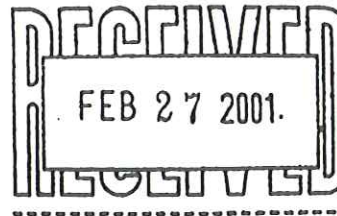




Earth Systems Consultants
Northern California

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Doc. No. 0102-044

File No. FRE-4392-01
February 21, 2001

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

RECEIVED

9:05 am, Aug 02, 2011

Alameda County
Environmental Health

Attention: Mr. Barney Chan, Senior Hazardous Materials Specialist

Subject: 2415 Mariner Square Drive
Alameda, California

FIRST SEMI-ANNUAL GROUNDWATER SAMPLING 2001

Dear Mr. Chan:

Event 12

Earth Systems Consultants Northern California (ESCNC) is submitting this report which describes the first semi-annual groundwater sampling event for 2001 at the subject site (Figure 1). This sampling event, the second semi-annual groundwater sampling, took place during the first quarter 2001. The last event was in 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 a result of previous free product in wells MW-6A and MW-10, these wells were inspected and groundwater samples taken where possible.

Groundwater Sampling on January 12, 2001

On January 12, 2001, 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 not detected in wells MW-6A and MW-10 during this event. However, a sheen was observed in MW-10. MW-9 was inaccessible due to a large pond of water covering the well box. Blaine Tech Services personnel purged and sampled wells MW-5, MW-6A, and MW-10, since the remainder of site wells were removed from the sampling schedule by Alameda County Health Care Services Agency (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 the three wells 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.

A-251

Groundwater elevations across the site ranged from 7.70 to 10.25 feet above mean sea level with an average elevation of 9.22 feet. The average groundwater elevation during this sampling event, not including wells MW-6A and MW-10, is 0.11 feet lower than during the third quarter 2000. The groundwater flow direction was toward the southeast with a approximate gradient of 0.005. 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, 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. Wells MW-9 were not sampled due to well being inaccessible. Bunker C & Motor Oil

Results

The analytical results of groundwater samples collected from wells MW-5, MW-6A, and MW-10 indicated hydrocarbon concentrations similar or a slight decline compared to historical levels. The MW-6A sample results 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.

Discussion and Conclusions

The results from the wells sampled during this event indicate similar or a decline in concentrations of TPHg, TPHd, and TPHmo. Wells MW-6A and MW-10 did not have free product during the sampling for this event. The groundwater gradient has not significantly changed from previous events.

The conclusion, at least from this event, is that natural biodegradation has occurred within the three wells sampled.

Recommendations

ESCNC recommends continued monitoring and sampling of wells MW-6A and MW-10. The adjacent Navy property is planned for development with a remedial action plan proposed for the Navy well

adjacent to the fire wall. The Navy FISC plans on using the bioslurping method to clean up the observed free product in their well adjacent to the fire wall.

ESCNC recommends placement of a bioremediation method adjacent to wells MW-6A and MW-10. This method would increase the localized biodegradation of the motor oil at MW-10, and the bunker crude at MW-6A. The bioremediation method could be installed as a curtain adjacent to MW-6A to prevent migration and enhance biodegradation of the bunker crude adjacent to MW-6A.

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

Very truly yours,

EARTH SYSTEMS CONSULTANTS
Northern California



Gary Pischke, Senior Geologist
Certified Engineering Geologist 1501

GP/CWG: gwDisk004.21

Distribution: 1 to addressee
1 to Mr. John Beery

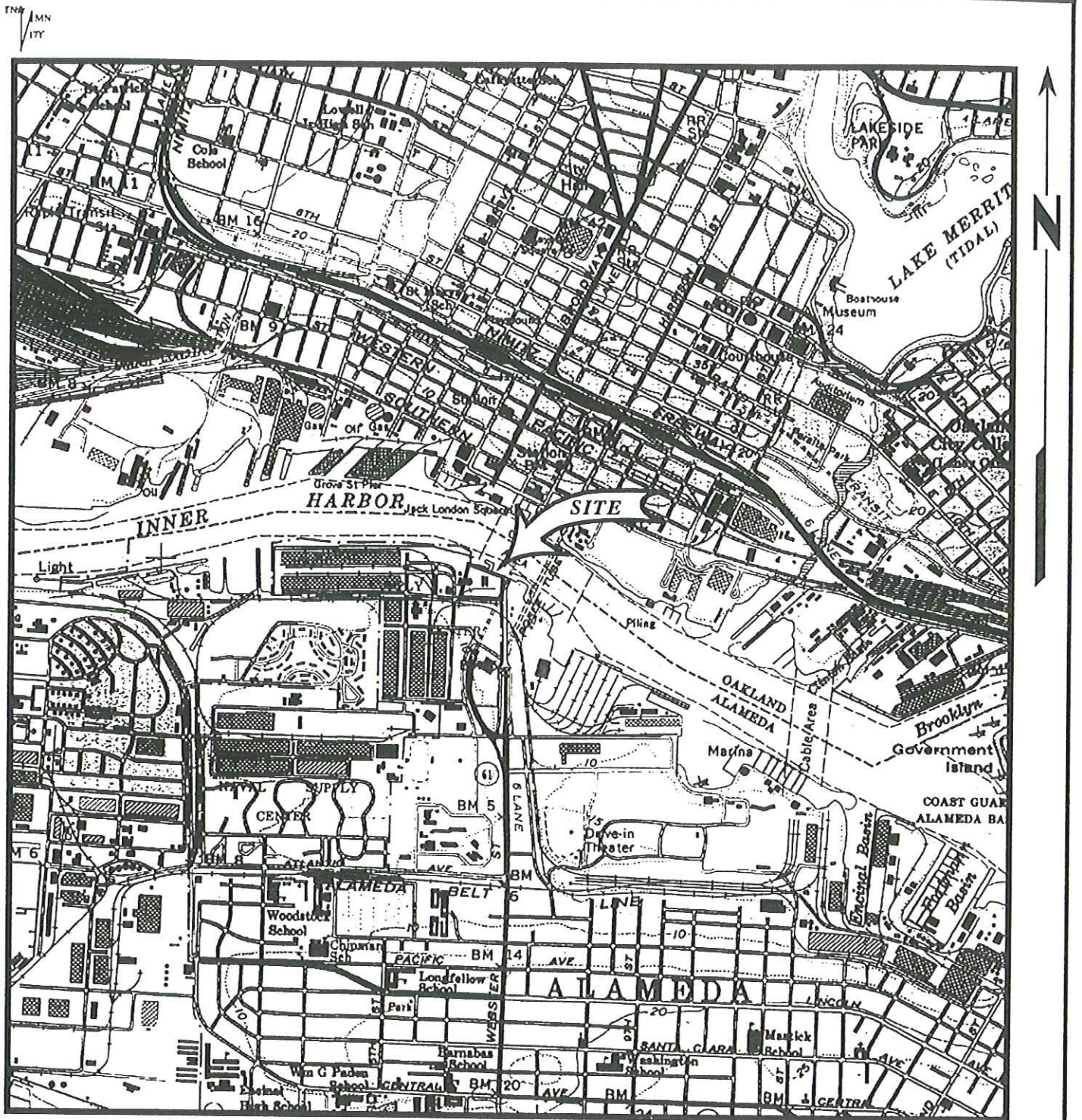


Carl W. Greenlee
Senior Engineer
Geotechnical Engineer 355

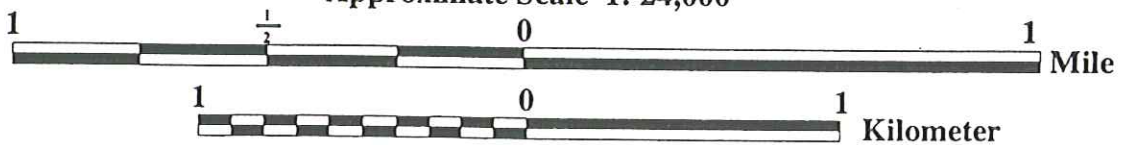
FIGURES

Figure 1 – Site Location

Figure 2 – Groundwater Gradient Map



Approximate Scale 1: 24,000



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

TABLES

Table I – Historical Groundwater Elevations

Table II – Groundwater Analytical Results -- Organics

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
	01/12/01	11.99	4.29	-	7.70
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 continued	03/15/00	15.21	4.00	-	11.21
	08/03/00	15.21	5.45	-	9.76
	01/21/01	15.21	5.61	-	9.60
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
	01/12/01	14.19	3.94	-	10.25
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
	01/12/01	13.95	3.82	-	10.13
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
	01/12/01	14.60	5.31	-	9.29
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
	01/12/01	15.22	5.22		10.00
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
	01/12/01	13.61	4.95	-	8.66
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
	01/12/01	12.64	4.94	-	7.70
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
	01/12/01	14.92	n/a	-	n/a
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
	01/12/01	14.91	5.25	Sheen	9.66

msl Mean Sea Level
- None measured
FP Free Product--not able to measure thickness
n/a Not accessible

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

ppb

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	-	-	<0.5
	09/27/94	-	<50	530	<50	<0.3	<0.3	<0.3	<0.3	-	-	<0.5
	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	-	-	<0.8
	02/18/98	-	<50	<50	<200	1.5	0.6	1.8	8	<5	-	<0.5
	05/08/98	-	<50	<50	<200	1.0	<0.5	0.7	5	<5	-	<0.5
	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	-	-	<0.5
	09/26/94	-	320	<50	240	<3.0	<3.0	<3.0	<3.0	-	-	<0.5
	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	-	<0.5
	02/18/98	-	90	<50	<200	<0.5	<0.5	1.1	2	<5	-	<0.5
	05/08/98	-	170	<50	<200	<0.5	<0.5	1.7	3	<5	-	<0.5
	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-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	-	-	<1
	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	3,500(4)	1,000(4)	19	4.6	17	18	<5.0	-	-
MW-6	01/12/01	-	250	670(4)	840	0.53	<0.5	2.1	3.5	<5.0	-	-
	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
MW-6A	04/28/98	-	-	-	-	Well Destroyed						
	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	-	-
	01/12/01	-	170	2,200 (4)	4,100 (4)	<0.5	<0.5	1.4	2.6	<5.0	-	-

All results ppb

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	-	-	-	-	-	-	-	-	-	-	-
	08/03/00	-	-	-	-	-	-	-	-	-	-	-
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
	Sampling discontinued											
	Not Sampled											
	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-9 continued	09/09/99	-	140	340	<100	<0.50	<0.50	<0.50	1.0	<5.0	-	-
	11/24/99	-	<50	650 (4)	900 (4)	<0.5	<0.5	<0.5	<0.5	<5.0	-	-
	03/15/00	-	<50	610 (4)	650 (4)	<0.5	<0.5	<0.5	<0.5	<5.0	-	-
	08/03/00	-	-	-	-	-	-	-	-	-	-	-
	01/12/01	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-
	09/06/00	-	350	<260	6,400	1.4	<0.5	1.0	18	<5.0	-	-
	01/12/01	-	140	4,500 (4)	16,000	1.3	<0.5	1.0	12	<5.0	-	-
	-	-	-	-	-	-	-	-	-	-	-	-

All results reported in parts per billion

TRPH Total Recoverable Petroleum Hydrocarbons
TPHg Total Petroleum Hydrocarbons as gasoline
TPHd Total Petroleum Hydrocarbons as diesel
• Total Petroleum Hydrocarbons as Bunker Oil.

< 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.