FIRST SEMI-ANNUAL GROUNDWATER SAMPLING

2145 MARINER SQUARE DRIVE
ALAMEDA, CALIFORNIA

OCTOBER 2000

Prepared for

Alameda County Health Care Services Agency
Environmental Protection Division
Alameda, California

Prepared by

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

Attention: Mr. Larry Seto, Senior Hazardous Materials Specialist

Subject: 2415 Mariner Square Drive
Alameda, California
FIRST SEMI-ANNUAL GROUNDWATER SAMPLING 2000

Dear Mr. Seto:

Earth Systems Consultants Northern California (ESCNC) is submitting this report which describes the first semi-annual groundwater sampling event for 2000 at the subject site (Figure 1). This sampling event, took place during the third quarter 2000. The scope of work included measuring depth to groundwater in all site wells and purging and sampling wells MW-5, MW-6A, MW-9, and MW-10 as required in the Alameda County Health Care Services Agency (CACHCSA) letter dated June 23,2000. As a result of free product in wells MW-6A and MW-10, a second round of sampling was completed for these wells on September 6, 2000, and product samples, as wells as groundwater samples, were collected.

Groundwater Sampling on August 3, 2000

On August 3, 2000, Blaine Tech Services measured the depth to groundwater in monitoring wells MW-1 through MW-5, MW-6A, and MW-7 through MW-10. Free product was detected in wells MW-6A and MW-10. However, the product thickness could not be measured due to the small diameter of the wells. Blaine Tech Services personnel purged and sampled wells MW-5 and MW-9 only since the remainder of site wells were not required in the sampling request 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. Samples were collected from MW-5 and MW-9 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 7.28 to 10.78 feet above mean sea level with an average elevation of 9.33 feet. Due to the free product of unknown thickness present in wells MW-6A and MW-10, the groundwater elevations for these wells were not used for interpretation of the groundwater flow direction and gradient. The average groundwater elevation during this sampling event, not including wells MW-6A and MW-10, is 1.24 feet lower than during the first quarter 2000. The groundwater flow direction was toward the southeast with a gradient ranging from 0.006 to 0.010 ft/ft (32 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. (Entech, ELAP #2346). The samples from wells MW-5 and MW-9 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. Wells MW-6A and MW-10 were not sampled due to free product.

Results

The analytical results of groundwater samples collected from wells MW-5 and MW-9 indicated hydrocarbon concentrations similar to historical levels. The samples indicated levels of TPHd and TPHmo that were within the quantitation range, but the chromatographic pattern was not typical of the fuels. The analytical results are summarized in Table 2. The laboratory analytical reports are included in Attachment B.

Groundwater and Free Product Sampling on September 6, 2000

As a result of the free product detected in wells MW-6A and MW-10 in August, Blaine Tech Services collected product samples from the two wells on September 6, 2000. After the product sampling was completed, the two wells were purged and groundwater samples were collected. Well monitoring forms are included in Attachment C.

The product and groundwater samples were submitted to Entech for laboratory analysis. The product samples were analyzed for purgeable and extractable petroleum hydrocarbons using EPA methods 8015 modified and 8020. These analyses include the TPH ranges for aviation gas, gasoline, mineral spirits, bunker oil, diesel, heating oil, hydraulic oil, jet fuel, kerosene, motor

oil, stoddard solvent, BTEX, and MTBE. The groundwater samples were analyzed for TPHg, TPHd, TPHmo, BTEX, and MTBE using the methods described previously.

Results

The results of the free product sample collected from well MW-6A indicate the fuel type is primarily within the bunker oil range, while the primary fuel type found in the sample collected from MW-10 is within the motor oil range. In addition, detectable levels of fuel in the gasoline range were also present in both samples. However, the laboratory note for the gasoline range concentrations state that the chromatographic pattern was not typical of gasoline. The remaining TPH range fuels, BTEX, and MTBE were below detection limits which were raised due to the high levels of hydrocarbons present in the samples.

The results of the groundwater samples collected from wells MW-6A and MW-10 contain detectable levels of TPHg and BEX. Toluene and MTBE were not detected in either sample. The sample from well MW-6A also contained TPHd and TPHmo, but the laboratory reported that the results were not typical of these fuels. The sample from MW-10 contained 6,400 parts per billion (ppb) TPHmo but did not contain detectable TPHd.

The analytical results for the groundwater samples are summarized in Table 2, and the analytical results for the product samples are summarized in Table 3. The laboratory analytical reports for the groundwater samples are included in Attachment D, and the laboratory analytical reports for the Product Samples are included in Attachment E.

Site Visit

A representative of ESCNC conducted a brief site visit on August 23, 2000. During the visit, he noted that an active water leak was originating from the Navy property approximately 20 feet west of the subject site boundary. This leak created water flow on the subject site southward toward MW-6A in a small ditch along the eastern property boundary and toward the east-northeast. In addition, the leak created a pond of standing water on the Navy property and on the property boundary.

The representative also noticed three oil-filled 5-gallon buckets plus smaller containers located beneath the stairs on the north side of the building in the northwestern corner of the property. The used motor oil in the buckets had overflowed and stained the concrete.

Discussion and Conclusions

Well MW-6A is located along the eastern property boundary outside the fire wall and adjacent to the Navy property. Since the groundwater flow direction outside the fire wall has consistently been toward the southeast, well MW-6A is located upgradient of any former onsite storage tanks. The free product from MW-6 contained bunker oil hydrocarbons which was the fuel used by the ships that formerly transported various fuels to and from the site and vicinity. Therefore, the possibility exists that the bunker oil present in well MW-6A originated offsite. As the bunker oil travels with groundwater toward the southeast, the fire wall has slowed or prevented the migration of bunker oil in the groundwater. Consequently, the bunker oil is probably pooling in the vicinity of MW-6A.

The located of MW-10 is downgradient of the leaking 5-gallon used oil containers noted during the site visit. The age of these containers is unknown, but the staining on the concrete did not appear to be new. Therefore, the possibility exists that the used oil from the containers is the source of free product in well MW-10, which was reported by the laboratory to be in the motor oil range.

Recommendations

ESCNC understands that the building in the northwestern property corner with the used oil buckets is to be demolished prior to redevelopment of the site. The demolition of this building would be an appropriate time to excavate soils contaminated with motor oil in the vicinity of the building and well MW-10.

To investigate the source of bunker oil in well MW-6A would require access to the Navy property. However, if the building adjacent to MW-6A is to be demolished prior to redevelopment, then excavating soils as described above would be recommended.

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, Senior Geologist
Certified Engineering Geologist 1501

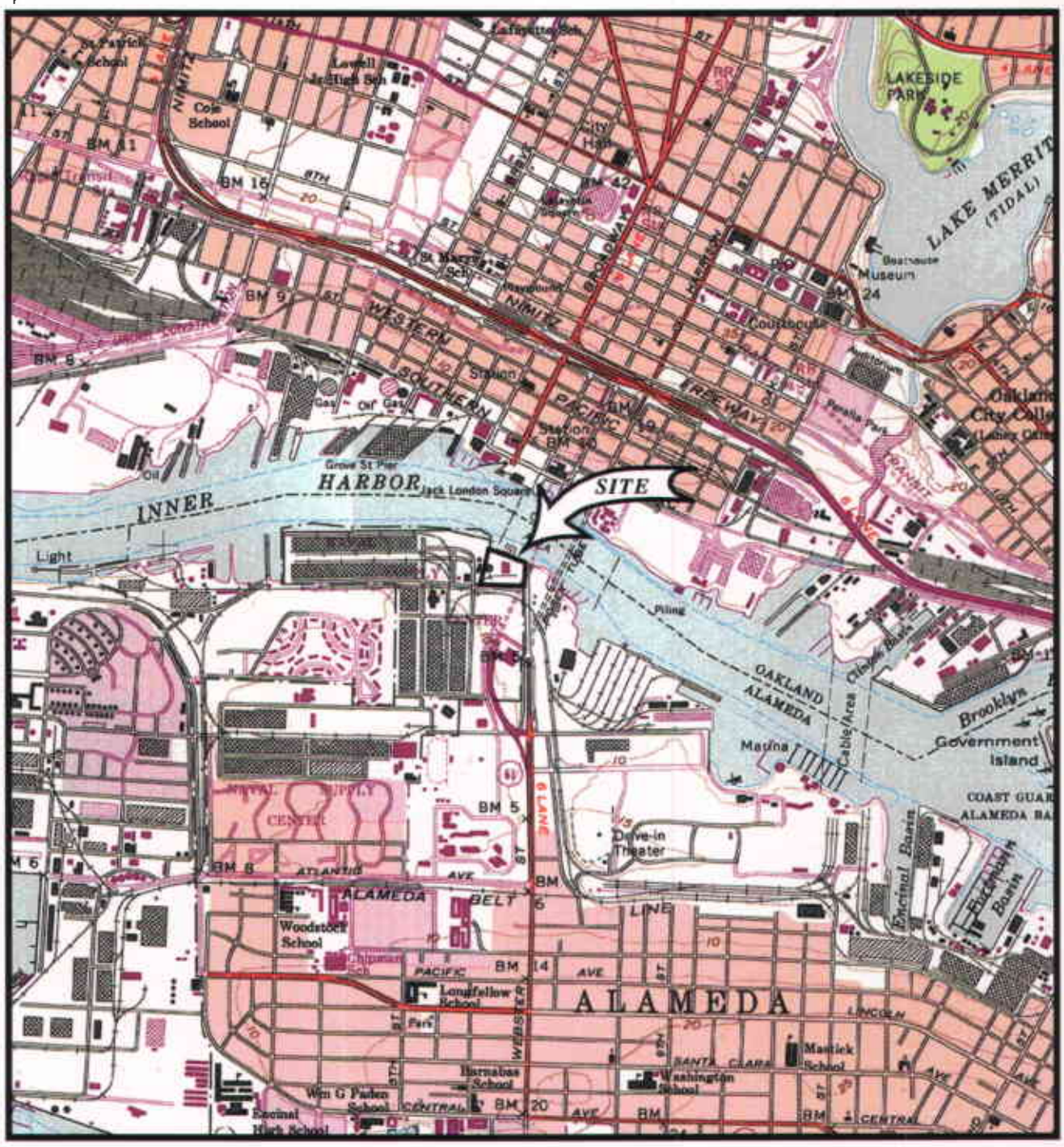
JB/GP: gwDisk004.10

Distribution: 1 to addressee
1 to Mr. John Beery

FIGURES

Figure 1 – Site Location
Figure 2 – Groundwater Gradient Map

File No. NFE-4392-01
October 2000



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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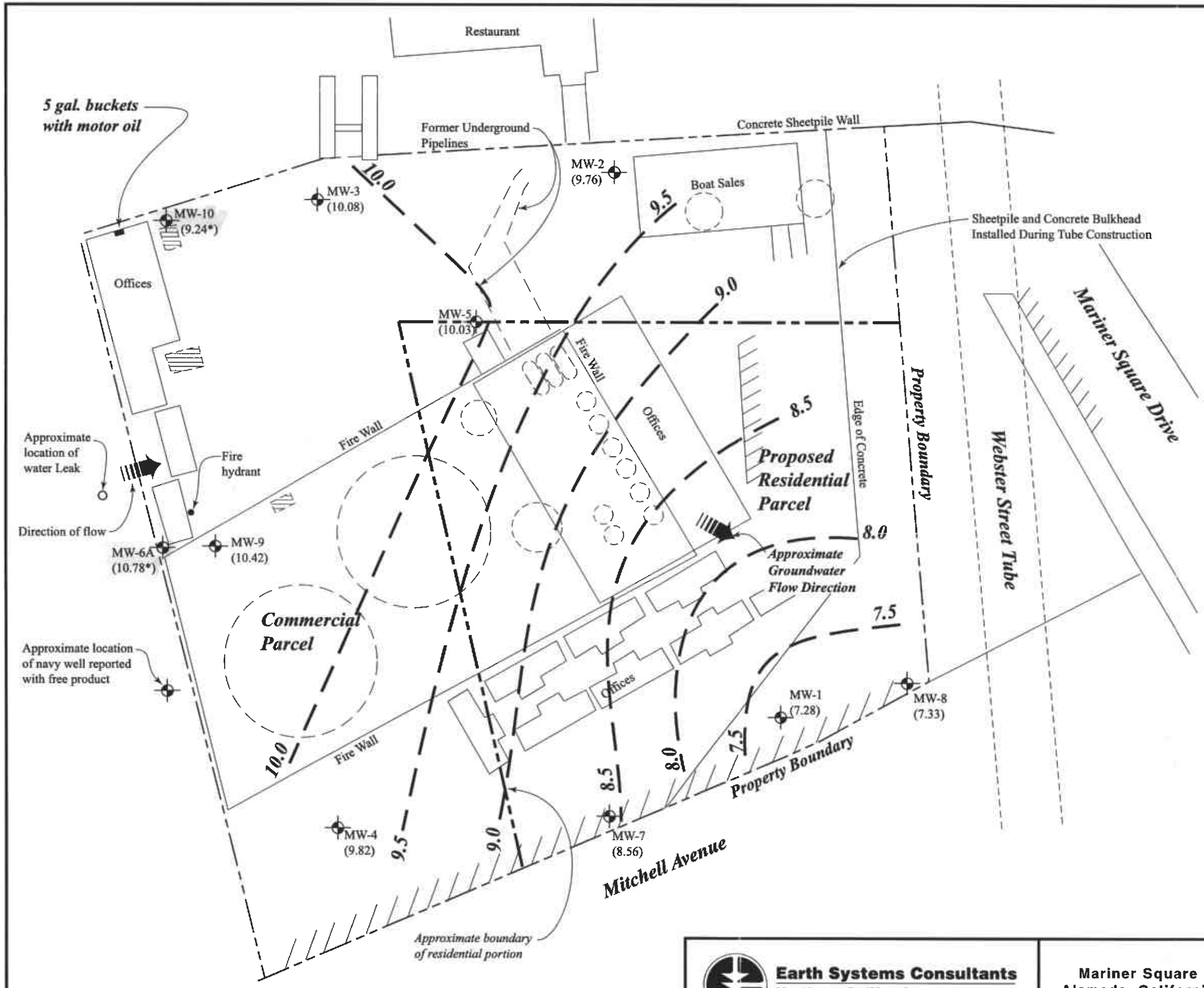
Earth Systems Consultants Northern California	Mariner Square Alameda, California	**SITE LOCATION** Figure 1



Earth Systems Consultants
Northern California

Mariner Square
Alameda, California

GROUNDWATER GRADIENT MAP 8/3/00

Date: October 2000
File No: NFE-4392-01

Figure 2

TABLES

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
	03/15/00	11.99	3.92	-	8.07
	08/03/00	11.99	4.71	-	7.28
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

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-2	03/15/00	15.21	4.00	-	11.21
continued	08/03/00	15.21	5.45	-	9.76
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
	03/15/00	14.19	3.00	-	11.19
	08/03/00	14.19	4.11	-	10.08
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

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-4 continued	11/24/99	13.95	4.25	-	9.70
	03/15/00	13.95	2.50	-	11.45
	08/03/00	13.95	4.13	-	9.82
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
	03/15/00	14.60	3.03	Sheen	11.57
	08/03/00	14.60	4.57	-	10.03
MW-6	06/13/94	14.81	5.96	0.02	8.85
	09/27/94	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			

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-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
	03/15/00	15.22	3.61	Sheen	11.61
	08/03/00	15.22	4.44	Sheen/FP	10.78
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
	03/15/00	13.61	3.65	-	9.96
	08/03/00	13.61	5.05	-	8.56
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
	03/15/00	12.64	4.71	-	7.93
	08/03/00	12.64	5.31	-	7.33
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

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-9 continued	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
	03/15/00	14.92	3.07	-	11.85
	08/03/00	14.92	4.50	-	10.42
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
	03/15/00	14.91	4.12	Sheen	10.79
	08/03/00	14.91	5.67	Sheen/FP	9.24

msl Mean Sea Level
\- None measured
FP Free Product--not able to measure thickness

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	-	-	-	-	-	-	-
	03/15/00	Not Sampled										
	08/03/00	Sampling discontinued										
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	-	-
	03/15/00	-	91	110 (4)	<250	<0.5	<0.5	<0.5	<0.5	<5	-	-
	08/03/00	Sampling discontinued										

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	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
	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	-	-
	03/15/00	-	88	350 (4)	440 (4)	<0.5	<0.5	<0.5	<0.5	<5.0	-	-
	08/03/00	Sampling discontinued										
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	-	-
	03/15/00	-	82	300 (4)	390 (4)	1.2	<0.5	<0.5	<0.5	6.7	-	-
	08/03/00	Sampling discontinued										

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-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	-	-
	03/15/00	-	1,400	6,600 (4)	4,200	4.7	6.9	3.5	2.4	<5.0	-	-
	08/03/00	-	2,700	3500 (4)	1000 (4)	19	4.6	17	18	<5.0	-	-
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	-	-
	03/15/00	-	4,400	6,700	8,100	1.4	<1.0	<1.0	<1.0	<10	-	-
	08/03/00	Not Sampled--Sheen Present										
	09/06/00	-	290	3,600 (4)	4,600 (4)	0.60	<0.5	0.59	0.65	<5.0	-	-

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-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	-	-	-	-	-	-	-
	03/15/00	Not Sampled										
	08/03/00	Sampling discontinued										
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

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	06/24/99	-	380	140	<100	51	10	11	39	<5.0	-	<0.50
continued	09/09/99	-	140	340	<100	<0.50	<0.50	<0.50	1.0	<5.0	-	-
	11/24/99	Not Sampled										
	03/15/00	-	<50	650 (4)	900 (4)	<0.5	<0.5	<0.5	<0.5	<5.0	-	-
	08/03/00	-	<50	610 (4)	650 (4)	<0.5	<0.5	<0.5	<0.5	<5.0	-	-
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	-	-
	03/15/00	-	1,200	<500	14,000	3.5	<1.0	2.2	18	<10	-	-
	08/03/00	Not Sampled--Sheen Present										
	09/06/00	-	350	<260	6,400	1.4	<0.5	1.0	18	<5.0	-	-

All results reported in parts per billion

TRPH	Total Recoverable Petroleum Hydrocarbons	<	Analyte not detected at or above stated detection limit
TPHg	Total Petroleum Hydrocarbons as gasoline	TPHmo	Total Petroleum Hydrocarbons as motor oil
THPd	Total Petroleum Hydrocarbons as diesel	VOCs	Volatile Organic Compounds
*	Total Petroleum Hydrocarbons as Bunker Oil.	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.

File No. NFE-4392-01
October 11, 2000

TABLE 3
Free Product Analytical Results
Mariner Square, Alameda, California

	MW-6A (1)	MW-10 (1)
TPH as bunker oil	1,000,000	<48,100
TPH as diesel	<39,000	<3,700
TPH as heating oil	<507,000	<48,100
TPH as hydraulic oil	<507,000	<48,100
TPH as jet fuel (Jet A)	<39,000	<3,700
TPH as kerosene	<39,000	<3,700
TPH as motor oil	<507,000	390,000
TPH as stoddard solvent	<39,000	<3,700
TPH as aviation gas	<1,250	<650
TPH as gasoline	7,100 (2)	3,000 (2)
TPH as mineral spirits	<1,250	<650
Benzene	<12.5	<6.5
Toluene	<12.5	<6.5
Ethylbenzene	<12.5	<6.5
Total Xylenes	<12.5	<13
Methyl tert-butyl Ether	<25	<65

Results are in parts per million (mg/Kg)

< Less than indicated detection limit

(1) Sample required methanol extraction due to high concentrations of target hydrocarbons

(2) Results within quantitation range; chromatographic pattern not typical of fuel

ATTACHMENT A

Well Monitoring Forms (August 3, 2000)

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

REC'D AUG 09 2000

WELLHEAD INSPECTION CHECKLIST

Client Earth Systems

Site Address Mariner Square, Alameda

Technician Patrick S.

Date 8-3-00

1. Lid on box?	6. Casing secure?	12. Water standing in wellbox?	15. Well cap functional?
2. Lid broken?	7. Casing cut level?	12a. Standing above the top of casing?	16. Can cap be pulled loose?
3. Lid bolts missing?	8. Debris in wellbox?	12b. Standing below the top of casing?	17. Can cap seal out water?
4. Lid bolts stripped?	9. Wellbox is too far above grade?	12c. Water even with the top of casing?	18. Padlock present?
5. Lid seal intact?	10. Wellbox is too far below grade?	13. Well cap present?	19. Padlock functional?
	11. Wellbox is crushed/damaged?	14. Well cap found secure?	

☐ Check box if no deficiencies were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken
~~MW-4~~		

Note below all deficiencies that could not be corrected and still need to be corrected.

Well I.D.	Persisting Deficiency	STS Office assigns or defers Correction to:	Date assigned	Date corrected
MW-9	well box broken top seperated	Contact Blaine Tech		ASAP
MW-1	no lid, tab broke off wellbox	We can provide quote for repairs		
		Wellbox replacement		
		2 @ $350 = $700		

WELL GAUGING DATA

Project # 000803-I1 Date 9-3-00 Client Earth Systems

Site Mariner Square Alameda

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	C/D
MW-1	2					4.71	11.34	TOC	1
MW-2	2					5.45	13.39		5
MW-3	2					4.11	9.53		4
MW-4	2					4.13	11.53		6
MW-5	2	odor				4.57	11.59		#10
MW-6A	1	odor				4.44	10.20		a
MW-7	4					5.05	13.50		3
MW-8	4					5.31	13.83		2
MW-9	4					4.50	13.26		7
MW-10	1	odor				5.67	10.14		8

WELL MONITORING DATA SHEET

Project #: 000803-F1	Client: Earth Systems
Sampler: S. F.	Start Date: 8-3-00
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 11.59	Depth to Water: 4.57
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
- Waterra
- Peristaltic
- Extraction Pump
- Other____

Sampling Method: Bailer

- (Disposable Bailer)
- Extraction Port
- Dedicated Tubing
- Other: ____

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1200	73.2	7.0	1190	>200	1.25	sheen
1202	74.1	7.0	1280	>200	2.5	strong odor
1204	74.5	7.0	1380	>200	3.5	
					DTW@ 6.69	

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

Sampling Time: 1207 Sampling Date: 8-3-00

Sample I.D.: MW-5 Laboratory: on 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 #: 000803-11	Client: Earth Systems
Sampler: P. T.	Start Date: 8-3-00
Well I.D.: mw-6A	Well Diameter: 2 3 4 6 8 1
Total Well Depth: 14.20	Depth to Water: 4.44
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
Waterra
Peristaltic
Extraction Pump
Other pin

Sampling Method: Bailer

Disposable Bailer
Extraction Port
Dedicated Tubing
Other: pin

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

.23 (Gals.) X 3 = .69 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
	found product during purge					
	no sample per. client					

Did well dewater? Yes No		Gallons actually evacuated:	
Sampling Time:		Sampling Date: 8-3-00	
Sample I.D.: mw-6A		Laboratory: En 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 #: 000803-I1	Client: Earth Systems
Sampler: P.F.	Start Date: 8-3-00
Well I.D.: MW-9	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 13.28	Depth to Water: 4.50
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
Waterra
Peristaltic
Extraction Pump
Other_____

Sampling Method: Bailer

(Disposable Bailer)
Extraction Port
Dedicated Tubing
Other: _____

5.7 (Gals.) X	3 =	17.1 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1100	71.9	6.9	980	7200	~~6.0~~	
1105	70.8	7.3	960	7200	12.0	
1110	70.4	7.3	950	7200	18.0	
					DTW @ 5.66	

Did well dewater? Yes (No) Gallons actually evacuated: 18.0

Sampling Time: 1115 Sampling Date: 8-3-00

Sample I.D.: MW-9 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 #: 000803-I1	Client: Earth Systems
Sampler: C. F.	Start Date:
Well I.D.: MW-10	Well Diameter: 2 3 4 6 8 1
Total Well Depth: 10.14	Depth to Water: 5.67
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 .04
Waterra
Peristaltic
Extraction Pump
Other pin

Sampling Method: Bailer
Disposable Bailer
Extraction Port
Dedicated Tubing
Other: pin

1 Case Volume	(Gals.) X	Specified Volumes	=	Calculated Volume	Gals.
.24		3		.7	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
	product found during purge					
	no sample per client					

Did well dewater? Yes No		Gallons actually evacuated:	
Sampling Time:		Sampling Date: 8-3-00	
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 (August 3, 2000)

Entech Analytical Labs, Inc.

RECD AUG 21 2000

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

August 11, 2000

Gary Pischke
Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400

Order: 21680
Project Name:
Project Number: 000803-I1
Project Notes:

Date Collected: 8/3/00
Date Received: 8/4/00
P.O. Number:

On August 04, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas/BTEX/MTBE/Diesel	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020
	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 (#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# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 8/11/00
Date Received: 8/4/00
Project Name:
Project Number: 000803-I1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21680 **Lab Sample ID:** 21680-001 **Client Sample ID:** MW-5

Sample Time: 12:04 PM **Sample Date:** 8/3/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	19		5	0.5	2.5	µg/L	N/A	8/8/00	WGC4000807	EPA 8020
Toluene	4.6		5	0.5	2.5	µg/L	N/A	8/8/00	WGC4000807	EPA 8020
Ethyl Benzene	17		5	0.5	2.5	µg/L	N/A	8/8/00	WGC4000807	EPA 8020
Xylenes, Total	18		5	0.5	2.5	µg/L	N/A	8/8/00	WGC4000807	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	86	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		5	5	25	µg/L	N/A	8/8/00	WGC4000807	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	86	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	2700		5	50	250	µg/L	N/A	8/8/00	WGC4000807	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	69	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 8/11/00
Date Received: 8/4/00
Project Name:
Project Number: 000803-I1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21680 **Lab Sample ID:** 21680-002 **Client Sample ID:** MW-9

Sample Time: 11:15 AM **Sample Date:** 8/3/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	8/7/00	WGC4000807	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	8/7/00	WGC4000807	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	8/7/00	WGC4000807	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	8/7/00	WGC4000807	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	99	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	8/7/00	WGC4000807	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	99	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L	N/A	8/7/00	WGC4000807	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	105	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 8/11/00
Date Received: 8/4/00
Project Name:
Project Number: 000803-I1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21680 **Lab Sample ID:** 21680-001 **Client Sample ID:** MW-5

Sample Time: 12:04 PM **Sample Date:** 8/3/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	3500	x	1	50	50	µg/L	8/7/00	8/10/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	103	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	1000	x	1	250	250	µg/L	8/7/00	8/10/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	103	65 - 135

Order ID: 21680 **Lab Sample ID:** 21680-002 **Client Sample ID:** MW-9

Sample Time: 11:15 AM **Sample Date:** 8/3/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	610	x	1	50	50	µg/L	8/7/00	8/10/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	650	x	1	250	250	µg/L	8/7/00	8/10/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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STANDARD LAB QUALIFIERS (FLAGS)

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 (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value 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 #: WGC4000807
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 08/07/00
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	5.2	ND	5.1	**99**	5.1	**98**	0.3	25	70-130
Toluene	8020	<0.50	29	ND	29	**101**	30	**102**	0.9	25	70-130
Ethyl Benzene	8020	<0.50	5.6	ND	5.4	**97**	5.5	**99**	1.4	25	70-130
Xylenes	8020	<0.50	32	ND	32	**97**	32	**98**	0.8	25	70-130
Gasoline	8015	<50.0	469	ND	510	**109**	446	**95**	13.4	25	70-130
aaa-TFT(S.S.)-FID	8020			114%	105%		106%				65-135
aaa-TFT(S.S.)-PID	8015			103%	101%		103%				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 #: DW000803
Matrix: Liquid
Units: µg/L

Date analyzed: 08/09/00
Date extracted: 08/07/00
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	960	**96**	1034	**103**	7.4	25	62-120
Hexocosane(S.S.)				129%	112%		116%				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

ATTACHMENT C

Well Monitoring Forms (September 6, 2000)

WELL MONITORING DATA SHEET

Project #: 000906 R1	Client: Earth Systems Consultants
Sampler: Jared	Start Date: 9/6/00
Well I.D.: MW-10	Well Diameter: 2 3 4 6 8 (1)
Total Well Depth: 10.13	Depth to Water: 5.11
Before: After:	Before: 5.10 After: 5.11
Depth to Free Product: 5.10	Thickness of Free Product (feet): 0.50
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- Bailer
- (Disposable Bailer)
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method: Bailer

- (Disposable Bailer)
- Extraction Port
- Dedicated Tubing
- Other: _____

0.204

.82 (Gals.) X	3 =	0.61 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	(Other)	radius² * 0.163 .0407

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1055	unable to take parameters: product in water					
1100	74.8	6.9	1150	190	.5	
1103	74.7	7.0	1090	130	.75	
		free product sample time: 941				

Did well dewater? Yes (No)	Gallons actually evacuated: .75
Sampling Time: 1105	Sampling Date: 9/6/00
Sample I.D.: MW-10	Laboratory: Entech
Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D)	Other: MOtbe 0.1
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 #: 000906 R1	Client: Earth Systems Consultants
Sampler: Jared	Start Date: 9/6/00
Well I.D.: MW-6A	Well Diameter: 2 3 4 6 8 (2)
Total Well Depth: 12.64	Depth to Water: 4.65
Before: After:	Before: 4.60 After: 4.65
Depth to Free Product: 4.40	Thickness of Free Product (feet): 0.20
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

Bailer
(Disposable Bailer)
Middleburg
Electric Submersible
Waterra
Peristaltic
Extraction Pump
Other_____

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

0.24 (Gals.) X 3 = 0.73 Gals.
1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	(Other)	radius² * 0.163

2.2 gal

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1213	74.3	8.4	169 µS	>200	0.25	sheen/odor
1217	72.8	8.2	160 µS	>200	0.50	
1224	71.5	8.1	160 µS	>200	0.75	
		free	product	sample time:	1138	

Did well dewater? Yes (No) Gallons actually evacuated: 0.75

Sampling Time: 1227 Sampling Date: 9/6/00

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

ATTACHMENT D

Laboratory Analytical Reports for Groundwater Samples (September 6, 2000)

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

September 14, 2000

Gary Pischke
Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400

Order: 22131
Project Name:
Project Number: 000906-R1
Project Notes:

Date Collected: 9/6/00
Date Received: 9/7/00
P.O. Number:

On September 07, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas/BTEX/MTBE/Diesel	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020
	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 (#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# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22131 **Lab Sample ID:** 22131-001 **Client Sample ID:** MW-10

Sample Time: 11:05 AM **Sample Date:** 9/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	1.4		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020
Ethyl Benzene	1.0		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020
Xylenes, Total	18		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	97	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	97	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	350		1	50	50	µg/L	N/A	9/9/00	WGC4000908	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	91	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22131 **Lab Sample ID:** 22131-002 **Client Sample ID:** MW-6A

Sample Time: 12:27 PM **Sample Date:** 9/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	0.60		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020
Ethyl Benzene	0.59		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020
Xylenes, Total	0.65		1	0.5	0.5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	95	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	9/9/00	WGC4000908	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	95	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	290		1	50	50	µg/L	N/A	9/9/00	WGC4000908	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	91	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

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Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22131 **Lab Sample ID:** 22131-001 **Client Sample ID:** MW-10

Sample Time: 11:05 AM **Sample Date:** 9/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		2	130	260	µg/L	9/8/00	9/12/00	DW000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	97	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	6400		2	630	1260	µg/L	9/8/00	9/12/00	DW000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	97	65 - 135

Comment: Reporting limits raised due to limited sample volume

Order ID: 22131 **Lab Sample ID:** 22131-002 **Client Sample ID:** MW-6A

Sample Time: 12:27 PM **Sample Date:** 9/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	3600	x	2	140	280	µg/L	9/8/00	9/12/00	DW000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	87	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	4600	x	2	680	1360	µg/L	9/8/00	9/12/00	DW000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	87	65 - 135

Comment: Reporting limits raised due to limited sample volume

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

Michelle L. Anderson, Laboratory Director

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STANDARD LAB QUALIFIERS (FLAGS)

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Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value 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 #: WGC4000908
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 09/08/00
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	5.2	ND	5.5	**105**	5.4	**104**	1.4	25	70-130
Toluene	8020	<0.50	29	ND	32	**110**	31	**107**	2.5	25	70-130
Ethyl Benzene	8020	<0.50	5.6	ND	5.9	**106**	5.8	**103**	2.4	25	70-130
Xylenes	8020	<0.50	32	ND	32	**98**	31	**95**	3.3	25	70-130
Gasoline	8015	<50.0	469	ND	474	**101**	483	**103**	1.9	25	70-130
aaa-TFT(S.S.)-FID	8020			111%	105%		106%				65-135
aaa-TFT(S.S.)-PID	8015			101%	102%		100%				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 #: DW000902
Matrix: Liquid
Units: µg/L

Date analyzed: 09/08/00
Date extracted: 09/07/00
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	915	**92**	883	**88**	3.6	25	61-121
Hexocosane(S.S.)				103%	104%		99%				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
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1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
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PHONE (408) 573-0555

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

CHAIN OF BTS # 000905-R1

CLIENT EARTH SYSTEMS

SITE Mariner Square
Alameda, CA

SPECIAL INSTRUCTIONS

Invoice and Report to : Earth Systems
Attn: Gary Pischke

C = COMPOSITE ALL CONTAINERS

SAMPLE I.D.	DATE	TIME	MATRIX S= SOIL W=H_2O	CONTAINERS TOTAL		TPH - Gas, BTEX, MTBE	TPH-DIESEL	MOTOR OIL					ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW 10	9/6/00	1105	W	5	Acl VOA (3) 2 1L Amber	X	X	X					22131-001			
MW 6A	9/6/00	1227	W	5		X	X	X					L 002			

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY
	9/6/00	1250	Jared

RESULTS NEEDED NO LATER THAN Per Client

RELEASED BY	DATE	TIME	RECEIVED BY	DATE
Jared Pons			Heidi N. Krall	9/7 11:20
Heidi N. Krall	9/7	11:35	Amy Dombroski	9/7/00 1135

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

00 SEP 7 11:35

ATTACHMENT E

Laboratory Analytical Reports for Product Samples (September 6, 2000)

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

September 14, 2000

REC'D OCT 10 2000

Gary Pischke
Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400

Order: 22132
Project Name:
Project Number: 000906-R1
Project Notes:

Date Collected: 9/6/00
Date Received: 9/7/00
P.O. Number:

On September 07, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Oil	Fuel Scan	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020

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 (#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# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22132 **Lab Sample ID:** 22132-001 **Client Sample ID:** I MW-10

Sample Time: 9:41 AM **Sample Date:** 9/6/00 **Matrix:** Oil

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		3700	13	48100	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		3700	1	3700	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		3700	13	48100	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		3700	13	48100	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		3700	1	3700	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22132 **Lab Sample ID:** 22132-001 **Client Sample ID:** I MW-10

Sample Time: 9:41 AM **Sample Date:** 9/6/00 **Matrix:** Oil

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		3700	1	3700	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	390000		3700	13	48100	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		3700	1	3700	mg/Kg	9/7/00	9/9/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	6968	65 - 135

Comment: Surrogate recoveries out of control limits due to no addition of surrogate

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22132 **Lab Sample ID:** 22132-002 **Client Sample ID:** I MW-6A

Sample Time: 11:38 AM **Sample Date:** 9/6/00 **Matrix:** Oil

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	1000000		39000	13	507000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		39000	1	39000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		39000	13	507000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		39000	13	507000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		39000	1	39000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22132 **Lab Sample ID:** 22132-002 **Client Sample ID:** I MW-6A

Sample Time: 11:38 AM **Sample Date:** 9/6/00 **Matrix:** Oil

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		39000	1	39000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		39000	13	507000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		39000	1	39000	mg/Kg	9/7/00	9/12/00	DS000902	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	7148	65 - 135

Comment: Surrogate recoveries out of control limits due to no addition of surrogate

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22132 **Lab Sample ID:** 22132-001 **Client Sample ID:** I MW-10

Sample Time: 9:41 AM **Sample Date:** 9/6/00 **Matrix:** Oil

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
MTBE	ND		13000	0.005	65	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Benzene	ND		13000	0.0005	6.5	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Toluene	ND		13000	0.0005	6.5	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Ethyl Benzene	ND		13000	0.0005	6.5	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Xylenes, Total	19		13000	0.001	13	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	100	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		13000	0.050	650	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	84	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	3000	x	13000	0.050	650	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	84	75 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		13000	0.050	650	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	84	65 - 135

Comment: Sample required methanol extraction due to high concentrations of target hydrocarbons

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

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Environmental Analysis Since 1983

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Earth Systems Consultants
47853 Warm Springs Boulevard
Fremont, CA 94539-7400
Attn: Gary Pischke

Date: 9/14/00
Date Received: 9/7/00
Project Name:
Project Number: 000906-R1
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 22132 **Lab Sample ID:** 22132-002 **Client Sample ID:** I MW-6A

Sample Time: 11:38 AM **Sample Date:** 9/6/00 **Matrix:** Oil

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
MTBE	ND		25000	0.005	125	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Benzene	ND		25000	0.0005	12.5	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Toluene	ND		25000	0.0005	12.5	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Ethyl Benzene	ND		25000	0.0005	12.5	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020
Xylenes, Total	ND		25000	0.001	25	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	94	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Aviation Gas	ND		25000	0.050	1250	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	91	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	7100	x	25000	0.050	1250	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	91	75 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Mineral Spirits	ND		25000	0.050	1250	mg/Kg	N/A	9/13/00	SGC4000911	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	91	65 - 135

Comment: Sample required methanol extraction due to high concentrations of target hydrocarbons

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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STANDARD LAB QUALIFIERS (FLAGS)

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 (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value 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
Laboratory Control Spikes

QC Batch #: DS000902
Matrix: Solid
Units: mg/Kg

Date analyzed: 09/08/00
Date extracted: 09/07/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	**SP %R**	SPD mg/Kg	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	21	**85**	22	**88**	3.3	30	50-150
Hexocosane				97%	96%		98%				65-135

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
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

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 #: SGC4000911
Matrix: Solid
Units: µg/kg

Date Analyzed: 09/11/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/kg	SA µg/kg	SR µg/kg	SP µg/kg	SP % R	SPD µg/kg	SPD %R	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<5.0	5.2	ND	5.3	102	5.3	102	0.0	25	80-120
Toluene	8020	<5.0	29	ND	31	105	31	106	0.6	25	80-120
Ethyl Benzene	8020	<5.0	5.6	ND	5.7	103	5.8	103	0.2	25	80-120
Xylenes	8020	<5.0	32	ND	31	95	31	95	0.1	25	80-120
Gasoline	8015	<1000	469	ND	469	100	444	95	5.6	25	75-115
aaa-TFT(S.S.)-FID	8015			113%	109%		107%				65-135
aaa-TFT(S.S.)-PID	8020			102%	106%		105%				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 #: SGC4000907
Matrix: Solid
Units: µg/kg

Date Analyzed: 09/07/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/kg	SA µg/kg	SR µg/kg	SP µg/kg	**SP % R**	SPD µg/kg	**SPD %R**	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<5.0	5.2	ND	5.6	**108**	5.8	**112**	3.7	25	80-120
Toluene	8020	<5.0	29	ND	31	**106**	32	**110**	2.9	25	80-120
Ethyl Benzene	8020	<5.0	5.6	ND	5.8	**103**	5.9	**105**	2.0	25	80-120
Xylenes	8020	<5.0	32	ND	33	**103**	34	**105**	1.8	25	80-120
Gasoline	8015	<1000	469	ND	434	**93**	442	**94**	1.8	25	75-115
aaa-TFT(S.S.)-FID	8015			109%	104%		101%				65-135
aaa-TFT(S.S.)-PID	8020			98%	99%		97%				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

BLAINE
TECH SERVICES, INC.

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

CHAIN OF BTS # 000906-R1

CLIENT: EARTH SYSTEMS

SITE: Mariner Square
Alameda, CA

LAB: Entech

DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS

Invoice and Report to : Earth Systems

Attn: Gary Pischke

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H_2O	CONTAINERS TOTAL		C = COMPOSITE ALL CONTAINERS	CONDUCT ANALYSIS TO DETECT: [redacted]	Fuel Scan Purgable and Extractable						ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW 10	9/6/00	941	W	4	HCl vom (3) 1L Amber		X	X					22132-001				
MW 6A	9/6/00	1138	W	4	"		X	X					002				
														Note: Analyze product only.			

00 SEP 7 11:36

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY
	9/6/00	1250	Jared

RESULTS NEEDED NO LATER THAN: Per Client

RELEASED BY	DATE	TIME	RECEIVED BY	DATE
Jared Kim	9/7/00	11:20	[signature]	9/7 11:20
[signature]	9/7	11:35	[signature]	9/7/00 1136
RELEASED BY	DATE	TIME	RECEIVED BY	DATE

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	