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December 28, 1999

Doc. No. 9912-079

Alameda County Health Care Services Agency
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

Attention: Mr. Larry Seto, Senior Hazardous Materials Specialist

Subject: 2415 Mariner Square Drive
Alameda, California
FOURTH QUARTER 1999 GROUNDWATER SAMPLING

Dear Mr. Seto:

Earth Systems Consultants Northern California (ESCNC) is submitting this report which describes the fourth quarter 1999 groundwater sampling and analysis at the subject site (Figure 1).

Groundwater Sampling
On November 24, 1999, Blaine Tech Services measured the depth to groundwater in monitoring wells MW-1 through MW-5, MW-6A, and MW-7 through MW-10. Blaine Tech Services personnel then purged and sampled all wells, except MW-7 and MW-9 since they have been removed from the sampling schedule by ACHCSA. The wells were purged of at least three well casing volumes of water and allowed to recharge to at least 80% prior to collecting samples. During purging, it was noted that wells MW-5, MW-6A and MW-10 contained sheen. Samples were collected with new disposable bailers. Purge water was stored in labeled 55-gallon drums and stored at the subject site. Well monitoring forms are included in Attachment A.

Groundwater elevations across the site ranged from 6.75 to 10.32 feet above mean sea level with an average elevation of 9.04 feet. The average groundwater elevation during the fourth quarter is 0.33 feet lower than during the third quarter. The groundwater flow direction was toward the southeast with a gradient ranging from 0.004 to 0.010 (21 to 53 ft/mile). Groundwater elevations are summarized in Table 1. The groundwater gradient map is shown on Figure 2.

The groundwater samples were delivered under chain of custody protocol to Entech Analytical Labs, Inc. (ELAP #2346). The samples from wells MW-2 through MW-6A and MW-10 were analyzed for total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPHg, TPHd, and TPHmo, respectively) using EPA methods 3510/3630/8015; and benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) using EPA method 8020. The samples from wells MW-1 and MW-8 were analyzed for TPHmo only. Wells MW-7 and MW-9 were not sampled. The analytical results are summarized in Table 2. The laboratory analytical reports are included in Attachment A.

Results
The analytical results of groundwater samples collected from wells MW-1 through MW-5, MW-6A, MW-8, and MW-10 indicated the following:

1. TPHg was detected in samples from wells MW-2 through MW-5, MW-6A, and MW-10 at concentrations ranging from 95 parts per billion (ppb) (MW-3) to 29,000 ppb (MW-6A).
2. TPHd was detected in samples from wells MW-2 through MW-5 at concentrations ranging from 140 ppb (MW-3) to 3,400 ppb (MW-5). However, the laboratory notes on these samples indicates that the results are within quantitation range, but the chromatographic pattern is not typical of diesel. The sample from MW-6A contained 7,900 ppb TPHd.
3. TPHmo was detected in samples from wells MW-4, MW-5, MW-6A, and MW-10 at concentrations ranging from 330 ppb (MW-4) to 17,000 ppb (MW-10). However, the laboratory notes on the result from MW-4 indicates that the results are within quantitation range, but the chromatographic pattern is not typical of motor oil. The samples from wells MW-1 and MW-8 did not contain detectable TPHmo.
4. BTEX concentrations were nondetectable or near detection limits in samples collected from wells MW-3 and MW-6A. However, the detection limits for the sample from MW-6A were raised as a result of necessary sample dilution.
5. BTEX concentrations in wells MW-2, MW-4, MW-5, MW-7, and MW-10 were similar to historical levels.
6. MTBE was detected at a concentration of 26 ppb in the sample collected from well MW-4. The detection limits for MTBE in the samples collected from wells MW-5 and MW-6A were raised as a result of necessary sample dilution.

Conclusions

The average groundwater elevation has decreased an average of 0.33 feet since the last sampling round on September 9, 1999. However, the groundwater flow direction is consistent toward the southeast.

The samples from wells MW-1 and MW-8 did not contain detectable TPHmo. However, the detection limits were higher than during the two previous sampling events when TPHmo was detected. According to Mr. Allan Aks of Entech Analytical Labs, Inc., the detection limit for TPHmo was recently raised by the state from 100 ppb to 250 ppb. The analytical results indicate that analytes present in the samples from wells MW-2 and MW-3 are similar to historical levels, except for the second consecutive quarter of detectable TPHd. The TPHd levels had been below detection limits in both wells since December 1997. Similarly, the sample collected from well MW-4 contained analytes near historical levels, except for detectable TPHmo. The laboratory notes that the TPHmo detected in the sample from MW-4 was not typical of motor oil. The sample collected from MW-5 contained the highest historical level of TPHmo, although the laboratory notes that the results were not typical of motor oil, and the remaining analytes were at concentrations similar to historical levels. The sample collected from MW-6A contained the highest historic levels of TPHg and TPHmo while BTEX were not detected below raised detection limits. The sample collected from well MW-10 contained the highest level of TPHmo for the site during this sampling round, TPHd was not detected below a raised detection limit, and BTEX were similar to historic levels.

Recommendations

ESCNC recommends destroying wells MW-1, MW-7, and MW-8 within the residential parcel. In addition, ESCNC recommends that well MW-5 be destroyed, due to its location on the boundary between the commercial and proposed residential parcels, and replaced with a new well on the commercial parcel.

ESCNC recommends sampling wells MW-2 through MW-5, MW-6A, MW-9, and MW-10 during the first quarter 2000. These wells should be analyzed for TPHg and TPHd using modified EPA method 8015 and BTEX and MTBE using EPA method 8020. In addition, wells MW-6A and

MW-10 should be analyzed for TPHmo using modified EPA method 8015. Additional sampling of these wells will be reevaluated after completion of the first quarter 2000 sampling is completed.

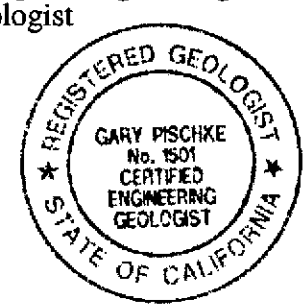
If you have any questions regarding this report, please call the undersigned at your earliest convenience.

Very truly yours,

EARTH SYSTEMS CONSULTANTS
Northern California

Jeanne Buckthal
Staff Geologist

Gary Pischke
Certified Engineering Geologist 1501
Senior Geologist



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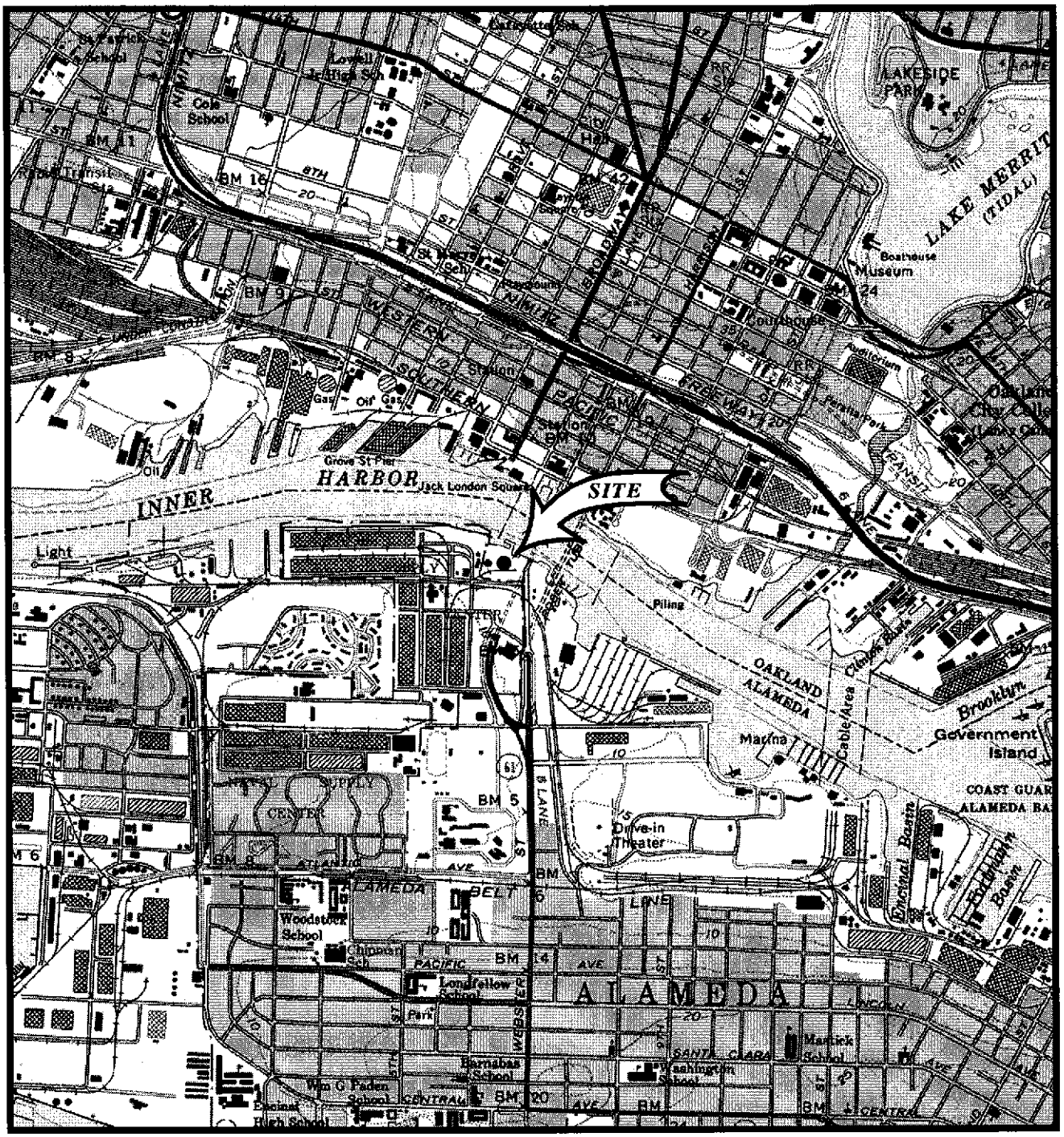
Distribution: 1 to addressee
1 to Mr. John Beery

Attachment: A — Well Monitoring Forms
B — Laboratory Analytical Reports

File No. NFE-4392-01
December 1999



Approximate Scale 1: 24,000

1 0 1 Mile

1 0 1 Kilometer

Base: U.S.G.S. 7.5 minute Oakland West Quadrangle (1980)
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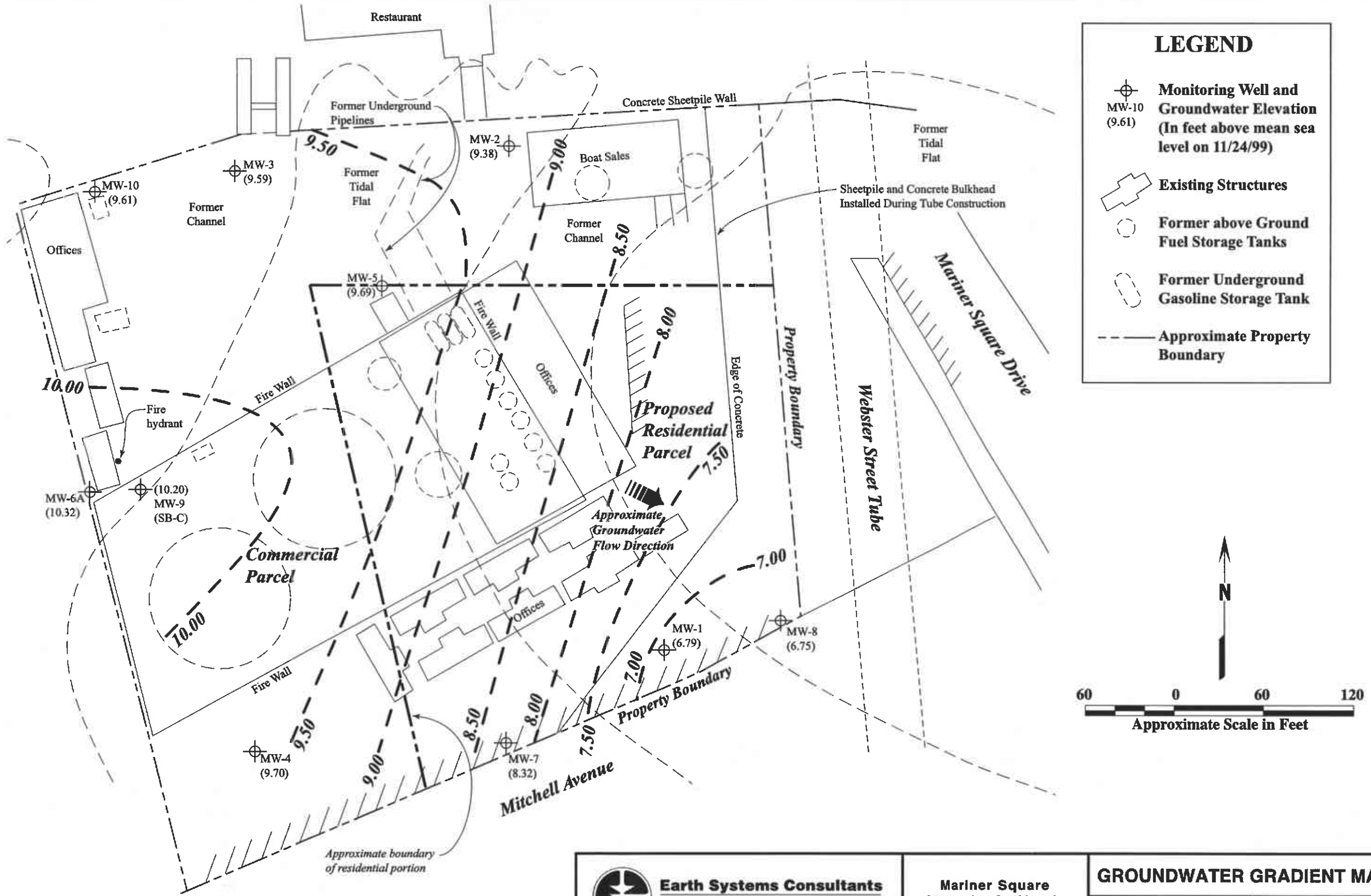
Earth Systems Consultants Northern California	Mariner Square Alameda, California	**SITE LOCATION** Figure 1



Earth Systems Consultants Northern California	Mariner Square Alameda, California	GROUNDWATER GRADIENT MAP
		Date: December 1999
		File No: NFE-4392-01
		Figure 2

TABLE 1
Historical Groundwater Elevations
Mariner Square, Alameda, California

Well	Date	Top of Casing (feet above MSL)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet above MSL)
MW-1	07/30/92	5.08	6.41	-	-1.33
	07/31/92	5.08	6.41	-	-1.33
	08/03/92	5.08	6.50	-	-1.42
	08/05/92	5.08	6.50	-	-1.42
	11/20/92	5.08	6.23	-	-1.15
	06/13/94	11.99	5.69	-	6.30
	09/27/94	11.99	5.64	-	6.35
	10/25/94	11.99	5.86	-	6.13
	06/28/96	11.99	5.34	-	6.65
	10/31/96	11.99	5.38	-	6.61
	09/30/97	11.99	5.08	-	6.91
	12/12/97	11.99	4.16	-	7.83
	02/18/98	11.99	2.97	-	9.02
	05/08/98	11.99	4.55	-	7.44
	06/24/99	11.99	4.75	-	7.24
	08/10/99	11.99	4.82	-	7.17
	09/09/99	11.99	4.94	-	7.05
	11/24/99	11.99	5.20	-	6.79
MW-2	07/30/92	8.30	5.98	-	2.32
	07/31/92	8.30	6.07	-	2.23
	08/03/92	8.30	6.11	-	2.19
	08/05/92	8.30	6.18	-	2.12
	11/20/92	8.30	6.42	-	1.88
	06/13/94	15.21	5.92	-	9.29
	09/26/94	15.21	6.51	-	8.70
	10/25/94	15.21	6.67	-	8.54
	06/28/96	15.21	5.68	-	9.53
	10/31/96	15.21	6.37	-	8.84
	09/30/97	15.21	6.17	-	9.04
	12/12/97	15.21	5.18	-	10.03
	02/18/98	15.21	3.96	-	11.25
	05/08/98	15.21	4.82	-	10.39
	06/24/99	15.21	4.69	-	10.52
	08/10/99	15.21	4.72	-	10.49
	09/09/99	15.21	5.31	-	9.90
	11/24/99	15.21	5.83	-	9.38

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Well	Date	Top of Casing (feet above MSL)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet above MSL)
MW-3	07/30/92	7.28	4.97	-	2.31
	07/31/92	7.28	5.05	-	2.23
	08/03/92	7.28	4.43	-	2.85
	08/05/92	7.28	5.06	-	2.22
	11/20/92	7.28	5.27	-	2.01
	06/13/94	14.19	4.91	-	9.28
	09/27/94	14.19	5.29	-	8.90
	10/25/94	14.19	5.42	-	8.77
	06/28/96	14.19	4.69	-	9.50
	10/31/96	14.19	5.24	-	8.95
	09/30/97	14.19	5.04	-	9.15
	12/12/97	14.19	4.32	-	9.87
	02/18/98	14.19	2.97	-	11.22
	05/08/98	14.19	3.85	-	10.34
	06/24/99	14.19	2.95	-	11.24
	08/10/99	14.19	3.01	-	11.18
	09/09/99	14.19	4.10	-	10.09
	11/24/99	14.19	4.60	-	9.59
MW-4	07/30/92	7.05	4.81	-	2.24
	07/31/92	7.05	4.88	-	2.17
	08/05/92	7.05	4.96	-	2.09
	11/20/92	7.05	5.13	-	1.92
	06/13/94	13.95	4.50	-	9.45
	09/27/94	13.95	5.39	-	8.56
	10/25/94	13.95	5.55	-	8.40
	06/28/96	13.95	4.25	-	9.70
	10/31/96	13.95	5.05	-	8.90
	09/30/97	13.95	4.73	-	9.22
	12/12/97	13.95	3.65	-	10.30
	02/18/98	13.95	2.38	-	11.57
	05/08/98	13.95	3.47	-	10.48
	08/10/99	13.95	4.90	-	9.05
	09/09/99	13.95	3.99	-	9.96
	11/24/99	13.95	4.25	-	9.70

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Historical Groundwater Elevations
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Well	Date	Top of Casing (feet above MSL)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet above MSL)
MW-5	07/30/92	7.68	5.30	-	2.38
	07/31/92	7.68	5.42	-	2.26
	08/03/92	7.68	5.40	-	2.28
	08/05/92	7.68	5.47	-	2.21
	11/20/92	7.68	5.74	-	1.94
	06/13/94	14.60	5.30	-	9.30
	09/26/94	14.60	5.82	-	8.78
	10/25/94	14.60	5.95	-	8.65
	06/28/96	14.60	5.04	-	9.56
	10/31/96	14.60	5.73	-	8.87
	09/30/97	14.60	5.45	-	9.15
	12/12/97	14.60	4.71	-	9.89
	02/18/98	14.60	3.10	-	11.50
	05/08/98	14.60	4.13	-	10.47
	06/24/99	14.60	3.65	-	10.95
	08/10/99	14.60	3.71	-	10.89
	09/09/99	14.60	4.51	-	10.09
	11/24/99	14.60	4.91	Sheen	9.69
MW-6	6/13/94	14.81	5.96	0.02	8.85
	9/27/94	14.81	5.90	0.03	8.91
	10/07/94	14.81	5.82	Sheen	8.99
	10/14/94	14.81	5.89	Sheen	8.92
	10/21/94	14.81	5.90	Sheen	8.91
	10/25/94	14.81	5.99	Sheen	8.82
	06/28/96	14.81	5.33	0.16	9.48
	10/31/96	14.81	5.17	0.02	9.64
	09/30/97	14.81	5.58	Sheen	9.23
	12/12/97	14.81	4.84	0.39	9.97
	02/18/98	14.81	3.70	0.55	11.11
	04/28/98	Well Destroyed			
MW-6A	08/10/99	15.22	4.96	Sheen	10.26
	09/09/99	15.22	4.35	Sheen	10.87
	11/24/99	15.22	4.90	Sheen	10.32

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Historical Groundwater Elevations
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Well	Date	Top of Casing (feet above MSL)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet above MSL)
MW-7	09/27/94	13.61	5.95	-	7.66
	10/25/94	13.61	6.09	-	7.52
	06/28/96	13.61	5.42	-	8.19
	10/31/96	13.61	5.90	-	7.71
	09/30/97	13.61	5.71	-	7.90
	12/12/97	13.61	4.58	-	9.03
	02/18/98	13.61	3.21	-	10.40
	05/08/98	13.61	4.49	-	9.12
	06/24/99	13.61	4.78	-	8.83
	08/10/99	13.61	4.76	-	8.85
	09/09/99	13.61	5.14	-	8.47
	11/24/99	13.61	5.29	-	8.32
MW-8	09/27/94	12.64	6.06	-	6.58
	10/25/94	12.64	6.26	-	6.38
	06/28/96	12.64	6.00	-	6.64
	10/31/96	12.64	5.85	-	6.79
	09/30/97	12.64	5.60	-	7.04
	12/12/97	12.64	4.87	-	7.77
	02/18/98	12.64	3.80	-	8.84
	05/08/98	12.64	5.30	-	7.34
	06/24/99	12.64	5.42	-	7.22
	08/10/99	12.64	5.48	-	7.16
	09/09/99	12.64	5.50	-	7.14
	11/24/99	12.64	5.89	-	6.75
MW-9	09/26/94	14.92	5.88	-	9.04
	10/25/94	14.92	6.04	-	8.88
	06/28/96	14.92	5.14	-	9.78
	10/31/96	14.92	6.37	-	8.55
	09/30/97	14.92	5.59	-	9.33
	12/12/97	14.92	4.53	-	10.39
	02/18/98	14.92	3.12	-	11.80
	05/08/98	14.92	4.20	-	10.72
	06/24/99	14.92	3.45	-	11.47
	08/10/99	14.92	3.56	-	11.36
	09/09/99	14.92	4.59	-	10.33
	11/24/99	14.92	4.72	-	10.20

TABLE 1
Historical Groundwater Elevations
Mariner Square, Alameda, California

Well	Date	Top of Casing (feet above MSL)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet above MSL)
MW-10	08/10/99	14.91	4.55	Sheen	10.36
	09/09/99	14.91	5.08	Sheen	9.83
	11/24/99	14.91	5.30	Sheen	9.61

MSL Mean Sea Level
NA Not Available
- None Measured

TABLE 2
Groundwater Analytical Results -- Organics
Mariner Square, Alameda, California

Well	Date	TRPH	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	VOCs	Vinyl Chloride
MW-1	08/03/92	-	-	580	<5,000	<0.5	<0.5	<0.5	<0.5	-	-	-
	11/20/92	-	<50	600	<5,000	<0.5	<0.5	<0.5	<0.5	-	-	<2
	09/27/94	-	<50	530	<50	<0.3	<0.3	<0.3	<0.3	-	-	-
	06/28/96	-	<100	<50	<200	<0.5	<1.0	<1.0	<2.0	-	-	<0.5
	10/31/96	-	<100	93	<200	<0.5	<1.0	<1.0	<2.0	<10	-	<1.0
	09/30/97	-	120	<50	<200	4.7	<1.0	3.7	21	<10	-	<0.8
	12/12/97	-	<50	<50	<200	<0.5	<0.5	<0.5	<2.0	<5	-	<2
	02/18/98	-	<50	<50	<200	1.5	0.6	1.8	8	<5	-	<2
	05/08/98	-	<50	<50	<200	1.0	<0.5	0.7	5	<5	-	<2
	06/24/99	-	<50	<50	110	<0.50	<0.50	<0.50	<1.5	<5.0	-	<0.50
	09/09/99						Not Sampled					
	11/24/99	-	-	-	<250	-	-	-	-	-	-	-
MW-2	08/03/92	-	-	2,200	<5,000	<0.5	6.5	3.2	5.3	-	-	-
	11/20/92	-	340	2,100	<5,000	<0.5	<0.5	<0.5	2.4	-	-	<2
	09/26/94	-	320	<50	240	<3.0	<3.0	<3.0	<3.0	-	-	-
	06/28/96 (1)	-	980	100 (2,3)	<200	0.5	<1.0	2.3	3.1	-	-	<0.5
	10/31/96	-	220	180	<200	<0.5	<1.0	<1.0	<2.0	<10	-	<1.0
	09/30/97	-	900	150 (2)	<200	0.8	<1.0	2	6.2	<10	-	<0.8
	12/12/97	-	360	<50	<200	1.1	<0.5	2.2	3	<5	-	<2
	02/18/98	-	90	<50	<200	<0.5	<0.5	1.1	2	<5	-	<2
	05/08/98	-	170	<50	<200	<0.5	<0.5	1.7	3	<5	-	<2
	06/24/99	-	<50	<50	<100	<0.50	0.66	<0.50	<1.5	<5.0	-	<0.50
	09/09/99	-	120	130	<100	<0.50	<0.50	<0.50	<0.50	<5.0	-	-
	11/24/99	-	770	260 (4)	<250	0.92	<0.50	2.7	3.4	<5.0	-	-
MW-3	08/03/92	-	-	1,000	<5,000	<0.5	1	<0.5	2.4	-	-	-
	11/20/92	-	98	2,000	<5,000	<0.5	<0.5	0.9	1	-	-	<2
	09/27/94	-	<50	720	<50	<3.0	<0.3	<0.3	<0.3	-	-	-
	06/28/96	-	<100	120 (2)	<200	<0.5	<1.0	<1.0	<2.0	-	-	<0.5
	10/31/96	-	<100	160	<200	<0.5	<1.0	<1.0	<2.0	<10	-	<1.0

TABLE 2
Groundwater Analytical Results -- Organics
Mariner Square, Alameda, California

Well	Date	TRPH	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	VOCs	Vinyl Chloride
MW-3 continued	09/30/97	-	<100	70	<200	0.8	<1.0	<1.0	3.3	<10	-	<0.8
	12/12/97	-	80	<50	<200	0.7	<0.5	0.7	4	9	-	<2
	02/18/98	-	60	<50	<200	<0.5	<0.5	<0.5	4	7	-	<2
	05/08/98	-	<50	<50	<200	0.5	<0.5	0.5	4	<5	-	<2
	06/24/99	-	<50	<50	<100	<0.50	1.1	<0.50	2.6	5.0	-	<0.50
	09/09/99	-	64	100	<100	<0.50	<0.50	<0.50	0.65	<5.0	-	-
	11/24/99	-	95	140 (4)	<250	<0.50	<0.50	<0.50	<0.50	<5.0		
MW-4	08/05/92	-	-	1,300	<5,000	16	2.6	0.6	2.7	-	-	9.0
	11/20/92	-	330	2,400	<5,000	31	5.2	0.7	2	-	-	13
	09/27/94	-	<50	890	<50	12	0.43	<0.3	<0.3	-	-	8.0
	06/28/96	-	180	170 (2,3)	<200	4	<1.0	<1.0	<2.0	-	-	2.5
	10/31/96	-	110	330	<200	6.2	<1.0	<1.0	<2.0	<10	-	4.3
	09/30/97	-	650	170 (2)	<200	3.9	<1.0	<1.0	<2.0	460	-	3.1
	12/12/97	-	260	<50	<200	4.9	0.9	<0.5	<2.0	320	-	3
	02/18/98	-	240	<50	<200	1.0	1.0	2.1	10	290	-	2
	05/08/98	-	90	<50	<200	0.5	0.5	0.8	5	30	-	<2
	08/10/99	-	93	270 (4)	320	0.59	1.4	<0.5	4.2	11	-	<0.5
	09/09/99	-	72	250	<100	<0.50	<0.50	<0.50	<0.50	25	-	-
	11/24/99	-	200	280 (4)	330 (4)	4.7	<0.50	0.68	<0.50	26	-	-
MW-5	08/03/92	-	-	2,200	<5,000	9	6	49	11	-	-	-
	11/20/92	-	4,800	1,500	<5,000	7.6	12	5.8	26	-	-	<2
	09/26/94	-	3,100	780	<500	7.9	11	8.7	14	-	-	-
	06/28/96	-	5,000	610 (2,3)	790	1.2	6.8	21	14	-	-	<0.5
	10/31/96	-	6,800	4,900	860	20	5.9	15	19	<10	-	<1.0
	09/30/97	-	9,000	4,100 (2)	520	35	5.3	36	32	12	-	<0.8
	12/12/97	-	3,400	90	<200	26	4.6	5.9	13	11	-	<2
	02/18/98	-	3,200	<50	<200	7.9	1.4	14	12	<5	-	<2
	05/08/98	-	3,900	<50	<200	8.0	22	19	10	<5	-	<2
	06/24/99	-	290	60	<100	48	8.8	8.6	33	<5.0	-	<0.50
	09/09/99	-	5,000	8,800	<100	32	16	20	14	12	-	-
	11/24/99	-	3,200	3,400 (4)	1,700	25	<2.5	15	10	<25	-	-

TABLE 2
Groundwater Analytical Results -- Organics
Mariner Square, Alameda, California

Well	Date	TRPH	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	VOCs	Vinyl Chloride
MW-6	05/25/93	-	460	2,700,000	-	<5.0	<5.0	<5.0	<5.0	-	-	<10
	9/27/94	-	1,100	9,900	3,200	<3.0	<3.0	<3.0	<3.0	-	-	<1.0
	06/28/96	Not Sampled--Sheen Present										
	09/30/97	Not Sampled--Sheen Present										
	12/12/97	-	21,000	1,900,000	43,000	5	<0.5	8	19	<50	-	<2
	02/18/98	-	70,000	<50	<200	20	20	20	70	<100	-	<2
	04/28/98	-	800	920	<200	<0.5	<0.5	<0.5	<2	<5	-	<2
	04/28/98	Well Destroyed										
MW-6A	08/10/99	-	770	5,400 (4)	3,900 (4)	1.7	<0.5	<0.5	1.9	<5.0	-	<0.5
	09/09/99	-	670	180,000	<5,000	<0.50	0.61	0.66	<0.50	<5.0	-	-
	11/24/99	-	29,000	7,900	11,000	<25	<25	<25	<25	<250	-	-
MW-7	09/27/94	-	<250	1,800	<250	<0.3	<0.3	<0.3	<0.3	-	-	<1.0
	06/28/96	-	560	490 (2,3)	<200	0.6	<1.0	<1.0	2.7	-	-	<0.5
	10/31/96	-	200	420	<200	1.1	<1.0	<1.0	<2.0	<10	-	<1.0
	09/30/97	-	750	190 (2)	<200	8.1	5.3	<1.0	6.9	<10	-	<0.8
	12/12/97	-	420	<50	<200	7.9	<0.5	<0.5	5	<5	-	<2
	02/18/98	-	650	<50	<200	9.5	0.6	<0.5	6	16	-	<2
	05/08/98	-	710	<50	<200	3.4	4.8	0.8	7	34	0.9 (5)	<2
	06/24/99	-	620	<250	<100	89	16	16	64	<5.0	-	<0.50
	09/09/99	-	420	400	<100	1.1	0.85	1.1	3.4	<5.0	-	-
	11/24/99	Sampling discontinued										
MW-8	09/27/94	-	<50	320	<50	<0.3	<0.3	<0.3	<0.3	-	-	-
	06/28/96	-	<100	58 (2)	<200	<0.5	<1.0	<1.0	<2.0	-	-	<0.5
	10/31/96	-	<100	120	<200	<0.5	<1.0	<1.0	<2.0	<10	-	<1.0
	09/30/97	-	110	70 (2)	<200	4.2	<1.0	3.4	16	<10	-	<0.8
	12/12/97	-	<50	<50	<200	<0.5	<0.5	<0.5	<2.0	15	-	<2
	02/18/98	-	<50	<50	<200	0.9	<0.5	0.8	3	<5	-	<2
	05/08/98	-	<50	<50	<200	<0.5	<0.5	<0.5	<2.0	<5	-	<2
	06/24/99	-	350	<50	<100	64	11	12	45	<5.0	-	<0.50
	09/09/99	-	56	120	130	<0.50	<0.50	<0.50	<0.50	<5.0	-	-
	11/24/99	-	-	-	<250	-	-	-	-	-	-	-

TABLE 2
Groundwater Analytical Results -- Organics
Mariner Square, Alameda, California

Well	Date	TRPH	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	VOCs	Vinyl Chloride
MW-9	09/26/94	-	<500	2,200	<500	<0.3	<0.3	<0.3	<0.3	-	-	<1.0
	06/28/96	-	390	550 (2,3)	<200	5.2	<1.0	<1.0	<2.0	-	-	<0.5
	10/31/96	-	300	590	720	5.9	<1.0	<1.0	<2.0	<10	-	<1.0
	09/30/97	-	150	460 (2)	<200	0.6	<1.0	<1.0	2.7	<10	-	<0.8
	12/12/97	-	180	<50	<200	<0.5	<0.5	<0.5	<2.0	<5	-	<2
	02/18/98	-	100	<50	<200	<0.5	0.5	<0.5	<2.0	6	-	<2
	05/08/98	-	70	130	<200	<0.5	<0.5	<0.5	<2.0	16	-	<2
	06/24/99	-	380	140	<100	51	10	11	39	<5.0	-	<0.50
	09/09/99	-	140	340	<100	<0.50	<0.50	<0.50	1.0	<5.0	-	-
	11/24/99	Sampling discontinued										
MW-10	08/10/99	-	1,300	3,000 (4)	8,200 (4)	9.2	1.9	12	46	<5.0	-	NA
	09/09/99	-	890	8,600	210,000	5.2	<0.50	13	37	<5.0	-	-
	11/24/99	-	1,700	<500	17,000	6.7	0.67	9.5	28	<5.0	-	-

All results reported in parts per billion

TRPH Total Recoverable Petroleum Hydrocarbons
TPHg Total Petroleum Hydrocarbons as gasoline
THPd Total Petroleum Hydrocarbons as diesel

< Analyte not detected at or above stated detection limit
TPHmo Total Petroleum Hydrocarbons as motor oil
VOCs Volatile Organic Compounds
MTBE Methyl Tert-Butyl Ether

(1) Water sample also analyzed for Freon 113 by EPA Method 8010A. Results were below the detection limit of 1.0 ppb.
(2) Qualitative identification is uncertain because the material present does not match laboratory standards.
(3) Quantitation uncertain due to matrix interferences
(4) Results within quantitation range; chromatographic pattern not typical of fuel
(5) Tetrochloroethene reported by lab on vinyl chloride sample unedited run.

ATTACHMENT A

Well Monitoring Forms

REC'D DEC 08 1999

WELL GAUGING DATA

Project # 99124R-1 Date 11-24-99 Client Earth Systems

Site Mariner Square

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
MW-1	2					5.20	11.56		
MW-2	2	Odor				5.83	13.80		
MW-3	2	Odor				4.60	10.31		
MW-4	2					4.25	12:00		
MW-5	2	Sheen Odor				4.91	12.20		
MW-6A	1	Sheen Odor				4.90	10.34		
MW-7	4	Odor				5.29	13.40		
MW-8	4					5.89	13.85		
MW-9	4					4.72	13.24		
MW-10	1	Sheen Odor				5.30	10.21		

All wells double checked

WELL MONITORING DATA SHEET

Project #: 99124 R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 11.56	Depth to Water: 5.20
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: (Bailer) Disposable Bailer Middleburg Electric Submersible Extraction Pump Other: _____

Sampling Method: (Bailer) Disposable Bailer Extraction Port Other: _____

1.0 (Gals.) X 3 = 3.0 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
9:30	66.7	6.7	3468	120.2	1.0	cloudy
9:32	66.9	6.6	3328	>200	2.0	turbid
9:34	65.9	6.6	3216	>200	3.0	/

Did well dewater? Yes (No) Gallons actually evacuated: 3.0

Sampling Time: 9:38 Sampling Date: 11-24-99

Sample I.D.: MW-1 Laboratory: EnTech

Analyzed for: (TPH-G) ~~BTEX~~ MTBE ~~TPH-D~~ Other: motor oil

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
ORP (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 99124 R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 13.80	Depth to Water: 5.83
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: (Bailer) Disposable Bailer / Middleburg / Electric Submersible / Extraction Pump / Other: ___

Sampling Method: (Bailer) Disposable Bailer / Extraction Port / Other: ___

1.2 (Gals.) X 3 = 3.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
10:25	66.4	6.8	1639	7200	1.5	Turbid
10:27	66.0	6.9	1742	>200	3.0	Odor
10:29	65.7	6.9	1713	>200	4.0	/

Did well dewater? Yes (No) Gallons actually evacuated: 4.0

Sampling Time: 10:34 Sampling Date: 11-24-99

Sample I.D.: MW-2 Laboratory: ENTech

Analyzed for: (TPH-G BTEX MTBE TPH-D) Other: Motor oil

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

ORP (if req'd): Pre-purge: mV Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 99124 R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 10.31	Depth to Water: 4.60
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: (Bailer)
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other: _____

Sampling Method: (Bailer)
Disposable Bailer
Extraction Port
Other: _____

0.9 (Gals.) X 3 = 2.7 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
10:07	66.7	6.7	2123	7200	1.0	odor
10:09	66.8	6.8	2210	7200	2.0	cloudy
10:11	66.2	6.8	2167	7200	3.0	/ green

Did well dewater? Yes (No) Gallons actually evacuated: 3.0

Sampling Time: 10:16 Sampling Date: 11-24-99

Sample I.D.: MW-3 Laboratory: ENTech

Analyzed for: (TPH-G BTEX MTBE TPH-D) Other: Motor oil

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

ORP (if req'd): Pre-purge: mV Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 99124 R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 12.00	Depth to Water: 4.25
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: (Bailer) Disposable Bailer / Middleburg / Electric Submersible / Extraction Pump / Other: ___

Sampling Method: (Bailer) Disposable Bailer / Extraction Port / Other: ___

1.2 (Gals.) X 3 = 3.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
10:42	63.6	6.7	1166	>200	1.5	Turbid
10:45	63.7	6.8	1203	>200	3.0	odor
10:47	63.1	6.9	1173	>200	4.0	/

Did well dewater? Yes (No) Gallons actually evacuated: 4.0

Sampling Time: 10:52 Sampling Date: 11-25-99

Sample I.D.: MW-4 Laboratory: ENTech

Analyzed for: (TPH-G BTEX MTBE TPH-D) Other: Motor oil

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:	mg/L
ORP (if req'd):	Pre-purge:		mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 99124 R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 12.20	Depth to Water: 4.91
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: (Bailer) Disposable Bailer; Middleburg; Electric Submersible; Extraction Pump; Other: ___

Sampling Method: (Bailer) Disposable Bailer; Extraction Port; Other: ___

1.1 (Gals.) X 3 = 3.3 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
11:04	62.8	6.7	1564	>200	1.5	odor (Strong)
11:07	62.5	6.8	1587	>200	2.5	sheen
11:09	62.1	6.8	1592	>200	3.5	Black

Did well dewater? Yes (No) Gallons actually evacuated: 3.5

Sampling Time: 11:15 Sampling Date: 11-25-99

Sample I.D.: MW-5 Laboratory: ENTech

Analyzed for: (TPH-G BTEX MTBE TPH-D) @ Time Other: Motor oil

Equipment Blank I.D.: Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

ORP (if req'd): Pre-purge: mV Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 99124 R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-6A	Well Diameter: 2 3 4 6 8 (1)
Total Well Depth: 10.34	Depth to Water: 4.90
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: (Bailer) pin
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other: _____

Sampling Method: (Bailer) pin
Disposable Bailer
Extraction Port
Other: _____

0.4 (Gals.) X 3 = 1.2 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
11:30	64.2	7.4	189.9	>200	.5	Strong odor
11:35	63.9	7.4	210.4	>200	1.0	Sheen
11:40	63.8	7.4	192.6	>200	1.5	turbid

Did well dewater? Yes (No) Gallons actually evacuated: 1.5

Sampling Time: 11:45 Sampling Date: 11-24-99

Sample I.D.: MW-6A Laboratory: ENTech

Analyzed for: (TPH-G BTEX MTBE TPH-D) Other: Motor oil

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

ORP (if req'd): Pre-purge: mV Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 99124 R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-8	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 13.85	Depth to Water: 5.89
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer / Disposable Bailer / Middleburg / (Electric Submersible) / Extraction Pump / Other: ___

Sampling Method: (Bailer) / Disposable Bailer / Extraction Port / Other: ___

5.1 (Gals.) X 3 = 15.3 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
9:50	65.3	7.3	1251	>200	6	cloudy
9:51	65.0	7.4	1213	>200	12	
9:52	64.8	7.3	1209	>200	16	

Did well dewater? Yes (No) Gallons actually evacuated: 16

Sampling Time: 9:56 Sampling Date: 11-25-99

Sample I.D.: MW-8 Laboratory: EA Tech

Analyzed for: (TPH-G) BTEX MTBE TPH-D Other: Motor oil

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

ORP (if req'd): Pre-purge: mV Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 9911241R-1	Client: Earth Systems Con.
Sampler: SR	Start Date: 11-24-99
Well I.D.: MW-10	Well Diameter: 2 3 4 6 8 (1)
Total Well Depth: 10.21	Depth to Water: 5.30
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: (Bailer) pm
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other: _____

Sampling Method: (Bailer) pm
Disposable Bailer
Extraction Port
Other: _____

0.2 (Gals.) X 3 = 0.9 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
12:00	66.6	6.8	1550	7200	.50	Sheen
12:05	66.1	6.8	1621	7200	.75	Odor
12:09	65.8	6.9	1602	151.6	1.0	turbid

Did well dewater? Yes (No) Gallons actually evacuated: 1.0

Sampling Time: 12:15 Sampling Date: 11-24-99

Sample I.D.: MW-10 Laboratory: ENTech

Analyzed for: (TPH-G BTEX MTBE TPH-D) Other: Motor oil

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

ORP (if req'd): Pre-purge: mV Post-purge: mV

ATTACHMENT B

Laboratory Analytical Reports

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

December 03, 1999

RECD DEC 23 1999

Jeanne Buckthal
Earth Systems Consultants
47853 Warm Springs Blvd.
Fremont, CA 94539-7400

Order: 17813
Project Name:
Project Number:
Project Notes:

Date Collected: 11/24/99
Date Received: 11/24/99
P.O. Number:

On November 24, 1999, 8 samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas.BTEX/MTBE	EPA 8015 MOD.
		EPA 8020
	TPH as Diesel	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#I-2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Earth Systems Consultants
47853 Warm Springs Blvd.
Fremont, CA 94539-7400
Attn: Jeanne Buckthal

Date: 12/3/99
Date Received: 11/24/99
Project:
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	**MW-1**			**MW-8**							
Sample Date	11/24/99			11/24/99							
Sample Time	9:38			9:56							
Lab #	**17813-001**			**17813-002**							
	Result	DF	DLR	Result	DF	DLR				PQL	Method
Results in µg/Liter:											
Analysis Date	11/30/99			11/30/99							
TPH-Motor Oil	**ND**	1.0	250	**ND**	1.0	250				250	8015M

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

· Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Lab Director

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Earth Systems Consultants
47853 Warm Springs Blvd.
Fremont, CA 94539-7400
Attn: Jeanne Buckthal

Date: 12/3/99
Date Received: 11/24/99
Project:
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	MW-2			MW-3			MW-4				
Sample Date	11/24/99			11/24/99			11/24/99				
Sample Time	10:34			10:16			10:52				
Lab #	17813-003			17813-004			17813-005				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Results in µg/Liter:											
Analysis Date	11/30/99			11/30/99			11/30/99				
TPH-Diesel	**260** x	1.0	50	**140** x	1.0	50	**280** x	1.0	50	50	8015M
TPH-Motor Oil	**ND**	1.0	250	**ND**	1.0	250	**330** x	1.0	250	250	8015M
Analysis Date	11/30/99			12/2/99			11/29/99				
TPH-Gas	**770**	1.0	50	**95**	1.0	50	**200**	1.0	50	50	8015M
MTBE	**ND**	1.0	5.0	**ND**	1.0	5.0	**26**	1.0	5.0	5.0	8020
Benzene	**0.92**	1.0	0.50	**ND**	1.0	0.50	**4.7**	1.0	0.50	0.50	8020
Toluene	**ND**	1.0	0.50	**ND**	1.0	0.50	**ND**	1.0	0.50	0.50	8020
Ethyl Benzene	**2.7**	1.0	0.50	**ND**	1.0	0.50	**0.68**	1.0	0.50	0.50	8020
Xylenes (total)	**3.4**	1.0	0.50	**ND**	1.0	0.50	**ND**	1.0	0.50	0.50	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

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Earth Systems Consultants
47853 Warm Springs Blvd.
Fremont, CA 94539-7400
Attn: Jeanne Buckthal

Date: 12/3/99
Date Received: 11/24/99
Project:
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	MW-5			MW-6A			MW-10				
Sample Date	11/24/99			11/24/99			11/24/99				
Sample Time	11:15			11:45			12:15				
Lab #	17813-006			17813-007			17813-008				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Results in µg/Liter:											
Analysis Date	11/30/99			12/1/99			12/1/99				
TPH-Diesel	**3,400** x	1.0	50	**7,900**	5.0	250	**ND**	10	500	50	8015M
TPH-Motor Oil	**1,700**	1.0	250	**11,000**	5.0	1250	**17,000**	10	2500	250	8015M
Analysis Date	11/30/99			11/30/99			12/1/99				
TPH-Gas	**3,200**	5.0	250	**29,000** x	50	2500	**1,700**	1.0	50	50	8015M
MTBE	**ND**	5.0	25	**ND**	50	250	**ND**	1.0	5.0	5.0	8020
Benzene	**25**	5.0	2.5	**ND**	50	25	**6.7**	1.0	0.50	0.50	8020
Toluene	**ND**	5.0	2.5	**ND**	50	25	**0.67**	1.0	0.50	0.50	8020
Ethyl Benzene	**15**	5.0	2.5	**ND**	50	25	**9.5**	1.0	0.50	0.50	8020
Xylenes (total)	**10**	5.0	2.5	**ND**	50	25	**28**	1.0	0.50	0.50	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Lab Director

Entech Analytical Labs, Inc.

CA ELAP# I-2346

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STANDARD LAB QUALIFIERS
July, 1998

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier	Description
U	Compound was analyzed for but not detected
J	Estimated valued for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range: chromatographic pattern not typical of fuel

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: GBG4991201
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 12/01/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	**SP % R**	SPD µg/Liter	**SPD %R**	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<0.50	5.6	ND	5.0	**90**	5.1	**91**	1.5	25	70-130
Toluene	8020	<0.50	31	ND	29	**91**	30	**95**	4.1	25	70-130
Ethyl Benzene	8020	<0.50	6.1	ND	5.5	**90**	5.6	**91**	1.4	25	70-130
Xylenes	8020	<0.50	35	ND	32	**92**	32	**94**	2.0	25	70-130
Gasoline	8015	<50.0	500	ND	481	**96**	457	**91**	5.1	25	70-130
aaa-TFT(S.S.)-FID	8020			107%	99%		102%				65-135
aaa-TFT(S.S.)-PID	8015			110%	107%		111%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: GBG4991130
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 11/30/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	SP % R	SPD µg/Liter	SPD %R	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<0.50	5.6	ND	5.0	**90**	5.1	**91**	1.5	25	70-130
Toluene	8020	<0.50	31	ND	29	**94**	30	**96**	2.1	25	70-130
Ethyl Benzene	8020	<0.50	6.1	ND	5.6	**92**	5.5	**91**	1.7	25	70-130
Xylenes	8020	<0.50	35	ND	32	**94**	33	**96**	2.2	25	70-130
Gasoline	8015	<50.0	500	ND	478	**96**	468	**94**	2.1	25	70-130
aaa-TFT(S.S.)-FID	8020			107%	98%		102%				65-135
aaa-TFT(S.S.)-PID	8015			116%	105%		110%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: GBG4991124
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 11/24/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	SP % R	SPD µg/Liter	SPD %R	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<0.50	5.6	ND	5.2	**92**	5.0	**89**	3.9	25	70-130
Toluene	8020	<0.50	31	ND	30	**96**	30	**95**	1.2	25	70-130
Ethyl Benzene	8020	<0.50	6.1	ND	5.8	**94**	5.6	**92**	2.7	25	70-130
Xylenes	8020	<0.50	35	ND	33	**95**	33	**95**	0.2	25	70-130
Gasoline	8015	<50.0	500	ND	472	**94**	457	**91**	3.3	25	70-130
aaa-TFT(S.S.)-FID	8020			100%	101%		101%				65-135
aaa-TFT(S.S.)-PID	8015			112%	111%		110%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW991111
Matrix: Liquid
Units: µg/L

Date analyzed: 11/25/99
Date extracted: 11/24/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	**SP %R**	SPD µg/L	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	886	**89**	882	**88**	0.5	25	60-120
Hexocosane(S.S.)				87%	91%		91%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE

DATE 12/1/99

Total pages including cover sheet 1

TO MARA

OF ENTECH
735-1554

FROM BILLY

* Revised

PLEASE FORWARD TO MARA ASAP.
THX.

REMARKS: PLEASE CANCEL TPH-G ANALYSIS FOR MW-1 & MW-8

DO NOT ANALYZE ON REPORT PER EACH SYSTEMS (Jeanne Buckthall)

SHE WILL ALSO CALL YOU TO CONFIRM.

THANKS.

* P.S. - PLEASE BILL THE MW-1 & MW-8 (ONLY) TPH-GAS Analyses to BLAINE TECH SERVICES ATTN: W.R. JONES.

- ALL OTHERS ARE BILLED TO MARINER SQUARE ASSOC

BLAINE
TECH SERVICES INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 991124R-1

CLIENT EARTH SYSTEMS

SITE MARINERS SQUARE
ALAMEDA, CA

CONDUCT ANALYSIS TO DETECT

LAB ENTECH DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

☐ EPA ☐ RWQCB REGION _____
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS
INVOICE TO: MARINER SQUARE ASSOC.
Attn: John Beery
2900 MAIN ST. #100
Alameda, CA 94601
REPORT TO: EARTH SYSTEMS
ATTN JOANNE BULKHALL

SAMPLE I.D.	Date	Time	MATRIX S=SOIL W=H2O	CONTAINERS TOTAL		C=COMPOSITE ALL CONTAINERS	8015 (8020) TPH-G / BTEX / MTBE	TPH-D	MOTOR-OIL	TPH-G	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-1	11/24	9:38	W	4	HCl preserved				X	X				17813-001
MW-2		10:34		5	+		X	X	X					-003
MW-3		10:16		5	NP Lt.		X	X	X					-004
MW-4		10:52		5			X	X	X					-005
MW-5		11:15		5			X	X	X					-006
MW-6A		11:45		5			X	X	X					-007
MW-8		9:56		4					X	X				-002
MW-10		12:15		5			X	X	X					-008

SAMPLING COMPLETED DATE 11/24 TIME

SAMPLING PERFORMED BY

RESULTS NEEDED NO LATER THAN ASAP Earth Systems.

RELEASED BY		DATE	TIME	RECEIVED BY	DATE / TIME
RELEASED BY		DATE	TIME	RECEIVED BY	DATE / TIME
RELEASED BY		DATE	TIME	RECEIVED BY	DATE 11/24/99 TIME 1505
SHIPPED VIA		DATE SENT	TIME SENT	COOLER #	