RO 514

Brunsing Associates, Inc.

September 28, 2004 Project No. 029.022

Mr. Don Hwang
Alameda County Health Care Services Agency
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Groundwater Monitoring Report
June 2004
Pacific Supply Company
1735 24th Street
Oakland, California

Dear Mr. Hwang:

This correspondence has been prepared by Brunsing Associates, Inc. (BAI) to provide you with a report summarizing the fieldwork completed at the above-referenced site on June 22, 23 and 25, 2004, and the results of the laboratory analyses of the groundwater samples collected. The fieldwork was completed in accordance with the Alameda County Health Care Services Agency (ACHCSA) correspondence dated November 6, 2003.

Site Background

In May 1987, efforts were initiated to abandon a 1,000-gallon underground gasoline storage tank at Pacific Supply Company's West Oakland site. Soil and associated vapor samples from exploratory boreholes at the site were analyzed by gas chromatography carried out by CHIPS Environmental Consultants and Anatec Laboratories (Plate 2). The results indicated that soil in the vicinity of the tank was contaminated with gasoline and raised the possibility that gasoline may have reached groundwater below the site. During subsequent removal of the tank by Erikson Industrial Services, substantial deterioration of the tank body was documented. Gasoline odors were also detected during tank removal operations.

In order to assess the extent of soil and groundwater quality beneath and immediately adjacent to the Pacific Supply Company site and the potential for migration of

contaminants from off-site sources, BAI carried out a two-phase soil and groundwater investigation. Monitoring wells MW-1 through MW-5 (Plate 2) were constructed in September 1988 as the first phase of a soil and groundwater investigation. Monitoring wells MW-6 and MW-7 were constructed on December 19, 1989 during Phase II of the same investigation. The construction and sampling of these wells are also documented in BAI's Report of Findings, dated March 23, 1990. The results of the Phase I and II investigations indicated that light petroleum hydrocarbons had migrated beyond the immediate vicinity of the former UST; however, it was concluded that hydrocarbons in the soil and groundwater had not extended beyond the limits of the property.

The Pacific Supply Company initiated quarterly groundwater monitoring at the request of the ACHCSA in May 1992. Initially, only on-site wells were monitored for total petroleum hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene and xylenes (BTEX), and lead. Later, the five on-site and the two off-site wells were monitored quarterly.

A vapor extraction pilot study was performed in June 1992 to determine the feasibility of using vapor extraction technology as an in-situ corrective action to remove volatile petroleum hydrocarbons from the shallow subsurface soils. A two-inch diameter vapor extraction well (VEW-1) was installed at the location indicated on Plate 2 to an approximate depth of eight feet below ground surface (bgs). The results of the 4-day pilot study indicated that the lithology at the site permitted the flow of air through the soils at a sufficient rate so as to volatilize hydrocarbon constituents in the soil. The radius of influence was determined in the field by measuring the relative pressure at several probe locations positioned at various radial distances away from the extraction well. The results indicated that the estimated radius of influence from a two-inch diameter extraction well was approximately 30 feet at a relatively low pressure of less than 50 inches of water, as discussed in BAI's report titled "Vapor Extraction Remedial Design Report and Specification," dated May 24, 1993.

In response to an ACHCSA December 1992 request, BAI also performed an investigation to attempt to delineate the zero line of contamination. Ten soil borings were drilled as part of this investigation (B-1 through B-10) to a depth of approximately seven to ten feet bgs (Plate 2). From each boring, one soil sample was retained from a depth of approximately seven to eight feet bgs for analytical testing of TPH as gasoline and BTEX. Further discussions of this investigation are provided in BAI's report titled "Vapor Extraction Remedial Design Report and Specification," dated May 24, 1993.

Vapor recovery wells VRW-1 through VRW-9 were constructed in August 1993 as part of a vapor recovery system. During installation of the extraction wells, soil samples were collected for chemical analysis in the borings at the depth where first groundwater occurred, at approximately seven feet bgs. Installations of these wells were documented in a February 7, 1994 report. A vapor extraction system was installed in the fall of 1993 as an interim remedial action. The system began operation on December 26, 1993. The system consisted of an internal combustion engine with a spray aeration tank for treatment of groundwater, and an activated carbon treatment polishing step prior to groundwater discharge. The internal combustion unit and spray aeration unit was manufactured by Remediation Service International (RSI), under the trade name Spray Aeration Vapor Extraction (SAVE) system.

On June 28, 1996, the treatment system was shut down with the concurrence of Pacific Supply Company. Prior to shut down, the system had destroyed an estimated 6,550 pounds of petroleum hydrocarbons since start of operations on December 26, 1993. After shut down, the water in the water tank was treated and discharged to the sanitary sewer under the existing permit and the inside of the tank was cleaned on July 15, 1996.

The permit with the Bay Area Air Quality Management District (BAAQMD) expired on September 1, 1996, and was not renewed. The water discharge permit was discontinued on July 31, 1996. The total volume of water discharged to the sanitary sewer was 151,089 gallons. In December 1996, the shut down and decommissioning of the system was authorized by Jennifer Eberle of the Alameda County Department of Health Services.

Groundwater monitoring continued following the shut down of the vapor extraction system. In August 2000, BAI supervised the drilling of 3 soil borings in 24th Street, on the north side of the Pacific Supply Company building in a downgradient direction from the former UST location. Grab groundwater samples were collected to evaluate whether off-site migration of hydrocarbon contamination in groundwater was occurring. One of the three groundwater samples was reported to contain low levels of TPH as gasoline, BTEX, and petroleum oxygenates. The results of the field investigation are presented in BAI's "Groundwater Investigation and Monitoring Report," dated December 14, 2000.

As requested by the ACHCSA, BAI prepared a workplan to evaluate the effectiveness of the vapor extraction system, and prepared a sensitive receptor survey; BAI's report was titled "Soil Parameters and Confirmation Soil Sampling Workplan and a Sensitive

Receptor Survey Report" dated January 29, 2004. The drilling activities were performed on July 21, 2004 to determine the effectiveness of the vapor extraction system and to collect soil samples for geotechnical properties to aid in the evaluation of risk based cleanup scenarios. The drilling report will be submitted to the ACHCSA after the geotechnical results have been obtained from the laboratory.

Table 1 presents a summary of groundwater analytical data and groundwater elevations for the monitoring wells. Table 2 presents the groundwater concentrations and groundwater elevations for vapor recovery wells. Plate 2 presents a site map that includes the historical boring and sampling locations. Groundwater elevations and flow direction for June 2004 are provided on Plate 3.

Scope of Work

The scope of work performed for this sampling event included collecting groundwater samples for laboratory analysis from monitoring wells MW-1 through MW-3, and vapor extraction wells VRW-1 through VRW-9. The groundwater sampling was completed on June 22, 23, and 25, 2004. Prior to sampling, groundwater levels were also measured in the 12 wells. The groundwater sampling protocol and field logs are included in Appendix A. BACE Analytical & Field Services, Inc. (BAFS) analyzed the groundwater samples for total petroleum hydrocarbons (TPH) as gasoline by Test Method CATPH-G and for benzene, toluene, ethylbenzene, and xylenes by EPA Test Method 8260. The groundwater analytical report for the samples collected in June 2004 is presented in Appendix B.

Groundwater Flow Direction

Groundwater elevations and flow directions are presented on Plate 3. The groundwater flow direction was predominately to the north with is highest elevation observed in well VRW-4. The groundwater elevations measured in wells VRW-4, MW-3 and VRW-9 were slightly higher than the adjacent wells, causing a local mounding effect in this area and local easterly and westerly groundwater flows. The groundwater gradient was approximately 0.007 foot per foot (ft/ft) to the north.

Discussion of Groundwater Analytical Results

The June 2004 groundwater data show that petroleum hydrocarbon concentrations in groundwater generally increased in most of the wells across the site. The maximum

TPH as gasoline and BTEX concentrations reported in the groundwater samples were 14 milligrams per liter (mg/l), 4,540 micrograms per liter (µg/l), 611 µg/l, 739 µg/l, and 1,170 µg/l, respectively. These groundwater concentrations were reported to occur in the well VRW-4 sample. Historically, petroleum hydrocarbon concentrations have been significantly higher in well VRW-4 than the other site wells. The average TPH as gasoline, and BTEX concentrations measured in the twelve wells was 1.8 mg/l, 429.7 µg/l, 53.9 µg/l, 63.8 µg/l, 104.4 µg/l, respectively. Tables 1 and 2 present a summary of groundwater analytical data and groundwater elevations for the monitoring wells and vapor recovery wells, respectively.

Conclusion

BAI is currently waiting for geotechnical results for the soil samples collected during the July 21, 2004 drilling activities. When the geotechnical results are obtained, BAI will prepare and submit the results of these activities. The drilling report will provide the analytical results of the soil samples and groundwater sample collected, an evaluation of the soil type present on site, and a comparison of the site soil and groundwater concentrations to the appropriate Tier 2 site-specific target levels, as recommended in the *Oakland Urban Land Redevelopment Program: Guidance Document*.

If you should have any questions regarding this report, please contact Michelle Floyd Frederick or Diana Dickerson at (707) 838-3027.

Sincerely,

Michelle Floyd Frederick

Michelle Floyd Frederick
Project Engineer

Diana M. Dickerson

Diana M. Dickerson, R.G., R.E.A.
Principal Geologist

REGISTERED GEOLOGIST
DICKERSON
NO. 6013
STATE OF CALIFORNIA

cc: Ms. Normita Callison

LIST OF ATTACHMENTS

 Source Data: USGS 700 ft Scale: 1 : 24,000 Detail: 13-0 Datum: NAD27

NORTH

APPROXIMATE SCALE (FEET)

0 1000 2000 4000

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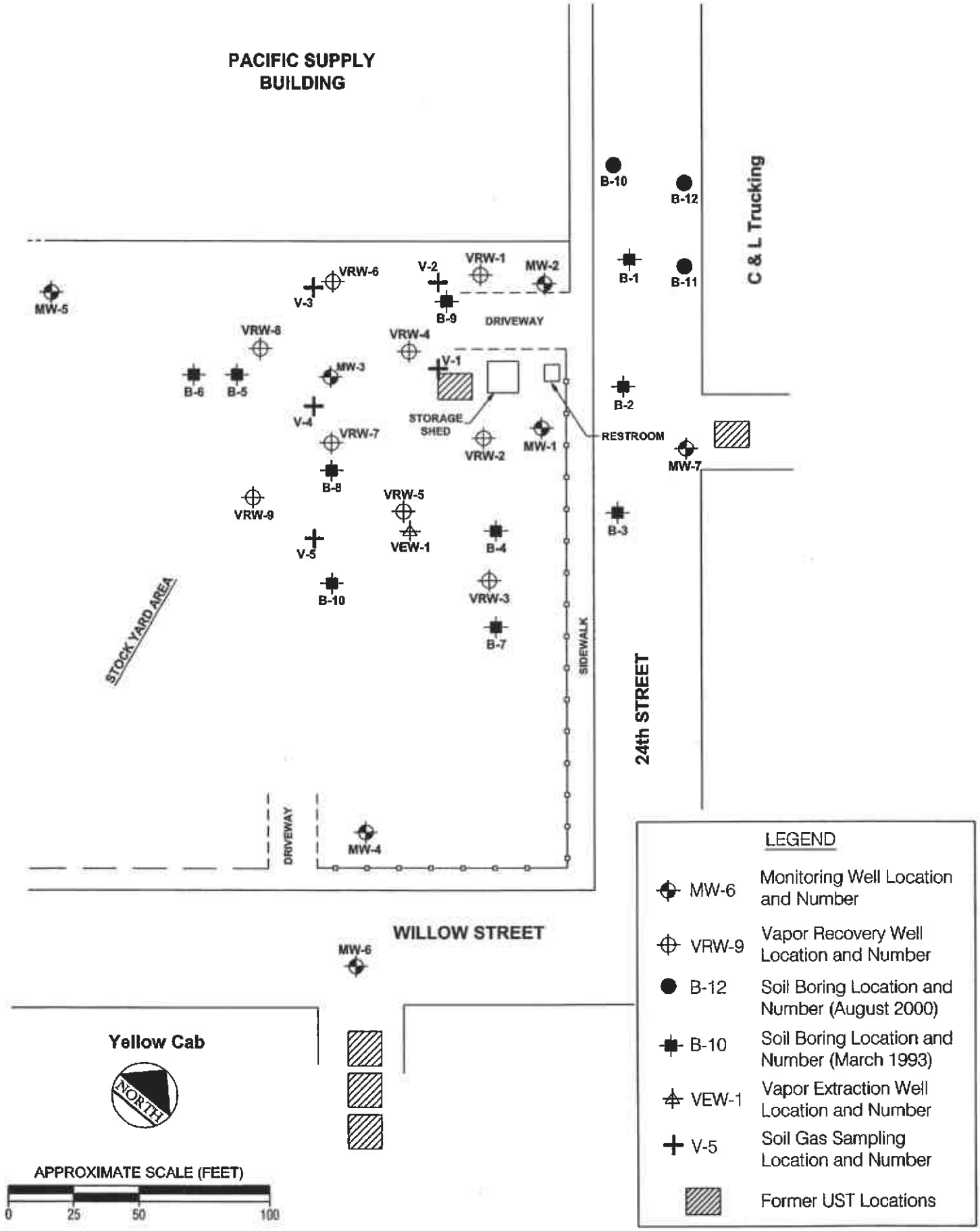
Job No.: 029.2
Appr.:
Date: 1/8/04

VICINITY MAP
PACIFIC SUPPLY COMPANY
Oakland, California

PLATE
1



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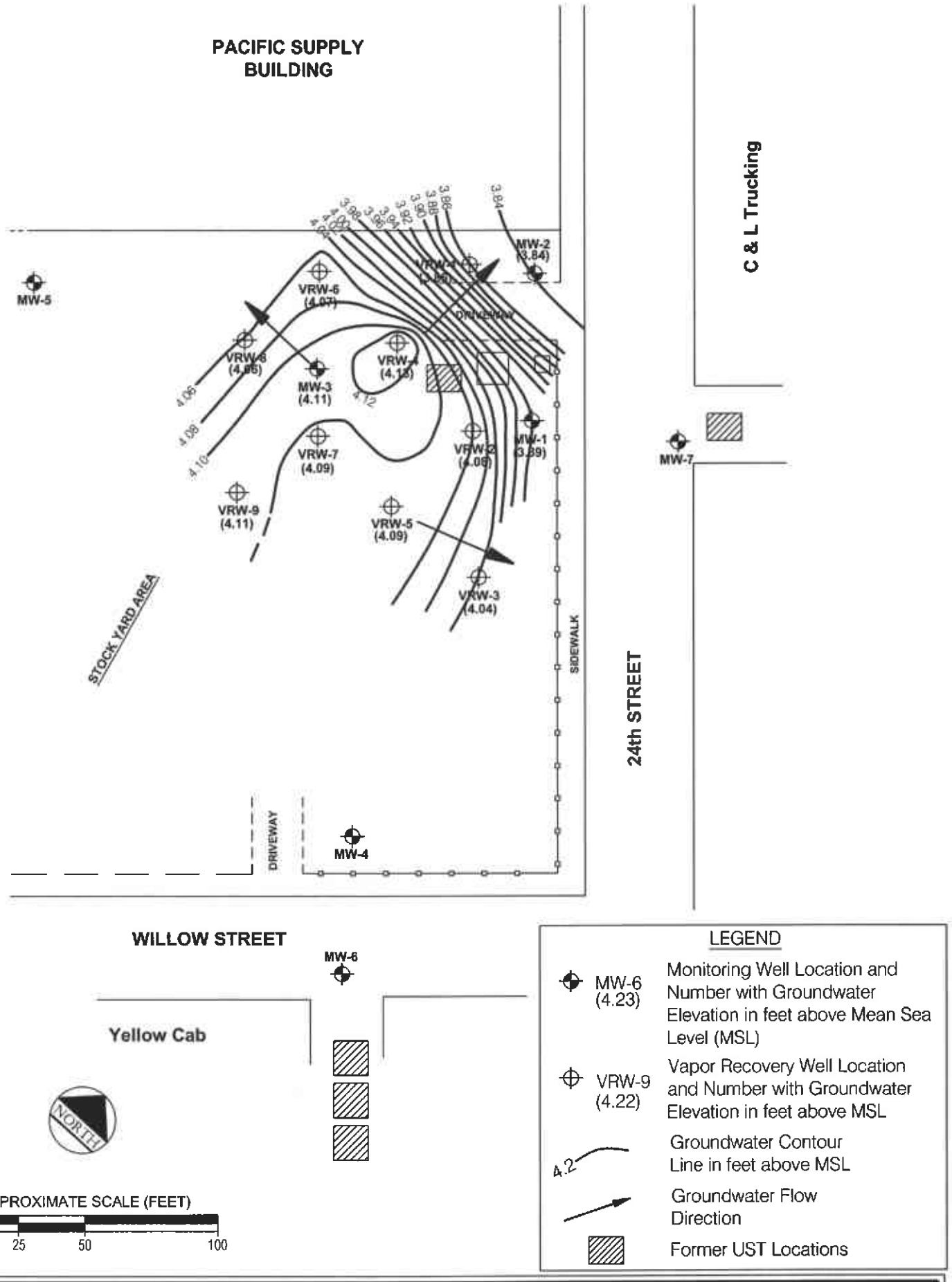
SITE MAP
PACIFIC SUPPLY COMPANY
1734 24th Street
Oakland, California

PLATE
2



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GROUNDWATER ELEVATIONS
JUNE 22, 2004
PACIFIC SUPPLY COMPANY
1734 24th Street
Oakland, California

PLATE
3

TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS

Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-1	10/14/1988	7.99	0.88	1.1	1.1	ND	–	ND	–	–
MW-1	12/29/1989	7.74	1.13	ND	ND	ND	ND	ND	ND (1)	–
MW-1	5/28/1992	7.81	1.06	ND	ND	ND	ND	ND	0.003(2)	–
MW-1	9/3/1992	7.90	0.97	ND	ND	ND	ND	ND	0.12 (2)	–
MW-1	11/24/1992	7.90	0.97	ND	ND	ND	ND	ND	0.017 (2)	–
MW-1	3/9/1993	7.38	1.49	ND	ND	ND	ND	ND	ND (1)	–
MW-1	7/21/1993	7.68	1.19	ND	ND	ND	ND	ND	ND (1)	–
MW-1	11/3/1993	7.83	1.04	ND	ND	ND	ND	ND	ND (1)	–
MW-1	2/1/1994	7.30	1.57	ND	ND	ND	ND	ND	ND (1)	–
MW-1	6/2/1994	7.43	1.44	ND	ND	ND	ND	ND	ND (1)	–
MW-1	9/1/1994	7.70	1.17	ND	ND	ND	ND	ND	ND (1)	–
MW-1	12/13/1994	6.90	1.97	ND	ND	ND	ND	ND	–	–
MW-1	3/7/1995	7.30	1.57	0.06	3.8	ND	ND	ND	–	–
MW-1	6/9/1995	7.87	1.00	0.09	12	0.8	0.5	1.3	–	–
MW-1	9/21/1995	7.67	1.20	ND	4.1	ND	ND	ND	–	–
MW-1	12/18/1995	7.15	1.72	ND	ND	ND	ND	ND	–	–
MW-1	2/29/1996	6.74	2.13	0.09	1.4	0.5	ND	0.8	–	–
MW-1	7/15/1996	7.76	1.11		–	–	–	–	–	–
MW-1	1/7/1997	6.80	2.07	0.06	0.6	<0.5	<0.5	<0.5	–	–
MW-1	7/12/1997	7.67	1.20	–	–	–	–	–	–	–
MW-1	1/26/1998	6.93	1.94	<0.05	<0.5	<0.5	<0.5	1.1	–	–
MW-1	7/3/1998	7.51	1.36	–	–	–	–	–	–	–
MW-1	1/13/1999	7.63	1.24	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-1	9/27/1999	7.77	1.10	–	–	–	–	–	–	–
MW-1	1/28/2000	6.85	2.02	<0.05	<0.5	<0.5	<0.5	<0.5	–	<5.0
MW-1	5/16/2002	7.45	1.42	0.35	<0.5	<0.5	<0.5	<0.5	–	<1.0
MW-1	6/10/2003	7.32	4.15	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-1	11/19/2003	7.30	4.17	<0.050	<0.30	<0.30	<0.50	<0.50	–	–
MW-1	6/23/2004	7.49	3.98	0.37	<1.0	<1.0	<1.0	<1.0	–	–

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Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-2	10/14/1988	7.29	0.85	11	23	20	–	16	–	–
MW-2	12/29/1989	6.87	1.27	4	200	6.7	ND	ND	0.22 (1)	–
MW-2	5/28/1992	6.92	1.22	8.9	550	48	ND	13	ND (2)	–
MW-2	9/3/1992	7.26	0.88	2.1	760	6.2	1.8	5.1	0.006 (2)	–
MW-2	11/24/1992	7.28	0.86	4.2	370	15	3.4	9.5	ND (2)	–
MW-2	3/9/1993	6.73	1.41	4.3	280	14	3.7	7.1	ND (1)	–
MW-2	7/21/1993	7.02	1.12	3.4	250	9.6	2.5	11	ND(1)	–
MW-2	11/4/1993	7.22	0.92	2.5	230	7.8	2.1	9.9	ND(1)	–
MW-2	2/1/1994	6.93	1.21	3.4	240	17	ND	15	ND(1)	–
MW-2	6/2/1994	6.86	1.28	3.0	150	9.8	3.0	10	ND(1)	–
MW-2	9/1/1994	7.10	1.04	2.1	120	9.8	2.0	9.6	ND(1)	–
MW-2	12/13/1994	6.58	1.56	2.0	200	10	2.7	11	–	–
MW-2	3/7/1995	6.69	1.45	3.0	500	15	5.8	16	–	–
MW-2	6/9/1995	7.00	1.14	2.1	300	14	5.8	13	–	–
MW-2	9/21/1995	6.91	1.23	1.6	120	9.6	ND	15	–	–
MW-2	12/18/1995	6.73	1.41	2.8	120	16	5.2	19	–	–
MW-2	2/29/1996	6.36	1.78	1.7	170	15	2.9	17	–	–
MW-2	7/15/1996	7.11	1.03	2.8	160	22	3.5	17	–	–
MW-2	1/7/1997	6.40	1.74	3.0	350	25	8.1	24	–	–
MW-2	7/12/1997	6.98	1.16	2.1	55	11	<2.5	18	–	–
MW-2	1/26/1998	6.45	1.69	1.8	310	29	5.0	15	–	–
MW-2	7/3/1998	6.91	1.23	1.9	85	9.3	1.8	17	–	–
MW-2	1/13/1999	7.07	1.07	2.1	48	33	2.0	16	–	–
MW-2	9/27/1999	7.22	0.92	1.5	20	6.8	2.6	11	–	–
MW-2	1/28/2000	6.61	1.53	1.3	22	6.4	1.5	11	–	<5.0
MW-2	5/17/2002	6.95	1.19	3.3	25.4	<5.0	<5.0	<5.0	–	<10
MW-2	6/10/2003	6.71	4.09	1.6	52	2.3	32	9.1	–	–
MW-2	11/19/2003	6.95	3.85	3.7	9.7	<1.1	<1.1	7.5	–	–
MW-2	6/23/2004	6.96	3.84	1.1	6.30	2.36	<1.0	7.41	–	–

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MW-3	10/14/1988	8.25	0.88	3.4	ND	ND	–	2.8	–	–
MW-3	12/29/1989	7.79	1.34	ND	ND	ND	ND	ND	0.205 (1)	–
MW-3	5/28/1992	7.83	1.30	ND	0.8	0.5	ND	ND	0.016 (2)	–
MW-3	9/3/1992	8.22	0.91	ND	ND	ND	ND	ND	0.033 (2)	–
MW-3	11/24/1992	8.29	0.84	ND	ND	ND	ND	ND	0.011 (2)	–
MW-3	3/9/1993	7.30	1.83	0.1	1.8	ND	ND	ND	ND(1)	–
MW-3	7/21/1993	7.87	1.26	ND	ND	ND	ND	ND	ND(1)	–
MW-3	11/4/1993	8.23	0.90	0.07	0.6	0.5	ND	ND	ND(1)	–
MW-3	2/1/1994	7.56	1.57	ND	ND	ND	ND	ND	ND(1)	–
MW-3	6/2/1994	7.46	1.67	0.06	ND	ND	ND	ND	ND(1)	–
MW-3	9/1/1994	7.83	1.30	0.07	1.7	0.9	ND	ND	ND(1)	–
MW-3	12/13/1994	7.07	2.06	0.06	1.4	ND	ND	ND	–	–
MW-3	3/8/1995	7.27	1.86	0.06	1.5	ND	ND	ND	–	–
MW-3	6/9/1995	7.79	1.34	0.10	5.7	ND	ND	ND	–	–
MW-3	9/21/1995	7.87	1.26	ND	1.5	ND	ND	ND	–	–
MW-3	12/18/1995	7.30	1.83	ND	1.3	ND	ND	ND	–	–
MW-3	2/29/1996	6.84	2.29	ND	2.1	0.6	ND	0.7	–	–
MW-3	7/15/1996	7.79	1.34	–	–	–	–	–	–	–
MW-3	1/7/1997	6.62	2.51	0.05	1.0	<0.5	<0.5	<0.5	–	–
MW-3	7/12/1997	7.83	1.30	–	–	–	–	–	–	–
MW-3	1/26/1998	6.60	2.53	<0.05	0.8	<0.5	<0.5	<0.5	–	–
MW-3	7/3/1998	7.48	1.65	–	–	–	–	–	–	–
MW-3	1/13/1999	7.63	1.50	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-3	9/27/1999	7.94	1.19	–	–	–	–	–	–	–
MW-3	1/28/2000	7.12	2.01	<0.05	<0.5	<0.5	<0.5	<0.5	–	<5.0
MW-3	6/5/2003	7.53	4.23	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-3	11/19/2003	7.83	3.93	0.16	<0.54	<0.54	<0.55	<1.6	–	–
MW-3	6/23/2004	7.65	4.11	<0.05	<1.0	<1.0	<1.0	<1.0	–	–

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MW-4	10/14/1988	8.33	0.74	4.6	1.2	ND	–	2.2	–	–
MW-4	12/29/1989	8.08	0.99	0.5	0.7	ND	ND	ND	ND (1)	–
MW-4	5/28/1992	8.19	0.88	0.27	8.8	1	ND	3.2	0.030 (2)	–
MW-4	9/3/1992	8.37	0.70	0.20	4.5	4.4	ND	1.9	0.022 (2)	–
MW-4	11/24/1992	8.28	0.79	0.14	3.2	3.2	ND	1.0	0.005 (2)	–
MW-4	3/9/1993	7.98	1.09	0.47	10	ND	ND	2.5	ND (1)	–
MW-4	7/21/1993	8.17	0.90	0.28	4.4	5.9	ND	ND	ND(1)	–
MW-4	11/4/1993	8.14	0.93	0.08	1.3	1.6	ND	ND	ND(1)	–
MW-4	2/1/1994	7.79	1.28	0.08	ND	ND	ND	ND	ND(1)	–
MW-4	6/2/1994	7.53	1.54	0.30	3.1	2.9	ND	0.8	ND(1)	–
MW-4	9/1/1994	7.69	1.38	0.12	1.6	ND	ND	ND	ND(1)	–
MW-4	12/13/1994	6.70	2.37	ND	ND	ND	ND	ND	–	–
MW-4	3/8/1995	6.83	2.24	0.09	ND	ND	ND	ND	–	–
MW-4	6/9/1995	7.66	1.41	0.19	ND	ND	ND	ND	–	–
MW-4	9/21/1995	7.93	1.14	0.09	ND	ND	ND	ND	–	–
MW-4	12/18/1995	6.98	2.09	–	–	–	–	–	–	–
MW-4	2/29/1996	6.54	2.53	0.14	1.6	1.0	ND	0.6	–	–
MW-4	7/15/1996	7.74	1.33	–	–	–	–	–	–	–
MW-4	1/7/1997	6.46	2.61	0.09	1.0	0.5	<0.5	<0.5	–	–
MW-4	7/12/1997	7.82	1.25	–	–	–	–	–	–	–
MW-4	1/26/1998	6.67	2.40	0.09	1.1	0.8	<0.5	<0.5	–	–
MW-4	7/3/1998	7.45	1.62	–	–	–	–	–	–	–
MW-4	1/13/1999	7.51	1.56	0.12	1.1	0.62	<0.5	0.57	–	–
MW-4	9/27/1999	7.88	1.19	–	–	–	–	–	–	–
MW-4	1/28/2000	6.73	2.34	0.072	<0.5	<0.5	<0.5	<0.5	–	<5.0

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Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-5	10/14/1988	8.04	0.89	3.2	ND	ND	–	ND	–	–
MW-5	12/29/1989	7.40	1.53	ND	ND	ND	ND	ND	ND (1)	–
MW-5	5/28/1992	7.53	1.40	ND	ND	ND	ND	ND	0.008 (2)	–
MW-5	9/3/1992	8.02	0.91	ND	ND	ND	ND	ND	0.034 (2)	–
MW-5	11/24/1992	7.75	1.18	ND	ND	ND	ND	ND	0.011 (2)	–
MW-5	3/9/1993	6.91	2.02	ND	ND	ND	ND	ND	ND (1)	–
MW-5	7/21/1993	7.57	1.36	ND	ND	ND	ND	ND	ND(1)	–
MW-5	11/4/1993	7.77	1.16	ND	ND	ND	ND	ND	ND(1)	–
MW-5	2/1/1994	7.05	1.88	ND	ND	ND	ND	ND	ND(1)	–
MW-5	6/2/1994	7.18	1.75	ND	ND	ND	ND	ND	ND(1)	–
MW-5	9/1/1994	7.53	1.40	ND	ND	ND	ND	ND	–	–
MW-5	3/8/1995	6.67	2.26	ND	ND	ND	ND	ND	–	–
MW-5	6/9/1995	7.33	1.60	ND	ND	ND	ND	ND	–	–
MW-5	9/21/1995	7.67	1.26	ND	ND	ND	ND	ND	–	–
MW-5	12/18/1995	6.62	2.31	–	–	–	–	–	–	–
MW-5	2/29/1996	6.16	2.77	ND	ND	ND	ND	ND	–	–
MW-5	7/15/1996	7.47	1.46	–	–	–	–	–	–	–
MW-5	1/7/1997	6.11	2.82	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-5	7/12/1997	7.61	1.32	–	–	–	–	–	–	–
MW-5	1/26/1998	6.17	2.76	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-5	7/3/1998	7.23	1.70	–	–	–	–	–	–	–
MW-5	1/13/1999	7.27	1.66	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-5	9/27/1999	7.76	1.17	–	–	–	–	–	–	–
MW-5	1/28/2000	6.43	2.50	<0.05	<0.5	<0.5	<0.5	<0.5	–	<5.0

TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS

Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-6	12/29/1989	5.02	1.11	1.1	5.4	4.5	ND	ND	ND (1)	–
MW-6	3/9/1993	5.10	1.03	2.3	2.3	2.8	ND	3.1	ND (1)	–
MW-6	7/21/1993	5.23	0.90	0.59	ND	7.6	ND	ND	ND(1)	–
MW-6	11/4/1993	5.25	0.88	1.5	ND	1.2	ND	0.7	ND(1)	–
MW-6	2/1/1994	5.05	1.08	1.9	2.5	3.9	1.6	1.1	ND(1)	–
MW-6	6/2/1994	4.49	1.64	1.3	ND	1	ND	ND	ND(1)	–
MW-6	9/1/1994	4.53	1.60	2.2	ND	1.7	ND	ND	ND(1)	–
MW-6	12/13/1994	4.27	1.86	0.66 (3)	ND	ND	ND	ND	–	–
MW-6	3/8/1995	3.37	2.76	1.0 (3)	ND	ND	ND	ND	–	–
MW-6	6/9/1995	4.40	1.73	1.5	ND	3.3	ND	ND	–	–
MW-6	9/21/1995	4.69	1.44	0.28	ND	ND	ND	ND	–	–
MW-6	12/18/1995	4.42	1.71	–	–	–	–	–	–	–

TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS

Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-7	12/29/1989	8.35	-3.32	ND	ND	ND	ND	ND	0.235 (1)	–
MW-7	3/9/1993	13.60	-8.57	ND	ND	ND	ND	ND	ND (1)	–
MW-7	7/21/1993	12.59	-7.56	ND	ND	ND	ND	ND	ND(1)	–
MW-7	11/4/1993	9.84	-4.81	ND	ND	ND	ND	ND	ND(1)	–
MW-7	2/1/1994	10.38	-5.35	ND	ND	ND	ND	ND	ND(1)	–
MW-7	6/2/1994	10.10	-5.07	ND	ND	ND	ND	ND	ND(1)	–
MW-7	9/1/1994	9.63	-4.60	ND	ND	ND	ND	ND	ND(1)	–
MW-7	12/13/1994	11.27	-6.24	ND	ND	ND	ND	ND	–	–
MW-7	3/7/1995	9.68	-4.65	ND	ND	ND	ND	ND	–	–
MW-7	6/9/1995	9.37	-4.34	ND	ND	ND	ND	ND	–	–
MW-7	9/21/1995	9.43	-4.40	ND	ND	ND	ND	ND	–	–
MW-7	12/18/1995	13.28	-8.25	–	–	–	–	–	–	–
MW-7	2/29/1996	11.70	-6.67	ND	ND	ND	ND	ND	–	–
MW-7	7/15/1996	11.12	-6.09	–	–	–	–	–	–	–
MW-7	1/7/1997	14.35	-9.32	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-7	7/12/1997	15.12	-10.09	–	–	–	–	–	–	–
MW-7	1/26/1998	15.28	-10.25	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-7	7/3/1998	14.10	-9.07	–	–	–	–	–	–	–
MW-7	1/13/1999	14.55	-9.52	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-7	9/27/1999	14.03	-9.00	–	–	–	–	–	–	–
MW-7	1/28/2000	10.91	-5.88	<0.05	<0.5	<0.5	<0.5	<0.5	–	<5.0

MTBE = methyl tertiary butyl ether. TPH = total petroleum hydrocarbons.

(1)=Organic Lead, (2)=Total Lead, and (3)=chromatographic peak array does not match gasoline standard.

ND = not detected at laboratory reporting limit. <= less than given laboratory reporting limit.

µg/L = micrograms per liter. mg/L = milligrams per liter. – = not requested.

MSL = mean seal level.

Groundwater elevations prior to 2003 based on the following well casing elevations in feet above MSL:

MW-1 (8.87'), MW-2 (8.14'), MW-3 (9.13'), MW-4 (9.07'), MW-5 (8.93'), MW-6 (6.13') and MW-7 (5.03').

New survey data was obtained on June 23, 2003 by Phelps and Associates Land Surveyors.

June 2003 water levels were measured on June 5, 2003.

June 2004 water levels were measured on June 22, 2004.

TABLE 2. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR VAPOR EXTRACTION WELLS

Pacific Supply Company, 1735 24th Street, Oakland, California

Sample ID	Sample Collection Date	Depth to Groundwater (feet)	Top of Casing Elevation (feet, MSL)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	Other Oxygenates & Lead Scavengers (ug/l)
VRW-1	11/3/1993	–	–	–	3	1600	19	1.1	16	-	-
VRW-1	6/10/2003	7.31	11.18	3.87	0.44	5.9	<0.5	<0.5	1.9	-	-
VRW-1	11/19/2003	7.33	11.18	3.85	1.2	19	<0.54	<0.55	6.3	-	-
VRW-1	6/22/2004	7.32	11.18	3.86	0.32	3.23	<1.0	<1.0	3.36	-	-
VRW-2	11/4/1993	–	–	–	7.2	3,300	600	2.4	870	-	-
VRW-2	5/17/2002	–	–	–	2.8	471	<10	<10	<10	<20	<10 to <20
VRW-2	6/9/2003	6.87	11.08	4.21	0.47	38	2.8	<1.0	<1.0	-	-
VRW-2	11/19/2003	7.00	11.08	4.08	1.3	51	<0.54	<0.55	4.0	-	-
VRW-2	6/25/2004	7.00	11.08	4.08	0.24	274	4.10	4.11	8.22	-	-
VRW-3	11/4/1993	–	–	–	5.7	120	41	1.1	380	-	-
VRW-3	5/17/2002	–	–	–	0.42	10.9	<0.5	<0.5	1.07	<1.0	<0.50 to <1.0
VRW-3	6/9/2003	7.41	11.62	4.21	0.061	4.8	<0.5	<0.5	<0.5	-	-
VRW-3	11/19/2003	7.48	11.62	4.14	0.16	1.7	<0.54	<0.55	2.7	-	-
VRW-3	6/25/2004	7.58	11.62	4.04	0.12	2.00	<0.50	<0.50	1.00	-	-
VRW-4	11/4/1993	–	–	–	9.0	4,400	900	5.4	990	-	-
VRW-4	5/15/2002	–	–	–	11	4,270	741	512	1,130	<50	<25 to <50
VRW-4	6/5/2003	7.01	11.33	4.32	2.2	1,200	100	12	89	-	-
VRW-4	11/19/2003	7.44	11.33	3.89	1.7	210	2.4	<2.2	36	-	-
VRW-4	6/22/2004	7.20	11.33	4.13	14	4,540	611	739	1,170	-	-
VRW-5	11/4/1993	–	–	–	0.90	68	33	2.5	32	-	-
VRW-5	5/16/2002	–	–	–	0.87	44.3	<5.0	<5.0	<5.0	<10	<5.0 to <10
VRW-5	6/9/2003	7.33	11.56	4.23	0.93	90	<1.0	14	0.16	-	-
VRW-5	11/19/2003	7.53	11.56	4.03	2.9	250	<1.1	24	41	-	-
VRW-5	6/23/2004	7.47	11.56	4.09	0.72	40.5	<1.0	1.17	8.04	-	-
VRW-6	11/4/1993	–	–	–	0.41	6.6	1.0	ND	31	-	-
VRW-6	5/15/2002	–	–	–	0.73	178	4.58	1.41	6.10	<1.0	<0.50 to <1.0
VRW-6	6/6/2003	7.21	11.43	4.22	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
VRW-6	11/19/2003	7.39	11.43	4.04	0.21	13	<0.54	1.0	2.5	-	-
VRW-6	6/23/2004	7.36	11.43	4.07	0.42	43.4	3.60	1.69	13.0	-	-
VRW-7	11/4/1993	–	–	–	0.10	ND	ND	ND	ND	-	-
VRW-7	5/16/2002	–	–	–	1.6	28.9	0.980	<0.50	<0.50	<1.0	<0.50 to <1.0
VRW-7	6/6/2003	7.47	11.70	4.23	0.36	19	1.3	<0.5	2.2	-	-
VRW-7	11/19/2003	7.78	11.70	3.92	1.1	14	<0.54	1.7	5.6	-	-
VRW-7	6/22/2004	7.61	11.70	4.09	1.3	130	8.06	9.81	15.9	-	-

TABLE 2. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR VAPOR EXTRACTION WELLS

Pacific Supply Company, 1735 24th Street, Oakland, California

Sample ID	Sample Collection Date	Depth to Groundwater (feet)	Top of Casing Elevation (feet, MSL)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Oxygenates & Lead Scavengers (µg/l)
VRW-8	11/4/1993	–	–	–	5.9	460	54	ND	53	-	-
VRW-8	5/16/2002	–	–	–	3.3	248	16.0	<10	<10	<20	<10 to <20
VRW-8	6/6/2003	7.42	11.62	4.20	1.8	70	10	11	6.1	-	-
VRW-8	11/19/2003	7.85	11.62	3.77	3.6	36	<2.7	<2.7	4.3	-	-
VRW-8	6/23/2004	7.56	11.62	4.06	2.1	115	11.8	<5.0	18.2	-	-
VRW-9	11/4/1993	–	–	–	0.47	36	18	ND	1.0	-	-
VRW-9	5/16/2002	–	–	–	0.080	0.990	2.00	<0.50	5.93	<1.0	<0.50 to <1.0
VRW-9	6/6/2003	7.67	11.87	4.20	0.58	10	4.4	4.9	<0.50	-	-
VRW-9	11/19/2003	8.01	11.87	3.86	0.86	<1.1	<1.1	<1.1	5.5	-	-
VRW-9	6/22/2004	7.76	11.87	4.11	0.61	<1.0	1.35	<1.0	5.55	-	-

mg/l = milligrams per kilogram
µg/l = micrograms per kilogram
na = not analyzed.
ND = not detected above laboratory reporting limits.
June 2004 groundwater elevations were collected on June 22, 2004.

APPENDIX A

Groundwater Sampling Protocol and Field Reports

Groundwater Sampling Protocol

Monitoring Wells

Prior to purging a monitoring well, groundwater levels are measured with a Solinst electric depth measurement device, or an interface probe, in all wells that are to be measured. At sites where petroleum hydrocarbons are possible contaminants, the well is checked for floating product using a clear bailer, a steel tape with water/oil paste, or an interface probe, during the initial sampling round. If floating product is measured during the initial sampling round or noted during subsequent sampling rounds, floating product measurements are continued.

After the water level and floating product measurements are complete, the monitoring well is purged until a minimum of three casing volumes of water are removed, water is relatively clear of sediment, and pH, conductivity, and temperature measurements of the water become relatively stabile. If the well is purged dry, groundwater samples are collected after the water level in the well recovers to at least 80 percent of the original water column measured in the well prior to sampling, or following a maximum recovery period of two hours. The well is purged using a factory-sealed, disposable, polyethylene bailer, a four-inch diameter submersible Grundfos pump, a two-inch diameter ES-40 purge pump, or a peristaltic pump. The purge water is stored on-site in clean, 55-gallon drums.

A groundwater sample is collected from each monitoring well following re-equilibration of the well after purging. The groundwater sample is collected using a factory-sealed disposable, polyethylene bailer with a sampling port, or a factory-sealed Teflon bailer. A factory provided attachment designed for use with volatile organic compounds (VOCs) is attached to the polyethylene bailer sampling port when collecting samples to be analyzed for VOCs. The groundwater sample is transferred from the bailer into sample container(s) that are obtained directly from the analytical laboratory.

The sample container(s) is labeled with a self-adhesive tag. The following information is included on the tag:

- Project number
- Sample number
- Date and time sample is collected
- Initials of sample collector(s).

Individual log sheets are maintained throughout the sampling operations. The following information is recorded:

- Sample number
- Date and time well sampled and purged
- Sampling location
- Types of sampling equipment used
- Name of sampler(s)
- Volume of water purged.

Following collection of the groundwater sample, the sample is immediately stored on blue ice in an appropriate container. A chain-of-custody form is completed with the following information:

- Date the sample was collected
- Sample number and the number of containers
- Analyses required
- Remarks including preservatives added and any special conditions.

The original copy of the chain-of-custody form accompanies the sample containers to a California-certified laboratory. A copy is retained by BAI and placed in company files.

Sampling equipment including thermometers, pH electrodes, and conductivity probes are cleaned both before and after their use at the site. The following cleaning procedures are used:

- Scrub with a potable water and detergent solution or other solutions deemed appropriate using a hard bristle brush
- Rinse with potable water
- Double-rinse with organic-free or deionized water
- Package and seal equipment in plastic bags or other appropriate containers to prevent contact with solvents, dust, or other contaminants.

In addition, the pumps are cleaned by pumping a potable water and detergent solution and deionized water through the system. Cleaning solutions are contained on-site in clean 55-gallon drums.

Domestic and Irrigation Wells

Groundwater samples collected from domestic or irrigation wells are collected from the spigot that is the closest to the well. Prior to collecting the sample, the spigot is allowed to flow for at least 5 minutes to purge the well. The sample is then collected directly into laboratory-supplied containers, sealed, labeled, and stored on blue ice in an appropriate container, as described above. A chain-of-custody form is completed and submitted with the samples to the analytical laboratory.

Brunsing Associates, Inc

UST Fund Site: ☒ Yes ☐ No

FIELD REPORT

PAGE 1 OF 8

JOB NO: 29
INITIAL: CJVB
DATE: 6/22/04

PROJECT: Pacific Supply
SUBJECT: GW Monitoring
PROJECT PHASE NUMBER:
VEHICLE USED: F-150

Total Time: 10.25
End. Mileage: 161795
Beg. Mileage: 161662
TOTAL MILEAGE: 133

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD:
0745	Pull together paperwork, meet with Michelle, load up truck.
0903	Leave for site.
1035	Arrive on site, locate wells - need to have some pallets moved.
1129	Take two rounds of depth to water.
1240 *	Purge and sample VRW-7 - went dry -
1300 *	Purge and sample VEW-9, close well
1330 *	Purge and sample VEW-4, went dry -
1350 *	Purge and sample VRW-1, close well.
1435 *	Purge and sample VRW-6, went dry -
1500	Sample VEW-7, close well.
1509	Sample VEW-4 - 40% + recovery, close well.
1520	Check if VEW-6 is 80%, but it wasn't - will sample tomorrow.
1530	Pack up truck after deconing equipment. Close & label drums.
1550	Leave site for office.
1745	Arrive at office, unload truck, finish paperwork.
1800	FINISHED FOR THE DAY.

DRUM COUNT: (5 empty)
Water = 2 Devlpmt Water =
Soil = Decon Water =

* Conductivity meter flashing 3999 - couldn't get a reading. I tried two different meters with the same results. Assuming that it's too high for the meter to register.

Brunsing Associates, Inc.

WATER LEVELS

SHEET 2 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

INSTRUMENT TYPE: water level probe INITIALS: EDUB DATE: 6/22/04

WELL NUMBER	DEPTH TO PRODUCT	DISTANCE TO WATER	TIME (24 HOUR)	EQUILIBRATED (CHECK FOR YES)	NOTES
MW-1	—	7.49	11:45		
MW-2	—	6.95	11:33		
MW-3	—	~~7.35~~ 7.65	~~11:37~~		
VRW-1	—	7.53	11:35		
VRW-2	—	7.01	11:45		
VRW-3	—	7.57	11:50		
VRW-4	—	7.20	11:36		
VRW-5	—	~~7.84~~ 7.41	~~11:47~~ 11:53		
VRW-6	—	7.37	11:38		
VRW-7	—	7.61	11:46		
VRW-8	—	7.55	11:40		
VRW-9	—	7.77	11:43		
MW-1	—	7.49	12:14	✓	
MW-2	—	6.96	11:57	✓	
MW-3	—	7.65	12:15	✓	
VRW-1	—	7.32	11:58	✓	
VRW-2	—	7.0	12:12	✓	
VRW-3	—	7.58	12:10	✓	
VRW-4	—	7.20	11:55	✓	
VRW-5	—	7.46	12:05	✓	—
VRW-6	—	7.36	12:01	✓	
VRW-7	—	7.61	12:16	✓	
VRW-8	—	7.56	12:03	✓	
VRW-9	—	7.76	12:08	✓	
VRW-5	—	7.47	12:15	✓	

WELL SAMPLING

SHEET 3 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-9 PRECIP. IN LAST 5 DAYS: NO WIND CALM DATE: 6/22/04

STARTING TIME: 1300 FINISHING TIME: 1330 INITIALS: EJVB/EJC

CALCULATION OF PURGE VOLUME

2" WELL DEPTH: [ ] - D.T.W. [ ] = H20 COLUMN: [ ] X 0.5 = [ ]

4" WELL DEPTH: [20.00] - D.T.W. [7.76] = H20 COLUMN: [12.24] X 2.0 = [24.48]

THEREFORE TOTAL PURGE GALLONS EQUALS [25] GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	p H	CONDUCTIVITY	TEMP.	OBSERVATIONS
1304	5	7.60	—	21.8°c	orange/brown, odor, light sheen,
1306	10	7.38	—	22.8°c	yellow, odor, no sheen
1311	15	7.35	—	22.8°c	yellow, odor, no sheen
1314	20	7.34	—	22.3°c	same
1319	25	7.32	—	22.6°c	same

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1320 DID WELL GO DRY? NO

WATER LEVELS:	
TIME	D.T.W.
1330	7.83

NOTES:

Conductivity meter flashing 3999 - couldn't get a reading - too high?

WELL SAMPLING

SHEET 4 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-1 PRECIP. IN LAST 5 DAYS: ND WIND CALM DATE: 6/22/04

STARTING TIME: 1350 FINISHING TIME: 1435 INITIALS: EJVB/EJC

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.32	= H20 COLUMN:	12.68	X 2.0 =	25.36	

THEREFORE TOTAL PURGE GALLONS EQUALS 26

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	p H	CONDUCTIVITY *	TEMP.	OBSERVATIONS
1356	5	~~8~~ 7.00	—	22.5°c	yellow, odor, little silt, no sheen
1359	10	7.02	—	20.9°c	same
1406	15	7.12	—	19.8°c	same
1409	20	6.98	—	20.0°c	same
1412	25	7.02	—	19.9°c	same

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1414 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.	NOTES:
1418	15.10	*Conductivity too high for meter to read.

WELL SAMPLING

SHEET 5 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-7 PRECIP. IN LAST 5 DAYS: No WIND Calm DATE: 6/22/04

STARTING TIME: 1240 FINISHING TIME: 1509 INITIALS: EJUB & EJC

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H2O COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.61	= H2O COLUMN:	12.39	X 2.0 =	24.78	

THEREFORE TOTAL PURGE GALLONS EQUALS 25

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1245	5	6.95	———	27.5°c	dark green, odor, sheen (conductivity too high for meter?)
1251	10	7.08	———	21.1°c	green tint, odor, sheen, silt
1255	15	7.07	———	21.5°c	dark green, odor, sheen
1257	~~20~~ ~~25~~	Well	Went	dry @ 15	gallons

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1503 DID WELL GO DRY? YES

WATER LEVELS: TIME	D.T.W.
~~1330~~	~~7.03~~
1507	9.13

NOTES:

Meter flashed 3999 for conductivity — could not get a reading.

Well went dry @ 15 gallons - Waited 2 hours to sample.

WELL SAMPLING

SHEET 6 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-4 PRECIP. IN LAST 5 DAYS: ND WIND Calm DATE: 6/22/04

STARTING TIME: 1330 FINISHING TIME: 1520 INITIALS: SJUB/SJC

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.20	= H20 COLUMN:	12.80	X 2.0 =	25.60	

THEREFORE TOTAL PURGE GALLONS EQUALS 26

(9.76 depth = 80% ~~10.24 = 80%~~)

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1339	5	6.92	2980	23.3°c	yellow, odor, slight sheen, silt (very little)
1342	10	6.93	—*	21.3°c	same
1345	15	6.98	—*	21.0°c	brown/yellow cloudy, odor, sheen, silt
1348	well went dry @ 16 gallons				

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1515 DID WELL GO DRY? YES

WATER LEVELS: TIME	D.T.W.
1518	7.85

NOTES:

* Conductivity too high for meter to read.
Well went dry @ 16 gallons.
80% recovery = 9.76' DTW, @ 1512 it was 7.80 so we sampled.

WELL SAMPLING

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-6 PRECIP. IN LAST 5 DAYS: NO WIND CALM DATE: 6/22/04

STARTING TIME: 1435 FINISHING TIME: 1530 (for today) INITIALS: BJVB/EJC

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.36	= H20 COLUMN:	12.64	X 2.0 =	25.28	

THEREFORE TOTAL PURGE GALLONS EQUALS 26

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY *	TEMP.	OBSERVATIONS
1436	5	6.97	2286	23.1°c	yellow tint, odor, no sheen, silt
1438	10	6.99	—	21.4°c	same
1442	15	7.03	—	20.5°c	same
1445	18	well	went	dry @	18 gallons

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: N/A DID WELL GO DRY? YES

WATER LEVELS: TIME	D.T.W.
—	—

NOTES:

* Conductivity too high for meter to read.
80% DTW = 10.91
Did not reach 80% - will sample tomorrow.

Chain-of Custody Form

Project #	Project Name			No. of Containers	Analysis										C.O.C. No. 11072
29	Pacific Supply				TPH-Gas	8260B-BTEX, MTBE, oxy, Pb scav.									
L.P. No.	Sampler's Signature: Christian VandenBosch														Remarks:
Date Sampled	Sample I.D.	Time (24 Hour)	Sample Type												
6/22/04	VRW-9	1320	water	6	X	X									6 HCl preserved VOAs
↓	VRW-1	1414	↓	↓	↓	↓									↓ ↓
	VRW-7	1503													
↓	VRW-4	1515	↓	↓	↓	↓									

Laboratory: BACE Analytical & Field Services (BAFS)

Preservation: A - HCL B - H2SO4: C - NaOH: D - HNO3: E - Ice: F - (specify)

Relinquished by: (signed)	Date/Time	Received by: (signed)	Remarks:
[signature] CTUB	6/22/04 1800		Standard TAT EDF Format Analytical to Michelle
Relinquished by: (signed)	Date/Time	Received by: (signed)	
Relinquished by: (signed)	Date/Time	Received for Laboratory by: (signed)	

Brunsing Associates, Inc.
P.O. Box 588
5803 Skylane Blvd., Suite A
Windsor, CA 95492
(707) 838-3027
(707) 838-4420 fax

Brunsing Associates, Inc

UST Fund Site: X Yes ____ No

FIELD REPORT

PAGE 1 OF 8

JOB NO: 29
INITIAL: EJUB
DATE: 6/23/04

PROJECT: Pacific Supply
SUBJECT: GW Monitoring
PROJECT PHASE NUMBER:
VEHICLE USED: S-10

Total Time: 11.50
End. Mileage: 2458
Beg. Mileage: 2325
TOTAL MILEAGE: 133

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD:
0740	Get paperwork together and load truck with supplies and equipment.
0823	Leave for site.
0940	Arrive on site and set up.
0953	Sample, VRW-6, close well (was purged yesterday - went dry)
1015	Purge and sample, VRW-8, close well.
1140	Purge and sample MW-2, close well. Replaced delphin lock.
1235	Purge and sample MW-3, close well.
1325	Purge and sample VRW-5, close well. - Replaced 4" locking cap.
1440	Purge and sample MW-1, close well. Probe quit working.
1530	Decon equipment and pack up truck, close + label drums, etc...
1619	Leave site for office, stopping for fuel.
1831	Arrive at office and unload truck, complete paperwork.
1915	Finished

DRUM COUNT: 3 empty

Water = 4 full Devlpmt Water =
Soil = Decon Water =

Brunsing Associates, Inc.

WELL SAMPLING

SHEET 2 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-6 PRECIP. IN LAST 5 DAYS: NO WIND Calm DATE: 6/23/04

STARTING TIME: 0953 FINISHING TIME: 1015 INITIALS: SDB

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.36	= H20 COLUMN:	12.64	X 2.0 =	25.28	

THEREFORE TOTAL PURGE GALLONS EQUALS 25.5

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
		See previous day's notes			

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1000 DID WELL GO DRY? N/A

WATER LEVELS:	
TIME	D.T.W.
1012	7.89

NOTES:

Purged well dry yesterday (see previous day's report for parameters), sampled today.

WELL SAMPLING

SHEET 3 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-8 PRECIP. IN LAST 5 DAYS: No WIND Calm DATE: 6/23/04

STARTING TIME: 1015 FINISHING TIME: 1140 INITIALS: EJB

CALCULATION OF PURGE VOLUME

2" WELL DEPTH: [ ] - D.T.W. [ ] = H20 COLUMN: [ ] X 0.5 = [ ]

4" WELL DEPTH: [20.00] - D.T.W. [7.56] = H20 COLUMN: [12.44] X 2.0 = [24.88]

THEREFORE TOTAL PURGE GALLONS EQUALS [25] GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY *	TEMP.	OBSERVATIONS
1041	5	6.92	—	20.0°c	brown/yellow, odor, some silt/sand, sheen
1044	10	6.92	—	19.5°c	same
1053	15	6.89	—	19.7°c	same
1056	20	6.97	—	19.8°c	brown/yellow, odor, sheen
1108	25	7.05	—	20.2°c	same

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1110 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.
1135	8.21

NOTES:

* Conductivity too high for meter to register.

WELL SAMPLING

SHEET 4 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # MW-2 PRECIP. IN LAST 5 DAYS: NO WIND CALM DATE: 6/23/04

STARTING TIME: 1140 FINISHING TIME: 1235 INITIALS: EJUB

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	6.96	= H20 COLUMN:	13.04	X 2.0 =	26.08	

THEREFORE TOTAL PURGE GALLONS EQUALS 26

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	p.H	CONDUCTIVITY	TEMP.	OBSERVATIONS
1200	5	6.97	3329	21.6°c	yellow/brown, odor, some silt + sand
1204	10	6.98	2929	20.8°c	same
1212	15	6.97	2573	21.3°c	same
1215	20	6.97	2341	20.9°c	Same

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1222 DID WELL GO DRY? NO

WATER LEVELS:

TIME	D.T.W.
1232	6.95

NOTES:

Replaced a dolphin lock.

WELL SAMPLING

SHEET 5 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # MW-3 PRECIP. IN LAST 5 DAYS: 00 WIND CALM DATE: 6/23/04

STARTING TIME: 1235 FINISHING TIME: 1325 INITIALS: EJ VB

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:	16.00	- D.T.W.	7.65	= H20 COLUMN:	8.35	X 0.5 =	4.16	GALLONS
4" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 2.0 =		

THEREFORE TOTAL PURGE GALLONS EQUALS 4.5

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	p H	CONDUCTIVITY *	TEMP.	OBSERVATIONS
1247	1.5	7.06	—	23.7°c	brown/gold, odor, sheen, some sand
1252	3.0	7.08	—	23.0°c	same
1255	4.5	7.07	—	22.8°c	same

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1257 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.	NOTES:
1319	8.00	* Conductivity too high for meter to register.

WELL SAMPLING

SHEET 6 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-5 PRECIP. IN LAST 5 DAYS: NO WIND Calm DATE: 6/23/04

STARTING TIME: 1325 FINISHING TIME: 1440 INITIALS: GJvB

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.47	= H20 COLUMN:	12.53	X 2.0 =	25.06	

THEREFORE TOTAL PURGE GALLONS EQUALS 25

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY *	TEMP.	OBSERVATIONS
1349	5	6.86	—	21.5°c	yellow/gold, odor, silt/sand, sheen
1353	10	6.83	—	21.3°c	same
1401	15	6.82	—	20.7°c	same
1405	20	6.85	—	20.6°c	same
1414	25	6.88	—	20.5°c	

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1418 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.
1431	8.53

NOTES:

* Conductivity too high for meter to register.

Replaced 4" locking cap.

WELL SAMPLING

SHEET 7 OF 8

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # MW-1 PRECIP. IN LAST 5 DAYS: No WIND CALM DATE: 6/23/04

STARTING TIME: 1440 FINISHING TIME: 1530 INITIALS: EJUB

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:	19.00	- D.T.W.	7.49	= H2O COLUMN:	11.51	X 0.5 =	5.76	GALLONS
4" WELL	DEPTH:		- D.T.W.		= H2O COLUMN:		X 2.0 =		

THEREFORE TOTAL PURGE GALLONS EQUALS 6

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1456	2	7.01	2073	22.4°c	yellow tint, sulfur-like odor, specks of silt
1502	4	7.00	1956	20.2°c	same
1506	6	7.00	2303	20.0°c	

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1508 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.
*	*

NOTES:

* water level probe quit working - not sure why - could not get a reading.

Replaced 2" locking cap and dolphin lock.

Chain-of Custody Form

Project #	Project Name				Analysis		C.O.C. No.
29	Pacific Supply						11073

L.P. No.:

Sampler's Signature: Elta Jon VandenBosch

Remarks:

Date Sampled	Sample I.D.	Time (24 Hour)	Sample Type	No. of Containers	TPH-Gas	8260B-BTEX fuel-oxy., Pb scav.										Remarks
6/23/04	VRW-6	1000	water	6	X	X										6 HCl preserved voas
↓	VRW-8	1110	↓	↓	↓	↓										↓
↓	MW-2	1222	↓	↓	↓	↓										↓
↓	MW-3	1257	↓	↓	↓	↓										↓
↓	VRW-5	1418	↓	↓	↓	↓										↓
↓	MW-1	1508	↓	↓	↓	↓										↓

Laboratory: BACE Analytical & Field Services (BAFS)

Preservation: A - HCL (circled) B - H2SO4: C - NaOH: D - HNO3: E - Ice: (circled) F - (specify)

Relinquished by:	Date/Time	Received by:
(signed) Elta Jon VandenBosch	6/23/04 1900	(signed)
Relinquished by: (signed)	Date/Time	Received by: (signed)
Relinquished by: (signed)	Date/Time	Received for Laboratory by: (signed)

Remarks: Standard TAT EDF Format Analytical to Michelle

Brunsing Associates, Inc.
P.O. Box 588
5803 Skylane Blvd., Suite A
Windsor, CA 95492
(707) 838-3027
(707) 838-4420 fax

Brunsing Associates, Inc

UST Fund Site: X Yes ____ No

FIELD REPORT

JOB NO: 29
INITIAL: JRC
DATE: 6/25/04

PROJECT: Pacific Supply
SUBJECT: GW Monitoring
PROJECT PHASE NUMBER:
VEHICLE USED: 2003 CHEVY

Total Time: 10:30
End. Mileage: 21720
Beg. Mileage: 21675
TOTAL MILEAGE: 45

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD:
8:00	Receive PAPER WORK.
	GATHER MATERIALS + TOOLS FOR JOB
	Leave for Job
10:30	ARRIVE @ SITE. UNLOAD EQUIPMENT + opened wells
	Purged + Sampled VRW-2
	Purged + Sampled VRW-3
	Closed All Wells
	Decon'd Equipment
	Closed All Drums (Full Drums 5 - Empty Drums - 2
	Loaded Truck
	Marked locations For Drilling Crew
1320	Departed site

DRUM COUNT:

Water = Devlpmt Water =
Soil = Decon Water =

Brunsing Associates, Inc.

WELL SAMPLING

SHEET 2 OF 3

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-2 PRECIP. IN LAST 5 DAYS: NO WIND NONE DATE: 6/25/04

STARTING TIME: 10:36 FINISHING TIME: 11:11 INITIALS: RC/EG

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.00	= H20 COLUMN:	13	X 2.0 =	26	

THEREFORE TOTAL PURGE GALLONS EQUALS 26

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
10:40	5	7.06	3370	22.8	Dark green, odor, silt, No Sheen
10:47	10	7.08	—	22.6	"
10:52	15	7.05	3513	23.2	"
10:55	20	7.06	3422	23.1	"
11:00	25	7.09	3318	23.0	"

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 11:04 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.	NOTES:
11:07	7.31	pH 10 gal Conductivity 3999

WELL SAMPLING

SHEET 3 OF 3

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-3 PRECIP. IN LAST 5 DAYS: No WIND None DATE: 6/25/04

STARTING TIME: 11:20 FINISHING TIME: INITIALS: RC/GK

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.58	= H20 COLUMN:	12.42	X 2.0 =	24.84	

THEREFORE TOTAL PURGE GALLONS EQUALS 25

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
11:23	5	6.90	—	22.1	DARK green, Bio odor, No Sheen, No Sheen
11:27	10	6.94	—	21.3	Silt "
11:31	15	6.90	—	20.6	Heavy Silt "
11:35	20	6.91	3860	20.4	"
11:40	25	6.93	3858	20.4	"

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 11:44 DID WELL GO DRY? No

WATER LEVELS:		NOTES:
TIME	D.T.W.	
11:51	7.96	AT 5 gal conductivity AT 3999

APPENDIX B

Analytical Laboratory Reports

Laboratory Report Project Overview

EDF 1.2a

Laboratory:	Bace Analytical, Windsor, CA
Lab Report Number:	4339
Project Name:	PACIFIC SUPPLY
Work Order Number:	29
Control Sheet Number:	NA

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
4339	VRW-1	4339-2	W	CS	8260FAB	SW5030B	06/22/2004	07/04/2004	07/04/2004	20040704	16
4339	VRW-1	4339-2	W	CS	CATPH-G	SW5030B	06/22/2004	07/04/2004	07/04/2004	07042004	4
4339	VRW-4	4339-4	W	CS	8260FAB	SW5030B	06/22/2004	07/04/2004	07/04/2004	20040704	18
4339	VRW-4	4339-4	W	CS	CATPH-G	SW5030B	06/22/2004	07/04/2004	07/04/2004	07042004	6
4339	VRW-7	4339-3	W	CS	8260FAB	SW5030B	06/22/2004	07/04/2004	07/04/2004	20040704	17
4339	VRW-7	4339-3	W	CS	CATPH-G	SW5030B	06/22/2004	07/04/2004	07/04/2004	07042004	5
4339	VRW-9	4339-1	W	CS	8260FAB	SW5030B	06/22/2004	07/04/2004	07/04/2004	20040704	15
4339	VRW-9	4339-1	W	CS	CATPH-G	SW5030B	06/22/2004	07/04/2004	07/04/2004	07042004	3
		4340-1	W	NC	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704	7
		4339MB	W	LB1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704	2
		4339MB	W	LB1	CATPH-G	SW5030B	/ /	07/04/2004	07/04/2004	07042004	1
		4339MS	W	MS1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704	8
		4339MS	W	MS1	CATPH-G	SW5030B	/ /	07/04/2004	07/04/2004	07042004	7
		4339SD	W	SD1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704	9
		4339SD	W	SD1	CATPH-G	SW5030B	/ /	07/04/2004	07/04/2004	07042004	8

Bace Analytical, Windsor, CA

Lab Report No.: 4339 Date: 07/23/2004

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-1	Lab Samp ID:	4339-2
Descr/Location:	VRW-1	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1414	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		3.23	UG/L	2
Toluene	0.50	1.0	PQL		ND	UG/L	2
Ethylbenzene	0.50	1.0	PQL		ND	UG/L	2
Xylenes	0.50	1.0	PQL		3.36	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		102%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		94%		1

Approved by: [signature] Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-4	Lab Samp ID:	4339-4
Descr/Location:	VRW-4	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1515	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	2.7	5.0	PQL		4540.	UG/L	10
Toluene	2.5	5.0	PQL		611.	UG/L	10
Ethylbenzene	2.5	5.0	PQL		739.	UG/L	10
Xylenes	2.5	5.0	PQL		1170.	UG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		101%		1
Toluene-d8		88-110	SLSA		99%		1
Dibromofluoromethane		86-118	SLSA		92%		1

Approved by: [signature] Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-7	Lab Samp ID:	4339-3
Descr/Location:	VRW-7	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1503	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		130	UG/L	2
Toluene	0.50	1.0	PQL		8.06	UG/L	2
Ethylbenzene	0.50	1.0	PQL		9.81	UG/L	2
Xylenes	0.50	1.0	PQL		15.9	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		98%		1
Toluene-d8		88-110	SLSA		99%		1
Dibromofluoromethane		86-118	SLSA		91%		1

Approved by: [signature] Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-9	Lab Samp ID:	4339-1
Descr/Location:	VRW-9	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1320	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		ND	UG/L	2
Toluene	0.50	1.0	PQL		1.35	UG/L	2
Ethylbenzene	0.50	1.0	PQL		ND	UG/L	2
Xylenes	0.50	1.0	PQL		5.55	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		96%		1
Toluene-d8		88-110	SLSA		99%		1
Dibromofluoromethane		86-118	SLSA		102%		1

Approved by: William H Patty Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-1	Lab Samp ID:	4339-2
Descr/Location:	VRW-1	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1414	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	07042004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.100	0.250	PQL		0.32	MG/L	5
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		88%		1

Approved by: _____ Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-4	Lab Samp ID:	4339-4
Descr/Location:	VRW-4	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1515	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	07042004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.800	2.00	PQL		14.	MG/L	40
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		98%		1

Approved by: _____ Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-7	Lab Samp ID:	4339-3
Descr/Location:	VRW-7	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1503	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	07042004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.200	0.500	PQL		1.3	MG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		89%		1

Approved by: William H Patty Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-9	Lab Samp ID:	4339-1
Descr/Location:	VRW-9	Rec'd Date:	06/23/2004
Sample Date:	06/22/2004	Prep Date:	07/04/2004
Sample Time:	1320	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	07042004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		0.61	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		105%		1

Approved by: _____ Date: 9/17/04

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4339 Date: 07/23/2004

QC Batch:	07042004	Analysis:	CA LUFT Method for Gasoline Range
Matrix:	Water	Method:	CATPH-G
Lab Samp ID:	4339MB	Prep Meth:	SW5030B
Analysis Date:	07/04/2004	Prep Date:	07/04/2004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		ND	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		80%		1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4339 Date: 07/23/2004

QC Batch: 07042004
Matrix: Water
Lab Samp ID: 4339MS
Basis: Not Filtered

Project Name: PACIFIC SUPPLY
Project No.: 29
Field ID: VRW-9
Lab Ref ID: 4339-1

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Gasoline Range Organics (C5-C12)	CATPH-G	1.0	1.0	0.61	1.40	1.44	MG/L	79.0	83.0	4.9	130-70	MSA	20MSP
Trifluorotoluene	CATPH-G	100.	100.	105.	111.	116.	PERCENT	111	116	4.4	130-70	SLSA	20SLSP

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4339 Date: 07/23/2004

QC Batch:	20040704	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Matrix:	Water	Method:	8260FAB
Lab Samp ID:	4339MB	Prep Meth:	SW5030B
Analysis Date:	07/04/2004	Prep Date:	07/04/2004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.27	0.50	PQL		ND	UG/L	1
Toluene	0.25	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.25	0.50	PQL		ND	UG/L	1
Xylenes	0.25	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		97%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		93%		1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4339 Date: 07/23/2004

QC Batch: 20040704
Matrix: Water
Lab Samp ID: 4339MS
Basis: Not Filtered

Project Name: Lab Generated or Non COE Sample
Project No.: Lab Generated or Non COE Sample
Field ID: Lab Generated or Non COE Sample
Lab Ref ID: 4340-1

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Benzene	8260FAB	10.0	10.0	43.4	53.9	53.6	UG/L	105	102	2.9	127-76	MSA	20MSP
Ethylbenzene	8260FAB	10.0	10.0	1.69	13.4	13.4	UG/L	117	117	0.00	130-70	MSA	20MSP
Toluene	8260FAB	10.0	10.0	3.60	14.9	13.8	UG/L	113	102	10	125-76	MSA	20MSP
Xylenes	8260FAB	30.0	30.0	13.0	46.8	48.2	UG/L	113	117	3.5	130-70	MSA	20MSP
4-Bromofluorobenzene	8260FAB	100.	100.	102.	104.	104.	PERCENT	104	104	0.00	115-86	SLSA	20SLSP
Dibromofluoromethane	8260FAB	100.	100.	93.	93.	93.	PERCENT	93.0	93.0	0.00	118-86	SLSA	20SLSP
Toluene-d8	8260FAB	100.	100.	99.	101.	101.	PERCENT	101	101	0.00	110-88	SLSA	20SLSP

Chain-of Custody Form

Project #	Project Name				No. of Containers	Analysis		C.O.C. No.
29	Pacific Supply							11072
L.P. No.	Sampler's Signature: Ella Jan VandenBosch [signature]					TPH-Gas	8260B-BTEX, 5 oxy, Pb scav.	Remarks:
Date Sampled	**Sample I.D.**		**Time (24 Hour)**	**Sample Type**				
6/22/04	VRW-9		1320	water	6	X	X	4339-1 / 6 HCl preserved voas
↓	VRW-1		1414	↓	↓	↓	↓	-2 / ↓
↓	VRW-7		1503	↓	↓	↓	↓	-3 / ↓
↓	VRW-4		1515	↓	↓	↓	↓	-4 / ↓

Laboratory: BACE Analytical & Field Services (BAFS)

Preservation: (A - HCL) B - H2SO4: C - NaOH: D - HNO3: (E - Ice:) F - (specify)

Relinquished by: (signed)	Date/Time	Received by: (signed)
[signature] EJVB	6/22/04 1800	[signature] 6/23/04 745
Relinquished by: (signed)	Date/Time	Received by: (signed)
Relinquished by: (signed)	Date/Time	Received for Laboratory by: (signed) William [signature]

Remarks: Standard TAT, EDF Format, Analytical to Michelle

Brunsing Associates, Inc.
P.O. Box 588
5803 Skylane Blvd., Suite A
Windsor, CA 95492
(707) 838-3027
(707) 838-4420 fax

Laboratory Report Project Overview

EDF 1.2a

Laboratory:	Bace Analytical, Windsor, CA
Lab Report Number:	4340
Project Name:	PACIFIC SUPPLY
Work Order Number:	29
Control Sheet Number:	NA

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
4340	MW-1	4340-6	W	CS	8260FAB	SW5030B	06/23/2004	07/04/2004	07/04/2004	20040704A	14
4340	MW-1	4340-6	W	CS	CATPH-G	SW5030B	06/23/2004	06/25/2004	06/25/2004	06252004	14
4340	MW-2	4340-3	W	CS	8260FAB	SW5030B	06/23/2004	07/04/2004	07/04/2004	20040704A	11
4340	MW-2	4340-3	W	CS	CATPH-G	SW5030B	06/23/2004	06/25/2004	06/25/2004	06252004	9
4340	MW-3	4340-4	W	CS	8260FAB	SW5030B	06/23/2004	07/04/2004	07/04/2004	20040704A	12
4340	MW-3	4340-4	W	CS	CATPH-G	SW5030B	06/23/2004	06/25/2004	06/25/2004	06252004	12
4340	VRW-5	4340-5	W	CS	8260FAB	SW5030B	06/23/2004	07/04/2004	07/04/2004	20040704A	13
4340	VRW-5	4340-5	W	CS	CATPH-G	SW5030B	06/23/2004	06/25/2004	06/25/2004	06252004	11
4340	VRW-6	4340-1	W	CS	8260FAB	SW5030B	06/23/2004	07/04/2004	07/04/2004	20040704A	7
4340	VRW-6	4340-1	W	CS	CATPH-G	SW5030B	06/23/2004	06/25/2004	06/25/2004	06252004	10
4340	VRW-8	4340-2	W	CS	8260FAB	SW5030B	06/23/2004	07/04/2004	07/04/2004	20040704A	10
4340	VRW-8	4340-2	W	CS	CATPH-G	SW5030B	06/23/2004	06/25/2004	06/25/2004	06252004	13
		062504MS	W	NC	CATPH-G	SW5030B	/ /	06/25/2004	06/25/2004	06252004	1
		4340MB	W	LB1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704A	2
		4340MB	W	LB1	CATPH-G	SW5030B	/ /	06/25/2004	06/25/2004	06252004	1
		4340MS	W	MS1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704A	8
		4340MS	W	MS1	CATPH-G	SW5030B	/ /	06/25/2004	06/25/2004	06252004	7
		4340SD	W	SD1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704A	9
		4340SD	W	SD1	CATPH-G	SW5030B	/ /	06/25/2004	06/25/2004	06252004	8

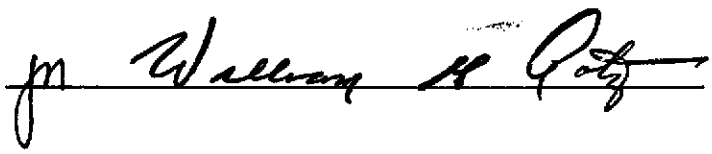
Bace Analytical, Windsor, CA

Lab Report No.: 4340 Date: 07/29/2004 Page: 1

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	MW-1	Lab Samp ID:	4340-6
Descr/Location:	MW-1	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	07/04/2004
Sample Time:	1508	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		ND	UG/L	2
Toluene	0.50	1.0	PQL		ND	UG/L	2
Ethylbenzene	0.50	1.0	PQL		ND	UG/L	2
Xylenes	0.50	1.0	PQL		ND	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		98%		1
Toluene-d8		88-110	SLSA		101%		1
Dibromofluoromethane		86-118	SLSA		92%		1

Approved by:  Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	MW-2	Lab Samp ID:	4340-3
Descr/Location:	MW-2	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	07/04/2004
Sample Time:	1222	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		6.30	UG/L	2
Toluene	0.50	1.0	PQL		2.36	UG/L	2
Ethylbenzene	0.50	1.0	PQL		ND	UG/L	2
Xylenes	0.50	1.0	PQL		7.41	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		100%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		93%		1

Approved by: William A Patty Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	MW-3	Lab Samp ID:	4340-4
Descr/Location:	MW-3	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	07/04/2004
Sample Time:	1257	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		ND	UG/L	2
Toluene	0.50	1.0	PQL		ND	UG/L	2
Ethylbenzene	0.50	1.0	PQL		ND	UG/L	2
Xylenes	0.50	1.0	PQL		ND	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		101%		1
Toluene-d8		88-110	SLSA		103%		1
Dibromofluoromethane		86-118	SLSA		94%		1

Approved by: _____ Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-5	Lab Samp ID:	4340-5
Descr/Location:	VRW-5	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	07/04/2004
Sample Time:	1418	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		40.5	UG/L	2
Toluene	0.50	1.0	PQL		ND	UG/L	2
Ethylbenzene	0.50	1.0	PQL		1.17	UG/L	2
Xylenes	0.50	1.0	PQL		8.04	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		104%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		91%		1

Approved by: William H Patty Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-6	Lab Samp ID:	4340-1
Descr/Location:	VRW-6	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	07/04/2004
Sample Time:	1000	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.27	0.50	PQL		43.4	UG/L	1
Toluene	0.25	0.50	PQL		3.60	UG/L	1
Ethylbenzene	0.25	0.50	PQL		1.69	UG/L	1
Xylenes	0.25	0.50	PQL		13.0	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		102%		1
Toluene-d8		88-110	SLSA		99%		1
Dibromofluoromethane		86-118	SLSA		93%		1

Approved by: William A Patty Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-8	Lab Samp ID:	4340-2
Descr/Location:	VRW-8	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	07/04/2004
Sample Time:	1110	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	2.7	5.0	PQL		115	UG/L	10
Toluene	2.5	5.0	PQL		11.8	UG/L	10
Ethylbenzene	2.5	5.0	PQL	DX	ND	UG/L	10
Xylenes	2.5	5.0	PQL		18.2	UG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		104%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		92%		1

DX: Value < lowest standard (MQL), but > than MDL

Approved by: [signature] Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	MW-1	Lab Samp ID:	4340-6
Descr/Location:	MW-1	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	06/25/2004
Sample Time:	1508	Analysis Date:	06/25/2004
Matrix:	Water	QC Batch:	06252004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		0.37	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		87%		1

Approved by: _____ Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	MW-2	Lab Samp ID:	4340-3
Descr/Location:	MW-2	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	06/25/2004
Sample Time:	1222	Analysis Date:	06/25/2004
Matrix:	Water	QC Batch:	06252004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		1.1	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		107%		1

Approved by: _____ Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	MW-3	Lab Samp ID:	4340-4
Descr/Location:	MW-3	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	06/25/2004
Sample Time:	1257	Analysis Date:	06/25/2004
Matrix:	Water	QC Batch:	06252004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		ND	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		88%		1

Approved by: William H Patty Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-5	Lab Samp ID:	4340-5
Descr/Location:	VRW-5	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	06/25/2004
Sample Time:	1418	Analysis Date:	06/25/2004
Matrix:	Water	QC Batch:	06252004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		0.72	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		89%		1

Approved by: _____ Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-6	Lab Samp ID:	4340-1
Descr/Location:	VRW-6	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	06/25/2004
Sample Time:	1000	Analysis Date:	06/25/2004
Matrix:	Water	QC Batch:	06252004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		0.42	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		92%		1

Approved by: _____ Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-8	Lab Samp ID:	4340-2
Descr/Location:	VRW-8	Rec'd Date:	06/24/2004
Sample Date:	06/23/2004	Prep Date:	06/25/2004
Sample Time:	1110	Analysis Date:	06/25/2004
Matrix:	Water	QC Batch:	06252004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		21	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		88%		1

Approved by: _____ Date: 9/17/04

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4340 Date: 07/29/2004

QC Batch:	06252004	Analysis:	CA LUFT Method for Gasoline Range
Matrix:	Water	Method:	CATPH-G
Lab Samp ID:	4340MB	Prep Meth:	SW5030B
Analysis Date:	06/25/2004	Prep Date:	06/25/2004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		ND	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		83%		1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4340 Date: 07/29/2004

QC Batch: 06252004
Matrix: Water
Lab Samp ID: 4340MS
Basis: Not Filtered

Project Name: Lab Generated or Non COE Sample
Project No.: Lab Generated or Non COE Sample
Field ID: Lab Generated or Non COE Sample
Lab Ref ID: 062504MS

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Gasoline Range Organics (C5-C12)	CATPH-G	0.500	0.500	ND	0.46	0.50	MG/L	92.0	100	8.3	130-70	MSA	20 MSP
Trifluorotoluene	CATPH-G	100.	100.	ND	112.	111.	PERCENT	112	111	0.90	130-70	SLSA	20 SLSP

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4340 Date: 07/29/2004

QC Batch:	20040704A	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Matrix:	Water	Method:	8260FAB
Lab Samp ID:	4340MB	Prep Meth:	SW5030B
Analysis Date:	07/04/2004	Prep Date:	07/04/2004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.27	0.50	PQL		ND	UG/L	1
Toluene	0.25	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.25	0.50	PQL		ND	UG/L	1
Xylenes	0.25	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		97%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		93%		1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4340 Date: 07/29/2004

QC Batch: 20040704A
Matrix: Water
Lab Samp ID: 4340MS
Basis: Not Filtered

Project Name: PACIFIC SUPPLY
Project No.: 29
Field ID: VRW-6
Lab Ref ID: 4340-1

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Benzene	8260FAB	10.0	10.0	43.4	53.9	53.6	UG/L	105	102	2.9	127-76	MSA	20MSP
Ethylbenzene	8260FAB	10.0	10.0	1.69	13.4	13.4	UG/L	117	117	0.00	130-70	MSA	20MSP
Toluene	8260FAB	10.0	10.0	3.60	14.9	13.8	UG/L	113	102	10	125-76	MSA	20MSP
Xylenes	8260FAB	30.0	30.0	13.0	46.8	48.2	UG/L	113	117	3.5	130-70	MSA	20MSP
4-Bromofluorobenzene	8260FAB	100.	100.	102.	104.	104.	PERCENT	104	104	0.00	115-86	SLSA	20SLSP
Dibromofluoromethane	8260FAB	100.	100.	93.	93.	93.	PERCENT	93.0	93.0	0.00	118-86	SLSA	20SLSP
Toluene-d8	8260FAB	100.	100.	99.	101.	101.	PERCENT	101	101	0.00	110-88	SLSA	20SLSP

Chain-of Custody Form

Project #	Project Name	C.O.C. No.
29	Pacific Supply	11073

L.P. No.	Sampler's Signature	Remarks:
	Ette Jon VandenBosch	

Date Sampled	Sample I.D.	Time (24 Hour)	Sample Type	No. of Containers	Analysis: TPH-Gas	Analysis: 8260B - BTEX, 5 fuel oxy, Pb scav.	Lab No.	Remarks
6/23/04	VRW-6	1000	water	6	X	X	4340-1	6 HCl preserved voas
↓	VRW-8	1110	↓	↓	↓	↓	-2	↓
↓	MW-2	1222	↓	↓	↓	↓	-3	↓
↓	MW-3	1257	↓	↓	↓	↓	-4	↓
↓	VRW-5	1418	↓	↓	↓	↓	-5	↓
↓	MW-1	1508	↓	↓	↓	↓	-6	↓

Laboratory: BACE Analytical & Field Services (BAFS)

Preservation: (A - HCL) B - H2SO4: C - NaOH: D - HNO3: (E - Ice:) F - (specify)

Relinquished by: (signed)	Date/Time	Received by: (signed)
Ette Jon VandenBosch	6/23/04 1900	[signature] 6/24/04 920
Relinquished by: (signed)	Date/Time	Received by: (signed) William H [signature]
Relinquished by: (signed)	Date/Time	Received for Laboratory by: (signed)

Remarks: Standard TAT
EDF Format
Analytical to Michelle

Brunsing Associates, Inc.
P.O. Box 588
5803 Skylane Blvd., Suite A
Windsor, CA 95492
(707) 838-3027
(707) 838-4420 fax

Laboratory Report Project Overview

EDF 1.2a

Laboratory:	Bace Analytical, Windsor, CA
Lab Report Number:	4342
Project Name:	PACIFIC SUPPLY
Work Order Number:	29
Control Sheet Number:	NA

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
4342	VRW-2	4342-1	W	CS	8260FAB	SW5030B	06/25/2004	07/04/2004	07/04/2004	20040704B	30
4342	VRW-2	4342-1	W	CS	CATPH-G	SW5030B	06/25/2004	07/04/2004	07/04/2004	07042004A	9
4342	VRW-3	4342-2	W	CS	8260FAB	SW5030B	06/25/2004	07/04/2004	07/04/2004	20040704B	31
4342	VRW-3	4342-2	W	CS	CATPH-G	SW5030B	06/25/2004	07/04/2004	07/04/2004	07042004A	10
		4339-1	W	NC	CATPH-G	SW5030B	/ /	07/04/2004	07/04/2004	07042004A	3
		4340-1	W	NC	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704B	7
		4342MB	W	LB1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704B	2
		4342MB	W	LB1	CATPH-G	SW5030B	/ /	07/04/2004	07/04/2004	07042004A	1
		4342MS	W	MS1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704B	8
		4342MS	W	MS1	CATPH-G	SW5030B	/ /	07/04/2004	07/04/2004	07042004A	7
		4342SD	W	SD1	8260FAB	SW5030B	/ /	07/04/2004	07/04/2004	20040704B	9
		4342SD	W	SD1	CATPH-G	SW5030B	/ /	07/04/2004	07/04/2004	07042004A	8

Bace Analytical, Windsor, CA

Lab Report No.: 4342 Date: 08/03/2004 Page: 1

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B

Field ID:	VRW-2	Lab Samp ID:	4342-1
Descr/Location:	VRW-2	Rec'd Date:	06/28/2004
Sample Date:	06/25/2004	Prep Date:	07/04/2004
Sample Time:	1104	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704B
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.54	1.0	PQL		274.	UG/L	2
Toluene	0.50	1.0	PQL		4.10	UG/L	2
Ethylbenzene	0.50	1.0	PQL		4.11	UG/L	2
Xylenes	0.50	1.0	PQL		8.22	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		102%		1
Toluene-d8		88-110	SLSA		101%		1
Dibromofluoromethane		86-118	SLSA		99%		1

Approved by: [signature] Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Project No:	29	Method:	8260FAB
		Prep Meth:	SW5030B
Field ID:	VRW-3	Lab Samp ID:	4342-2
Descr/Location:	VRW-3	Rec'd Date:	06/28/2004
Sample Date:	06/25/2004	Prep Date:	07/04/2004
Sample Time:	1144	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	20040704B
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.27	0.50	PQL		2.00	UG/L	1
Toluene	0.25	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.25	0.50	PQL		ND	UG/L	1
Xylenes	0.25	0.50	PQL		1.00	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		103%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		98%		1

Approved by: [signature] Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-2	Lab Samp ID:	4342-1
Descr/Location:	VRW-2	Rec'd Date:	06/28/2004
Sample Date:	06/25/2004	Prep Date:	07/04/2004
Sample Time:	1104	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	07042004A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		0.24	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		87%		1

Approved by: William H Patty Date: 9/17/04

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-3	Lab Samp ID:	4342-2
Descr/Location:	VRW-3	Rec'd Date:	06/28/2004
Sample Date:	06/25/2004	Prep Date:	07/04/2004
Sample Time:	1144	Analysis Date:	07/04/2004
Matrix:	Water	QC Batch:	07042004A
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		0.12	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		92%		1

Approved by: _____ Date: 9/17/04

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4342 Date: 08/03/2004

QC Batch:	07042004A	Analysis:	CA LUFT Method for Gasoline Range
Matrix:	Water	Method:	CATPH-G
Lab Samp ID:	4342MB	Prep Meth:	SW5030B
Analysis Date:	07/04/2004	Prep Date:	07/04/2004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.020	0.050	PQL		ND	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		70-130	SLSA		80%		1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4342 Date: 08/03/2004

QC Batch: 07042004A
Matrix: Water
Lab Samp ID: 4342MS
Basis: Not Filtered

Project Name: Lab Generated or Non COE Sample
Project No.: Lab Generated or Non COE Sample
Field ID: Lab Generated or Non COE Sample
Lab Ref ID: 4339-1

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Gasoline Range Organics (C5-C12)	CATPH-G	1.0	1.0	0.61	1.40	1.44	MG/L	79.0	83.0	4.9	130-70	MSA	20MSP
Trifluorotoluene	CATPH-G	100.	100.	105.	111.	116.	PERCENT	111	116	4.4	130-70	SLSA	20SLSP

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4342 Date: 08/03/2004

QC Batch:	20040704B	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX
Matrix:	Water	Method:	8260FAB
Lab Samp ID:	4342MB	Prep Meth:	SW5030B
Analysis Date:	07/04/2004	Prep Date:	07/04/2004
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.27	0.50	PQL		ND	UG/L	1
Toluene	0.25	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.25	0.50	PQL		ND	UG/L	1
Xylenes	0.25	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		86-115	SLSA		97%		1
Toluene-d8		88-110	SLSA		100%		1
Dibromofluoromethane		86-118	SLSA		93%		1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4342 Date: 08/03/2004

QC Batch: 20040704B
Matrix: Water
Lab Samp ID: 4342MS
Basis: Not Filtered

Project Name: Lab Generated or Non COE Sample
Project No.: Lab Generated or Non COE Sample
Field ID: Lab Generated or Non COE Sample
Lab Ref ID: 4340-1

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Benzene	8260FAB	10.0	10.0	43.4	53.9	53.6	UG/L	105	102	2.9	127-76	MSA	20MSP
Ethylbenzene	8260FAB	10.0	10.0	1.69	13.4	13.4	UG/L	117	117	0.00	130-70	MSA	20MSP
Toluene	8260FAB	10.0	10.0	3.60	14.9	13.8	UG/L	113	102	10	125-76	MSA	20MSP
Xylenes	8260FAB	30.0	30.0	13.0	46.8	48.2	UG/L	113	117	3.5	130-70	MSA	20MSP
4-Bromofluorobenzene	8260FAB	100.	100.	102.	104.	104.	PERCENT	104	104	0.00	115-86	SLSA	20SLSP
Toluene-d8	8260FAB	100.	100.	99.	101.	101.	PERCENT	101	101	0.00	110-88	SLSA	20SLSP

Chain-of Custody Form

Project #	Project Name			No. of Containers	Analysis			C.O.C. No. 11074
29	Pacific Supply				TPH GRO	8260 B BTEX, EtOxy, Pb Scav		
L.P. No.	Sampler's Signature							Remarks:
Date Sampled	Sample I.D.	Time (24 Hour)	Sample Type					
6/25/04	JRW-2	11:04	H2O	6	X	X		4342-1
12	JRW-3	11:44	1	6	X	X		-2

Laboratory: BAFS

Preservation: A - HCl B - H2SO4: C - NaOH: D - HNO3: E - Ice F - (specify)

Relinquished by: (signed)	Date/Time 6/25/04 8:20	Received by: (signed) 6/28/04 821	Remarks: Standard TAT EDF Format Analytical To Michelle
Relinquished by: (signed)	Date/Time	Received by: (signed)	
Relinquished by: (signed)	Date/Time	Received for Laboratory by: (signed)	

Brunsing Associates, Inc.
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