	2.5	EPA 7420
Zinc	180	mg/Kg	0.5	EPA 6010

Hazardous Waste

No STLC or TTLC

No Test Completed. Not needed.

QA/QC:

	RPD, %	RECOVERY, %
Cadmium	<1	92
Chromium	<1	94
Lead	3	100
Zinc	3	90

ENCLOSURE B

Analytical Results Table
Prepared by
Groundwater Technology, Inc. in 1995

TABLE 1
Analytical Results of Soil Samples
(Results expressed as milligrams per kilogram)

Former Signal Service Station No. S0800
800 Center Street
Oakland, California

Date	Sample ID	Sample Depth (ft)[a]	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g[b]
10-17-95	MW-1-5	5	0.091	0.49	0.14	1.9	11
10-17-95	MW-1-10	10	120	800	270	1,300	14,000
10-17-95	MW-2-5	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	MW-2-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	MW-3-5	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	MW-3-10	10	0.24	0.010	0.016	0.019	<1.0
10-18-95	MW-4-5	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-18-95	MW-4-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	SB-1-5	5	0.34	1.2	1.2	1.3	87
10-17-95	SB-1-10	10	72	640	240	1,100	8,100
10-17-95	SB-2-5	5	0.19	4.8	5.1	26	240
10-17-95	SB-2-10	10	28	440	150	630	4,700
10-18-95	SB-3-5	5	<0.0050	0.019	0.0087	0.049	<1.0
10-18-95	SB-3-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-18-95	COMP	N/A	0.036	1.5	0.75	3.2	13

[a] feet below surface grade
[b] total petroleum hydrocarbons as gasoline

ENCLOSURE C

Analytical Results Tables
Prepared by
Pacific Environmental Group in 1996

Table 1
Soil Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, and MTBE)

Former Signal Service Station S0800
800 Center Street at 8th Street
Oakland, California

Well Number	Sample Depth (feet)	Date Sampled	TPPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)	MTBE (ppm)
P-1	6	03/22/96	ND	ND	ND	ND	ND	ND
	10		510	ND	18	9.7	46	ND
	17		ND	ND	ND	0.008	0.009	ND
P-2	6	03/22/96	4,000	ND	120	71	330	ND
P-3	10	03/22/96	13,000	38	780	280	1,400	ND
	16		5,400	41	310	110	1,400	ND
	20		260	3.7	21	6.2	27	ND
P-7	6	03/22/96	ND	ND	ND	ND	ND	ND
	10		1	ND	ND	ND	ND	ND
	15		13	ND	0.31	0.15	0.71	ND
P-8	6	03/22/96	ND	ND	ND	ND	ND	ND
	12		ND	ND	ND	0.0066	ND	ND

TPPH = Total purgeable petroleum hydrocarbons
MTBE = Methyl t-butyl ether
ppm = Parts per million
ND = Not detected
See certified analytical reports for detection limits.

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 049-022 Date: 12/24/96
Client: Pacific Environmental By: DC
Project: 320-162.1B

Boring:	MW-7	MW-7				
Sample:						
Depth, ft.:	5.5	15.5				
Soil Classification: (visual)	brown clayey SAND	brown clayey SAND				
Wt. of Pycnometer Soil & Water, gm:	343.26	314.5				
Temp. centigrade:	19	19				
Wt. of Pycnometer & Water, gm:	302.31	274.61				
Wt. Dry Soil, gm:	64.49	63.28				
Temp. Correction Factor:	1	1				
Specific Gravity:	2.74	2.71	ERR	ERR	ERR	ERR

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

COOPER TESTING LABS

MOISTURE DENSITY - POROSITY DATA SHEET

Job #	049-022
Client	Pacific Environmental
Project/Location	320-162.1B
Date	12/24/96

Boring #	MW-7	MW-7			
Depth (ft)	5.5	15.5			
Soil Type	brown clayey SAND	brown clayey SAND			
Specific Gravity	2.74	2.71			
Volume Total cc	233.588	290.633			
Volume of Solids	155.156	194.509			
Volume of Voids	78.432	96.124			
Void Ratio	0.506	0.494			
Porosity %	33.6%	33.1%			
Saturation %	98.6%	98.7%			
Moisture %	18.2%	18.0%			
Dry Density (pcf)	113.6	113.2			

Remarks

Table 1
Soil Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

Former Signal Service Station S0800
800 Center Street at 8th Street
Oakland, California

Well/ Boring Number	Date Sampled	Sample Depth (feet)	TPPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)
MW-5	12/18/96	5	<1.0	<0.0050	0.016	0.0083	0.046
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
MW-6	12/18/96	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
MW-7	12/18/96	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
MW-8/B-8	12/18/96	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050

TPPH = Total purgeable petroleum hydrocarbons
ppm = Parts per million

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, MTBE, and TRPH)

Former Signal Service Station S0800
800 Center Street at 8th Street
Oakland, California

Boring Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TRPH (ppm)
P-1	03/22/96	320,000	7,700	52,000	7,300	31,000	ND	NA
P-2	03/22/96	800,000	13,000	72,000	15,000	76,000	ND*	NA
P-3	03/22/96	69,000	460	9,500	2,000	9,000	NA	NA
P-4	03/26/96	12,000	6,900	16,000	2,700	11,000	ND	NA
P-5	03/26/96	1,900	ND	470	ND	ND	ND	NA
P-6	03/26/96	2,100	530	ND	ND	ND	ND	NA
P-7	03/22/96	160,000	8,400	28,000	3,200	16,000	ND	ND
P-8	03/22/96	58	ND	4.1	0.55	2.9	ND	NA
P-9	03/26/96	ND	ND	ND	ND	ND	ND	NA

TPPH = Total purgeable petroleum hydrocarbons
MTBE = Methyl t-butyl ether
TRPH = Total recoverable petroleum hydrocarbons
ppb = Parts per billion
ND = Not detected
NA = Not anlayzed
* = Originally reported by Sequoia Analytical as 8,900 ppb MTBE; 8260 analysis indicated that MTBE was not present in the sample. GC results should be regarded as coelution of another compound in the sample in the retention window for MTBE.
See certified analytical reports for detection limits.

ENCLOSURE D

Analytical Results Tables
Prepared by
Pacific Environmental Group in 1997

Table 3
Analytical Soil Data

Former Signal Service Station 0800
800 Center Street at Eighth Street
Oakland, California

Soil Sample ID	Sample Date	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
SV-1	5/30/97	3	<1.0	<0.005	<0.005	<0.005	<0.005
		6	2,100	<2.5	46	57	300
		8.5	7,600	52	360	140	720
SV-2	5/30/97	3.5	<1.0	<0.005	<0.005	<0.005	<0.005
		6	11	<0.005	0.009	0.01	0.057
		9	8,000	12	420	150	710
SV-3	5/30/97	3	1.4	<0.005	0.029	0.014	0.1
		6	84	0.13	0.28	1.4	1.9
		9	2,200	5.8	130	83	340
SV-4	5/30/97	3	<1.0	<0.005	0.0058	<0.005	0.01
		6	4.5	<0.005	<0.005	<0.005	<0.005
		9	16,000	86	470	210	960
SV-5	5/30/97	3	<1.0	<0.005	<0.005	<0.005	<0.005
		6	<1.0	<0.005	<0.005	<0.005	<0.005
		9	7,900	20	410	130	690

mg/kg = Milligrams per kilograms
TPH-g = Total petroleum hydrocarbons calculated as gasoline

Table 2
Physical Soil Data

Former Signal Service Station 0800
800 Center Street at Eighth Street
Oakland, California

Sample ID	Sample Date	Sample Depth feet	Total Porosity %	Air Content %	Water Content %	Saturation %	pH	Foc %	Soil Density g/cc
SV-1	5/30/97	2.5	44.75	36	8.8	19.67	6.31	NT	0.068
		6	39.52	4.3	35.21	89.1	NT	NT	0.275
		6.5	NT	NT	NT	NT	NT	0.12	NT
		9.5	33.6	0.15	33.6	99.57	6.8	NT	0.26
SV-2	5/30/97	3	NT	NT	NT	NT	7.53	NT	NT
		3.5	NT	NT	NT	NT	NT	0.083	NT
		9	NT	NT	NT	NT	NT	0.067	NT
		10	34.02	0.95	33.1	97.21	7.03	NT	0.257
SV-3	5/30/97	3.5	46	30	16	35.01	7.66	NT	0.126
Overall Averages =			39.65	14.3	25.34	68.11	7.07	0.09	0.197
Vadose Zone Average (to 3.5 feet) =			45.57*	33*	12.4*	27.34	6.99*	NT	0.097*
Vadose Zone Average (to 6 feet) =			43.4	23.4	20	47.9	6.99	NT	0.156

NT = Not tested
Soil Density = Dry density x moisture %
g/cc = grams per cubic centimeter
* = These values were used to calculate the soil vapor model risk and the construction worker RBSL
Foc = Fraction of organic carbon

Table 1
Soil Vapor Data

Former Signal Service Station 0800
800 Center Street at Eighth Street
Oakland, California

Sample ID	Sample Date	Sample Depth	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH-g (µg/L)	O_2 %	CO_2 %
SV-1	5/30/97	3	0.17	1.6	0.75	5.3	360	20.97	0.87
		6	65	320	84	430	50,000	18.97	1.00
		9	32	130	340	1,400	24,000	20.97	0.07
SV-2	5/30/97	3	ND	0.11	0.11	0.53	11	15.97	6.00
		6	22	100	18	66	27,000	18.97	2.20
		9	NT	NT	NT	NT	NT	20.97	0.16
SV-3	5/30/97	3	ND	0.54	0.15	12	180	NT	NT
		6	ND	0.42	0.84	5.7	83	NT	NT
		8	6.5	54	30	44	5,400	NT	NT
SV-4	5/30/97	3	ND	0.034	0.17	0.48	71	NT	NT
		6	ND	0.08	0.46	1.4	270	NT	NT
		9	17	150	36	160	5,400	NT	NT
SV-5	5/30/97	3	ND	0.015	0.009	0.071	5	NT	NT
		6	0.84	6.1	0.79	3.3	660	NT	NT
		9	11	84	24	110	1,400	NT	NT

µg/L = Micrograms per liter
TPH-g = Total petroleum hydrocarbons calculated as gasoline
O_2 = Oxygen
CO_2 = Carbon dioxide

ENCLOSURE E

Analytical Results Tables
Prepared by
Blain Tech Services, Inc.
First Quarter 2000 Monitoring and Sampling Report

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
MW-1											
10/27/1995	15.69	10.54	5.15	--	170,000	19,000	34,000	4800	26,000	--	--
2/20/1997	15.64	8.96	6.68	--	18,000	870	3500	470	2100	<250	--
4/24/1997	15.64	7.30	8.34	--	76,000	4600	16,000	1600	8300	1000	--
7/23/1997	15.64	5.90	9.74	--	37,000	2700	8000	870	6100	<250	--
10/29/1997	15.64	--	--	Inaccessible	--	--	--	--	--	--	--
1/28/1998	15.64	9.30	6.34	--	10,000	380	2000	300	1500	<25	--
5/11/1998	15.64	8.72	6.92	--	17,000	880	3100	380	2300	<250	--
7/16/1998	15.64	7.23	8.41	--	29,000	2700	6800	890	3900	<1000	--
8/4/1998	15.64	6.90	8.74	**	--	--	--	--	--	--	$<1.0 \times 10^1$
9/3/1998	15.64	6.43	9.21	**/+	--	--	--	--	--	--	4.1×10^3
10/21/1998	15.64	5.59	10.05	***	--	--	--	--	--	--	4.7×10^2
11/4/1998	15.64	5.64	10.00	--	25,000	1900	5900	810	4300	<125	--
1/26/1999	15.64	6.86	8.78	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
5/6/1999	15.64	8.17	7.47	--	8050	515	1840	256	1190	300	--
5/6/1999	15.64	8.17	7.47	Confirmation Run	--	--	--	--	--	<20	--
8/21/1999	15.64	13.27	2.37	--	46,500	2530	8700	1010	5300	<1250	--
8/21/1999	15.64	13.27	2.37	Confirmation Run	--	--	--	--	--	<40	--
10/28/1999	15.64	5.46	10.18	--	31,600	1580	6100	794	4400	1270	--
1/31/2000	15.64	7.49	8.15	--	7270	366	1280	171	935	<12.5	--

** Contaminate hydrocarbon utilizing bacteria plate count was run with diesel and jet fuel degraders.
***Contaminate hydrocarbon utilizing bacteria plate count was run with gasoline degraders.
+ See Table of Additional Analyses.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
MW-2											
10/27/1995	15.77	10.60	5.17	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
2/20/1997	15.72	8.51	7.21	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
4/24/1997	15.72	7.82	7.90	--	83*	<0.5	<0.5	<0.5	<0.5	<2.5	--
7/23/1997	15.72	5.92	9.80	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/1997	15.72	5.13	10.59	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
1/28/1998	15.72	9.21	6.51	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
5/11/1998	15.72	8.82	6.90	Sampled annually	--	--	--	--	--	--	--
7/16/1998	15.72	7.37	8.35	--	--	--	--	--	--	--	--
8/4/1998	15.72	7.03	8.69	**	--	--	--	--	--	--	1.9×10^1
9/3/1998	15.72	6.44	9.28	**/+	--	--	--	--	--	--	3.0×10^2
10/21/1998	15.72	5.51	10.21	***	--	--	--	--	--	--	8.8×10^2
11/4/1998	15.72	5.60	10.12	--	--	--	--	--	--	--	--
1/26/1999	15.72	6.87	8.85	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
5/6/1999	15.72	8.20	7.52	--	--	--	--	--	--	--	--
8/21/1999	15.72	13.21	2.51	--	--	--	--	--	--	--	--
10/28/1999	15.72	6.35	9.37	--	--	--	--	--	--	--	--
1/31/2000	15.72	7.25	8.47	--	<50	<0.5	0.541	<0.5	<0.5	<2.5	--

* Chromatogram pattern indicates an unidentified hydrocarbon.
** Contaminate hydrocarbon utilizing bacteria plate count was run with diesel and jet fuel degraders.
***Contaminate hydrocarbon utilizing bacteria plate count was run with gasoline degraders.
+ See Table of Additional Analyses.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
MW-3											
10/27/1995	15.46	10.37	5.09	--	33,000	11,000	1700	2300	4200	--	--
2/20/1997	15.42	8.37	7.05	--	260	56	<1.0	7.6	5.9	<5.0	--
4/24/1997	15.42	7.29	8.13	--	1400	310	28	76	75	74	--
7/23/1997	15.42	5.84	9.58	--	37,000	10,000	1500	2700	4200	2500	--
10/29/1997	15.42	5.09	10.33	--	53,000	12,000	1200	3000	3100	2500	--
1/28/1998	15.42	8.94	6.48	--	210	43	1.5	1.7	3.9	10	--
5/11/1998	15.42	8.49	6.93	--	59	11	<0.5	2.1	<0.5	<2.5	--
7/16/1998	15.42	7.14	8.28	--	260	90	4.8	18	5.7	<10	--
8/4/1998	15.42	6.88	8.54	*	--	--	--	--	--	--	8.5×10^2
9/3/1998	15.42	6.34	9.08	*/+	--	--	--	--	--	--	2.4×10^3
10/21/1998	15.42	5.62	9.80	**	--	--	--	--	--	--	6.0×10^1
11/4/1998	15.42	5.60	9.82	--	73,000	17,000	3800	4900	8100	<250	--
1/26/1999	15.42	6.70	8.72	--	32,400	10,200	1850	2650	3140	715	--
1/26/1999	15.42	6.70	8.72	Confirmation Run	--	--	--	--	--	<500	--
5/6/1999	15.42	7.97	7.45	--	3160	668	89.6	180	123	<200	--
5/6/1999	15.42	7.97	7.45	Confirmation Run	--	--	--	--	--	<10	--
8/21/1999	15.42	7.95	7.47	--	53,800	9700	2040	2880	5000	<1250	--
8/21/1999	15.42	7.95	7.47	Confirmation Run	--	--	--	--	--	<40	--
10/28/1999	15.42	5.37	10.05	--	71,300	14,000	3420	4320	8360	<1000	--
1/31/2000	15.42	7.16	8.26	--	1650	496	49.1	134	82.6	<12.5	--

* Contaminate hydrocarbon utilizing bacteria plate count was run with diesel and jet fuel degraders.
** Contaminate hydrocarbon utilizing bacteria plate count was run with gasoline degraders.
+ See Table of Additional Analyses.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
MW-4											
10/27/1995	14.45	9.37	5.08	--	66	6.8	<0.5	<0.5	<0.5	--	--
2/20/1997	14.40	8.12	6.28	--	54	<0.5	<0.5	<0.5	7.4	39	--
4/24/1997	14.40	7.29	7.11	--	54	1.4	<0.5	0.65	3.0	100	--
7/23/1997	14.40	5.80	8.60	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/1997	14.40	5.74	8.66	Inaccessible	--	--	--	--	--	--	--
11/13/1997	14.40	4.97	9.43	--	<50	<0.5	0.79	<0.5	<0.5	<2.5	--
1/28/1998	14.40	8.88	5.52	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
5/11/1998	14.40	8.40	6.00	Sampled biannually	--	--	--	--	--	--	--
7/16/1998	14.40	7.08	7.32	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
8/4/1998	14.40	6.28	8.12	*	--	--	--	--	--	--	1.8×10^4
9/3/1998	14.40	6.32	8.08	*/+	--	--	--	--	--	--	1.4×10^4
10/21/1998	14.40	5.64	8.76	**	--	--	--	--	--	--	8.6×10^4
11/4/1998	14.40	5.61	8.79	--	--	--	--	--	--	--	--
1/26/1999	14.40	6.71	7.69	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
5/6/1999	14.40	8.15	6.25	--	--	--	--	--	--	--	--
8/21/1999	14.40	8.13	6.27	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/28/1999	14.40	4.14	10.26	--	--	--	--	--	--	--	--
1/31/2000	14.40	7.07	7.33	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

* Contaminate hydrocarbon utilizing bacteria plate count was run with diesel and jet fuel degraders.
** Contaminate hydrocarbon utilizing bacteria plate count was run with gasoline degraders.
+ See Table of Additional Analyses.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
MW-5											
1/3/1997	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
2/20/1997	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
4/24/1997	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
4/30/1997	15.03	7.06	7.97	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
7/23/1997	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
10/29/1997	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
1/28/1998	15.03	8.83	6.20	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
5/11/1998	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
7/16/1998	15.03	7.28	7.75	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
8/4/1998	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
11/4/1998	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
1/26/1999	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
5/6/1999	15.03	--	--	Inaccessible	--	--	--	--	--	--	--
8/21/1999	15.03	6.74	8.29	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/28/1999	15.03	4.60	10.43	--	--	--	--	--	--	--	--
1/31/2000	15.03	7.39	7.64	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
MW-6											
1/3/1997	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
2/20/1997	14.73	8.11	6.62	--	800	310	23	11	28	<12	--
4/24/1997	14.73	7.13	7.60	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
7/23/1997	14.73	5.73	9.00	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/1997	14.73	4.98	9.75	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
1/28/1998	14.73	8.19	6.54	--	160	38	<0.5	<0.5	<0.5	<2.5	--
5/11/1998	14.73	8.08	6.65	--	1700	490	72	39	52	<25	--
7/16/1998	14.73	7.04	7.69	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
8/4/1998	14.73	6.89	7.84	*	--	--	--	--	--	--	8.6×10^3
9/3/1998	14.73	6.24	8.49	*/+	--	--	--	--	--	--	2.9×10^3
10/21/1998	14.73	5.46	9.27	**	--	--	--	--	--	--	1.8×10^3
11/4/1998	14.73	5.52	9.21	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
1/26/1999	14.73	6.49	8.24	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
5/6/1999	14.73	7.91	6.82	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
8/21/1999	14.73	7.93	6.80	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/28/1999	14.73	5.27	9.46	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
1/31/2000	14.73	7.16	7.57	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

* Contaminate hydrocarbon utilizing bacteria plate count was run with diesel and jet fuel degraders.
**Contaminate hydrocarbon utilizing bacteria plate count was run with gasoline degraders.
+ See Table of Additional Analyses.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
MW-7											
1/3/1997	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
2/20/1997	16.36	8.86	7.50	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
4/24/1997	16.36	7.59	8.77	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
7/23/1997	16.36	6.09	10.27	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/1997	16.36	5.28	11.08	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
1/28/1998	16.36	9.10	7.26	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
5/11/1998	16.36	9.11	7.25	Sampled annually	--	--	--	--	--	--	--
7/16/1998	16.36	8.00	8.36	--	--	--	--	--	--	--	--
8/4/1998	16.36	7.32	9.04	*	--	--	--	--	--	--	1.5×10^3
9/3/1998	16.36	6.65	9.71	*/+	--	--	--	--	--	--	6.5×10^2
10/21/1998	16.36	5.96	10.40	**	--	--	--	--	--	--	4.8×10^3
11/4/1998	16.36	5.89	10.47	--	--	--	--	--	--	--	--
1/26/1999	16.36	8.25	8.11	--	<50	<0.5	<0.5	<0.5	0.5	<2.0	--
5/6/1999	16.36	8.47	7.89	--	--	--	--	--	--	--	--
8/21/1999	16.36	8.51	7.85	--	--	--	--	--	--	--	--
10/28/1999	16.36	6.04	10.32	--	--	--	--	--	--	--	--
1/31/2000	16.36	7.57	8.79	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

* Contaminate hydrocarbon utilizing bacteria plate count was run with diesel and jet fuel degraders.
**Contaminate hydrocarbon utilizing bacteria plate count was run with gasoline degraders.
+ See Table of Additional Analyses.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	CUB (cfu/ml)
TRIP BLANK											
2/20/1997	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
4/24/1997	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
7/23/1997	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/1997	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
1/28/1998	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
5/11/1998	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
7/16/1998	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
11/4/1998	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
1/26/1999	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
5/6/1999	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
1/31/2000	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

Cumulative Table of Well Data and Analytical Results

ADDITIONAL ANALYSES

Analytical values are in parts per billion (ppb)

DATE	Notes	Total Alkalinity	Ferrous Iron	Nitrate as Nitrate	Sulfate	Pre-purge D.O. (mg/L)	Post-purge D.O. (mg/L)	Pre-purge O.R.P. (mV)	Post-purge O.R.P. (mV)
MW-1									
9/3/1998	--	230,000	9800	<1000	6100	2.3	1.6	-90	-103
MW-2									
9/3/1998	--	390,000	7400	<1000	21,000	2.8	2.5	-206	-163
MW-3									
9/3/1998	--	830,000	45,000	<1000	10,000	3.1	0.7	-124	-99
MW-4									
9/3/1998	--	--	--	--	--	2.6	1.1	-190	-206
MW-6									
9/3/1998	--	94,000	62	28,000	47,000	2.6	3.2	-148	-167
MW-7									
9/3/1998	--	170,000	120	7800	57,000	2.7	3.2	-207	-229

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on February 20, 1997. Earlier field data and analytical results are drawn from the January 24, 1997 Groundwater Technology, Inc. report.

ABBREVIATIONS:
TPH = Total Petroleum Hydrocarbons
MTBE = Methyl t-Butyl Ether
ND = Not detected at or above the minimum quantitation limit. See laboratory reports for minimum quantitation limits.
CUB = Contaminate Utilizing Bacteria