PACIFIC
ENVIRONMENTAL
GROUP, INC.

AN ITT COMPANY

November 23, 1998
Project 360-014.2B

1138

Mr. Dennis Buran
Glascock Street Properties
425 Market Street
Oakland, California 94607

Re: **Quarterly Report - Third Quarter 1998**
Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Dear Mr. Buran:

This letter has been prepared for Glascock Street Properties by Pacific Environmental Group, Inc. (PEG). The following presents results of the third quarter 1998 groundwater monitoring program for the site referenced above (Figure 1). In addition, PEG has included a response to a letter from the Alameda County Health Care Services Agency (ACHCSA) dated September 29, 1998.

QUARTERLY GROUNDWATER MONITORING PROGRAM

All seven existing groundwater monitoring wells (MW–1 through MW-4, and MW-6 through MW-8; Figure 2) were gauged and sampled by PEG on September 11, 1998. The depth to groundwater and groundwater analytical data are presented in Tables 1 and 2. The wells were sampled and analyzed for the presence of total purgeable petroleum hydrocarbons quantified as gasoline (TPPH-g), benzene, toluene, ethyl-benzene, and xylenes (BTEX compounds), total extractable petroleum hydrocarbons quantified as diesel (TEPH-d), total extractable petroleum hydrocarbons quantified as motor oil (motor oil), and methyl tert-butyl ether (MtBE).

Extractable hydrocarbons were analyzed using two different preparation methods this quarter. One split of the samples was prepared using only a silica gel cleanup prior to analysis for TEPH-d and motor oil by EPA Method 8015M. The other split was filtered using a 0.7 micron glass filter to remove suspended solids from the sample, followed by a silica gel cleanup prior to analysis for extractable petroleum hydrocarbons by EPA Method 8015M.

The second preparation method was selected since recent research[1] has demonstrated that non-dissolved petroleum hydrocarbons adsorbed to suspended soil particles in groundwater samples (particularly samples with moderate to heavy turbidity) can create false positive results for dissolved hydrocarbons measured using EPA Method 8015M. Most of the groundwater samples collected at this site during the third quarter exhibited moderate to heavy turbidity, consistent with previous sampling events.

Groundwater Levels

Four monitoring wells exhibited an increase in groundwater elevation, two wells showed a decrease, and one well remained the same compared to the previous monitoring event (Table 1). **Overall, the average groundwater elevation in site monitoring wells increased by approximately 0.43 feet compared to last quarter.** Groundwater flow is still generally to the south/southwest (toward the Oakland Estuary), consistent with previous measurements, at a gradient of approximately 0.012 (Figure 2). Groundwater elevations were within the historic range for the site.

Groundwater Quality

No separate phase hydrocarbons (SPH) were observed in any site monitoring wells this quarter. The following paragraphs summarize the results for TPPH-g, BTEX compounds, MtBE, TEPH-d, and motor oil. Table 2 presents the groundwater analytical data; Figure 2 illustrates the results for benzene and TEPH-d. Certified analytical results, chain-of-custody documentation, and field data sheets are contained in Attachment A.

Detectable concentrations of TPPH-g were reported for samples collected from four wells this quarter, ranging from 110 to 660 micrograms per liter (µg/L) (see Table 2). However, none of the results were characterized as gasoline; the chromatogram patterns for all TPPH-g results above the detection limit were reported as unidentified hydrocarbons greater than C_{12}.

BTEX compounds were detected in two wells this quarter, MW-1 and MW-6. Benzene and xylenes were detected at Well MW-1 at concentrations of 2.8 and 1.8 µg/L, respectively. Benzene was reportedly detected in Well MW-6 at a concentration of 500 µg/L, which appears to be an anomaly. This concentration does not correlate with either the concentration of TPPH-g detected, or the concentration of benzene previously detected in the well. This anomalous result may be attributable to laboratory error or contamination, contamination of the sample or sample container, or it may be the result

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[1] For example, see Zemo, D.A., *Do Your Extractable TPH Concentrations Represent Dissolved Petroleum? An Update on Applied Research*, in Proceedings of the 1997 Petroleum Hydrocarbons & Organic Chemicals in Groundwater, November 1997.

of off-site contamination from the estuary migrating onto the site in the vicinity of Well MW-6.

Detectable concentrations of MtBE were found in Wells MW-1, MW-6, and MW-7 this quarter, at concentrations of 8.7, 6.5, and 110 µg/L, respectively. Well MW-7 is an upgradient well located off-site at the intersection of Glascock and Peterson Streets. Based on the concentrations observed in Well MW-7, it appears that an upgradient source of MtBE is impacting monitoring wells at this site.

not true

None of the samples (filtered or unfiltered) were reported to contain detectable concentrations of motor oil. However, filtered samples from two wells (MW-1 and MW-6) were reported to contain unidentified hydrocarbons in the C_{16} through C_{36} range.

in the motor oil range

Detectable TEPH-d concentrations were reported for unfiltered samples from four wells (MW-1, MW-2, MW-3, and MW-6) ranging from 320 to 11,000,000 µg/L. The results from three of these samples were characterized as a mixture of weathered diesel and unidentified hydrocarbons; the fourth was characterized only as containing unidentified hydrocarbons. None of the filtered samples were reported to contain diesel or weathered diesel; all of the filtered samples containing detectable concentrations were characterized as unidentified hydrocarbons, ranging from 130 to 6,100 µg/L.

(+1%)

Q: does unfiltered material migrate?

Q: what's the for. of weathered vs fresh product?

A comparison of the results for filtered and unfiltered samples indicates agreement with recent studies demonstrating that non-dissolved petroleum hydrocarbons adsorbed to suspended soil particles in groundwater samples can create false positive results for dissolved hydrocarbons measured using EPA Method 8015M. Based on the split samples analyzed this quarter, there does not appear to be any dissolved diesel present in groundwater at the site. The samples reported to contain weathered diesel were all unfiltered, and likely produced false positive results for diesel in groundwater when weathered diesel adsorbed to suspended soil particles was extracted during the analyses.

RESPONSE TO ACHCSA LETTER

In a letter dated September 29, 1998, the ACHCSA commented on groundwater monitoring results for second quarter 1998, and requested a revised work plan for site remediation. The following sections respond to various issues raised in the ACHCSA's letter.

Results of Analyses for Motor Oil, Gasoline, and Diesel

The ACHCSA letter stated that second quarter groundwater monitoring results indicate dissolved diesel and motor oil still exist at the site. However, the *Quarterly Report - Second Quarter 1998* (PEG, September 11, 1998) explicitly stated that although detectable concentrations were reported as a result of the analyses for motor oil, none of

the samples were reported to contain motor oil; all of the samples were characterized as containing unidentified hydrocarbons. The same is true for the results of the third quarter 1998 monitoring event.

Likewise, samples analyzed for TPPH-g during the third quarter which were reported to contain detectable concentrations exhibited chromatogram patterns of unidentified hydrocarbons greater than C_{12}. None of the samples containing detectable concentrations were reported to contain gasoline.

Furthermore, careful preparation of samples collected during the third quarter 1998 demonstrates that dissolved diesel is not present at the site either. The only samples with concentrations of extractable hydrocarbons characterized as diesel were those which were not filtered with a 0.7 micron filter. **This indicates that the diesel detected in those samples was extracted from suspended soil particles, rather than diesel dissolved in groundwater.**

Estimate of Residual Petroleum Mass

As stated above, no residual dissolved gasoline, diesel, or motor oil are currently detectable at the site, and no SPH is present. Given the results of the recent monitoring event, the residual petroleum hydrocarbon mass is so low that dissolved concentrations of that mass are not detectable.

However, in order to fulfill the ACHCSA's request for an estimate of the residual petroleum mass, PEG developed a conservative scenario using the following assumptions:

1) hypothetical residual dissolved hydrocarbon mass is equally distributed amongst gasoline, diesel, and motor oil fractions.

2) the hypothetical plume covers one-half the site (approximately 3,400 square meters) at constant concentrations of gasoline, diesel, and motor oil.

3) concentrations of dissolved gasoline range from 0 µg/L to less than 50 µg/L, dissolved diesel ranges from 0 µg/L to less than 50 µg/L, and dissolved motor oil ranges from 0 µg/L to less than 500 µg/L. ← not true!

4) the saturated thickness of the hypothetical plume is 3 meters.

5) the average porosity of soils at the site is 0.3.

Using the above assumptions, the hypothetical residual petroleum hydrocarbon plume mass would range from 0 kilograms to less than 0.6 kilograms (0 to less than 1.3 pounds).

CONCLUSION

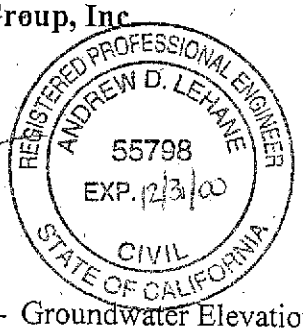
Since recent groundwater monitoring results demonstrate that no residual gasoline, diesel, or motor oil remains dissolved in groundwater at the site, PEG believes that the current site conditions meet the cleanup goals set by the ACHCSA. Therefore, it is PEG's opinion that no further remedial action is warranted at this site.

By copy of this report, PEG requests that the ACHCSA issue a letter recognizing no further action be required for this site.

If you have any questions regarding the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.



Andrew D. Lehane
Project Engineer
RCE 55798

Attachments:
- Table 1 - Groundwater Elevation Data
- Table 2 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, Motor Oil, and MtBE)
- Figure 1 - Site Location Map
- Figure 2 - Groundwater Monitoring Map - Second Quarter 1998
- Figure 3 - Conceptual Remediation Plan
- Attachment A - Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets

cc: Mr. Barney Chan, ACHCSA
Mr. Chuck Headlee, Cal/EPA S.F. Bay RWQCB

Table 1
Groundwater Elevation Data

Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-1	10/06/94	10.76	NA	NA
	01/20/95		6.67	4.09
	05/15/95		7.08	3.68
	08/28/95		8.06	2.70
	12/06/95		8.24	2.52
	01/18/96	10.76	6.35	4.41
	03/08/96		6.52	4.24
	07/02/96		8.35	2.41
	12/17/96		6.85	3.91
	03/21/97		7.90	2.86
	06/25/97		9.20	1.56
	09/29/97		8.90	1.86
	12/11/97		7.10	3.66
	03/27/98		7.50	3.26
	06/26/98		8.65	2.11
	09/11/98		8.35	2.41
MW-2	10/06/94	10.62	7.17	3.45
	01/20/95		4.64	5.98
	05/15/95		5.66	4.96
	08/28/95		6.26	4.36
	12/06/95		7.30	3.32
	01/18/96	10.63	4.85	5.78
	03/08/96		4.38	6.25
	07/02/96		6.60	4.03
	12/17/96		5.10	5.53
	03/21/97		6.25	4.38
	06/25/97		8.01	2.62
	09/29/97		8.45	2.18
	12/11/97		5.63	5.00
	03/27/98		6.50	4.13
	06/26/98		7.55	3.08
	09/11/98		7.15	3.48
MW-3	10/06/94	9.87	6.57	3.30
	01/20/95		4.47	5.40
	05/15/95		5.08	4.79
	08/28/95		6.18	3.69
	12/06/95		6.44	3.43
	01/18/96	9.87	4.15	5.72
	03/08/96		4.76	5.11
	07/02/96		6.45	3.42
	12/17/96		4.92	4.95
	03/21/97		5.72	4.15
	06/25/97		6.35	3.52
	09/29/97		6.35	3.52
	12/11/97		4.70	5.17
	03/27/98		5.15	4.72
	06/26/98		6.17	3.70
	09/11/98		6.40	3.47

Table 1
Groundwater Elevation Data

Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)		Groundwater Elevation (feet, MSL)
MW-4	10/06/94	10.64	7.96		2.68
	01/20/95		5.95		4.69
	05/15/95		6.28		4.36
	08/28/95		7.38		3.26
	12/06/95		7.80		2.84
	01/18/96	10.64	5.60		5.04
	03/08/96		5.93		4.71
	07/02/96		7.95		2.69
	12/17/96		6.35		4.29
	03/21/97		7.30		3.34
	06/25/97		7.95		2.69
	09/29/97		7.65		2.99
	12/11/97		5.75		4.89
	03/27/98		6.60		4.04
	06/26/98		7.85		2.79
	09/11/98		7.85		2.79
MW-5	05/15/95	10.61	7.54		3.07
	08/28/95		8.44		2.17
	12/06/95		8.34		2.27
	01/18/96	10.61	7.15		3.46
	03/08/96		7.54		3.07
	07/02/96		9.45		1.16
	12/17/96		NA	a	NA
MW-6	05/15/95	10.27	7.46		2.81
	08/28/95		8.06		2.21
	12/06/95		8.78		1.49
	01/18/96	10.28	7.85		2.43
	03/08/96		8.64		1.64
	07/02/96		11.50		-1.22
	12/17/96		9.40		0.88
	03/21/97		9.00		1.28
	06/25/97		11.50		-1.22
	09/29/97		9.95		0.33
	12/11/97		8.50		1.78
	03/27/98		10.10		0.18
	06/26/98		12.10		-1.82
	09/11/98		9.90		0.38
MW-7	05/15/95	9.85	3.46		6.39
	08/28/95		4.49		5.36
	12/06/95		5.04		4.81
	01/18/96	9.86	3.10		6.76
	03/08/96		3.18		6.68
	07/02/96		4.40		5.46
	12/17/96		3.45		6.41
	03/21/97		3.75		6.11
	06/25/97		4.75		5.11
	09/29/97		5.05		4.81

Table 1
Groundwater Elevation Data

Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-7	12/11/97		3.45	6.41
(cont.)	03/27/98		3.45	6.41
	06/26/98		4.00	5.86
	09/11/98		4.95	4.91
MW-8	01/18/96	10.61	7.15	3.46
	03/08/96		NA	NA
	07/02/96		10.80	-0.19
	12/17/96		8.52	2.09
	03/21/97		8.60	2.01
	06/25/97		10.27	0.34
	09/29/97		8.75	1.86
	12/11/97		7.20	3.41
	03/27/98		8.85	1.76
	06/26/98		10.70	-0.09
	09/11/98		9.40	1.21

MSL = Mean sea level
TOC = Top of casing
NA = Not available
a. Well MW-5 was destroyed in September 1996.

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, Motor Oil, and MtBE)

Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TEPH as Diesel (µg/L)	Motor Oil (µg/L)	MtBE (µg/L)
MW-1	10/06/94	NS	NS	NS	NS	NS	NS	NS	NS
	01/20/95	670	5.3	ND	ND	1.1	1,900	NA	NA
	05/15/95	290	7.9	ND	ND	1.4	3,400	NA	NA
	08/28/95	250	5.4	ND	ND	1.1	1,800	NA	NA
	11/29/95	NA	NA	NA	NA	NA	ND	ND	NA
	12/06/95	770	4.8	ND	ND	1.3	39,000	NA	NA
	01/18/96	NA	NA	NA	NA	NA	23,000	NA	NA
	03/08/96	360	2,600	ND	ND	1.9	16,000	NA	24
	07/02/96	5,300 a	ND	ND	ND	ND	6,600	ND	ND
	12/17/96	540 b	3.4	ND	ND	0.83	2,800 c	1,600 d	60
	03/21/97	590	5.5	0.66	ND	ND	5,500 e	5,000 d	71
	05/16/97	NA	NA	NA	NA	NA	NA	NA	NA
	06/25/97	470 h	ND	ND	ND	ND	39,000 e	26,000 d	45
	09/29/97	510 h	2.2	ND	ND	ND	5,000 e	4,000 d	37
	12/11/97	ND	ND	ND	ND	ND	1,900 e	1,300 d	ND
	03/27/98	280 k	5.0	0.60	ND	ND	4,600 e	3,900 d	890
	06/26/98	450 f	2.6	ND	ND	ND	1,700 e	1,300 d	41
	09/11/98	230 l	2.8	ND	ND	1.8	3,000 m	ND	8.7
	09/11/98	NA	NA	NA	NA	NA	620 g	520 d	NA
MW-2	10/06/94	NS	NS	NS	NS	NS	NS	NS	NS
	01/20/95	520	2.2	1.9	ND	1.3	4,000	NA	NA
	05/15/95	310	2.3	1.9	ND	1.4	5,100	NA	NA
	08/28/95	320	2.9	2.9	ND	2.6	4,100	NA	NA
	11/29/95	NS	NS	NS	NS	NS	NS	NS	NS
	12/06/95	210	2.0	2.2	ND	0.57	17,000	NA	NA
	01/18/96	NA	NA	NA	NA	NA	22,000	NA	NA
	03/08/96	310	2.4	1.9	ND	1.4	56,000	NA	ND
	07/02/96	9,300 a	ND	ND	ND	ND	19,000	ND	ND
	12/17/96	140 b	1.1	2.0	ND	1.4	10,000 e	5,400 d	ND
	03/21/97	230	2.1	1.9	ND	ND	17,000 e	16,000 d	ND
	05/16/97	NA	NA	NA	NA	NA	NA	NA	NA
	06/25/97	630 h	ND	ND	ND	ND	16,000 e	13,000 d	ND
	09/29/97	300 h	1.3	0.66	ND	ND	32,000 e	20,000 d	ND
	12/11/97	ND	ND	ND	ND	ND	4,800 e	4,000 d	ND
	03/27/98	94 k	1.3	1.30	ND	ND	15,000 e	11,000 d	18
	06/26/98	490 b	ND	ND	ND	ND	11,000 e	5,900 d	ND
	09/11/98	550 l	ND	ND	ND	ND	11,000 n	ND	ND
	09/11/98	NA	NA	NA	NA	NA	6,100 g	ND	NA

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, Motor Oil, and MtBE)

Former Dorr-Oliver Site
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Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TEPH as Diesel (µg/L)	Motor Oil (µg/L)	MtBE (µg/L)
MW-3	10/06/94	NA	ND	ND	ND	ND	320	NA	NA
	01/20/95	86	ND	ND	ND	ND	460	NA	NA
	05/15/95	60	ND	ND	ND	ND	310	NA	NA
	08/28/95	ND	ND	ND	ND	ND	310	NA	NA
	11/29/95	NS	NS	NS	NS	NS	NS	NS	NS
	12/06/95	120	ND	ND	ND	ND	1,000	NA	NA
	01/18/96	NA	NA	NA	NA	NA	210	NA	NA
	03/08/96	67	ND	ND	ND	ND	1,000	NA	7.2
	07/02/96	230 a	ND	ND	ND	ND	640	ND	ND
	12/17/96	240 f	ND	ND	ND	ND	560 e	ND	ND
	03/21/97	760 h	ND	ND	ND	0.94	2,100 e	1900 d	5.6
	05/16/97	NA	NA	NA	NA	NA	NA	NA	NA
	06/25/97	180 h	ND	ND	ND	0.58	610 g	ND	5.3
	09/29/97	84 i	ND	ND	ND	ND	470 g	ND	ND
	12/11/97	ND	ND	ND	ND	ND	380 e	ND	ND
	03/27/98	ND	ND	ND	ND	ND	220 g	ND	ND
	06/26/98	68 b	ND	ND	ND	ND	210 g	ND	ND
	09/11/98	110 l	ND	ND	ND	ND	320 o	ND	ND
	09/11/98	NA	NA	NA	NA	NA	210 g	ND	NA
MW-4	10/06/94	NA	ND	ND	ND	ND	ND	NA	NA
	01/20/95	ND	ND	ND	ND	ND	ND	NA	NA
	05/15/95	ND	ND	ND	ND	ND	ND	NA	NA
	08/28/95	ND	ND	ND	ND	ND	ND	NA	NA
	11/29/95	NA	NA	NA	NA	NA	NA	NA	NA
	12/06/95	ND	ND	ND	ND	ND	57	NA	NA
	01/18/96	NA	NA	NA	NA	NA	ND	NA	NA
	03/08/96	ND	ND	ND	ND	ND	100	NA	ND
	07/02/96	ND	ND	ND	ND	ND	ND	ND	ND
	12/17/96	ND	ND	ND	ND	ND	310 g	530 d	ND
	03/21/97	ND	ND	ND	ND	ND	180 g	500 d	ND
	06/25/97	ND	ND	ND	ND	ND	120 g	ND	ND
	09/29/97	ND	ND	ND	ND	ND	130 g	ND	ND
	12/11/97	ND	ND	ND	ND	ND	57 g	ND	ND
	03/27/98	ND	ND	ND	ND	ND	ND	ND	ND
	06/26/98	ND	ND	ND	ND	ND	ND	ND	ND
	09/11/98	ND	ND	ND	ND	ND	ND	ND	ND
	09/11/98	NA	NA	NA	NA	NA	230 g	ND	NA
MW-5*	05/15/95	ND	ND	ND	ND	ND	490	NA	NA
	08/28/95	ND	ND	ND	ND	ND	170	NA	NA
	11/29/95	NS	NS	NS	NS	NS	NS	NS	NS
	12/06/95	ND	ND	ND	ND	ND	250	NA	NA
	01/18/96	NA	NA	NA	NA	NA	49	NA	NA
	03/08/96	ND	ND	ND	ND	ND	210	ND	12
	07/02/96	200 a	ND	ND	ND	ND	110	ND	ND

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, Motor Oil, and MtBE)

Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TEPH as Diesel (µg/L)	Motor Oil (µg/L)	MtBE (µg/L)
MW-6	05/15/95	120	5.6	0.88	ND	2.1	1,100	NA	NA
	08/28/95	140	6.1	0.77	ND	2.3	2,100	NA	NA
	11/29/95	NA	NA	NA	NA	NA	35,000	5,400	NA
	12/06/95	140	4.6	0.89	ND	1.7	38,000	NA	NA
	01/18/96	NA	NA	NA	NA	NA	59,000	NA	NA
	03/08/96	160	3.4	0.57	ND	1.9	14,000	NA	ND
	07/02/96	3,300 a	3.1	ND	ND	ND	2,300	1,300	ND
	12/17/96	150 b	3.4	0.93	ND	1.7	15,000 e	14,000 d	14
	03/21/97	300	3.5	0.91	ND	0.79	18,000 e	17,000 d	19
	05/16/97	NA	NA	NA	NA	NA	NA	NA	NA
	06/25/97	590 h	3.2	ND	ND	ND	9,300 e	7,900 d	15
	09/29/97	490 h	2.6	0.83	ND	1.5	7,900 e	7,900 d	13
	12/11/97	ND	ND	ND	ND	ND	5,600 e	5,100 j	ND
	03/27/98	ND	ND	ND	ND	ND	1,500 e	1,400 d	ND
	06/26/98	290 f	5.3	ND	ND	1.1	9,200 e	6,400 d	11
	09/11/98	660 l	500	ND	ND	ND	4,200 m	ND	6.5
	09/11/98	NA	NA	NA	NA	NA	1,600 g	1,300 d	NA
MW-7	05/15/95	110	ND	ND	ND	ND	ND	NA	NA
	08/28/95	ND	ND	ND	ND	ND	ND	NA	NA
	11/29/95	NA	NA	NA	NA	NA	NA	NA	NA
	12/06/95	62	ND	ND	ND	ND	ND	NA	NA
	01/18/96	NA	NA	NA	NA	NA	ND	NA	NA
	03/08/96	ND	ND	ND	ND	ND	ND	NA	ND
	07/02/96	ND	ND	ND	ND	ND	ND	ND	580
	12/17/96	ND	ND	ND	ND	ND	120 g	ND	100
	03/21/97	ND	ND	ND	ND	ND	79 g	ND	190
	06/25/97	ND	ND	ND	ND	ND	58 g	ND	580
	09/29/97	ND	ND	ND	ND	ND	ND	ND	310
	12/11/97	ND	ND	ND	ND	ND	ND	ND	ND
	03/27/98	ND	ND	ND	ND	ND	ND	ND	ND
	06/26/98	ND	ND	ND	ND	ND	ND	ND	110
	09/11/98	ND	ND	ND	ND	ND	ND	ND	110
	09/11/98	NA	NA	NA	NA	NA	140 g	ND	NA

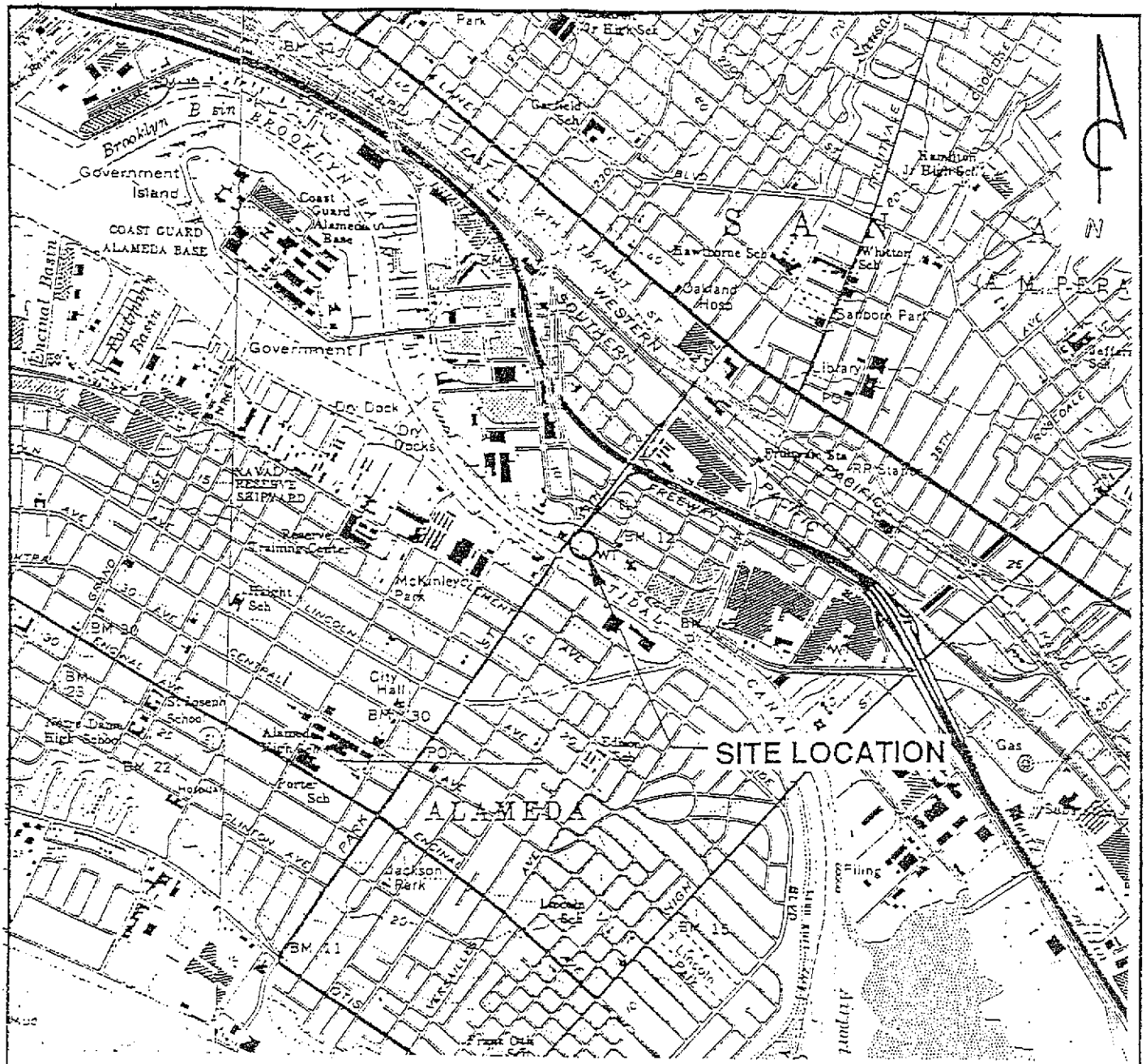
Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, Motor Oil, and MtBE)

Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TEPH as Diesel (µg/L)	Motor Oil (µg/L)	MtBE (µg/L)
MW-8	11/29/95	NA	NA	NA	NA	NA	NA	NA	NA
	01/18/96	NA	NA	NA	NA	NA	ND	NA	NA
	03/08/96	NS	NS	NS	NS	NS	NS	NS	NS
	07/02/96	ND	0.74	0.88	ND	0.82	ND	ND	ND
	12/17/96	ND	ND	ND	ND	ND	53 g	ND	ND
	03/21/97	ND	ND	ND	ND	ND	ND	ND	ND
	06/25/97	ND	ND	ND	ND	ND	ND	ND	ND
	09/29/97	ND	ND	ND	ND	ND	ND	ND	ND
	12/11/97	270	8.0	1.8	5.7	14	ND	ND	72
	03/27/98	ND	ND	ND	ND	ND	ND	ND	ND
	06/26/98	ND	ND	ND	ND	ND	ND	ND	ND
	09/11/98	ND	ND	ND	ND	ND	ND	ND	ND
	09/11/98	NA	NA	NA	NA	NA	130 g	ND	NA

TPPH = Total purgeable petroleum hydrocarbons
TEPH = Total extractable petroleum hydrocarbons
MtBE = Methyl tert-butyl ether
µg/L = Micrograms per liter
NS = Not sampled
ND = Not detected (see certified analytical reports for detection limits)
NA = Not analyzed
* = Well MW-5 was destroyed in September 1996.

a. Chromatogram pattern is not gasoline, but volatile fraction of diesel quantified as gasoline.
b. Chromatogram pattern is not gasoline, but unidentified hydrocarbons in C6 - C12 range.
c. Chromatogram pattern is a mixture of weathered diesel and unidentified hydrocarbons in C9 - C24 range.
d. Chromatogram pattern is not motor oil, but unidentified hydrocarbons in C16 - C36 range.
e. Chromatogram pattern is weathered diesel in C9 - C24 range.
f. Chromatogram pattern is not gasoline, but unidentified hydrocarbons > C10.
g. Chromatogram pattern is not diesel, but unidentified hydrocarbons in the C9 - C24 range.
h. Chromatogram pattern is weathered gasoline.
i. Chromatogram pattern is not gasoline, but unidentified hydrocarbons in C6 - C8 range.
j. Chromatogram pattern is not motor oil, but unidentified hydrocarbons in the C16 to C34 range.
k. Chromatogram pattern is not gasoline, but unidentified hydrocarbons > C5.
l. Chromatogram pattern is not gasoline, but unidentified hydrocarbons > C12.
m. Chromatogram pattern is a mixture of weathered diesel and unidentified hydrocarbons in the C18 - C40 range.
n. Chromatogram pattern is a mixture of weathered diesel and unidentified hydrocarbons in the C9 - C40 range.
o. Chromatogram pattern is not diesel, but unidentified hydrocarbons in the C9 - C40 range.



QUADRANGLE LOCATION

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

SCALE IN FEET
2000 0 2000

PACIFIC ENVIRONMENTAL GROUP, INC.

FORMER DORR-OLIVER SITE
2901 Glascock Street
Oakland, California

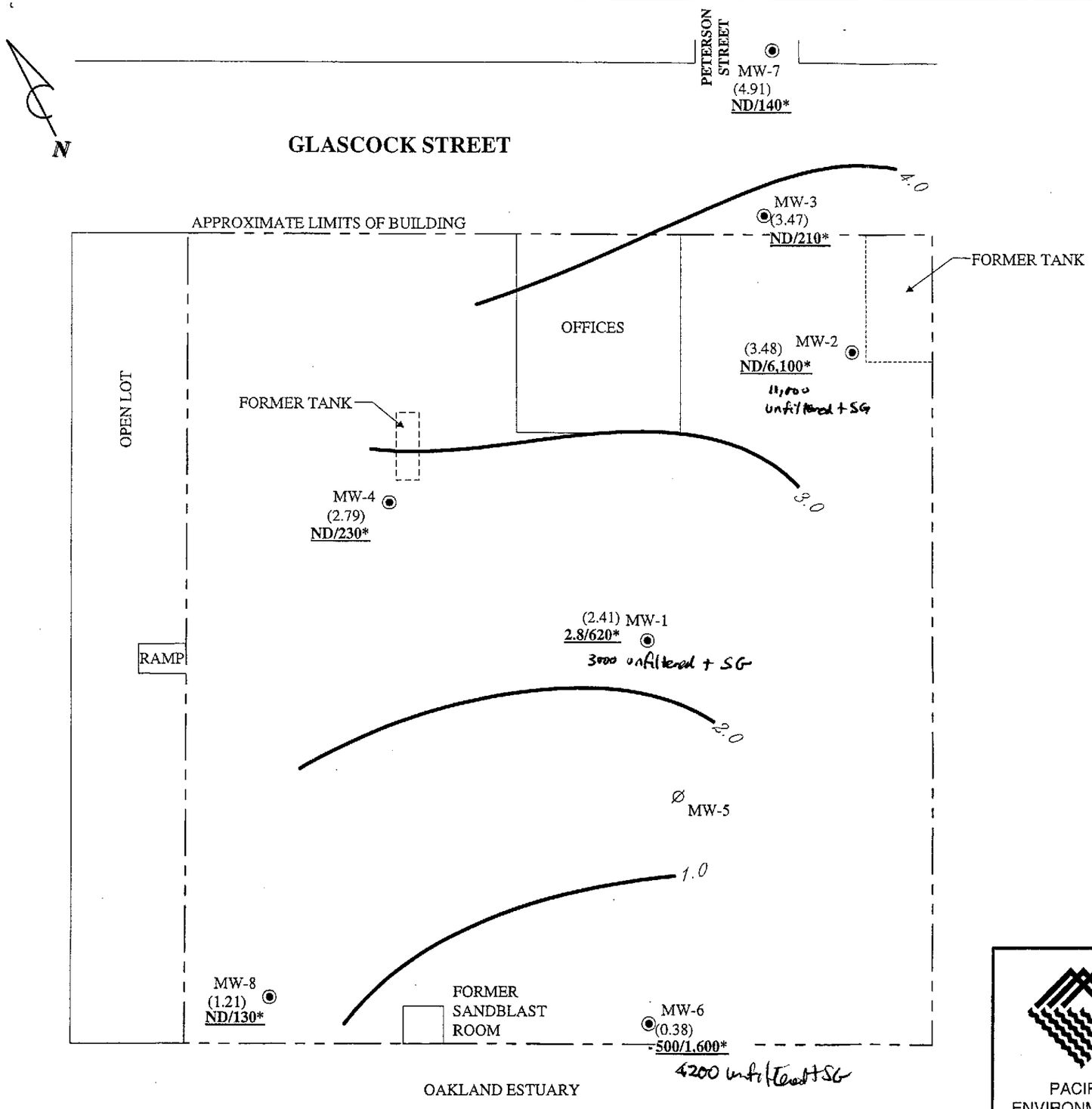
SITE LOCATION MAP

FIGURE: 1

PROJECT: 360-014.2B

1/8/99 Conv/CHeadley

1) filtering ok
2) Silica gel ok



LEGEND

MW-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

MW-5 Ø DESTROYED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

(1.21) GROUNDWATER ELEVATION IN FEET - MSL, 9-11-98

1.0 — GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 9-11-98

ND/220 BENZENE/TEPH-d CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 9-11-98

ND NOT DETECTED

* NOT DIESEL; UNIDENTIFIED HYDROCARBONS C9-C24

APPROXIMATE SCALE

0 40 80 FEET

Reference: 360/014/Sitemp40.vsd

PACIFIC ENVIRONMENTAL GROUP, INC.

TITLE:

GROUNDWATER MONITORING MAP - THIRD QUARTER 1998

PREPARED FOR:

FORMER DORR-OLIVER SITE
2901 Glascock Street
Oakland, California

DATE: 11/6/98 | PROJECT: 360-014.2B | FIGURE: 2

ATTACHMENT A
CERTIFIED ANALYTICAL REPORTS, CHAIN-OF-CUSTODY DOCUMENTATION, AND FIELD DATA SHEETS

UNFILTERED SAMPLES

NOV 1 1 1998

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-1	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	Extracted: 09/23/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/24/98
Attention: Andrew LeHane	Lab Number: 9809790-01	Reported: 11/10/98

C Batch Number: GC0923980HBPEXD
strument ID: GCHP5B

Fuel Fingerprint with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	150	3000
Chromatogram Pattern:		W. Diesel
Unidentified HC		C18-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	102

alytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

d Granicher
oject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-1	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/98
Attention: Andrew LeHane	Lab Number: 9809790-01	Reported: 11/10/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	230
Methyl t-Butyl Ether	2.5	8.7
Benzene	0.50	2.8
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	1.8
Chromatogram Pattern:		
Unidentified HC		>C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Todd Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809790-02

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/23/98
Analyzed: 09/25/98
Reported: 11/10/98

C Batch Number: GC0923980HBPEXD
strument ID: GCHP5B

Fuel Fingerprint with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	1500	11000
Chromatogram Pattern:		W. Diesel
Unidentified HC		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	156 Q

alytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

d Granicher
oject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-2	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/98
Attention: Andrew LeHane	Lab Number: 9809790-02	Reported: 11/10/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	550
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		
Unidentified HC		>C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103

alytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

d Granicher
oject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-3	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	Extracted: 09/23/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/24/98
Attention: Andrew LeHane	Lab Number: 9809790-03	Reported: 11/10/98

QC Batch Number: GC0923980HBPEXD
Instrument ID: GCHP5B

Fuel Fingerprint with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	150	320
Chromatogram Pattern:		
Unidentified HC		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	80

nalytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

od Granicher
roject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-3	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/98
Attention: Andrew LeHane	Lab Number: 9809790-03	Reported: 11/10/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	110
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Unidentified HC		>C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

ytes reported as N.D. were not present above the stated limit of detection.

QUOIA ANALYTICAL - ELAP #1210

Granicher
ect Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-4	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	Extracted: 09/23/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/24/98
Attention: Andrew LeHane	Lab Number: 9809790-04	Reported: 11/10/98

QC Batch Number: GC0923980HBPEXD
Instrument ID: GCHP5B

Fuel Fingerprint with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons Chromatogram Pattern:	150	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	65

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Ed Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-4	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/98
Attention: Andrew LeHane	Lab Number: 9809790-04	Reported: 11/10/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103

nalytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

od Granicher
roject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-6	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	Extracted: 09/23/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/25/98
Attention: Andrew LeHane	Lab Number: 9809790-05	Reported: 11/10/98

QC Batch Number: GC0923980HBPEXD
Instrument ID: GCHP5A

Fuel Fingerprint with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	300	4200
Chromatogram Pattern:		W. Diesel
Unidentified HC		C18-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Ed Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9809790-05

Sampled: 09/11/98
Received: 09/14/98

Analyzed: 09/21/98
Reported: 11/10/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	100	660
Methyl t-Butyl Ether	5.0	6.5
Benzene	1.0	500
Toluene	1.0	N.D.
Ethyl Benzene	1.0	N.D.
Xylenes (Total)	1.0	N.D.
Chromatogram Pattern:		
Unidentified HC		>C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	111

lytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

Granicher
ject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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acific Environmental Group
025 Gateway Place, Suite 440
an Jose, CA 95110

ttention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-7
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809790-06

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/23/98
Analyzed: 09/24/98
Reported: 11/10/98

C Batch Number: GC0923980HBPEXD
trument ID: GCHP5A

Fuel Fingerprint with Silica Gel Cleanup

nalyte	Detection Limit ug/L	Sample Results ug/L
xtractable Hydrocarbons Chromatogram Pattern:	150	N.D.

urrogates	Control Limits %		% Recovery
-Pentacosane (C25)	50	150	63

lytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

d Granicher
oject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-7	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/98
Attention: Andrew LeHane	Lab Number: 9809790-06	Reported: 11/10/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**110**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	107

nalytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

od Granicher
roject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

acific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
025 Gateway Place, Suite 440	Sample Descript: MW-8	Received: 09/14/98
an Jose, CA 95110	Matrix: LIQUID	Extracted: 09/23/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/24/98
ttention: Andrew LeHane	Lab Number: 9809790-07	Reported: 11/10/98

C Batch Number: GC0923980HBPEXD
strument ID: GCHP5A

Fuel Fingerprint with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons Chromatogram Pattern:	150	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	78

alytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

d Granicher
oject Manager

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680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 360-014.2B/2901 Glascock St.	Sampled: 09/11/98
2025 Gateway Place, Suite 440	Sample Descript: MW-8	Received: 09/14/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/21/98
Attention: Andrew LeHane	Lab Number: 9809790-07	Reported: 11/10/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106

Analytes reported as N.D. were not present above the stated limit of detection.

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roject Manager

FILTERED SAMPLES

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-01

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
nstrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	620
Chromatogram Pattern: Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	160 Q

tes reported as N.D. were not present above the stated limit of detection.

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-01

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

C Batch Number: GC0925980HBPEXZ
strument ID: GCHP4A

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
xtractable HC as Motor Oil	500	520
hromatogram Pattern:		C16-C36
nidentified HC		

Surrogates	Control Limits %		% Recovery
-Pentacosane (C25)	50	150	160 Q

es reported as N.D. were not present above the stated limit of detection.

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ct Manager

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acific Environmental Group
025 Gateway Place, Suite 440
an Jose, CA 95110

ttention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-02

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

Batch Number: GC0925980HBPEXZ
trument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

nalyte	Detection Limit ug/L	Sample Results ug/L
EPH as Diesel	500	6100
hromatogram Pattern:		C9-C24
nidentified HC		

urrogates	Control Limits %		% Recovery
Pentacosane (C25)	50	150	155 Q

s reported as N.D. were not present above the stated limit of detection.

UOIA ANALYTICAL - ELAP #1210

ranicher
t Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-02

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
Instrument ID: GCHP4A

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern:	5000	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	155 Q

Results reported as N.D. were not present above the stated limit of detection.

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Granicher
Project Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-03

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	210
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	158 Q

ytes reported as N.D. were not present above the stated limit of detection.

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Granicher
ect Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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'acific Environmental Group
025 Gateway Place, Suite 440
an Jose, CA 95110

ttention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-03

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

Batch Number: GC0925980HBPEXZ
trument ID: GCHP4A

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

nalyte	Detection Limit ug/L	Sample Results ug/L
xtractable HC as Motor Oil nromatogram Pattern:	500	N.D.
urrogates	**Control Limits %**	**% Recovery**
Pentacosane (C25)	50 150	158 Q

s reported as N.D. were not present above the stated limit of detection.

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anicher
Manager

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680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-04

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	230
Chromatogram Pattern: Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	84

es reported as N.D. were not present above the stated limit of detection.

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ranicher
t Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-04

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
Instrument ID: GCHP4A

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern:	500	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	84

ytes reported as N.D. were not present above the stated limit of detection.

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Granicher
ect Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-05

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

C Batch Number: GC0925980HBPEXZ
strument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
EPH as Diesel	100	1600
hromatogram Pattern:		
nidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
-Pentacosane (C25)	50	150	114

es reported as N.D. were not present above the stated limit of detection.

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t Manager

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-05

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
Instrument ID: GCHP4A

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	1000	1300
Chromatogram Pattern:		C16-C36
Unidentified HC		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	114

lytes reported as N.D. were not present above the stated limit of detection.

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Granicher
ect Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-7
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-06

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	140
Chromatogram Pattern: Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	166 Q

ytes reported as N.D. were not present above the stated limit of detection.

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-7
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-06

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

QC Batch Number: GC0925980HBPEXZ
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern:	500	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	166 Q

lytes reported as N.D. were not present above the stated limit of detection.

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Granicher
ect Manager

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-8
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-07

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

C Batch Number: GC0925980HBPEXZ
strument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
EPH as Diesel	50	130
hromatogram Pattern:		
nidentified HC		C9-C24

urrogates	Control Limits %		% Recovery
-Pentacosane (C25)	50	150	161 Q

es reported as N.D. were not present above the stated limit of detection.

QUOIA ANALYTICAL - ELAP #1210

ranicher
ct Manager

Sequoia Analytical

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Pacific Environmental Group
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San Jose, CA 95110

Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Sample Descript: MW-8
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809F83-07

Sampled: 09/11/98
Received: 09/14/98
Extracted: 09/25/98
Analyzed: 09/29/98
Reported: 09/30/98

C Batch Number: GC0925980HBPEXZ
strument ID: GCHP4B

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	500	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	161 Q

tes reported as N.D. were not present above the stated limit of detection.

QUOIA ANALYTICAL - ELAP #1210

Granicher
ct Manager

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Pacific Environmental Group
2025 Gateway Place, Ste. 440
San Jose, CA 95110
Attention: Andrew LeHane

Client Project ID: 360-014.2B/2901 Glascock St.

QC Sample Group: 9809F83

Reported: Oct 1, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015A
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC0925980HBPEXZ SG

Sample No.:	9809E85-1
Date Prepared:	9/25/98
Date Analyzed:	9/29/98
Instrument I.D.#:	GCHP5A
Sample Conc., ug/L:	N.D.
Conc. Spiked, ug/L:	1000
Matrix Spike, ug/L:	1400
% Recovery:	140
Matrix Spike Duplicate, ug/L:	1200
% Recovery:	120
Relative % Difference:	15
RPD Control Limits:	0-50

LCS Batch#: BLK092598ZS SG

Date Prepared:	9/25/98
Date Analyzed:	9/30/98
Instrument I.D.#:	GCHP19A
Conc. Spiked, ug/L:	1000
Recovery, ug/L:	930
LCS % Recovery:	93

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Andrew LeHane

Client Proj. ID: 360-014.2B/2901 Glascock St.
Lab Proj. ID: 9809F83

Received: 09/14/98
Reported: 09/30/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 17 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

QUOIA ANALYTICAL

ranicher
ct Manager

PROJECT No. 360014.03

Chain of Custody 9809790

Pacific Environmental Group, Inc.
2025 Gateway Place #440, San Jose CA 95110
Phone 408 441 7790 Fax 408 441 7539

Facility No: FORMER DORE OIL SITE

Facility Address: 2901 Glascock St Oakland CA

CLIENT engineer: DEN'S BUEAU

PACIFIC Point of Contact: ANDREW LEHAVE

Sampler: KEVIN E. REED

Billing Refence Number: 424

Laboratory Name: SEQUOIA

W=water S=soil A=air

G=grab D=disc. C=comp.

Sample I.D.	Cont. No.	Container Size (ml)	Sample Preserv.	Matrix	Type	Sampling Date	Sampling Time	BTEX/ VPHgas (8015/ 8020)	TPH Diesel (8015)	Oil and Grease (5520)	Total Dislvd. Metals	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOC (EPA 601/ 8010)	Fuel Fingerprint As Diesel/motor oil	
MW-1	5	40ml	HCl VOA	W	G	9-11-98	10:50	X							X	01
MW2							11:05									02
MW3							9:35									03
MW4							9:50									04
MW6							10:30									05
MW7							9:20									06
MW8	↓	↓	↓	↓	↓	↓	10:10	↓							↓	07

Comments:

Fuel Fingerprint as Diesel & motor oil w/ Silica Gel Clean up by EPA method 3630B with no solvent exchange and filtration by glass fiber 0.7 micron TCLP filter

Please contact PEG/Andrew Lehave if you have questions.

Condition of Sample:

Temperature Received:

Relinquished by	Date	Time	Received by	Date	Time
	9-11-98	14:00	Kenny Flores	9/11/98	1400
Kenny Flores	9/14/98	1005		9/14/98	1005
	9/14/98				

Received by laboratory:

Mail original Analytical Report to:

Pacific Environmental Group
2025 Gateway Place #440
San Jose, CA 95110

620 Contra Costa Blvd. #209
Pleasant Hill, CA 94523

25725 Jeronimo Rd. #576C
Mission Viejo, CA 92622

4020 148th Ave NE #B
Redmond, WA 98052

Turnaround Time:

- Priority Rush (1 day)
- Rush (2 days)
- Expedited (5 days)
- Standard (10 days) ✓

PROJECT No. 3600114B **Chain of Custody** 9809790

Pacific Environmental Group, Inc.
2025 Gateway Place #440, San Jose CA 951
Phone 408 441 7790 Fax 408 441 7539

Facility No. FORMER DORR OLIVER SITE
Facility Address: 2901 Glascock St Oakland CA
CLIENT engineer: Dave's Buran
PACIFIC Point of Contact: Andrew Lehaux
Sampler: Pedro E. Ruiz
Billing Refence Number: 4024
Laboratory Name: SEQUOIA

Sample I.D.	Cont. No.	Container Size (ml)	Sample Preserv.	Matrix (W=water S=soil A=air)	Type (G=grab D=disc. C=comp.)	Sampling Date	Sampling Time	BTEX/ VPHgas (8015/ 8020) MTBE	TPH Diesel (8015)	Oil and Grease (5520)	Total Dislvd. Metals	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOC (EPA 601/ 8010)	Fuel Fingerprint As Diesel motor oil			Comments:
MW-1	5	40ml	HCl, ice	W	G	9-11-98	10:50	X							X	01		Fuel fingerprint as Diesel & motor oil w/ silica gel clean by EPA method 3630B with no solvent exchange and filtration by glass fiber 0.7 micron TCLP filter. Please contact PEG/Andrew Lehaux if you have questions
MW-2	↓	↓	↓	↓	↓	↓	11:05	↓							↓	02		
MW-3							9:35									03		
MW-4							9:50									04		
MW-6							10:30									05		
MW-7							9:20									06		
MW-8							10:10									07		

Condition of Sample:

Temperature Received:

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9-11-98	14:00	Kenny Thomas	9/11/98	1400
Kenny Thomas	9/14/98	1005	[signature]	9/14/98	1005
[signature]	9/14/98				
Relinquished by	Date	Time	Received by laboratory [signature]	Date	Time

Mail original Analytical Report to:
Pacific Environmental Group
- [X] 2025 Gateway Place #440 San Jose, CA 95110
- [ ] 620 Contra Costa Blvd. #209 Pleasant Hill, CA 94523
- [ ] 25725 Jeronimo Rd. #576C Mission Viejo, CA 92622
- [ ] 4020 148th Ave NE #...

Turnaround Time:
- [ ] Priority Rush (1 day)
- [ ] Rush (2 days)
- [ ] Expedited (5 days)
- [X] Standard (10 days)

SEP 14 1998 748

FIELD SERVICES REQUEST

SITE INFORMATION FORM

Identification

Project # 360-014.2B
Station ID Former Dorr-Olive Site
Site Address: 2901 Glascock St.
Oakland
Lab: Sequoia
County: Alameda
Project Manager: Andrew D. Lehane
Requester: J. Nelligan / E. Noolandi
Client: Glascock Street Properties
Client P.O.C: Dennis Buran
Date of Request: ~~Sept 9, 1998~~

Project Type

☐ Operation & Maintenance
☐ Sampling
☐ 1st time visit
☒ Quarterly
☐ 1st ☐ 2nd ☒ 3rd ☐ 4th
☐ Monthly
☐ Semi- Monthly
☐ Weekly
☐ One time event
☐ Other:
Ideal field date: Sept event

Site Check Appropriate Category

☒ In Budget Visit
☐ Out of Budget Site Visit

Budget Hours:
Actual Hours: 8
Mob de Mob:

Site Safety Concerns

STANDARD

Field Tasks General Description

Quarterly M&S, Months 3,6,9,12

1. Contact Gary or Bill @ ICONCO, 303 Derby Ave. @ Glascock, (510) 261-1900 to arrange for site access.
2. Take groundwater DTW (TOC) measurements for Wells MW-1 through MW-4, MW-6 through MW-8.
3. Collect groundwater samples from Wells MW-1 through MW-4, MW-6 through MW-8. Take dissolved oxygen (DO) readings from MW-1, 2, and 6. Request analysis for the following on normal TAT:

Quarterly, all wells	TPPH-g, TEPH-d*, TEPH-mo*, BTEX, MtBE
Annually (Mar) , MW-6 and MW-8	cadmium, chromium, lead, nickel, zinc, and chlorinated hydrocarbons (8010)

* Request on COC "Fuel Fingerprint as diesel and motor oil with silica gel clean-up"

4. Ideal sampling order: MW-4, MW-7, MW-8, MW-3, MW-6, MW-1, MW-2
5. Purge water to be disposed of at Seaport, Redwood City.

6. BRING ORC's & Dispos.

Comments, remarks from field staff

TASK Completed Disposed old ORC's
Brought two purge to SEAPORT.

Completed By: [signature] Date: 9.11.98.

Pacific Environmental Group, Inc.

FIELD REPORT

EPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 360004.20 LOCATION: 2601 Glascock St DATE: 9.1.98

CLIENT/STATION NO.: Former Oliver site FIELD TECHNICIAN: RE DAY OF WEEK: Tue

PROBE TYPE/ID No.
- [X] Oil/Water IF/ _____
- [X] H_2O level indicator _____
- [ ] Other: _____

Dtw Order	Well ID	Time	Surface Seal	Lid Secure	Gasket	Lock	Expanding Cap	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SEPARATE-PHASE HYDROCARBONS (SPH): SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	COLOR: Fresh	Weathered	Gas	Oil	VISCOSITY: Lite	Medium	Heavy	LIQUID REMOVED (gallons): SPH / H_2O
	MW1	8:48	✓	✓	✓	✓	✓	19.80	8.35 / 8.35	8.55 / 8.55										/
	MW2	8:50	✓	✓	✓	✓	✓	19.75	7.15 / 7.15	7.45 / 7.45										/
	MW3	8:30	✓	✓	✓	✓	✓	19.80	6.40 / 6.40	6.75 / 6.75										/
	MW4	8:34	✓	✓	✓	✓	✓	19.70	7.85 / 7.85	8.03 / 8.03										/
	MW5							Destroyed.												/
	MW6	8:43	✓	✓	✓	✓	✓	19.50	9.90 / 9.90	10.53 / 10.53										/
	MW7	8:36	✓	✓	✓	✓	✓	17.75	4.95 / 4.95	5.40 / 5.40										/
	MW8	8:38	✓	✓	✓	✓	✓	17.70	9.40 / 9.40	9.95 / 9.95										/
									/	/										/

Comments: _____

FIELD DATA SHEET

ATER SAMPLE FIELD DATA SHEET

OJECT No.: 3600142B LOCATION: 2901 Glascock St WELL ID #: MW-1

CLIENT/STATION No. Former Dreyer's site FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION			CASING DIAMETER	GAL/ LINEAR FT.	SAMPLE TYPE
Depth to Liquid: ____	TOB ____	TOC	☒ 2	0.17	☒ Groundwater
Depth to water: ____	TOB ____	TOC	☐ 3	0.38	☐ Duplicate
Total depth: ____	TOB ____	TOC	☐ 4	0.66	☐ Extraction well
Date: ____	Time (2400): ____		☐ 4.5	0.83	☐ Trip blank
Probe Type and I.D. #	☐ Oil/Water interface ____		☐ 5	1.02	☐ Field blank
	☐ Electronic indicator ____		☐ 6	1.5	☐ Equipment blank
	☐ Other; ____		☐ 8	2.6	☐ Other; ____

TD 19.80 DTW 8.35 = 11.45 × Gal/Linear Foot .17 = 1.94 × Number of Casings 3 = Calculated Purge 5.83

DATE PURGED: 9-11-98 START: 10:35 END (2400 hr): —— PURGED BY: PE

DATE SAMPLED: 9-11-98 START: 10:50 END (2400 hr): —— SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:39	2	7.25	1190	65.3	Cloudy	Mod	Mod
10:42	4	7.24	1190	65.8	Cloudy	Mod	Mod
10:45	6	7.20	1170	64.9	Cloudy	Mod	Mod

Cobalt 0-100 / Clear / Cloudy / Yellow / Brown — NTU 0-200 / Heavy / Moderate / Light / Trace — Strong / Moderate / Faint / None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ____ TOB/TOC ____

PURGING EQUIPMENT/I.D. #

☐ Bailer: ____ ☐ Airlift Pump: ____

☒ Centrifugal Pump: 15 ☐ Dedicated: ____

☐ Other: ____

SAMPLING EQUIPMENT/I.D. #

☒ Bailer: 158

☐ Dedicated: ____

☐ Other: ____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-1	9-11-98	10:50	3	40ml	VOA	HCL	TPHG/BTEX/MTBE
			3	1L	Amb	NP	TPHD, TPHmo

EMARKS: DO 7.8 bef.
22 Aft.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001928 LOCATION: 2901 Blaycock St WELL ID #: MW-2

CLIENT/STATION No.: Former Dorothy Site FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☒	2	0.17
☐	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☒ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 19.75 - DTW 7.10 = 12.65 x Gal/Linear Foot .17 = 2.14 x Number of Casings 3 = Calculated Purge 6.42

DATE PURGED: 9-11-98 START: 10:55 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-11-98 START: 11:05 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:58	2	7.11	1640	68.2	Cloudy	Mod	Mod
11:01	4	7.10	1660	66.5	Cloudy	Mod	Mod
11:04	6	7.08	1650	65.6	Cloudy	Mod	Mod

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: 15
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15-6
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW2	9.11.98	11:05	3	40ml	VOA	HCL	TPHG / BTEX / MTBE
			2	1L	AMB	N/P	TPHD, TPHmo

REMARKS: 20.26

FIELD DATA SHEET

ATER SAMPLE FIELD DATA SHEET

PROJECT No.: 360014.28 LOCATION: 2901 Blanco St WELL ID #: MW-3

CLIENT/STATION No.: Former Dupont site FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☒	2	0.17
☐	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☒ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 19.80 - DTW 6.90 = 13.1 x Gal/Linear Foot .17 = 2.27 x Number of Casings 3 = Calculated Purge 6.83

DATE PURGED: 9-11-98 START: 9:22 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-11-98 START: 9:35 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:26	2.25	7.30	1080	64.9	Cloudy	Light	Faint
9:29	4.5	7.33	1090	65.1	Cloudy	Light	Faint
9:32	6.75	7.35	1080	65.1	Cloudy	Light	Faint

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☒ Centrifugal Pump: 15
- ☐ Airlift Pump: _____
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15-7
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-3	9-11-98	9:35	3	40ml	VOA	HCl	TPHG / BTEX / MTBE
			2	1L	Amb	NP	TPHD, TPHmo

REMARKS: _____

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 3600142B LOCATION: 2901 Glascock St WELL ID #: MW-4

CLIENT/STATION No.: Former Dorr Oliver Site FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: ______ TOB ______ TOC

Depth to water: ______ TOB ______ TOC

Total depth: ______ TOB ______ TOC

Date: ______ Time (2400): ______

Probe Type and I.D. #

- ☐ Oil/Water interface ______
- ☐ Electronic indicator ______
- ☐ Other; ______

CASING DIAMETER	GAL/ LINEAR FT.
☒ 2	0.17
☐ 3	0.38
☐ 4	0.66
☐ 4.5	0.83
☐ 5	1.02
☐ 6	1.5
☐ 8	2.6

SAMPLE TYPE

- ☒ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; ______

TD 19.70 DTW 7.85 = 11.85 x Gal/Linear Foot .17 = 2.01 x Number of Casings 3 = Calculated Purge 6.04

DATE PURGED: 9.11.98 START: 9:39 END (2400 hr): ______ PURGED BY: PR

DATE SAMPLED: 9.11.98 START: 9:50 END (2400 hr): ______ SAMPLED BY: PR

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:42	2	7.46	751	65.5	Cloudy	Mod	None
9:46	4	7.44	750	65.7	Cloudy	Mod	None
9:48	6	7.46	737	64.8	Cloudy	Mod	None

COLOR: Cobalt 0-100, Clear, Cloudy, Yellow, Brown — TURBIDITY: NTU 0-200, Heavy, Moderate, Light, Trace — ODOR: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: ______ TOB/TOC ______

PURGING EQUIPMENT/I.D. #

- ☐ Bailer: ______
- ☒ Centrifugal Pump: 15
- ☐ Other: ______
- ☐ Airlift Pump: ______
- ☐ Dedicated: ______

SAMPLING EQUIPMENT/I.D. #

- ☒ Bailer: 15-3
- ☐ Dedicated: ______
- ☐ Other: ______

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-4	9.11.98	9:50	3	40ml	VOA	HCL	TPHG / BTEX / MTBE
			2	1L	Amb	NP	TPHD, TPHmo

REMARKS: ______

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001428 LOCATION: 2901 Glascock St WELL ID #: MW-6

CLIENT/STATION No.: Former Dupont Site FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☒	2	0.17
☐	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☒ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 9.50 - DTW 9.90 = 9.6 x Gal/Linear Foot .17 = 1.63 x Number of Casings 3 = Calculated Purge 4.89

DATE PURGED: 9-11-98 START: 10:15 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-11-98 START: 10:30 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:18	1.5	7.53	1500	64.2	Brn	Heavy	Strong
10:21	3	7.47	1490	63.5	Brn	Heavy	Strong
10:25	4.5	7.40	1400	63.9	Brn	Heavy	Strong

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (NO)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: 15
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15-5
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW6	9.11.98	10:30	3	40ml	VOA	HCL	TPHG / BTEX / MTBE
			3	1L	Amb	NP	TPHD, TPHmo

REMARKS: 02

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001928 LOCATION: 2901 Blaycock St WELL ID #: MW-7

CLIENT/STATION No.: Former Dupont Site FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☒	2	0.17
☐	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☒ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 17.75 - DTW 4.95 = 12.8 x Gal/Linear Foot .17 = 2.17 x Number of Casings 3 = Calculated Purge 6.51

DATE PURGED: 9-11-98 START: 9:05 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-11-98 START: 9:00 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:09	2	7.39	1280	67.7	Cloudy	Mod	Low
9:12	4	7.32	1270	67.9	Cloudy	Mod	None
9:15	6	7.35	1260	68.2	Cloudy	Mod	None

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D.

- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: 15
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D.

- ☒ Bailer: 15
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-7	9-11-98	9:00	3	40ml	VOA	HCL	TPHG / BTEX / MTBE
			2	1L	Amb	NP	TPHD, TPHmo

REMARKS: _____

FIELD DATA SHEET

ATER SAMPLE FIELD DATA SHEET

PROJECT No.: 360014.28 LOCATION: 2901 Blycock St WELL ID #: MW-8

CLIENT/STATION No.: Former Dependable FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: _____ TOB _____ TOC
Depth to water: _____ TOB _____ TOC
Total depth: _____ TOB _____ TOC
Date: _____ Time (2400): _____

Probe Type and I.D. #
- ☐ Oil/Water interface _____
- ☐ Electronic indicator _____
- ☐ Other; _____

CASING DIAMETER		GAL/ LINEAR FT.
☒	2	0.17
☐	3	0.38
☐	4	0.66
☐	4.5	0.83
☐	5	1.02
☐	6	1.5
☐	8	2.6

SAMPLE TYPE
- ☒ Groundwater
- ☐ Duplicate
- ☐ Extraction well
- ☐ Trip blank
- ☐ Field blank
- ☐ Equipment blank
- ☐ Other; _____

TD 17.70 DTW 9.40 = 8.3 x Gal/Linear Foot .17 = 1.41 x Number of Casings 3 = Calculated Purge 4.23

DATE PURGED: 9-11-98 START: 9:57 END (2400 hr): _____ PURGED BY: PE

DATE SAMPLED: 9-11-98 START: 10:10 END (2400 hr): _____ SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:00	1.5	6.54	409	64.5	Cloudy	Mod	None
10:03	3	6.55	408	64.9	Cloudy	Mod	None
10:06	4.5	6.61	415	64.3	Cloudy	Mod	None

Color: Cobalt 0-100, Clear, Cloudy, Yellow, Brown
Turbidity: NTU 0-200, Heavy, Moderate, Light, Trace
Odor: Strong, Moderate, Faint, None

Pumped dry Yes / (No)

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: _____ TOB/TOC _____

PURGING EQUIPMENT/I.D. #
- ☐ Bailer: _____
- ☐ Airlift Pump: _____
- ☒ Centrifugal Pump: 15
- ☐ Dedicated: _____
- ☐ Other: _____

SAMPLING EQUIPMENT/I.D. #
- ☒ Bailer: 15-9
- ☐ Dedicated: _____
- ☐ Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW8	9-11-98	10:10	3	40ml	VOA	HCL	TPHG/BTEX/MTBE
			2	1L	AMB	NP	TPHD, TPHmo

REMARKS: _____

TRANSPORT FORM #: _____

NON-HAZARDOUS WATER TRANSPORT FORM

GENERATOR INFORMATION

NAME: B. P. Oil Att: Scott Hooton

ADDRESS: 295 Southwest 41st Street

CITY,STATE,ZIP: Renton, WA. 98055 PHONE #: 206-251-0439

DESCRIPTION OF WATER: WATER GENERATED FROM GROUNDWATER MONITORING ACTIVITIES.

I CERTIFY THAT THIS MATERIAL IS A LIQUID, EXEMPT FROM RCRA PER 40 CFR 261.4 (B)(10) AND DOES NOT MEET THE CRITERIA OF HAZARDOUS WASTE AS DESCRIBED IN 22 CCR ARTICLE 11 OR ANY OTHER APPLICABLE STATE LAW, HAS BEEN PROPERLY DESCRIBED, CLASSIFIED AND PACKAGED AND IS IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO APPLICABLE REGULATIONS.

Pacific Environmental — 9-11-98

GENERATOR/AUTHORIZED AGENT SIGNATURE & DATE

SITE INFORMATION

BP Station #	Street Address, City	Gals
Former Dorado Site	3901 Glascock Oakland	40

TOTAL GALLONS: 40

TRANSPORTER INFORMATION

NAME: Pacific Environmental Group

ADDRESS: 2025 Gateway Place, Suite #440

CITY,STATE,ZIP: San Jose, CA 95110 PHONE #: 408-441-7500

TRUCK ID #: 16 Pedro E. Ruiz 9-11-98

(Typed or printed full name & signature) (Date)

RECEIVING FACILITY

NAME: Seaport Environmental

ADDRESS: 675 Seaport Blvd.

CITY,STATE,ZIP: Redwood City, CA 94063 PHONE #: (415) 364-9534

APPROVAL #: 508-147 Javier Valdes 9-11-98

(Typed or printed full name & signature) (Date)

Chain of Custody

Pacific Environmental Group, Inc.
2025 Gateway Place #440, San Jose CA 95110
Phone 408 441 7790 Fax 408 441 7539

PROJECT No. 360014QB

Facility No. FORMER DORR OLIVER SITE

CLIENT engineer: DENIS BURAN

Facility Address: 2901 GLASCOCK ST OAKLAND CA

PACIFIC Point of Contact: ANDREW YEHAWE

Sampler: PEDRO E. RUIZ

Billing Reference Number: 1024

Laboratory Name: SEQUOIA

Sample I.D.	Cont. No.	Container Size (ml)	Sample Preserv.	Matrix (W=water S=soil A=air)	Type (G=grab D=disc. C=comp.)	Sampling Date	Sampling Time	BTEX/VPHgas (8015/8020) w/ MTBE	TPH Diesel (8015)	Oil and Grease (5520)	Total Dislvd. Metals	VOC (EPA 624/8240)	SVOC (EPA 627/8270)	HVOC (EPA 601/8010)	Fuel Fingerprint As Diesel/motor oil				Comments:
MW-1	5	40/1L	HCL NP	W	G	9-1-98	10:50	X							X				Fuel Fingerprint as Diesel & motor oil w/ Silica Gel Clean up
MW-2	↓	↓	↓	↓	↓	↓	11:05	↓							↓				
MW-3	↓	↓	↓	↓	↓	↓	9:35	↓							↓				
MW-4	↓	↓	↓	↓	↓	↓	9:50	↓							↓				
MW-6	↓	↓	↓	↓	↓	↓	10:30	↓							↓				
MW-7	↓	↓	↓	↓	↓	↓	9:20	↓							↓				
MW-8	↓	↓	↓	↓	↓	↓	10:10	↓							↓				

Condition of Sample:

Temperature Received:

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by [signature]	9-1-98	14:00	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by laboratory	Date	Time

Mail original Analytical Report to:
Pacific Environmental Group
- [X] 2025 Gateway Place #440 San Jose, CA 95110
- [ ] 620 Contra Costa Blvd. #209 Pleasant Hill, CA 94523
- [ ] 25725 Jeronimo Rd. #576C Mission Viejo, CA 92622
- [ ] 4020 148th Ave NE #B Redmond, WA 98052

Turnaround Time:
- [ ] Priority Rush (1 day)
- [ ] Rush (2 days)
- [ ] Expedited (5 days)
- [X] Standard (10 days)
- [ ] As Contracted