



PACIFIC
ENVIRONMENTAL
GROUP, INC.

AN COMPANY

ENVIRONMENTAL
PROTECTION

98 SEP 25 PM 3:17

September 11, 1998

Project 360-014.2B

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

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

Dear Mr. Buran:

This letter has been prepared for Glascocock Street Properties by Pacific Environmental Group, Inc. (PEG). The following presents the results of second quarter 1998 groundwater monitoring program for the site referenced above (Figure 1). In addition, PEG has included a response to letters from the Alameda County Health Care Services Agency (ACHCSA) dated July 9 and August 18, 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 June 26, 1998. The depth to groundwater and groundwater analytical data are presented in Tables 1 through 3. The wells were sampled and analyzed for the presence of total purgeable petroleum hydrocarbons quantified as gasoline (TPPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), total extractable petroleum hydrocarbons quantified as diesel (TEPH-d), total extractable petroleum hydrocarbons quantified as motor oil, and methyl tert-butyl ether (MtBE). Groundwater elevations, benzene, and TEPH-d concentrations for the second quarter 1998 sampling event are shown on Figure 2. The certified analytical reports, chain-of-custody documentation, and field data sheets are presented as Attachment A.

Groundwater Levels

The average groundwater elevation in site monitoring wells decreased approximately 1.27 feet compared to the last monitoring event (Table 1). Groundwater flow is still generally to the south/southwest (toward the Oakland Estuary), consistent with previous measurements, at a gradient of approximately 0.022 (Figure 2). Groundwater elevations were within the historic range for the site.

Groundwater Quality

Detectable TEPH-d concentrations were found in Wells MW-1, MW-2, and MW-6, and were characterized as weathered diesel. A concentration of TEPH-d was reported for Well MW-3, however it was not characterized as diesel but as unidentified hydrocarbons in the C₉ through C₂₄ range. The highest TEPH-d concentration detected was in the sample from Well MW-2 at 11,000 micrograms per liter ($\mu\text{g/L}$).

Concentrations of total extractable petroleum hydrocarbons quantified as motor oil were reported in samples from Wells MW-1, MW-2, and MW-6. However, laboratory analysis characterized the samples as unidentified hydrocarbons in the C₁₆ to C₃₆ range and not motor oil.

Wells MW-1, MW-2, MW-3, and MW-6 were reported to have detectable TPPH-g, however, the analytical reports characterized all results as unidentified hydrocarbons in the C₆ through C₁₂ range or greater than C₁₀. None of the results were reported to be gasoline. Benzene was detected in Wells MW-1 and MW-6 this quarter. Benzene concentrations were reported as 2.6 $\mu\text{g/L}$ for Well MW-1 and 5.3 $\mu\text{g/L}$ for Well MW-6. MtBE concentrations were detected in Wells MW-6 and MW-7 at 11 $\mu\text{g/L}$ and 110 $\mu\text{g/L}$ respectively. Well MW-7 is an upgradient well located off-site at the intersection of Glascock and Peterson Streets.

Results of analyses for TEPH-d and benzene are shown on Figure 2.

RESPONSE TO ACHCSA LETTERS

Letters from the ACHCSA dated July 9 and August 18, 1998, provided guidance on proposed cleanup goals for the site, indicated that additional source removal should be considered, and requested a work plan for additional groundwater remediation. The following paragraphs respond to the ACHCSA's letters.

Proposed Cleanup Goals

The ACHCSA letters propose both qualitative and quantitative cleanup goals for the site. The qualitative goals set forth for considering site closure included:

September 11, 1998

Page 3

- 1) Demonstrating the extent of hydrocarbon-impacted groundwater at the site is stabilized or shrinking.
- 2) Removing or remediating the source of contamination.
- 3) Abating risks to human health or the environment.

The quantitative goals included proposed cleanup goals for TEPH-d ranging from 100 ppb to 570 ppb. PEG also understands that concentrations considerably higher than these have been proposed to the Regional Water Quality Control Board (RWQCB) as cleanup goals for sites similar in nature to this site (e.g., the San Francisco International Airport). The RWQCB is currently without formal guidance for standard cleanup goals at sites such as this, since the *Enclosed Bays and Estuaries Plan* (EBEP) adopted in 1991 was voided by the Sacramento Superior Court in 1994. The US EPA has proposed standards under the *California Toxics Rule*, but this rule is still draft. In the meantime, State Water Resources Control Board (SWRCB) is developing an *Implementation Policy* for operating under the *California Toxics Rule*, once finalized, while continuing to develop a new EBEP.

Given the uncertain nature of numerical cleanup goals at this point, PEG recommends the qualitative objectives be used to guide the remedial effort at this time.

Consideration of Additional Source Removal

Per the request of the ACHCSA, PEG has reviewed the site data in relation to further source removal. PEG reviewed the site background and found that 2 underground storage tanks (USTs) were removed from the site in February of 1993, along with about 200 cubic yards of hydrocarbon-impacted soil. Overexcavation in the vicinity of the former UST at the south-east corner of the warehouse was stopped when the extent of the excavation threatened structural integrity of the building. In the fourth quarter of 1996, approximately 150 additional cubic yards of hydrocarbon-impacted soil were excavated and removed from the site, based on the findings of soil sampling from 7 site monitoring wells and 32 soil borings performed between 1993 and 1995. All confirmation samples taken in 1996 were in compliance with the soil cleanup goals approved by the ACHCSA.

In summary, the primary source of hydrocarbons (i.e., the USTs) have been removed, the site has been extensively characterized and any areas identified as containing elevated concentrations of residual hydrocarbons (i.e., "secondary source areas") have been excavated to achieve the cleanup goals approved by the ACHCSA, to the extent feasible. Therefore, it is our opinion that additional source removal is not warranted.

Work Plan for Additional Groundwater Remediation

PEG has reviewed several alternatives for remediating residual petroleum hydrocarbons in groundwater at the site, and found that the most feasible alternative for this site is the use of enhanced bioremediation. PEG proposes to install 5 remedial wells, as described in the *Work Plan for Additional Remediation* (PEG, November 12, 1997), and equip the wells with oxygen releasing compound (ORC®) units (Figure 3).

The location of the proposed remedial wells was selected to create a treatment "fence" through which the hydrocarbon plume will migrate, while maintaining a monitoring point between the remedial wells and the site boundary. The distribution of the remedial wells is designed to cover the lateral extent of the plume at this location, based on quarterly monitoring data.

The ACHCSA suggested that we provide a estimate of the amount of residual hydrocarbons and a calculation of the amount of oxygen needed to react with the hydrocarbons to complete remediation. While PEG could predict the amount of ORC® required to remediate the residual hydrocarbons at the site, this calculation is highly sensitive to the estimated mass of hydrocarbons. Given the site conditions (e.g., fluctuating groundwater elevations and concentrations), the assumptions which must be made to estimate residual hydrocarbon mass, and our experience with similar sites, PEG believes the residual mass cannot be accurately calculated. The resulting prediction of ORC® consumption would likewise be unreliable. However, since PEG does not intend to construct a grid of borings backfilled with an ORC® slurry, this issue is not critical. The construction of wells will allow for monitoring and replacement of ORC® material as oxygen-releasing ability is depleted. The ORC® will be replaced periodically to continue stimulation of the residual hydrocarbon plume until the remedial objectives have been met, or asymptotic conditions are achieved.

CONCLUSION

PEG believes that this alternative is the most technically and economically feasible alternative for remediating residual hydrocarbons at the site to meet the qualitative cleanup goals proposed for the site. PEG proposes to stimulate enhanced bioremediation of the residual hydrocarbon plume until the qualitative remedial objectives have been met, or asymptotic conditions are achieved. Groundwater monitoring and sampling will continue on the existing schedule until site conditions warrant a modification to the program.

gw velocity < 10' / yr
Or radially by diffusion
load ft/day
zntact 2

Table 1
Groundwater Elevation Data

Former Dorr-Oliver Site
2901 Glascock Avenue
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
MW-2	03/27/98		7.50	3.26
	06/26/98		8.65	2.11
	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
MW-3	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
	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
MW-4	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
MW-4	10/06/94	10.64	7.96	2.68
	01/20/95		5.95	4.69

Table 1
Groundwater Elevation Data

Former Dorr-Oliver Site
2901 Glascock Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-4 (cont.)	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
MW-5	06/26/98		7.85	2.79
	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
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
	12/11/97		3.45	6.41
	03/27/98		3.45	6.41
	06/26/98		4.00	5.86

Table 1
Groundwater Elevation Data

Former Dorr-Oliver Site
2901 Glascock Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
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
<hr/>				
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)		Ethyl-benzene (µg/L)			TEPH as Diesel (µg/L)		
		Benzene (µg/L)	Toluene (µg/L)	Xylenes (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
MW-2	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
	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
MW-3	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
	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

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)		Ethyl-benzene (µg/L)			TEPH as Diesel (µg/L)			Motor Oil (µg/L)	MtBE (µg/L)
		Benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)							
MW-3 (cont.)	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	
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	
MW-5*	03/27/98	ND	ND	ND	ND	ND	ND		ND	ND	
	06/26/98	ND	ND	ND	ND	ND	ND		ND	ND	
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	
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	
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	

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

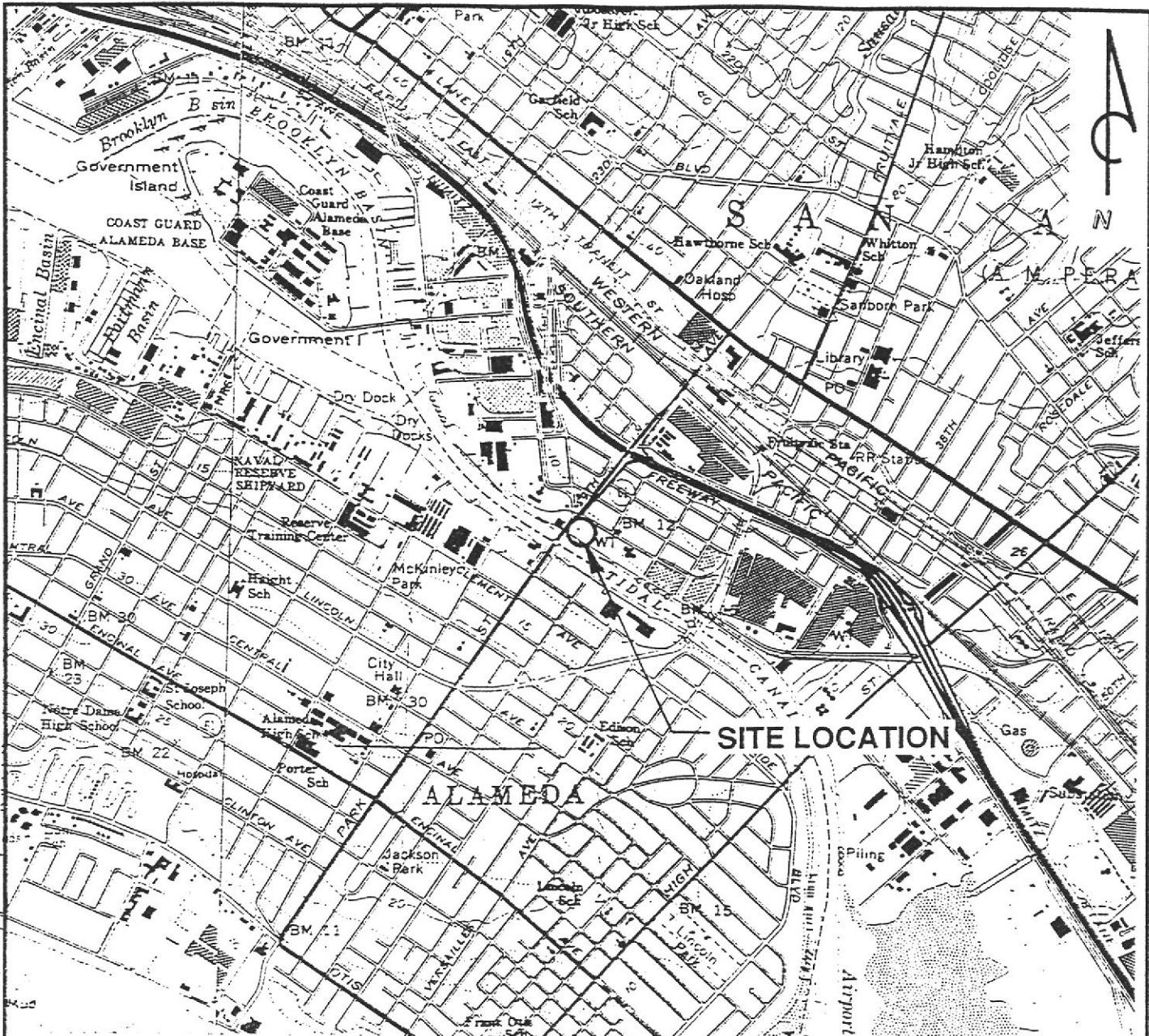
Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (µg/L)		Ethyl-benzene (µg/L)			TEPH as Diesel (µg/L)		Motor Oil (µg/L)	MtBE (µg/L)
		Benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)						
MW-7	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	
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	
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.									

Table 3
Groundwater Analytical Data
PCBs, Metals, and VOCs

Former Dorr-Oliver Site
2901 Glascock Street
Oakland, California

Well Number	Date Sampled	PCBs (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Lead (µg/L)	Nickel (µg/L)	Zinc (µg/L)	VOCs (µg/L)
MW-1	11/29/95	NA	NA	NA	NA	NA	NA	ND
	01/18/96	NA	ND	ND	ND	ND	ND	NA
	06/25/97	NA	NA	NA	NA	NA	NA	NA
	03/27/98	NA	NA	NA	NA	NA	NA	NA
MW-2	11/29/95	NA	NA	NA	NA	NA	NA	NA
	01/18/96	NA	ND	ND	ND	ND	ND	NA
	06/25/97	NA	NA	NA	NA	NA	NA	NA
	03/27/98	NA	NA	NA	NA	NA	NA	NA
MW-3	11/29/95	NA	NA	NA	NA	NA	NA	NA
	01/18/96	NA	ND	ND	ND	ND	51.2	NA
	06/25/97	NA	NA	NA	NA	NA	NA	NA
	03/27/98	NA	NA	NA	NA	NA	NA	NA
MW-4	11/29/95	NA	NA	NA	NA	NA	NA	ND a
	01/18/96	NA	ND	ND	ND	ND	20.5	NA
	06/25/97	NA	NA	NA	NA	NA	NA	NA
	03/27/98	NA	NA	NA	NA	NA	NA	NA
MW-5	11/29/95	NA	NA	NA	NA	NA	NA	NA
	01/18/96	NA	ND	ND	ND	ND	22.6	NA
MW-6	11/29/95	ND	ND	822	107	1,190	851	ND
	01/18/96	NA	ND	ND	ND	ND	ND	NA
	06/25/97	NA	ND	0.14	ND	0.2	0.18	ND d
	03/27/98	NA	ND	ND	ND	ND	0.017	ND e
MW-7	11/29/95	NA	NA	NA	NA	NA	NA	ND b
	01/18/96	NA	ND	ND	ND	ND	25.1	NA
	06/25/97	NA	NA	NA	NA	NA	NA	NA
	03/27/98	NA	NA	NA	NA	NA	NA	NA
MW-8	11/29/95	ND	ND	319	42.0	381	309	ND c
	01/18/96	NA	ND	ND	ND	ND	ND	NA
	06/25/97	NA	ND	0.54	ND	0.69	0.42	ND
	03/27/98	NA	ND	0.013	ND	ND	0.02	ND
PCBs = Polychlorinated bi-phenyls VOCs = Volatile organic compounds µg/L = Micrograms per liter NA = Not analyzed ND = Not detected (see certified analytical reports for detection limits)								
a. 0.61 µg/L 1,1-Dichloroethane b. 0.79 µg/L 1,1-Dichloroethane 0.74 µg/L <i>trans</i> -1,2-Dichloroethene c. 0.53 µg/L Vinyl Chloride 1.3 µg/L Trichloroethene d. 2.5 µg/L Chloroethene 0.97 µg/L 1,1-Dichloroethane 3.4 µg/L <i>trans</i> -1,2-Dichloroethene 1.4 µg/L Vinyl Chloride e. 2.1 µg/L Chloroethene 1.1 µg/L 1,1-Dichloroethane 0.85 µg/L <i>cis</i> -1,2-Dichloroethene 3.2 µg/L <i>trans</i> -1,2-Dichloroethene								



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



PACIFIC
ENVIRONMENTAL
GROUP, INC.

FORMER DORR-OLIVER SITE
2901 Glascock Street
Oakland, California

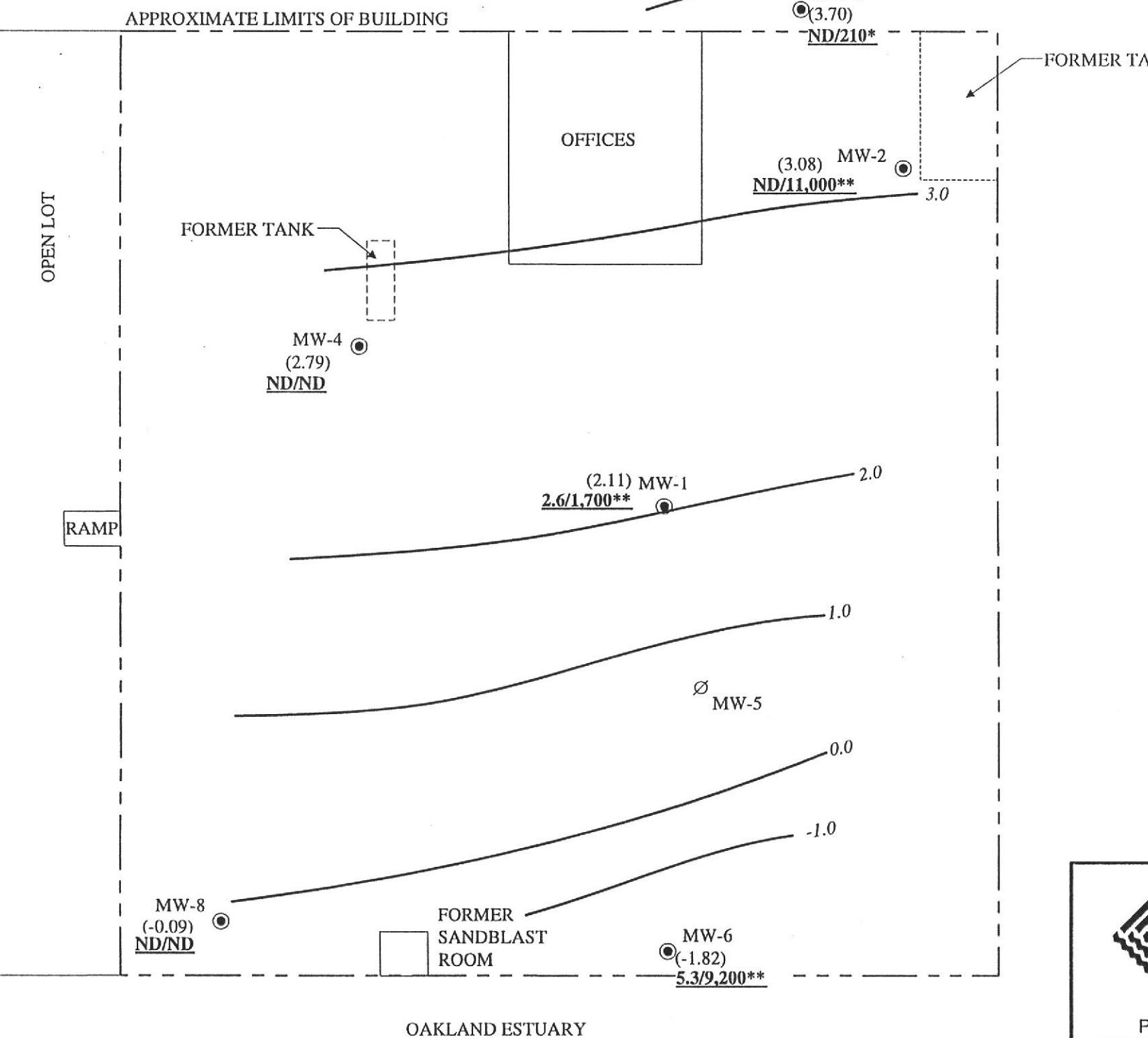
SITE LOCATION MAP

FIGURE:
1
PROJECT:
360-014.2B

N

GLASCOCK STREET

PETERSON
STREET



LEGEND

- MW-1 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-5 ○ DESTROYED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- (-1.82) GROUNDWATER ELEVATION IN FEET - MSL, 6-26-98
- 1.0 — GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 6-26-98
- ND/220 BENZENE/TEPH-d CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 6-26-98

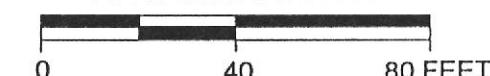
ND NOT DETECTED

* NOT DIESEL; UNIDENTIFIED HYDROCARBONS C9-C24

** WEATHERED DIESEL C9-C24

APPROXIMATE GRADIENT = 0.022

APPROXIMATE SCALE



PACIFIC
ENVIRONMENTAL
GROUP, INC.

GROUNDWATER MONITORING MAP -
SECOND QUARTER 1998

TITLE:

PREPARED FOR:
FORMER DORR-OLIVER SITE
2901 Glascock Street
Oakland, California

PREPARED FOR:

DATE:

PROJECT: 360-014.2B

FIGURE: 2

N

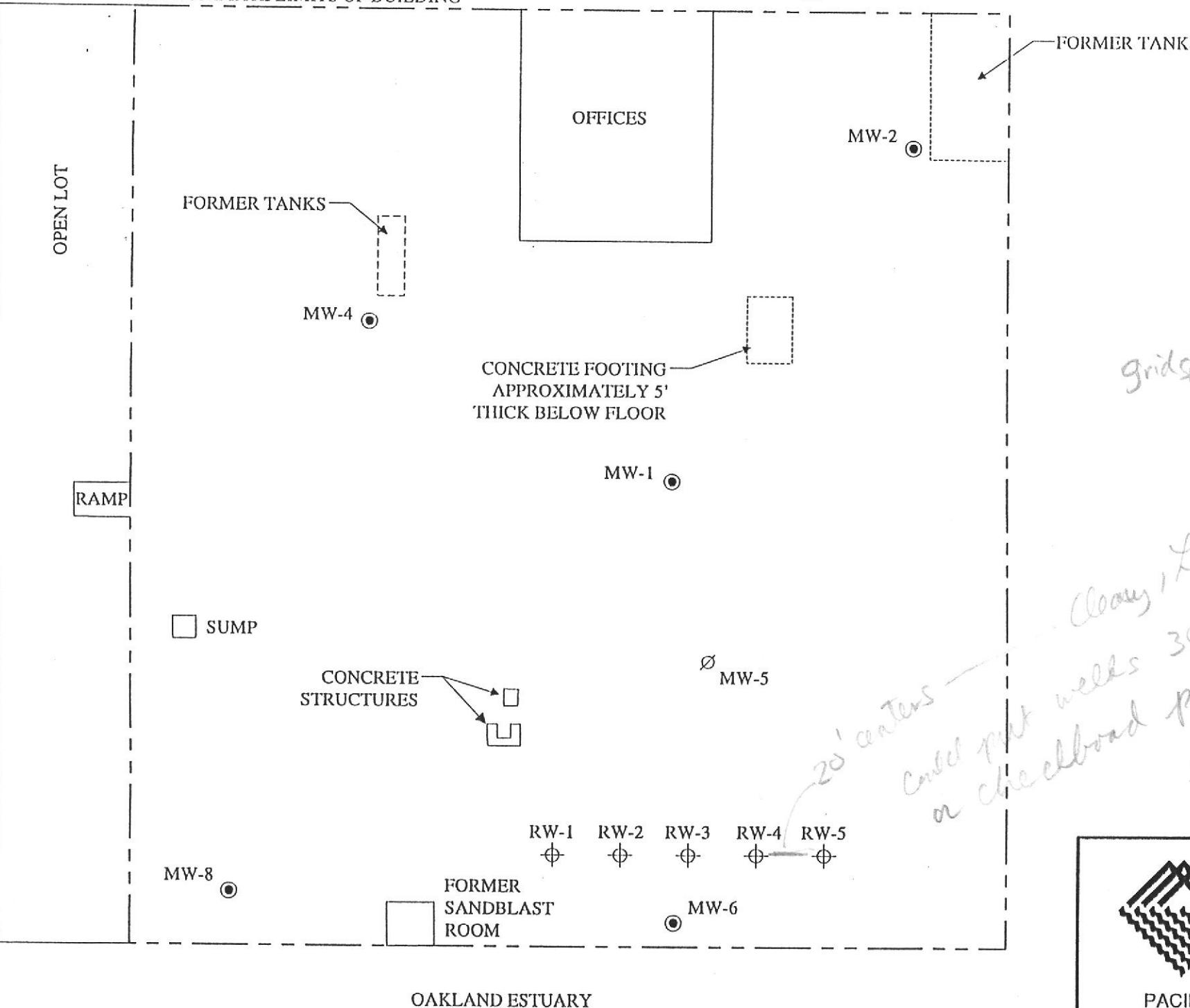
GLASCOCK STREET

PETERSON
STREET

MW-7

Clayey-sand
Silty-sand

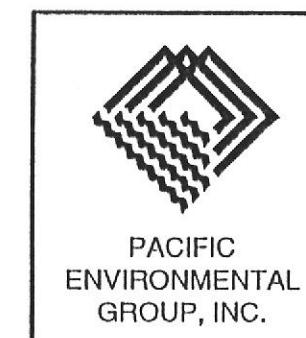
APPROXIMATE LIMITS OF BUILDING



LEGEND

- MW-4 (●) GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-5 (Ø) DESTROYED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- RW-1 (◊) PROPOSED REMEDIATION WELL LOCATION AND DESIGNATION

APPROXIMATE SCALE
0 40 80 FEET



TITLE:

CONCEPTUAL REMEDIATION PLAN

PREPARED FOR:

FORMER DORR-OLIVER SITE
2901 Glascock Street
Oakland, California

DATE: 5-1-97

PROJECT: 360-014.2B

FIGURE: 3

ATTACHMENT A

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



Sequoia
Analytical

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JUL 22 1998

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

Attention: Andrew Lehane

Client Proj. ID: 360-014.2B/Former Dorr-Oliver
Sample Descript: MW1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-01

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
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
Chromatogram Pattern: Weathered Diesel	.....	C18-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50	% Recovery 150

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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1



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

Attention: Andrew Lehane

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP4B

Client Proj. ID: 360-014.2B/Former Dorr-Oliver
Sample Descript: MW1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-01

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern: Unidentified HC	..... 500	..... 1300
Surrogates n-Pentacosane (C25)	.....	C16-C36
	Control Limits % 50 150	% Recovery 105

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

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2



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Pacific Environmental Group
2025 Gateway Place, Suite 440
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Attention: Andrew Lehane

Client Proj. ID: 360-014.2B/Former Dorr-Oliver
Sample Descript: MW1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806157-01

Sampled: 06/26/98
Received: 06/29/98
Analyzed: 07/08/98
Reported: 07/17/98

QC Batch Number: GC070898BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	.....	50
Methyl t-Butyl Ether	.....	450
Benzene	.....	2.5
Toluene	.....	41
Ethyl Benzene	.....	0.50
Xylenes (Total)	.....	2.6
Chromatogram Pattern:	.....	0.50
Gas & Unidentified HC	.....	N.D.
	.....	N.D.
	.....	N.D.
Surrogates		.....
Trifluorotoluene	Control Limits %	% Recovery
	70	130
		113

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

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3



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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/Former Dorr-Oliver
Sample Descript: MW2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-02

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/08/97
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern: Weathered Diesel	..... 500	11000
Surrogates n-Pentacosane (C25)	C18-C24	C9-C24+
	Control Limits % 50 150	% Recovery 120

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

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4



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Pacific Environmental Group
2025 Gateway Place, Suite 440
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Attention: Andrew Lehane

Client Proj. ID: 360-014.2B/Former Dorr-Oliver
Sample Descript: MW2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-02

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/08/97
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP5B

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	.....	5900
Chromatogram Pattern:		
Unidentified HC	.....	C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	120

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

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5



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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/Former Dorr-Oliver
Sample Descript: MW2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806157-02

Sampled: 06/26/98
Received: 06/29/98
Analyzed: 07/10/98
Reported: 07/17/98

QC Batch Number: GC071098BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	.....	200
Methyl t-Butyl Ether	10	.....
Benzene	2.0	N.D.
Toluene	2.0	N.D.
Ethyl Benzene	2.0	N.D.
Xylenes (Total)	2.0	N.D.
Chromatogram Pattern:	.....	.....
Unidentified HC	.....	C6-C12
Surrogates		
Trifluorotoluene	Control Limits % 70	% Recovery 130

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

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6



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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/Former Dorr-Oliver
Sample Descript: MW3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-03

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
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
Chromatogram Pattern:	.....	.....
Unidentified HC	.....	C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	81

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

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Pacific Environmental Group
2025 Gateway Place, Suite 440
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Attention: Andrew Lehane

Client Proj. ID: 360-014.2B/Former Dorr-Oliver
Sample Descript: MW3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-03

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
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 n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 81

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

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8



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

Attention: Andrew Lehane

Client Proj. ID: 360-014.28/Former Dorr-Oliver
Sample Descript: MW3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806157-03

Sampled: 06/26/98
Received: 06/29/98
Analyzed: 07/08/98
Reported: 07/17/98

QC Batch Number: GC070898BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte

Detection Limit
ug/L

Sample Results
ug/L

TPPH as Gas
Methyl t-Butyl Ether
Benzene
Toluene
Ethyl Benzene
Xylenes (Total)
Chromatogram Pattern:
Unidentified HC

..... 50 68
2.5 N.D.
0.50 N.D.
0.50 N.D.
0.50 N.D.
0.50 N.D.
..... C6-C12

Surrogates

Trifluorotoluene

Control Limits %
70 130

% Recovery
91

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

SEQUOIA ANALYTICAL - ELAP #1210

TG

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Project Manager

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9



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

Client Proj. ID: 360-014.2B/Former Dorr-Oliver
Sample Descript: MW4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-04

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	55	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 86

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

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

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10



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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/Former Dorr-Oliver
Sample Descript: MW4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-04

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
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:

550

N.D.

Surrogates

n-Pentacosane (C25)

Control Limits %

50

150

% Recovery
86

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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11



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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/Former Dorr-Oliver
Sample Descript: MW4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806157-04

Sampled: 06/26/98
Received: 06/29/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC070798BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and 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:	0.50	N.D.

Surrogates

Trifluorotoluene

Control Limits %

70 130

% Recovery
107

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Tod Granicher
Project Manager



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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/Former Dorr-Oliver
Sample Descript: MW6
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-05

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	500
Chromatogram Pattern:	.....	.....
Weathered Diesel	.....	C18-C24+
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	152 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

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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/Former Dorr-Oliver
Sample Descript: MW6
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-05

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP5B

Fuel Fingerprint : Motor Oil with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern: Unidentified HC	..... 5000	..... 6400
Surrogates n-Pentacosane (C25)	.....	C16-C36
	Control Limits % 50 150	% Recovery 152 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
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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/Former Dorr-Oliver
Sample Descript: MW6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806157-05

Sampled: 06/26/98
Received: 06/29/98
Analyzed: 07/08/98
Reported: 07/17/98

QC Batch Number: GC070898BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	.....	50
Methyl t-Butyl Ether	.....	2.5
Benzene	.....	0.50
Toluene	.....	0.50
Ethyl Benzene	.....	0.50
Xylenes (Total)	.....	0.50
Chromatogram Pattern: Gas & Unidentified HC	.....	0.50
		>C10
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

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

SEQUOIA ANALYTICAL - ELAP #1210

71
Tod Granicher
Project 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/Former Dorr-Oliver
Sample Descript: MW7
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-06

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 86

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
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Project Manager

Page:

16



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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/Former Dorr-Oliver
Sample Descript: MW7
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-06

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
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 n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 86

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

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Project Manager

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17



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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/Former Dorr-Oliver
Sample Descript: MW7
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806157-06

Sampled: 06/26/98
Received: 06/29/98
Analyzed: 07/08/98
Reported: 07/17/98

QC Batch Number: GC070898STEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte

Detection Limit
ug/L

Sample Results
ug/L

TPPH as Gas
Methyl t-Butyl Ether
Benzene
Toluene
Ethyl Benzene
Xylenes (Total)
Chromatogram Pattern:

50
2.5
0.50
0.50
0.50
0.50
N.D.
110
N.D.
N.D.
N.D.
N.D.

Surrogates

Trifluorotoluene

Control Limits %

70 130

% Recovery
88

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project 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/Former Dorr-Oliver
Sample Descript: MW8
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-07

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte

Detection Limit
ug/L

Sample Results
ug/L

TEPH as Diesel
Chromatogram Pattern:

50

N.D.

Surrogates

n-Pentacosane (C25)

Control Limits %

50

150

% Recovery
84

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

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

Page:

19



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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/Former Dorr-Oliver
Sample Descript: MW8
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9806157-07

Sampled: 06/26/98
Received: 06/29/98
Extracted: 07/06/98
Analyzed: 07/07/98
Reported: 07/17/98

QC Batch Number: GC0706980HBPEXB
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 n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 84

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager



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

Client Proj. ID: 360-014.2B/Former Dorr-Oliver
Sample Descript: MW8
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806157-07

Sampled: 06/26/98
Received: 06/29/98
Analyzed: 07/07/98
Reported: 07/17/98

Attention: Andrew Lehane
QC Batch Number: GC070798BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and 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:		N.D.

Surrogates

Trifluorotoluene

Control Limits %

70 130

% Recovery
90

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Tod Granicher
Project Manager

Page:

21



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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/Former Dorr-Oliver

QC Sample Group: 9806157

Reported: Jul 21, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8020
Analyst:	B. Burton

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
---------	---------	---------	--------------	---------

QC Batch #: GC071098BTEX21A

Sample No.: GW9806147-2

Date Prepared:	7/10/98	7/10/98	7/10/98	7/10/98
Date Analyzed:	7/10/98	7/10/98	7/10/98	7/10/98
Instrument I.D. #:	GCHP21	GCHP21	GCHP21	GCHP21

Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30

Matrix Spike, ug/L:	10	9.8	9.8	30
% Recovery:	104	98	98	99

Matrix				
Spike Duplicate, ug/L:	10	9.6	9.6	29
% Recovery:	102	96	96	96

Relative % Difference:	1.9	2.1	2.1	3.1
------------------------	-----	-----	-----	-----

RPD Control Limits:	0-25	0-25	0-25	0-25
---------------------	------	------	------	------

LCS Batch#: GWBLK071098AS

Date Prepared:	7/10/98	7/10/98	7/10/98	7/10/98
Date Analyzed:	7/10/98	7/10/98	7/10/98	7/10/98
Instrument I.D. #:	GCHP21	GCHP21	GCHP21	GCHP21

Conc. Spiked, ug/L:	10	10	10	30
---------------------	----	----	----	----

LCS Recovery, ug/L:	9.8	9.4	9.7	28
LCS % Recovery:	98	94	97	95

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

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

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

Tod Granicher
Project Manager



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

Client Project ID: 360-014.28/Former Dorr-Oliver

QC Sample Group: 9806157

Reported: Jul 21, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015
Analyst: N. Herrera

ANALYTE Gasoline

QC Batch #: GC070798BTEX03A

Sample No.: GW9806G23-6
Date Prepared: 7/7/98
Date Analyzed: 7/7/98
Instrument I.D.#: GCHP03

Sample Conc., ug/L: N.D.
Conc. Spiked, ug/L: 250

Matrix Spike, ug/L: 200
% Recovery: 82

Matrix
Spike Duplicate, ug/L: 260
% Recovery: 103

Relative % Difference: 23

RPD Control Limits: 0-25

LCS Batch#: GWBLK070798ABS

Date Prepared: 7/7/98
Date Analyzed: 7/7/98
Instrument I.D.#: GCHP03

Conc. Spiked, ug/L: 250

LCS Recovery, ug/L: 230
LCS % Recovery: 93

Percent Recovery Control Limits:

MS/MSD	60-140
LCS	70-130

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

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

Tod Granicher
Tod Granicher
Project 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/Former Dorr-Oliver

QC Sample Group: 9806157

Reported: Jul 21, 1998

QUALITY CONTROL DATA REPORT

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

ANALYTE Diesel

QC Batch #: GC0706980HBPEXB SG

Sample No.: 9806157-7 SG

Date Prepared: 7/6/98

Date Analyzed: 7/7/98

Instrument I.D.#: GCHP4B

Sample Conc., ug/L: N.D.
Conc. Spiked, ug/L: 1000

Matrix Spike, ug/L: 600
% Recovery: 60

Matrix

Spike Duplicate, ug/L: 680
% Recovery: 68

Relative % Difference: 12

RPD Control Limits: 0-50

LCS Batch#: BLK070698BS

Date Prepared: 7/6/98
Date Analyzed: 7/7/98
Instrument I.D.#: GCHP4B

Conc. Spiked, ug/L: 1000

Recovery, ug/L: 590
LCS % Recovery: 59

Percent Recovery Control Limits:

MS/MSD	40-140
LCS	40-140

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

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

Tod Granicher
Project 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/Former Dorr-Oliver

Received: 06/29/98

Lab Proj. ID: 9806157

Reported: 07/17/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 29 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Pacific Environmental Group, Inc.

2025 Gateway Place #440, San Jose CA 95110

Phone 408 441 7790 Fax 408 441 7539

Chain of Custody

PROJECT No. 360 B/VB

Facility No. Former Deer Valley Site
CLIENT engineer: Denis B. Pagan

Facility Address: 2901 Glasscock St Oakland CA

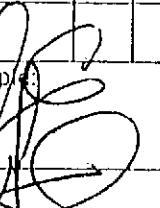
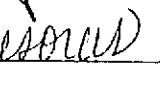
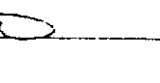
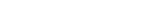
Billing Reference Number:

368

PACIFIC Point of Contact: 1000-1244 Sampler: Karen P.

Laboratory Name: Sepavia

Comments:

Facility No.	Former Dyer Oliver Site										Phone 408 441-7530	Fax 408 441-7535						
CLIENT engineer:	Denis Bureau										Billing Reference Number:	258						
	PACIFIC Point of Contact: Andrew Lefever Sampler: Pedro Ruiz										Laboratory Name:	Sepia						
												Comments:						
98-06-F57	Sample 1.0	Container Cont. No.	Size (ml)	Sample Preserv.	Matrix	W-water S-salt D-disc. A-aqueous C-comp.	G-grab			HIBE	Total TPH VPI/gas (8015/ 8020)	Oil and Grease (8015) (5520)	Disolv. Metals (EPA B24/ B240)	VOC (EPA 624/ 8270)	SVOC (EPA 627/ 8270)	HVOOC (EPA 601/ 8010)	Fuel Tissue print As Diesel & motor oil w/ 30% ch gel Clean up	
1	Water	5000	Water	0	6/26/98	10:50	X											
2	Water	1	Water	1		11:10												
3	Water	1	Water	1		9:35												
4	Water	1	Water	1		9:55												
5	Water	1	Water	1		10:50												
6	Water	1	Water	1		9:15												
7	Water	1	Water	1		10:10												
Condition of Sample												Temperature Received:	Mail original Analytical Report to:			Turnaround Time:		
Relinquished by 												Pacific Environmental Group			Priority Rush (1 day) <input type="checkbox"/>			
Relinquished by 												2025 Gateway Place #440 San Jose, CA 95110			Rush (2 days) <input type="checkbox"/>			
Relinquished by 												620 Contra Costa Blvd. #209 Pleasant Hill, CA 94523			Expedited (5 days) <input type="checkbox"/>			
Relinquished by 												25725 Jeronimo Rd. #576C Mission Viejo, CA 92622			Standard (10 days) <input checked="" type="checkbox"/>			
Relinquished by 												4020 148th Ave NE #B Redmond, WA 98052			As Contracted <input type="checkbox"/>			
Received by laboratory												11/24/98 12:17						

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME:
REC. BY (PRINT)
PEG 360 014213
AuraWORKORDER!
DATE OF LOG-IN:88-06-E57
6-29-98

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / <input checked="" type="checkbox"/> Absent Intact / <input type="checkbox"/> Broken	01	A-E	MW1	2XL Glass Amber	L	6/29/98	
2. Custody Seal #:	Put in Remarks Section	+	#	↓	3XVOA ACC			
3. Chain-of-Custody	Present / <input checked="" type="checkbox"/> Absent*	02	A-E	MW2	SAME			
4. Traffic Reports or Packing List:	Present / <input checked="" type="checkbox"/> Absent	03		MW3				
5. Airbill:	Airbill / Sticker Present / <input checked="" type="checkbox"/> Absent	04		MW4				
6. Airbill #:		05		MW6				
7. Sample Tags:	Present / <input checked="" type="checkbox"/> Absent	06		MW7				
Sample Tags #s:	Listed / Not Listed on Chain-of-Custody	07	F	MW8				
8. Sample Condition:	Intact / <input checked="" type="checkbox"/> Broken* / Leaking*							6/29/98
9. Does information on custody reports, traffic reports and sample tags agree?	Yes / <input checked="" type="checkbox"/> No*							<i>John</i>
10. Proper Preservatives used:	Yes / <input checked="" type="checkbox"/> No*							
11. Date Rec. at Lab:	<u>6/29/98</u>							
12. Time Rec. at Lab:	<u>1217</u>							
13. Temp Rec. at Lab:	<u>5°C</u>							

* If Circled, contact Project Manager and attach record of resolution.

FIELD SERVICES REQUEST

SITE INFORMATION FORM

Identification

Project # 350-014.2B

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: June 1, 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: June event

Site Check Appropriate Category

In Budget Visit

Out of Budget Site Visit

Budget Hours: _____

Actual Hours: _____

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, 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.

REPLACED

A
NO

Comments, remarks from field staff

TASK COMPLETED. PULL APC'S OUT OF WELLS AND STORE APC'S ON 5 GAL BUCKETS ON SITE. LABEL THEM FOR PURGE. BROUGHT TO SEAPORT.

Completed By: [Signature] Date: 6/26/98

Pacific Environmental Group, Inc.

FIELD REPORT

DEPTH TO WATER/SEPARATE-PHASE HYDROCARBON SURVEY

PROJECT No.: 3600014128LOCATION: 2001 G/A/cock ftDATE: 6-26-98CLIENT/STATION NO.: Former Oliver siteFIELD TECHNICIAN: PSDAY OF WEEK: Tu

PROBE TYPE/ID No.

 Oil/Water IF/ H₂O level
indicator Other:

Drw 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)				LIQUID REMOVED (gallons)	SPH		
											SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	Fresh	Weathered	Gas	Oil	VISCOSITY	
Mw1	8:39	-	-	-	-	-	-	19.80	8.65	8.65	8.83	8.83						
Mw2	8:45	-	-	-	-	-	-	19.75	7.55	7.55	7.83	7.83						
Mw3	8:50	-	-	-	-	-	-	19.80	6.17	6.17	6.54	6.54						
Mw4	8:54	-	-	-	-	-	-	19.70	7.85	7.85	8.04	8.04						
Mw5								Destroyed.										
Mw6	8:54	-	-	-	-	-	-	19.50	10.10	10.10	10.13	10.13						
Mw7	8:56	-	-	-	-	-	-	17.75	4.00	4.00	4.41	4.41						
Mw8	8:59	-	-	-	-	-	-	17.70	10.70	10.70	11.05	11.05						

Comments:

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001428 LOCATION: 29016 Agate St WELL ID #: MW-1CLIENT/STATION No.: Former Dryer FIELD TECHNICIAN: Pedro Ruiz

WELL INFORMATION

Depth to Liquid: TOB TOCDepth to water: TOB TOCTotal depth: TOB TOC

Date: _____ Time (2400): _____

Probe Type
and
I.D. #
 Oil/Water interface _____
 Electronic indicator _____
 Other: _____

CASING

DIAMETER

GAL/

LINEAR FT.

<input checked="" type="checkbox"/>	2	0.17
<input type="checkbox"/>	3	0.38
<input type="checkbox"/>	4	0.66
<input type="checkbox"/>	4.5	0.83
<input type="checkbox"/>	5	1.02
<input type="checkbox"/>	6	1.5
<input type="checkbox"/>	8	2.6

- Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other:

$$\text{TD } 19.80 \text{ DTW } 8.05 = 11.15 \text{ Gal/Linear Foot } .17 = 189 \text{ Number of Casings } 3 \text{ Calculated } = \text{Purge } 5.68$$

DATE PURGED: 6/26/98 START: 10:40 END (2400 hr): PURGED BY: PEDATE SAMPLED: 6/26/98 START: 10:50 END (2400 hr): SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
6:42	1.75	7.14	1310	60.8	Brown	Heavy	Weak
10:35	3.6	7.11	1350	63.1	Brown	Heavy	Weak
10:48	5.05	7.13	1310	60.7	Grey	Weak	Weak

Pumped dry Yes /No

Cobalt 0-100
 Clear
 Cloudy
 Yellow
 Brown

NTU 0-200
 Heavy
 Moderate
 Light
 Trace

Strong
 Moderate
 Faint
 None

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: 1513 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
MW-1	6/26/98	10:50	3	10ml	Obs	HCC	TPH/G / BTEX/mTBE

REMARKS: DO: 8.6 Btu. Pull caps out of well
art.

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001428 LOCATION: 29016/4cay 1f WELL ID #: MW-2CLIENT/STATION No.: Former Derridger FIELD TECHNICIAN: PEDRO PIZZWELL INFORMATIONDepth to Liquid: TOB TOCDepth to water: TOB TOCTotal depth: TOB TOC

Date: _____ Time (2400): _____

Probe Type
and
I.D. #
 Oil/Water interface _____
 Electronic indicator _____
 Other: _____CASINGDIAMETER____ 2 0.17____ 3 0.38____ 4 0.66____ 4.5 0.83____ 5 1.02____ 6 1.5____ 8 2.6GAL/LINEAR FT.SAMPLE TYPE Groundwater Duplicate Extraction well Trip blank Field blank Equipment blank Other: _____

$$\text{TD } 19.75 \cdot \text{ DTW } 7.55 = 12.2 \times \text{Foot } 17 = 207 \times \text{Number of Casings } 3 = \text{Calculated} \\ = \text{Purge } 600$$

DATE PURGED: 6/26/98 START: 11:00 END (2400 hr): — PURGED BY: PEDATE SAMPLED: 6/26/98 START: 11:10 END (2400 hr): — SAMPLED BY: PE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
11:03	2	7.03	2000	63.9	Bru	Mod	Mod
11:08	4	7.01	2000	64.1	Bru	Abnl	Abnl
11:09	6	6.99	2010	63.1	Bru	Mod	Abnl

Pumped dry Yes /NoCobalt 0-100
Clear
Cloudy
Yellow
BrownNTU 0-200
Heavy
Moderate
Light
TraceStrong
Moderate
Faint
None

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: 15-10
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW-2 6/26/98</u>	<u>11:10</u>	<u>3</u>	<u>10ml</u>	<u>obs</u>	<u>amb</u>	<u>HCl</u>	<u>TOTG / BTX / MTBE</u>

REMARKS:

DO DO PULL ORE'S OUT OF THE WELLAB

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001928 LOCATION: 2901 Glaycory St WELL ID #: MW-3CLIENT/STATION No.: Former DPPR site FIELD TECHNICIAN: Karen PitzWELL INFORMATIONDepth to Liquid: TOB TOCDepth to water: TOB TOCTotal depth: TOB TOC

Date: _____ Time (2400): _____

Probe Type
and
I.D. #

Oil/Water interface
 Electronic indicator
 Other:

CASINGDIAMETERGAL/LINEAR FT.

<input checked="" type="checkbox"/>	2	0.17
<input type="checkbox"/>	3	0.38
<input type="checkbox"/>	4	0.66
<input type="checkbox"/>	4.5	0.83
<input type="checkbox"/>	5	1.02
<input type="checkbox"/>	6	1.5
<input type="checkbox"/>	8	2.6

SAMPLE TYPE

- Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other: _____

$$\text{TD } 19.80 \text{ DTW } 6.17 = 13.63 \times \frac{\text{Gal/Linear}}{\text{Foot}} \times 17 = 2.31 \times \frac{\text{Number of}}{\text{Casings}} 3 = \frac{\text{Calculated}}{\text{Purge}} 6.95$$

DATE PURGED: 6/26/98 START: 9:00 END (2400 hr): — PURGED BY: PSDATE SAMPLED: 6/26/98 START: 9:35 END (2400 hr): — SAMPLED BY: PS

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. ($\mu\text{mhos/cm}$ @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>9:05</u>	<u>2.05</u>	<u>7.17</u>	<u>1260</u>	<u>63.2</u>	<u>Cloudy</u>	<u>light</u>	<u>Faint</u>
<u>9:09</u>	<u>1.5</u>	<u>7.11</u>	<u>1260</u>	<u>63.4</u>	<u>Cloudy</u>	<u>light</u>	<u>Faint</u>
<u>9:32</u>	<u>6.75</u>	<u>7.09</u>	<u>1250</u>	<u>62.9</u>	<u>Cloudy</u>	<u>light</u>	<u>Faint</u>

Pumped dry Yes / No

Cobalt C-100
Clear
Cloudy
Yellow
Brown

NTU 0-200
Heavy
Moderate
Light
Trace

Strong
Moderate
Faint
None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOCPURGING EQUIPMENT/I.D. #

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

SAMPLING EQUIPMENT/I.D. #

- Bailer: 15-14
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW3 6/26/98</u>	<u>9:35</u>	<u>3</u>	<u>10ml</u>	<u>Lab</u>	<u>H2O</u>	<u>H2O</u>	<u>TPH/G/13tex/mTBG</u>

REMARKS: DO 18 NO 10

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001928 LOCATION: 2901 Glaycoy 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: _____

CASINGDIAMETERGAL/LINEAR FT.

<input checked="" type="checkbox"/>	2	0.17
<input type="checkbox"/>	3	0.38
<input type="checkbox"/>	4	0.66
<input type="checkbox"/>	4.5	0.83
<input type="checkbox"/>	5	1.02
<input type="checkbox"/>	6	1.5
<input type="checkbox"/>	8	2.6

- Groundwater
 Duplicate
 Extraction well
 Trip blank
 Field blank
 Equipment blank
 Other: _____

$$TD \underline{19.70} \cdot DTW \underline{3.85} = \underline{11.85} \times \frac{\text{Gal/Linear}}{\text{Foot}} \underline{17} = \underline{201} \times \frac{\text{Number of}}{\text{Casings}} \underline{3} = \text{Calculated} \underline{604} \\ = \text{Purge} \underline{604}$$

DATE PURGED: 6/26/98 START: 9:44 END (2400 hr): _____ PURGED BY: RE

DATE SAMPLED: 6/26/98 START: 9:55 END (2400 hr): _____ SAMPLED BY: RE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
9:44	3	7.07	803	62.9	Cloudy	Neg	Above
9:50	1	7.08	808	63.3	Cloudy	Neg	None
9:53	6	7.06	791	63.0	Cloudy	Neg	None

Pumped dry Yes / No

Cobalt 0-100
Clear
Cloudy
Yellow
Brown

NTU 0-200
Heavy
Moderate
Light
Trace

Strong
Moderate
Faint
None

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: 15-12
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW-4</u>	<u>6/26/98</u>	<u>9:55</u>	<u>3</u>	<u>10ml</u>	<u>USA</u>	<u>HCC</u>	<u>TOHG / BTEX / MIGE</u>

REMARKS: DO: 10

JRW

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001428 LOCATION: 29016thcock st WELL ID #: MW-6

CLIENT/STATION No.: Former Dorrtyer FIELD TECHNICIAN: Reneo Piz

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: _____

CASINGDIAMETERGAL/LINEAR FT.

<input checked="" type="checkbox"/>	2	0.17	<input checked="" type="checkbox"/>	Groundwater
<input type="checkbox"/>	3	0.38	<input type="checkbox"/>	Duplicate
<input type="checkbox"/>	4	0.66	<input type="checkbox"/>	Extraction well
<input type="checkbox"/>	4.5	0.83	<input type="checkbox"/>	Trip blank
<input type="checkbox"/>	5	1.02	<input type="checkbox"/>	Field blank
<input type="checkbox"/>	6	1.5	<input type="checkbox"/>	Equipment blank
<input type="checkbox"/>	8	2.6	<input type="checkbox"/>	Other:

$$\text{TD } 19.50 - \text{ DTW } 12.10 = 7.4 \times \text{ Gal/Linear Foot } .17 = 1.25 \times \text{ Number of Casings } 3 = \text{ Calculated Purge } 3.77$$

DATE PURGED: 6/26/98 START: 10:18 END (2400 hr): _____ PURGED BY: DE

DATE SAMPLED: 6/26/98 START: 10:30 END (2400 hr): _____ SAMPLED BY: DE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE °F	COLOR	TURBIDITY	ODOR
10:21	1.25	7.33	1590	61.9	Brown	Heavy	Nod
10:24	2.5	7.30	1580	62.1	Brown	Heavy	Nod
10:27	3.75	7.07	1580	61.7	Brown	Heavy	Nod

Pumped dry Yes / No

Cobalt C-100
Clear
Cloudy
Yellow
Brown

NTU C-200
Heavy
Moderate
Light
Trace

Strong
Moderate
Faint
None

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: 15-1
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW6</u>	<u>6/26/98</u>	<u>10:30</u>	<u>3</u>	<u>10ml</u>	<u>1/2A</u>	<u>HCC</u>	<u>TOTG/BTEX/miC6</u>

REMARKS

DOA 4 DOB Pull OEC's out of well

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001428 LOCATION: 2901 Glacon St WELL ID #: MW-7CLIENT/STATION No.: Former Doppelweier FIELD TECHNICIAN: Reneo PoizWELL 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.
<input checked="" type="checkbox"/>	2	0.17
<input type="checkbox"/>	3	0.38
<input type="checkbox"/>	4	0.66
<input type="checkbox"/>	4.5	0.83
<input type="checkbox"/>	5	1.02
<input type="checkbox"/>	6	1.5
<input type="checkbox"/>	8	2.6

- | |
|-------------------------------------------------|
| <input checked="" type="checkbox"/> Groundwater |
| <input type="checkbox"/> Duplicate |
| <input type="checkbox"/> Extraction well |
| <input type="checkbox"/> Trip blank |
| <input type="checkbox"/> Field blank |
| <input type="checkbox"/> Equipment blank |
| <input type="checkbox"/> Other: _____ |

$$TD \underline{17.75} - DTW \underline{4.00} = \underline{13.75} \text{ Gal/Linear Foot } \underline{17} = \underline{2.33} \times \text{ Number of Casings } \underline{3} = \text{Calculated Purge } \underline{7.01}$$

DATE PURGED: 6/26/98 START: 9:05 END (2400 hr): _____ PURGED BY: REDATE SAMPLED: 6/26/98 START: 9:15 END (2400 hr): _____ SAMPLED BY: RE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
<u>9:08</u>	<u>2.25</u>	<u>7.61</u>	<u>1310</u>	<u>62.8</u>	<u>Cloudy</u>	<u>red</u>	<u>weak</u>
<u>9:11</u>	<u>4.5</u>	<u>7.53</u>	<u>1300</u>	<u>62.9</u>	<u>Cloudy</u>	<u>red</u>	<u>weak</u>
<u>9:14</u>	<u>6.75</u>	<u>7.47</u>	<u>1300</u>	<u>63.1</u>	<u>Cloudy</u>	<u>light</u>	<u>weak</u>

Pumped dry Yes / No

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

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: 15-11
 Dedicated: _____
 Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW-7</u>	<u>6/26/98</u>	<u>9:15</u>	<u>3</u>	<u>10ml</u>	<u>100</u>	<u>HCC</u>	<u>TOTG/3tex/miB</u>
				<u>a</u>	<u>1L</u>	<u>NP</u>	<u>TPHD, TPHmo</u>

REMARKS: DO:22

FIELD DATA SHEET

WATER SAMPLE FIELD DATA SHEET

PROJECT No.: 36001428 LOCATION: 2901 Gandy St WELL ID #: MW-8CLIENT/STATION No.: Former Dorr-Oliver site FIELD TECHNICIAN: Reed RizWELL INFORMATIONDepth to Liquid: TOB TOCDepth to water: TOB TOCTotal depth: TOB TOC

Date: _____ Time (2400): _____

Probe Type
and
I.D. #

- Oil/Water interface _____
- Electronic indicator _____
- Other: _____

CASINGDIAMETERGAL/LINEAR FT.

<input checked="" type="checkbox"/>	2	0.17
<input type="checkbox"/>	3	0.38
<input type="checkbox"/>	4	0.66
<input type="checkbox"/>	4.5	0.83
<input type="checkbox"/>	5	1.02
<input type="checkbox"/>	6	1.5
<input type="checkbox"/>	8	2.6

SAMPLE TYPE

- Groundwater
- Duplicate
- Extraction well
- Trip blank
- Field blank
- Equipment blank
- Other: _____

$$\text{TD } 17.70 \text{ DTW } 0.40 = 7 \quad \text{Gal/Linear} \times \text{Foot } .17 = 1.19 \times \text{Casings } 3 \quad \text{Calculated} \\ = \text{Purge } 3.57$$

DATE PURGED: 6/26/98 START: 10:00 END (2400 hr): PURGED BY: RSDATE SAMPLED: 6/26/98 START: 10:10 END (2400 hr): SAMPLED BY: RE

TIME (2400 hr)	VOLUME (gal.)	pH (units)	E.C. ($\mu\text{mhos/cm}$ @ 25°C)	TEMPERATURE (°F)	COLOR	TURBIDITY	ODOR
10:03	1	6.19	2660	63.0	Cloudy	Nod	Above
10:06	2	6.52	2650	63.3	Cloudy	Nod	Above
10:09	3	6.30	2610	62.6	Cloudy	Nod	Above

Pumped dry Yes /No

Cobalt C-100
Clear
Cloudy
Yellow
Brown

NTU C-200
Heavy
Moderate
Light
Trace

Strong
Moderate
Faint
None

FIELD MEASUREMENTS AT TIME OF SAMPLE, AFTER RECHARGE:

DTW: TOB/TOCPURGING EQUIPMENT/I.D. #

- Bailier: _____
- Centrifugal Pump: 15
- Other: _____
- Airlift Pump: _____
- Dedicated: _____

SAMPLING EQUIPMENT/I.D. #

- Bailier: 15
- Dedicated: _____
- Other: _____

SAMP. CNTRL #	DATE	TIME (2400)	No. of Cont.	SIZE	CONTAINER	PRESERVE	ANALYTICAL PARAMETER
<u>MW8</u>	<u>6/26/98</u>	<u>10:10</u>	<u>3</u>	<u>10ml</u>	<u>1/2A</u>	<u>HCC</u>	<u>TPH/G / 3tex/m²</u>
			<u>2</u>	<u>1L</u>	<u>Amb</u>	<u>NP</u>	<u>TPH/D, TPH/m²</u>

REMARKS: DO NOTREED RIZ

PROJECT No. 360 B/1/2B

Facility No. Former Doe Oliver Site
CLIENT engineer: Denis Burn

Chain of Custody

Pacific Environmental Group, Inc.

2025 Gateway Place #440, San Jose CA 95110
Phone 408 441 7790 Fax 408 441 7539

Billing Reference Number: 123456789

Laboratory Name: Seaweed

Comments:

Facility No.	Former Doer Diller Site										Phone 408 441 7790	Fax 408 441 7539				
CLIENT engineer:	Denis Burn										Billing Refence Number:	258				
	PACIFIC Point of Contact: Andrew Lefler Sampler: Eric Reiz										Laboratory Name:	Sepia				
Sample I.D.	Cont. No.	Container	Size (ml)	Sample Preserv.	Matrix	W=water G=grab S=salt D=disc. A=air C=comp.	Sampling Date	Sampling Time	BTEX VPIlgas (8015/ 8020) 1PH (8015) Diesel (5520)	Total Oil and Grease (5520) Metals (8240)	Dislvd.	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOOC (EPA 601/ 8010)	ToC Tinner Point AS Diesel & Motor oil	Comments:
Mw1	5	401C	100ml	09	6/26/98	10:30	X									
Mw2								11:10						X		
Mw3									9:35							
Mw4									9:55							
Mw5									10:30							
Mw7									9:15							
Mw8									10:0							

Condition of Sample

Temperature Received

Mail original Analytical Report to:
Pacific Environmental Group

Turnaround Time:

~~distinguished by~~

Date _____ Time _____

Date _____ Time _____

2025 Gately Place #44
San Jose, CA 95110

Priority Rush (1 day)

1

~~inducted by~~

Date _____ Time _____

620 Contra Costa Blvd. #209
Pleasant Hill, CA 94522

~~✓ Rush (2 days)~~

1

Distinguished by

Date _____

Date Time

25725 Jeronimo Rd. #576
Mission Viejo, CA 92622
4020 148th Ave NE #B
Redmond, WA 98052

Expedited (5 days)

1

TRANSPORT FORM #: _____

NON-HAZARDOUS WATER TRANSPORT FORM**GENERATOR INFORMATION**

NAME: B. P. Oil Attn: Scott Hooton
 ADDRESS: 295 Southwest 41st Street
 CITY,STATE,ZIP: Renton WA 98055 PHONE #: 206-251-0689

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 40 CFR ARTICLE II 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
GENERATOR/AUTHORIZED AGENTSIGNATURE & DATE 6-26-98**SITE INFORMATION**

BP Station #

Street Address, City

Gals

1	<u>Former Dow Chemical Site 2901 9th Street Oakwood 10</u>	
2		
3		
4		
5		
6		

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 #:

EFF5

(Typed or printed full name & signature)

(Date) 6-26-98**RECEIVING FACILITY**

NAME: Seaport Environmental
 ADDRESS: 675 Seaport Blvd.
 CITY,STATE,ZIP: Redwood City, CA 94063 PHONE #: (415) 364-8154

APPROVAL #:

508-147

(Typed or printed full name & signature)

(Date) 6-26-98