



## RECEIVED

2:31 pm, Apr 20, 2009

Alameda County  
Environmental Health

3330 Cameron Park Drive, Ste 550  
Cameron Park, California 95682  
(530) 676-6004 ~ Fax: (530) 676-6005

April 17, 2009  
Project No. 2007-0057-01

Mr. Jerry Wickham, P.G.  
Alameda County Health Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502  
(via GeoTracker)

Re: Quarterly Groundwater Monitoring Report, First Quarter 2009, for former USA Service Station No. 57, located at 10700 MacArthur Boulevard, Oakland, CA (LOP No. RO0000232)

Dear Mr. Wickham:

Stratus Environmental, Inc. (Stratus), on behalf of Moller Investment Group, Inc. (MIGI), is submitting the attached report, which presents the results of the first quarter 2009 quarterly monitoring and sampling program at the former USA Service Station No. 57, located at 10700 MacArthur Boulevard, Oakland, California (Figure 1). This report has been prepared in compliance with Alameda County Department of Environmental Health (ACDEH) requirements for underground storage tank (UST) investigations.

If you have any questions regarding this report, please contact Scott Bittinger at (530) 676-2062.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Gowri S. Kowtha, P.E.  
Principal Engineer

Scott G. Bittinger, P.G.  
Project Manager



Attachment: Quarterly Groundwater Monitoring Report, First Quarter 2009

cc: Mr. Charles Miller, Moller Investment Group, Inc.  
Mr. John Jay, Jay-Phares Corporation  
Mr. Peter McIntyre, AEI Consultants

Date April 17, 2009

## FORMER USA GASOLINE QUARTERLY GROUNDWATER MONITORING REPORT

Facility No: 57 Address: 10700 MacArthur Blvd., Oakland, California  
MIGI Project Supervisor: Charles Miller  
Consulting Co./Contact Person: Stratus Environmental, Inc./ Scott Bittinger, P.G.  
Consultant Project No: 2007-0057-01  
Primary Agency/Regulatory ID No: Jerry Wickham, Alameda County Department of Environmental Health / RO0000232

### WORK PERFORMED THIS QUARTER (First 2009):

1. Stratus measured groundwater elevations and collected groundwater samples from wells S-1, S-2, MW-3 through MW-5, MW-7, MW-8, EX-1, EX-2, and EX-4 on February 10, 2009.
2. Stratus compiled and evaluated groundwater monitoring data.
3. Stratus discontinued work to install a dual phase extraction/air sparge remediation system at the site, at the direction of Alameda County Department of Environmental Health (ACDEH, letter dated February 13, 2009).

### WORK PROPOSED FOR NEXT QUARTER (Second 2009):

1. The next sampling event is tentatively scheduled for April 2009. Groundwater samples will be collected for laboratory analysis from wells S-1, S-2, MW-3 through MW-5, MW-7, MW-8, and EX-1 through EX-4.
2. Groundwater samples will be analyzed for gasoline range organics (GRO) using U.S. Environmental Protection Agency Method (EPA) Method SW8015B/DHS Luft Manual, and for benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB) using EPA Method SW8260B.
3. Stratus intends to prepare and submit a Draft Corrective Action Plan (CAP) for the site. This document will include items specifically requested by ACDEH personnel in the February 13, 2009 letter. Stratus received an extension from ACDEH, on April 14, 2009, extending the deadline for submittal of the Draft CAP to May 29, 2009.

Current Phase of Project:	<u>Monitoring / Interim Remediation</u>
Frequency of Groundwater Sampling:	<u>All Wells = Quarterly</u>
Frequency of Groundwater Monitoring:	<u>Quarterly</u>
Groundwater Sampling Date:	<u>February 10, 2009</u>
Is Free Product (FP) Present on Site:	<u>No</u>
FP Recovered This Quarter:	<u>NA</u>
Cumulative FP Recovered to Date:	<u>NA</u>
Approximate Depth to Groundwater:	<u>13.38 to 24.43 feet below top of well casing</u>

Groundwater Flow Direction:	<u>South-southeast</u>
Groundwater Gradient:	<u>0.05 ft/ft</u>

## DISCUSSION:

At the time of the first quarter 2009 monitoring event, groundwater elevations had decreased between 0.45 and 1.99 feet in all wells since the previous monitoring event (October 1, 2008). Depth-to-water measurements were converted to feet above mean sea level (MSL) and used to construct a groundwater elevation contour map (Figure 2). The groundwater elevations measured in wells EX-1, EX-2, and EX-4 appear to be anomalous relative to the other well elevations, and thus were not used in preparation of the contour map. The groundwater flow direction was generally to the south-southeast at an average gradient of approximately 0.05 ft/ft. South-southeast, south, and radial groundwater flow patterns have been predominately observed during previous monitoring events.

GRO, benzene, and MTBE were reported in wells S-2, MW-3, EX-1, EX-2, and EX-4. MTBE was also reported in wells S-1 and MW-7. The maximum concentrations of GRO (11,000 µg/L) and benzene (5,400 µg/L) were reported in well EX-2, and the maximum concentration of MTBE (660 µg/L) was reported in well MW-3. TBA was reported in wells S-2 (140 µg/L), MW-3 (8,200 µg/L), and EX-4 (27 µg/L). DIPE (4.0 µg/L) was only reported in well MW-3. 1,2-DCA was reported in wells MW-3 (38 µg/L) and EX-4 (2.0 µg/L). No concentrations of ETBE, TAME, or EDB were reported in any of the wells. These results are generally consistent with historical analytical data. Analytical results of GRO, benzene, and MTBE for groundwater samples collected during the first quarter 2009 are presented in Figure 3. GRO, benzene, MTBE, and depth to water variation with time at wells S-1, S-2, and MW-3 are presented in Figures 4, 5, and 6, respectively.

## ATTACHMENTS:

- Table 1              Groundwater Elevation and Analytical Summary
- Table 2              Groundwater Analytical Results for Oxygenates and Additional Compounds
- Figure 1             Site Location Map
- Figure 2             Groundwater Elevation Contour Map (First Quarter 2009)
- Figure 3             Groundwater Analytical Summary (First Quarter 2009)
- Figure 4             GRO, Benzene, MTBE Concentration, and Depth to Water Variation with Time at S-1
- Figure 5             GRO, Benzene, MTBE Concentration, and Depth to Water Variation with Time at S-2
- Figure 6             GRO, Benzene, MTBE Concentration, and Depth to Water Variation with Time at MW-3
- Appendix A          Field Data Sheets
- Appendix B          Sampling and Analysis Procedures
- Appendix C          Certified Analytical Reports and Chain-of-Custody Documentation
- Appendix D          GeoTracker Electronic Submittal Information

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation		Groundwater				Total	
		(feet)	(ft msl)	(ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
S-1	02/12/87										
	03/03/95	13.10	74.74	61.64	910	5,900	260	7.6	16	14	NA
	07/24/95	12.35		62.39	NA	NA	NA	NA	NA	NA	NA
	11/22/95	19.30	78.68	59.38	460	6,100	13	0.69	0.99	1.1	460*
	12/06/95	19.59		59.09	NA	NA	NA	NA	NA	NA	NA
	01/04/96	19.52		59.16	NA	NA	NA	NA	NA	NA	NA
	01/31/97	15.07		63.61	1,100	200	11	6	3	6	200*
	10/10/97	18.90		59.78	530	2,000	<0.5	2.1	<0.5	<2	230*
	01/20/98	16.79		61.89	1,800	200	<0.5	<0.5	1.5	10	87*
	04/28/98	8.37		70.31	130	7,300	1.9	3.2	<0.5	<0.5	310*
	07/31/98	11.61		67.07	310	2,000	0.54	4.6	3.8	0.82	280*
	06/10/99	14.35		64.33	660	150	0.99	<0.5	<0.5	2.4	80*[1]
	10/18/00	17.56		61.12	<50	330	<0.5	0.93	<0.5	<0.5	44
	03/12/02	16.29		62.39	500	<50	2.8	4.8	0.79	4.4	63
	11/19/02	19.53		59.15	190	NA	<0.50	<0.50	<0.50	<0.50	190
	01/09/03	18.14		60.54	510	NA	1.1	<0.50	0.52	<0.50	11
	04/14/03	18.04		60.64	300	NA	<1.0[2]	<1.0[2]	<1.0[2]	<1.0[2]	27
	07/21/03	20.31		58.37	300	NA	<0.50	<0.50	<0.50	<0.50	11
	10/09/03	19.46		59.22	390	NA	<0.50	<0.50	<0.50	<0.50	8.8
	01/15/04	18.21	79.66	61.45	200	NA	<0.50	<0.50	<0.50	<0.50	6.0
	04/08/04	19.29		60.37	140	NA	<0.50	<0.50	<0.50	<0.50	12
	08/10/04	18.86		60.80	110	NA	4.6	<0.50	<0.50	0.51	73
	11/11/04	19.81		59.85	160	NA	<0.50	<0.50	<0.50	<0.50	150
	01/19/05	18.12		61.54	440	NA	<0.50	<0.50	1.4	<0.50	140
	04/14/05	13.94		65.72	320	NA	<0.50	<0.50	<0.50	<0.50	120
	07/19/05	14.11		65.55	240	NA	6.1	<0.50	0.60	<0.50	60
	10/24/05	16.53		63.13	320	NA	5.0	<0.50	1.1	<0.50	37

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water	Well Elevation	Groundwater						Total	
		(feet)	(ft msl)	Elevation (ft msl)	GRO[5] ( $\mu\text{g/L}$ )	TPHD ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )
S-1	02/02/06	15.27		64.39	<50	NA	<0.50	<0.50	<0.50	<0.50	45
Cont.	04/27/06	9.59		70.07	<50	NA	<0.50	<0.50	<0.50	<0.50	7.7
	07/12/06	11.00		68.66	<50	NA	<0.50	<0.50	<0.50	<0.50	12
	10/17/06	14.54		65.12	<50	NA	<0.50	<0.50	<0.50	<0.50	1.6
	01/08/07	15.87		63.79	260	NA	4.6	<0.50	<0.50	<0.50	15
	04/09/07	16.06		63.60	300	NA	<0.50	<0.50	<0.50	<0.50	22
	04/23/07	16.31		63.35	NA	NA	NA	NA	NA	NA	NA
	07/23/07	17.86		61.80	110	NA	<0.50	<0.50	<0.50	<0.50	52
	10/15/07	19.22		60.44	<50	NA	<0.50	<0.50	<0.50	<0.50	50
	03/24/08	17.58		62.08	180	NA	<0.50	<0.50	<0.50	<0.50	29
	05/30/08	19.66		60.00	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	43
	07/10/08	19.32		60.34	130	NA	<0.50	<0.50	<0.50	<0.50	4.1
	10/01/08	20.67		58.99	64	NA	<0.50	<0.50	<0.50	<0.50	70
	02/10/09	22.31		57.35	<50	NA	<0.50	<0.50	<0.50	<0.50	53

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation (ft msl)	Groundwater					Total	
		feet	(ft msl)		GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
Sheen	02/12/87		Sheen				3,400	3,800	1,300	11,000	NA
	03/03/95	15.39	76.86	61.47	24,000	6,000	1,900	440	600	2,500	NA
	07/24/95	14.47		62.39	NA	NA	NA	NA	NA	NA	NA
	11/22/95	21.52	80.93	59.41	NA	NA	NA	NA	NA	NA	NA
	12/06/95	21.78		59.15	NA	NA	NA	NA	NA	NA	NA
	01/04/96	21.75		59.18	NA	NA	NA	NA	NA	NA	NA
	01/31/97	17.25		63.68	NA	NA	NA	NA	NA	NA	NA
	10/10/97	21.21		59.72	13,000	<50	260	38	190	280	600*
	01/20/98	19.07		61.86	1,900	2,300	4.6	6.3	<0.5	4.6	190*
	04/28/98	10.47		70.46	22,000	<100	980	160	320	680	570*
Sheen	07/31/98	13.71		67.22	160,000	<50	950	290	550	1,700	550*
	11/02/98	17.31		63.62	14,000	<500	170	70	170	230	490*
	06/10/99	16.48		64.45	17,000	<50	650	230	<25	750	490*[1]
	10/18/00	19.70		61.23	4,400	<50	2	64	5.1	12	270
	03/12/02	18.56		62.37	5,100	660	62	44	52	78	430
	11/19/02	21.70		59.23	26,000	NA	1,400	180	520	340	750
	01/09/03	20.37		60.56	16,000	NA	120	32	76	214	270
	04/14/03	19.93		61.00	16,000	NA	160	76	210	290	400
	07/21/03	22.00		58.93	9,700	NA	270	90	200	277	410
	10/09/03	21.58		59.35	10,000	NA	39	9.2	52	26.5	180
	01/15/04	20.44	81.90	61.46	6,300	NA	21	<2.0 [3]	20	3.1	130
	04/08/04	17.15		64.75	13,000	NA	160	76	170	231	430
	08/10/04	20.98		60.92	10,000	NA	76	13	<5.0[3]	500	92
	11/11/04	21.95		59.95	20,000	NA	530	240	370	1,730	420
	01/19/05	20.33		61.57	17,000	NA	590	150	250	990	580
	04/14/05	16.17		65.73	20,000	NA	830	230	570	1,980	510
	07/19/05	16.25		65.65	970	NA	48	13	16	57	72
	10/24/05	18.07		63.83	1,200	NA	100	13	52	41	69

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation		Groundwater				Total	
		(feet)	(ft msl)	(ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
S-2	02/02/06	17.26		64.64	2,000	NA	17	12	26	108	340
Cont.	04/27/06	11.55		70.35	130	NA	5.1	1.1	2.8	8.8	81
	07/12/06	12.98		68.92	140	NA	<0.50	<0.50	<0.50	0.77	180
	10/17/06	16.59		65.31	130	NA	0.98	<0.50	1.1	2.20	160
	01/08/07	18.21		63.69	69	NA	<0.50	<0.50	<0.50	<0.50	64
	04/09/07	18.29		63.61	360	NA	1.4	1.5	2.2	9.8	270
	07/23/07	20.00		61.90	<50	NA	<0.50	<0.50	<0.50	<0.50	7.7
	10/15/07	21.32		60.58	260	NA	53	0.92	<0.50	1.0	86
	03/24/08	19.78		62.12	5,500	NA	540	20	120	70	600
	05/30/08	20.78		61.12	8,700	NA	270	50	200	386	340
	07/10/08	21.45		60.45	8,000	NA	310	36	150	246	420
	10/01/08	22.71		59.19	4,100	NA	170	3.8	57	8	720
	02/10/09	24.43		57.47	9,700	NA	390	31.0	340	107.5	480

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation		Groundwater				Total	
		(feet)	(ft msl)	(ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-3	03/03/95	13.99	76.30	62.31	2,500	1,600	540	92	36	200	NA
	07/24/95	13.33		62.97	NA	NA	NA	NA	NA	NA	NA
	11/22/95	20.94	80.32	59.38	14,000	5,400	5,700	230	430	650	820*
	12/06/95	17.48		62.84	NA	NA	NA	NA	NA	NA	NA
	01/04/96	20.01		60.31	NA	NA	NA	NA	NA	NA	NA
	01/31/97	16.63		63.69	1,100	<50	130	8	5	5	NA
	10/10/97	20.62		59.70	3,400	1,100	830	4	100	<10	160*
	01/20/98	15.40		64.92	3,900	550	7.9	4.1	<0.5	3.7	<5.0*
	04/28/98	10.51		69.81	800	1,000	82	5.2	5.7	5.4	240*
	07/31/98	13.46		66.86	2,200	610	510	7.6	16	5.27	310*
	11/02/98	17.11		63.21	4,900	1,600	220	16	13	13.7	180*
	06/10/99	15.24		65.08	1,000	120	<0.5	<0.5	<0.5	1.1	120*[1]
	10/18/00	15.41		64.91	<50	<50	<0.5	<0.5	<0.5	<0.5	12
	04/08/04	13.70		66.62	<50	NA	<0.50	<0.50	<0.50	<0.50	19
	08/10/04	16.96		63.36	580	NA	19	<1.0[3]	<1.0[3]	3.3	300
	11/11/04	17.40		62.92	3,000	NA	810	<5.0[3]	43	<5.0[3]	690
	01/19/05	13.28		67.04	92	NA	18	<0.50	0.77	<0.50	17
	04/14/05	8.73		71.59	<50	NA	0.52	<0.50	<0.50	<0.50	11
	07/19/05	11.94		68.38	390	NA	82	2.3	1.8	9.2	200
	10/24/05	14.70	77.27	62.57	2,100	NA	460	6.9	7.7	11.9	300
	02/02/06	16.48		60.79	530	NA	11	<0.50	1.2	1.1	560
	04/27/06	7.85		69.42	<300[3]	NA	<1.5[3]	<1.5[3]	<1.5[3]	<1.5[3]	180
	07/12/06	10.08		67.19	250	NA	5.5	<1.0[3]	<1.0[3]	<1.0[3]	190
	10/17/06	12.80		64.47	93	NA	8.8	<0.50	<0.50	<0.50	100

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation		Groundwater				Total	
		(feet)	(ft msl)	(ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-3	01/08/07	21.68		55.59	200	NA	14	<0.50	0.89	0.95	85
Cont.	04/09/07	12.24		65.03	1,400	NA	380	6.6	22	12.5	600
	04/23/07	12.53		64.74	NA	NA	NA	NA	NA	NA	NA
	07/23/07	14.44		62.83	1,600	NA	420	<2.5[3]	27	<2.5[3]	630
	10/15/07	16.45		60.82	2,000	NA	470	2.7	23	<2.5[3]	610
	03/24/08	13.80		63.47	1,200	NA	230	1.9	9.9	1.2	820
	05/30/08	15.54		61.73	1,100	NA	250	<2.5[3]	14	<2.5[3]	610
	07/10/08	16.10		61.17	1,400	NA	170	<1.0	10	2.6	560
	10/01/08	17.60		59.67	800	NA	95	<1.0[3]	1.8	<1.0[3]	620
	02/10/09	18.46		58.81	1,200	NA	50	<1.0[3]	1.8	<1.0[3]	660

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water	Well Elevation	Groundwater						Total Xylenes (µg/L)	MTBE (µg/L)
		(feet)	(ft msl)	Elevation (ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)		
MW-4	11/22/95	14.99	76.42	61.43	<50	200	<0.5	1.5	<0.5	1.7	6.4*
	12/06/95	11.21		65.21	NA	NA	NA	NA	NA	NA	NA
	01/04/96	14.62		61.80	NA	NA	NA	NA	NA	NA	NA
	01/31/97	8.18		68.24	<50	<50	<0.5	2	<0.5	2	11*
	10/10/97	14.14		62.28	<50	<50	<0.5	<0.5	<0.5	<2	<5.0*
	01/20/98	7.05		69.37	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	04/28/98	5.88		70.54	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	07/31/98	8.40		68.02	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	11/02/98	16.08		60.34	NA	NA	NA	NA	NA	NA	NA
	06/10/99	14.81		61.61	NA	NA	NA	NA	NA	NA	NA
	10/18/00	12.71		63.71	<50	<50	<0.5	0.59	0.82	0.53	<5.0*
	03/12/02	8.92		67.50	<50	<50	<0.5	0.61	0.72	2.5	1.8
	11/19/02	13.24		-13.24	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	01/09/03	11.00		-11.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/14/03	11.03		-11.03	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/21/03	13.10		-13.10	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/09/03	13.33		-13.33	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	01/15/04	12.14		-12.14	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/08/04	10.76		65.66	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	08/10/04	12.62		63.80	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	11/11/04	11.93		64.49	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	01/19/05	10.34		66.08	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/14/05	5.66	[4]	NM	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/19/05	7.55	[4]	NM	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/24/05	10.12		76.26	66.14	<50	NA	<0.50	<0.50	<0.50	<0.50

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Groundwater						Total	
		(feet)	(ft msl)	Elevation (ft msl)	GRO[5] ( $\mu\text{g/L}$ )	TPHD ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )
MW-4	02/02/06	6.99		69.27	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
Cont.	04/27/06	NM		NM			Well Not Monitored or Sampled - Covered				
	07/12/06	6.05		70.21	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/17/06	NM		NM			Well Not Monitored or Sampled - Covered				
	01/08/07	8.82		67.44	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/09/07	8.52		67.74	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/23/07	10.10		66.16	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/07	10.90		65.36	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	03/24/08	9.32		66.94	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	05/30/08	10.60		65.66	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/10/08	11.31		64.95	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/01/08	12.37		63.89	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	02/10/09	13.38		62.88	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation (ft msl)	Groundwater						Total Xylenes (µg/L)	MTBE (µg/L)
		Water (feet)	Elevation (ft msl)		GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)			
MW-5	11/22/95	19.56	80.52	60.96	<50	280	<0.5	1.8	<0.5	3	2.2*	
	12/06/95	15.84		64.68	NA	NA	NA	NA	NA	NA	NA	
	01/04/96	19.36		61.16	NA	NA	NA	NA	NA	NA	NA	
	01/31/97	13.31		67.21	80	<50	<0.5	0.6	<0.5	2	6*	
	10/10/97	17.80		62.72	<50	<50	<0.5	<0.5	<0.5	<2	<5*	
	01/20/98	12.58		67.94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	04/28/98	9.45		71.07	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	07/31/98	7.38		73.14	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	11/02/98	15.98		64.54	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0*	
	06/10/99	14.60		65.92	NA	NA	NA	NA	NA	NA	NA	
	10/18/00	17.77		62.75	<50	<50	<0.5	0.75	<0.5	0.79	28	
	03/12/02	15.72		64.80	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	11/19/02	NM		NM						Well Damaged		
	01/09/03	NM		NM						Well Damaged		
	04/14/03	NM		NM						Well Damaged		
	07/21/03	NM		NM						Well Damaged		
	10/09/03	NM		NM						Well Damaged		
	01/15/04	NM		NM						Well Damaged		
	04/08/04	16.80		63.72	<100	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	08/10/04	18.58		61.94	89	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	11/11/04	NM		NM						Well Damaged		
	01/19/05	NM		NM						Well Damaged		
	04/14/05	10.57	[4]	NM	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	07/19/05	11.77	[4]	NM	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/24/05	14.29	80.78	66.49	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	02/02/06	NM		NM			Well Not Monitored or Sampled - Under Soil Pile					
	04/27/06	7.42		73.36	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50	

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation		Groundwater				Total	
		(feet)	(ft msl)	(ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-5	07/12/06	NM		NM						Well Not Monitored or Sampled - Covered	
Cont.	10/17/06	NM		NM						Well Not Monitored or Sampled - Covered	
	01/08/07	NM		NM						Well Not Monitored or Sampled - Covered	
	04/09/07	NM		NM						Well Not Monitored or Sampled - Covered	
	04/23/07	11.90		68.88	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/23/07	13.98		66.80	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/07	14.97		65.81	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	03/24/08	12.77		68.01	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	05/30/08	14.76		66.02	<200[2]	NA	<1.0[2]	<1.0[2]	<1.0[2]	<1.0[2]	<1.0[2]
	07/10/08	15.74		65.04	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/01/08	16.90		63.88	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	02/10/09	18.12		62.66	<200[2]	NA	<1.0[2]	<1.0[2]	<1.0[2]	<1.0[2]	<1.0[2]
MW-6	10/15/07	NM		NM						Well Destroyed	
	10/01/08	NM		NM						Well Destroyed	

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Groundwater						Total	
		Elevation (feet)	Well Elevation (ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	
MW-7	11/22/95	19.38	78.86	59.48	<50	180	<0.5	0.57	<0.5	0.62	0.73*
	12/06/95	19.72		59.14	NA	NA	NA	NA	NA	NA	NA
	01/04/96	19.76		59.10	NA	NA	NA	NA	NA	NA	NA
	01/31/97	15.25		63.61	70	<50	0.7	1	<0.5	<1	8*
	10/10/97	19.03		59.83	<50	<50	<0.5	<0.5	<0.5	<2	15*
	01/20/98	17.11		61.75	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	04/28/98	8.22		70.64	<50	<50	<0.5	<0.5	<0.5	<0.5	9.3*
	07/31/98	11.53		67.33	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	11/02/98	15.15		63.71	NA	NA	NA	NA	NA	NA	NA
	06/10/99	14.23		64.63	NA	NA	NA	NA	NA	NA	NA
	10/18/00	17.59		61.27	NA	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	03/12/02	16.54		62.32	<50	<50	<0.5	<0.5	<0.5	<0.5	2.9
	11/19/02	19.59		-19.59	<50	NA	<0.50	<0.50	<0.50	<0.50	3.8
	01/09/03	18.38		-18.38	<50	NA	<0.50	<0.50	<0.50	<0.50	2.7
	04/14/03	18.17		-18.17	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/21/03	20.29		-20.29	<50	NA	<0.50	<0.50	<0.50	<0.50	1.8
	10/09/03	19.48		-19.48	<50	NA	<0.50	<0.50	<0.50	<0.50	2.9
	01/15/04	18.45	79.81	61.36	<50	NA	<0.50	<0.50	<0.50	<0.50	2.6
	04/08/04	17.28		62.53	<50	NA	<0.50	<0.50	<0.50	<0.50	0.81
	08/10/04	18.85		60.96	<50	NA	<0.50	<0.50	<0.50	<0.50	2.1
	11/11/04	19.85		59.96	<50	NA	<0.50	<0.50	<0.50	<0.50	1.0
	01/19/05	19.59		60.22	<50	NA	<0.50	<0.50	<0.50	<0.50	1.5
	04/14/05	14.17		65.64	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/19/05	14.16		65.65	<50	NA	<0.50	<0.50	<0.50	<0.50	1.9
	10/24/05	16.65		63.16	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation (ft msl)	Groundwater						Total	
		(feet)	(ft msl)		GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	
MW-7	02/02/06	15.39		64.42	<50	NA	<0.50	<0.50	<0.50	<0.50	1.3	
Cont.	04/27/06	8.51		71.30	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	07/12/06	9.94		69.87	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/17/06	13.46		66.35	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	01/08/07	15.03		64.78	<50	NA	<0.50	<0.50	<0.50	<0.50	0.99	
	04/09/07	15.27		64.54	<50	NA	<0.50	<0.50	<0.50	<0.50	0.54	
	07/23/07	16.96		62.85	<50	NA	<0.50	<0.50	<0.50	<0.50	1.7	
	10/15/07	18.29		61.52	750	NA	<0.50	<0.50	<0.50	<0.50	0.81	
	03/24/08	16.72		63.09	<50	NA	<0.50	<0.50	<0.50	<0.50	0.85	
	05/30/08	17.81		62.00	<50	NA	<0.50	<0.50	<0.50	<0.50	0.56	
	07/10/08	18.48		61.33	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/01/08	19.71		60.10	<50	NA	<0.50	<0.50	<0.50	<0.50	0.66	
	02/10/09	21.41		58.40	<50	NA	<0.50	<0.50	<0.50	<0.50	0.67	

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water (feet)		Well Elevation (ft msl)		Groundwater				Total	
						GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
MW-8	11/22/95	33.33	79.55	46.22	<50	360	<0.5	1.3	<0.5	2.1	2.1*
	12/06/95	17.57		61.98	NA	NA	NA	NA	NA	NA	NA
	01/04/96	20.08		59.47	NA	NA	NA	NA	NA	NA	NA
	01/31/97	18.72		60.83	80	<50	0.6	1	<0.5	1	8*
	10/10/97	20.26		59.29	50	<50	<0.5	<0.5	<0.5	<2	<5*
	01/20/98	15.91		63.64	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	04/28/98	10.39		69.16	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	07/31/98	12.93		66.62	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*
	11/02/98	16.90		62.65	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0*
	06/10/99	14.98		64.57	NA	NA	NA	NA	NA	NA	NA
	10/18/00	16.27		63.28	<50	<50	<0.5	<0.5	1.1	6.3	8.6*
	03/12/02	14.56		64.99	<50	<50	<0.5	0.63	0.55	1.7	0.94
	11/19/02	21.14		-21.14	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	01/09/03	17.90		-17.90	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/14/03	17.84		-17.84	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/21/03	19.79		-19.79	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/09/03	21.02		-21.02	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	01/15/04	18.10	80.50	62.40	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/08/04	17.51		62.99	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	08/10/04	20.76		59.74	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	11/11/04	21.38		59.12	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	01/19/05	17.20		63.30	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/14/05	12.68		67.82	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/19/05	15.78		64.72	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/24/05	18.68		61.82	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation		Groundwater				Total	
		(feet)	(ft msl)	(ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-8	02/02/06	14.57		65.93	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
Cont.	04/27/06	10.48		70.02	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/12/06	13.08		67.42	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/17/06	15.96		64.54	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	01/08/07	16.70		63.80	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	04/09/07	16.25		64.25	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/23/07	18.66		61.84	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/07	20.36		60.14	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	03/24/08	17.81		62.69	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	05/30/08	19.78		60.72	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	07/10/08	20.32		60.18	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/01/08	21.81		58.69	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	02/10/09	22.26		58.24	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water		Well Elevation (ft msl)	Groundwater						Total Xylenes (µg/L)	MTBE (µg/L)
		Water (feet)	Elevation (ft msl)		GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)			
EX-1	10/24/05	14.37	77.72	63.35	5,000	NA	140	8.4	20	195	360	
	02/02/06	1.68		76.04	3,000	NA	3.6	<0.50	14	55.5	0.63	
	04/27/06	1.76		75.96	130	NA	0.98	<0.50	<0.50	2.42	<0.50	
	07/12/06	6.88		70.84	2,600	NA	760	15	34	104	200	
	10/17/06	9.79		67.93	3,300	NA	810	<5.0[3]	32	68	170	
	01/08/07	5.47		72.25	910	NA	9.1	<0.50	2.7	5.9	1.6	
	04/09/07	4.88		72.84	140	NA	1.3	<0.50	1.2	0.93	<0.50	
	07/23/07	12.17		65.55	220	NA	7.4	<0.50	1.7	<0.50	0.55	
	10/15/07	NM		NM								
	03/24/08	5.17		72.55	120	NA	9.1	<0.50	1.6	0.96	<0.50	
	05/30/08	11.18		66.54	230	NA	11	<0.50	2.2	0.54	<0.50	
	07/10/08	12.27		65.45	1,100	NA	16	<0.50	4.9	13.5	<0.50	
	10/01/08	14.46		63.26	780	NA	15	<0.50	4.3	2.3	0.83	
	02/10/09	15.90		61.82	1,500	NA	40	<1.0[3]	11	9.1	2.0	
EX-2	10/24/05	16.00	76.96	60.96	42,000	NA	13,000	1,300	1,300	2,580	410	
	02/02/06	8.18		68.78	28,000	NA	9,000	1,300	1,100	3,340	200	
	04/27/06	5.22		71.74	24,000	NA	4,000	1,800	650	3,900	86	
	07/12/06	7.32		69.64	22,000	NA	6,000	1,300	810	3,280	190	
	10/17/06	9.22		67.74	31,000	NA	10,000	1,800	1,200	3,400	230	
	01/08/07	10.35		66.61	14,000	NA	4,100	440	440	1,140	90	
	04/09/07	9.67		67.29	620	NA	160	17	24	58	6.0	
	07/23/07	11.46		65.50	610	NA	150	7.5	29	38	5.2	
	10/15/07	NM		NM								
	03/24/08	9.98		66.98	4,900	NA	2,500	210	130	390	29	
	05/30/08	11.36		65.60	11,000	NA	3,300	330	380	1,100	<25[3]	
	07/10/08	11.85		65.11	17,000	NA	4,200	550	490	1,780	<25[3]	
	10/01/08	13.57		63.39	22,000	NA	5,900	510	960	3,400	<50[3]	
	02/10/09	14.50		62.46	11,000	NA	5,400	93	310	421	41	

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Well Water (feet)	Groundwater Elevation (ft msl)	GRO[5] ( $\mu\text{g/L}$ )	TPHD ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Xylenes ( $\mu\text{g/L}$ )	Total MTBE ( $\mu\text{g/L}$ )
EX-3	10/24/05	14.85	78.87	63.02	20,000	NA	220	21	660	3,110
	02/02/06	NM	NM	NM	Well Not Monitored or Sampled - Under Soil Pile					<10[3]
	04/27/06	NM	NM	NM	Well Not Monitored or Sampled - Under Soil Pile					<2.5[3]
	07/12/06	9.01	68.86	5,700	NA	79	19	120	657	
	10/17/06	NM	NM	NM	Well Not Monitored or Sampled - Covered					
	01/08/07	12.31	66.56	970	NA	8.3	0.81	19	19.8	<0.50
	04/09/07	10.78	68.09	700	NA	8.9	<0.50	11	6.5	<0.50
	07/23/07	12.82	66.05	1,500	NA	14	<0.50	21	8.9	<0.50
	10/15/07	NM	NM	Not Sampled						
	03/24/08	NM	NM	Well Not Monitored or Sampled - Covered						
EX-4	05/30/08	14.10	64.77	280	NA	0.99	<0.50	0.97	1.35	<0.50
	07/10/08	14.86	64.01	340	NA	1.5	<0.50	1.6	<0.50	<0.50
	10/01/08	16.38	62.49	330	NA	1.1	<0.50	<0.50	<0.50	<0.50
	02/10/09	NM	NM	Well Not Monitored or Sampled - Covered						
	10/24/05	14.93	77.96	63.03	1,900	NA	390	69	8.8	90
	02/02/06	NM	NM	Well Not Monitored or Sampled - Under Soil Pile						
	04/27/06	NM	NM	Well Not Monitored or Sampled - Covered						
	07/12/06	7.37	70.59	6,400	NA	1,400	400	120	1,220	35
	10/17/06	NM	NM	Well Not Monitored or Sampled - Covered						
	01/08/07	12.92	65.04	3,500	NA	840	51	22	162	25
	04/09/07	12.43	65.53	4,600	NA	730	78	83	410	6.5
	07/23/07	14.20	63.76	7,200	NA	2,600	180	100	560	29
	10/15/07	NM	Not Sampled							
	03/24/08	12.14	65.82	230	NA	29	<0.50	1.8	5.1	0.61
	05/30/08	14.10	63.86	360	NA	110	<1.0[3]	5.0	2.8	3.2
	07/10/08	15.16	62.80	500	NA	150	<1.0[3]	2.6	6.3	3.0
	10/01/08	16.41	61.55	260	NA	96	<1.0[3]	1.5	<1.0[3]	5.2
	02/10/09	18.40	59.56	330	NA	130	<0.50	2.5	1.2	11

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Well Water (feet)	Groundwater Elevation (ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total MTBE (µg/L)
<b>Note:</b>										
* = MTBE analyzed using EPA Method 8020/8021B										
MTBE = Methyl tert-butyl ether										
TPHD = Total petroleum hydrocarbons as diesel										
GRO = Gasoline Range Organics C4-C13										
GRO analyzed using EPA Method 8015B and the remaining analytes using EPA Method 8260B										
[1] Laboratory indicates the chromatogram does not match the diesel hydrocarbon range pattern.										
[2] Reporting limits were increased due to sample foaming.										
[3] Reporting limits were increased due to high concentrations of target analytes.										
[4] Casing elevation invalid - well casing modified (cut) on April 12, 2005.										
[5] Reported as total petroleum hydrocarbons as gasoline (TPHG C3-C14+) prior to second quarter 2006.										
Monitoring wells surveyed by Morrow Surveying on February 10, 2004, and again on November 29, 2005.										
Data prior to November 19, 2002 provided by GHH Engineering.										

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )	Methanol ( $\mu\text{g/L}$ )	Ethanol ( $\mu\text{g/L}$ )
S-1	11/19/02	190	<10	<1.0	<1.0	<1.0	NA	NA	NA	NA
	01/09/03	11	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	04/14/03	27	>20[2]	<2.0[2]	>2.0[2]	<2.0[2]	NA	NA	NA	NA
	07/21/03	11	<10[2]	<1.0	<1.0	<1.0	NA	NA	NA	NA
	10/09/03	8.8	6.4	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	01/15/04	6.0	10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	04/08/04	12	8.5	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	08/10/04	73	28	<1.0	<1.0	<1.0	16	<2.0	<5,000	<5,000
	11/11/04	150	14	<1.0	<1.0	<1.0	7.3	<2.0	<5,000	<5,000
	01/19/05	140	14	<1.0	<1.0	<1.0	3.8	<2.0	<5,000	<5,000
	04/14/05	120	10	<1.0	<1.0	<1.0	1.4	<2.0	<5,000	<5,000
	07/19/05	60	11	<1.0	<1.0	<1.0	9.6	<2.0	<5,000	<5,000
	10/24/05	37	<10	<1.0	<1.0	<1.0	2.2	<2.0	<5,000	<5,000
	02/02/06	45	<10	<1.0	<1.0	<1.0	1.2	<2.0	<5,000	<5,000
	04/27/06	7.7	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/12/06	12	<10	<1.0	<1.0	<1.0	7.9	<2.0	<5,000	<5,000
	10/17/06	1.6	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	01/08/07	15	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/09/07	22	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/23/07	52	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/15/07	50	<10	<1.0	<1.0	<1.0	1.8	<2.0	NA	NA
	03/24/08	29	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	05/30/08	43	13	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0[2]	NA
	07/10/08	4.1	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/01/08	70	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	02/10/09	53	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
S-2	11/19/02	750	<200[1]	<20[1]	<20[1]	NA	NA	NA	NA	NA
	01/09/03	270	<100[1]	<10[1]	<10[1]	NA	NA	NA	NA	NA
	04/14/03	400	95	<5.0[1]	<5.0[1]	NA	NA	NA	NA	NA
	07/21/03	410	110	<5.0[1]	<5.0[1]	NA	NA	NA	NA	NA
	10/09/03	180	57	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	NA	NA	NA
	01/15/04	130	48	<4.0[1]	<4.0[1]	<4.0[1]	<16[1]	NA	NA	NA
	04/08/04	430	130	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	<5,000	<5,000	<5,000
	08/10/04	92	<100[1]	<10[1]	<10[1]	74	<40[1]	<5,000	<5,000	<5,000
	11/11/04	420	<200[1]	<20[1]	<20[1]	<20[1]	<80[1]	<5,000	<5,000	<5,000
	01/19/05	580	200	<5.0[1]	<5.0[1]	8.2	<20[1]	<5,000	<5,000	<5,000
	04/14/05	510	150	<10[1]	<10[1]	<10[1]	<40[1]	<5,000	<5,000	<5,000
	07/19/05	72	37	<1.0	<1.0	<1.0	38	<2.0	<5,000	<5,000
	10/24/05	69	33	<1.0	<1.0	<1.0	35	<4.0[1]	<5,000	<5,000
	02/02/06	340	150	<1.0	<1.0	<1.0	3.2	<4.0[1]	<5,000	<5,000
	04/27/06	81	<10	<1.0	<1.0	<1.0	1.3	<2.0	<5,000	<5,000
	07/12/06	180	42	<1.0	<1.0	<1.0	5.8	<2.0	<5,000	<5,000
	10/17/06	160	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	01/08/07	64	<10	<1.0	<1.0	<1.0	2.6	<2.0	<5,000	<5,000
	04/09/07	270	32	<1.0	<1.0	<1.0	1.3	<2.0	<5,000	<5,000
	07/23/07	7.7	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/15/07	86	22	<1.0	<1.0	<1.0	3.5	<2.0	NA	NA
	03/24/08	600	180	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	NA	NA	NA
	05/30/08	340	220	<10[1]	<10[1]	<10[1]	<40[1]	NA	NA	NA
	07/10/08	420	150	<10[1]	<10[1]	<10[1]	<40[1]	NA	NA	NA
	10/01/08	720	300	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	NA	NA	NA
	02/10/09	480	140	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	NA	NA	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
MW-3	04/08/04	19	7.6	<1.0	<1.0	<1.0	<2.0	<2.0	<5,000	<5,000
	08/10/04	300	2,000	2.2	<2.0[1]	<2.0[1]	<8.0[1]	<8.0[1]	<5,000	<5,000
	11/11/04	690	1,400	<10[1]	<10[1]	<10[1]	<40[1]	<40[1]	<5,000	<5,000
	01/19/05	17	19	<1.0	<1.0	<1.0	1.4	<2.0	<5,000	<5,000
	04/14/05	11	25	<1.0	<1.0	<1.0	6.2	<2.0	<5,000	<5,000
	07/19/05	200	1,000	<2.0[1]	<2.0[1]	<2.0[1]	240	<8.0[1]	<5,000	<5,000
	10/24/05	300	750	<5.0[1]	<5.0[1]	<5.0[1]	210	<20[1]	<5,000	<5,000
	02/02/06	560	1,300	2.7	<1.0	<1.0	98	<4.0[1]	<5,000	<5,000
	04/27/06	180	330	<3.0[1]	<3.0[1]	<3.0[1]	220	<12[1]	<5,000	<5,000
	07/12/06	190	24	<2.0[1]	<2.0[1]	<2.0[1]	210	<8.0[1]	<5,000	<5,000
	10/17/06	100	50	<1.0	<1.0	<1.0	21	<2.0	<5,000	<5,000
	01/08/07	85	30	<1.0	<1.0	<1.0	22	<2.0	<5,000	<5,000
	04/09/07	600	510	<5.0[1]	<5.0[1]	<5.0[1]	67	<20[1]	<5,000	<5,000
	07/23/07	630	920	<5.0[1]	<5.0[1]	<5.0[1]	99	<20[1]	NA	NA
	10/15/07	610	840	<5.0[1]	<5.0[1]	<5.0[1]	110	<20[1]	NA	NA
	03/24/08	820	840	3.2	<2.0[1]	<2.0[1]	63	<8.0[1]	NA	NA
	05/30/08	610	880	<5.0[1]	<5.0[1]	<5.0[1]	68	<20[1]	NA	NA
	07/10/08	560	570	3.2	<2.0[1]	<2.0[1]	30	<8.0[1]	NA	NA
	10/01/08	620	1,100	3.5	<2.0[1]	<2.0[1]	94	<8.0[1]	NA	NA
	02/10/09	660	820	4.0	<2.0[1]	<2.0[1]	38	<8.0[1]	NA	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
MW-4	11/19/02	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	01/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	04/14/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	07/21/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	10/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	01/15/04	<0.50	7.8	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	04/08/04	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	08/10/04	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	11/11/04	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	01/19/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	04/14/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	07/19/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/24/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	02/02/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	04/27/06	<0.50	<10	<1.0	<1.0	<1.0	Well Not Monitored or Sampled - Covered	<2.0	<5,000	<5,000
	07/12/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	10/17/06					Well Not Monitored or Sampled - Covered				
	01/08/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/09/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/23/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/15/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	03/24/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	05/30/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	07/10/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/01/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	02/10/09	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )	Methanol ( $\mu\text{g/L}$ )	Ethanol ( $\mu\text{g/L}$ )
MW-5	1/19/02									
	01/09/03									
	04/14/03									
	07/21/03									
	10/09/03									
	01/15/04									
	04/08/04	<0.50	<1.0	<1.0	<1.0	<1.0	<4.0[2]	<5,000	<5,000	
	08/10/04	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000	
	11/11/04									
	01/19/05									
	04/14/05	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000	
	07/19/05	<0.50	<1.0	<1.0	<1.0	<1.0	<4.0[2]	<5,000	<5,000	
	10/24/05	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000	
	02/02/06									
	04/27/06	<0.50	<1.0	<1.0	<1.0	<1.0	<4.0[2]	<5,000	<5,000	
	07/12/06									
	10/17/06									
	01/08/07									
	04/09/07	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA	
	04/23/07	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA	
	07/23/07	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA	
	10/15/07	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA	
	03/24/08	<0.50	<1.0	<1.0	<1.0	<1.0	<4.0[2]	NA	NA	
	05/30/08	<1.0[2]	<20[2]	<2.0[2]	<2.0[2]	<2.0[2]	<2.0[2]	NA	NA	
	07/10/08	<0.50	<1.0	<1.0	<1.0	<1.0	<4.0[2]	NA	NA	
	10/01/08	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA	
	02/10/09	<1.0[2]	<20[2]	<2.0[2]	<2.0[2]	<2.0[2]	<2.0[2]	NA	NA	
MW-6	10/15/07									
	10/01/08									
								Well Destroyed	Well Destroyed	

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
MW-7	11/19/02	3.8	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	01/09/03	2.7	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	04/14/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	07/21/03	1.8	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	10/09/03	2.9	<5.0	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	01/15/04	2.6	7.9	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	04/08/04	0.81	9.0	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	08/10/04	2.1	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	11/11/04	1.0	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	01/19/05	1.5	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/14/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/19/05	1.9	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	10/24/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	02/02/06	1.3	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/27/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/12/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	10/17/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	01/08/07	0.99	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/09/07	0.54	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/23/07	1.7	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/15/07	0.81	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	03/24/08	0.85	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	05/30/08	0.56	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	07/10/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/01/08	0.66	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	02/10/09	0.67	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
MW-8	1/19/02	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	01/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	04/14/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	07/21/03	<0.50	<10[2]	<1.0	<1.0	<1.0	NA	NA	NA	NA
	10/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA	NA	NA
	01/15/04	<0.50	9.9	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	04/08/04	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	08/10/04	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	11/11/04	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	01/19/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/14/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/19/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	10/24/05	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	02/02/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/27/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<4.0[2]	<5,000	<5,000
	07/12/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	10/17/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	01/08/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/09/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/23/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/15/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	03/24/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	05/30/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	07/10/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/01/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	02/10/09	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**  
Former USA Service Station No. 57  
10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
EX-1	10/24/05	360	120	<1.0	<1.0	<1.0	<1.0	<4.0[1]	<5,000	<5,000
	02/02/06	0.63	<10	<1.0	<1.0	<1.0	<1.0	<4.0[1]	<5,000	<5,000
	04/27/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/12/06	200	110	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	<5,000	<5,000
	10/17/06	170	<100[1]	<10[1]	<10[1]	<10[1]	30	<40[1]	<5,000	<5,000
	01/08/07	1.6	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	04/09/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/23/07	0.55	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/15/07					Not Sampled				
	03/24/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	05/30/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	07/10/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/01/08	0.83	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	02/16/09	2.0	<20[1]	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	<8.0[1]	NA	NA
EX-2	10/24/05	410	<2,000[1]	<200[1]	<200[1]	<200[1]	<200[1]	<800[1]	<5,000	<5,000
	02/02/06	200	<1,000[1]	<100[1]	<100[1]	<100[1]	<100[1]	<400[1]	<5,000	<5,000
	04/27/06	86	<500[1]	<50[1]	<50[1]	<50[1]	<50[1]	<200[1]	<5,000	<5,000
	07/12/06	190	<500[1]	<50[1]	<50[1]	<50[1]	<50[1]	<200[1]	<5,000	<5,000
	10/17/06	230	<1,000[1]	<100[1]	<100[1]	<100[1]	400	<400[1]	<5,000	<5,000
	01/08/07	90	<400[1]	<40[1]	<40[1]	<40[1]	<40[1]	<160[1]	<5,000	<5,000
	04/09/07	6.0	<20[1]	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	<8.0[1]	<5,000	<5,000
	07/23/07	5.2	<10	<1.0	<1.0	<1.0	<1.0	<4.0[1]	NA	NA
	10/15/07					Not Sampled				
	03/24/08	29	<200[1]	<20[1]	<20[1]	<20[1]	<20[1]	<80[1]	NA	NA
	05/30/08	<25[1]	<500[1]	<50[1]	<50[1]	<50[1]	<50[1]	<200[1]	NA	NA
	07/10/08	<25[1]	<500[1]	<50[1]	<50[1]	<50[1]	<50[1]	<200[1]	NA	NA
	10/01/08	<50[1]	<1,000[1]	<100[1]	<100[1]	<100[1]	<100[1]	<400[1]	NA	NA
	02/10/09	41	<500[1]	<50[1]	<50[1]	<50[1]	<50[1]	<200[1]	NA	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**

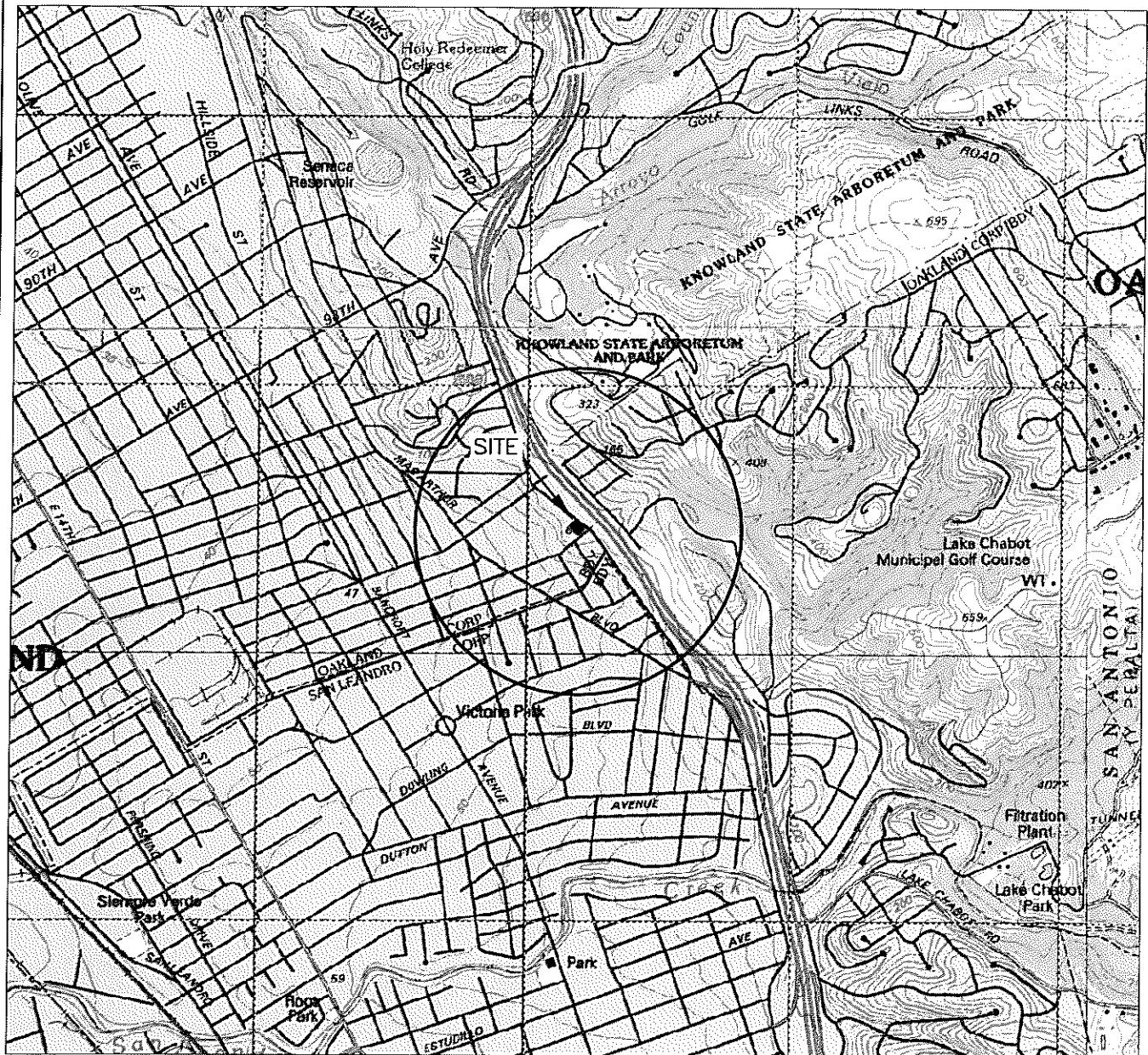
Former USA Service Station No. 57  
 10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
EX-3	10/24/05	<10[1]	<200[1]	<20[1]	<20[1]	<20[1]	<20[1]	<80[1]	<5,000	<5,000
	02/02/06									
	04/27/06									
	07/12/06	<2.5[1]	<50[1]	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	<5,000	<5,000
	10/17/06									
	01/08/07	<0.50	12	<1.0	<1.0	<1.0	1.1	<2.0	<5,000	<5,000
	04/09/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	07/23/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	10/15/07									
	03/24/08									
	05/30/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<4.0[2]	NA	NA
	07/10/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<4.0[2]	NA	NA
	10/01/08	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	02/10/09									
EX-4	10/24/05	11	51	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	<5,000	<5,000
	02/02/06									
	04/27/06									
	07/12/06	35	<200[1]	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	<5,000	<5,000
	10/17/06									
	01/08/07	25	<100[1]	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	<5,000	<5,000
	04/09/07	6.5	<100[1]	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	<5,000	<5,000
	07/23/07	29	<200[1]	<20[1]	<20[1]	<20[1]	<20[1]	<80[1]	NA	NA
	10/15/07									
	03/24/08	0.61	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	05/30/08	3.2	<20[1]	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	<8.0[1]	NA	NA
	07/10/08	3.0	<20[1]	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	<8.0[1]	NA	NA
	10/01/08	5.2	25	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	<8.0[1]	NA	NA
	02/10/09	11	27	<1.0	<1.0	<1.0	<1.0	2.0	<4.0[1]	NA

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**

Former USA Service Station No. 57  
 10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	MTBE ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )	Methanol ( $\mu\text{g/L}$ )	Ethanol ( $\mu\text{g/L}$ )
<b>Note:</b>										
Oxygenates analyzed using EPA Method 8260B										
$\mu\text{g/L}$ = micrograms per liter										
NA = Not analyzed										
[1] Reporting limits were increased due to high concentrations of target analytes										
[2] Reporting limits were increased due to sample foaming										
MTBE = Methyl tertiary butyl ether										
TBA = Tertiary butyl alcohol										
DiPE = Di-isopropyl ether										
ETBE = Ethyl tertiary butyl ether										
TAME = Tertiary amyl methyl ether										
1,2-DCA = 1,2-Dichloroethane										
EDB = 1,2-Dibromoethane										



GENERAL NOTES:

BASE MAP FROM U.S.G.S.

OAKLAND, CA

7.5 MINUTE TOPOGRAPHIC  
PHOTOREVISED 1980

JMP August 13, 2007 USA 57 Site Location Map



SCALE 1:24,000

USGS/Quarterly REV

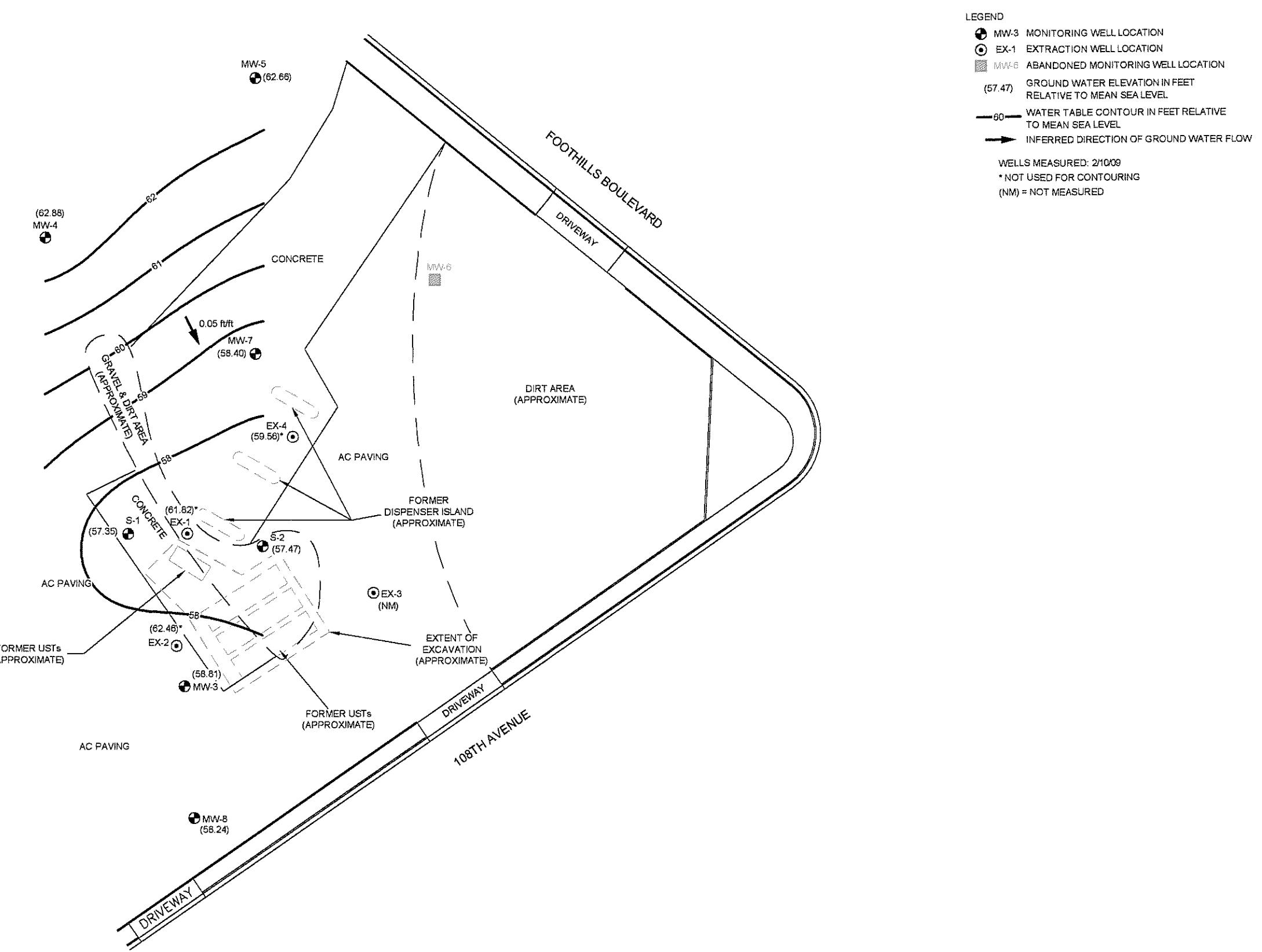
**STRATUS**  
ENVIRONMENTAL, INC.

FORMER USA SERVICE STATION NO. 57  
10700 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA  
SITE LOCATION MAP

FIGURE

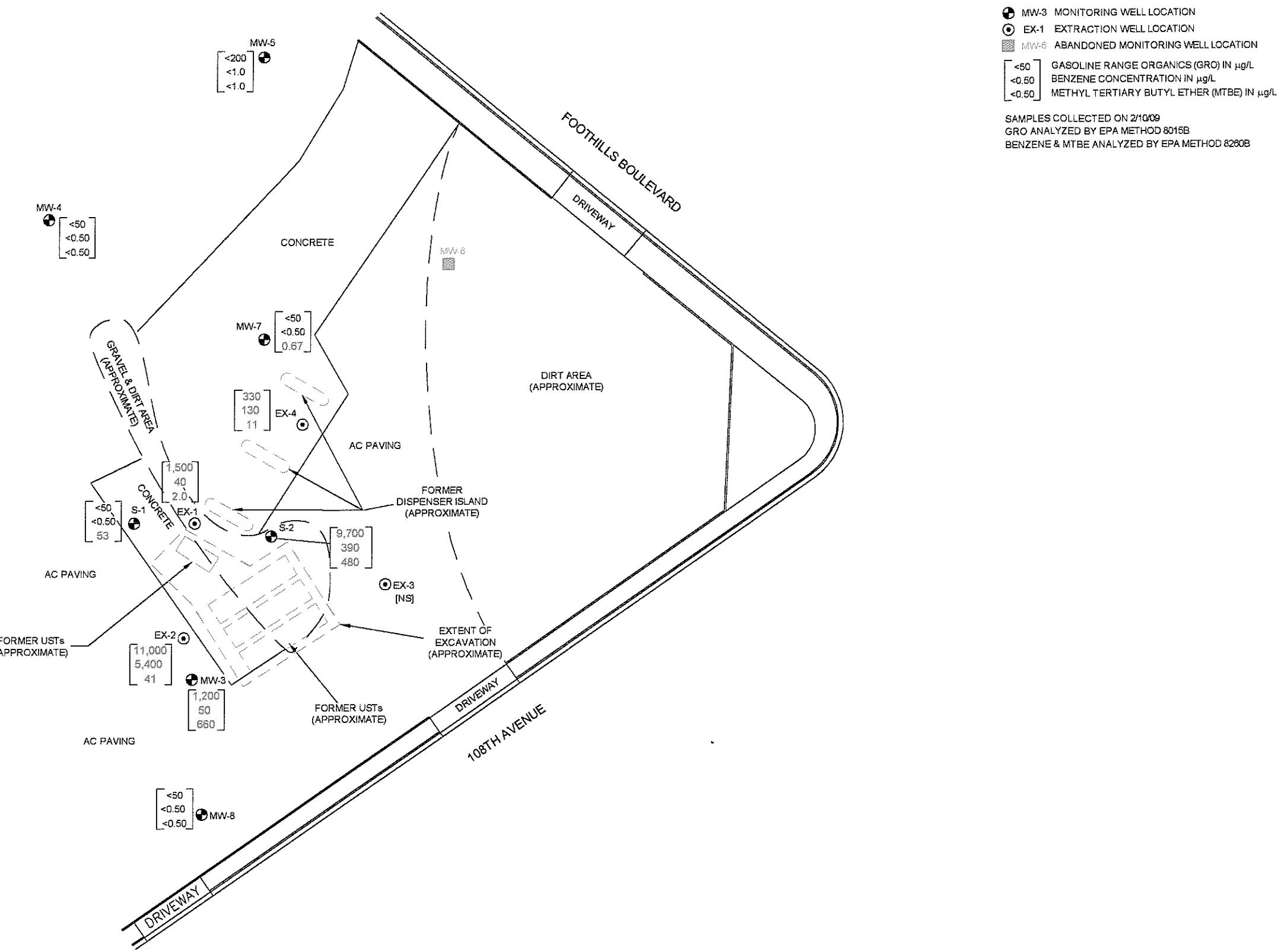
**1**

PROJECT NO.  
2007-0057-01

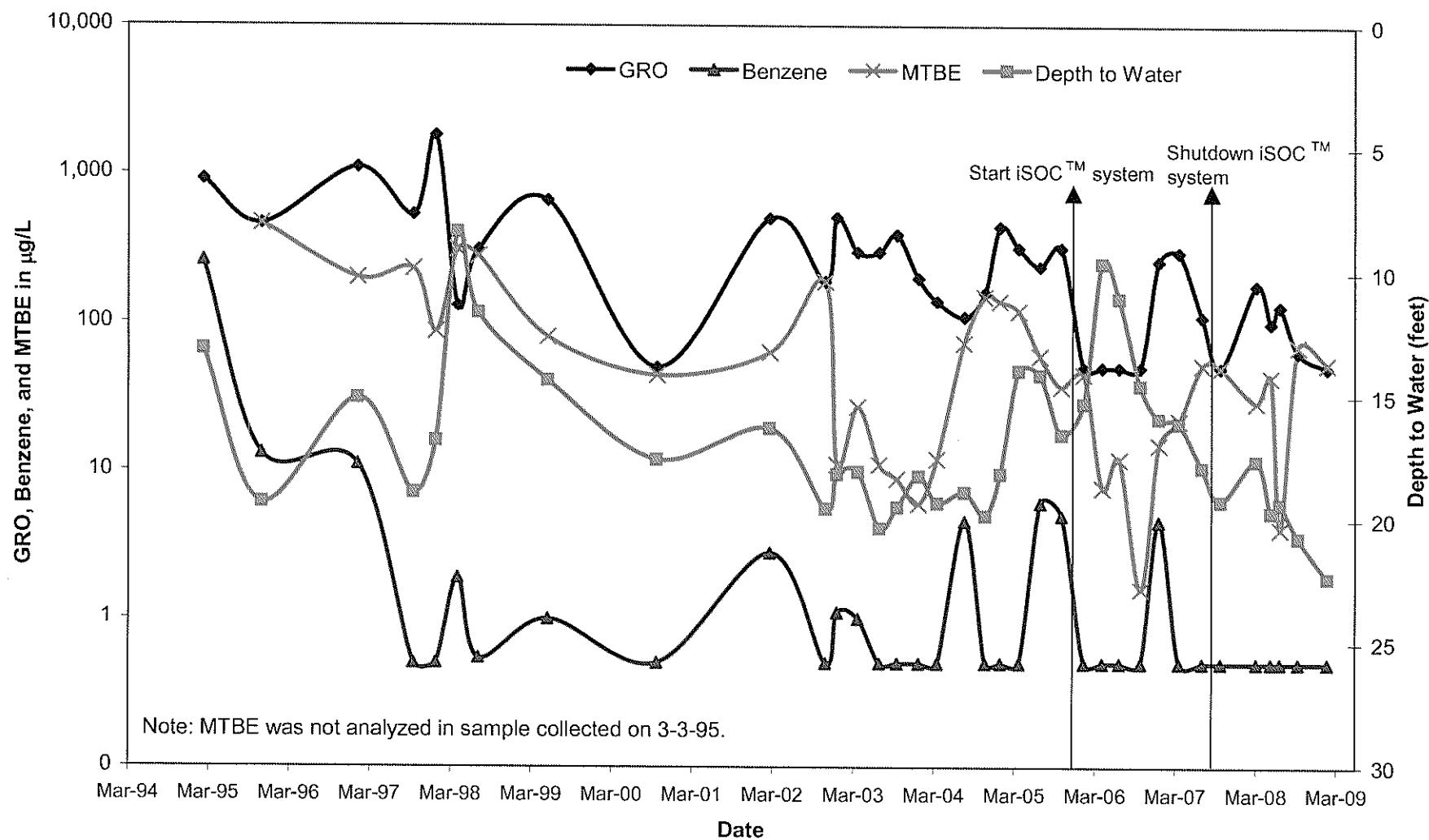


FORMER USA SERVICE STATION NO. 57  
 10700 MACARTHUR BOULEVARD  
 OAKLAND, CALIFORNIA  
 GROUNDWATER ELEVATION CONTOUR MAP  
 1st QUARTER 2009

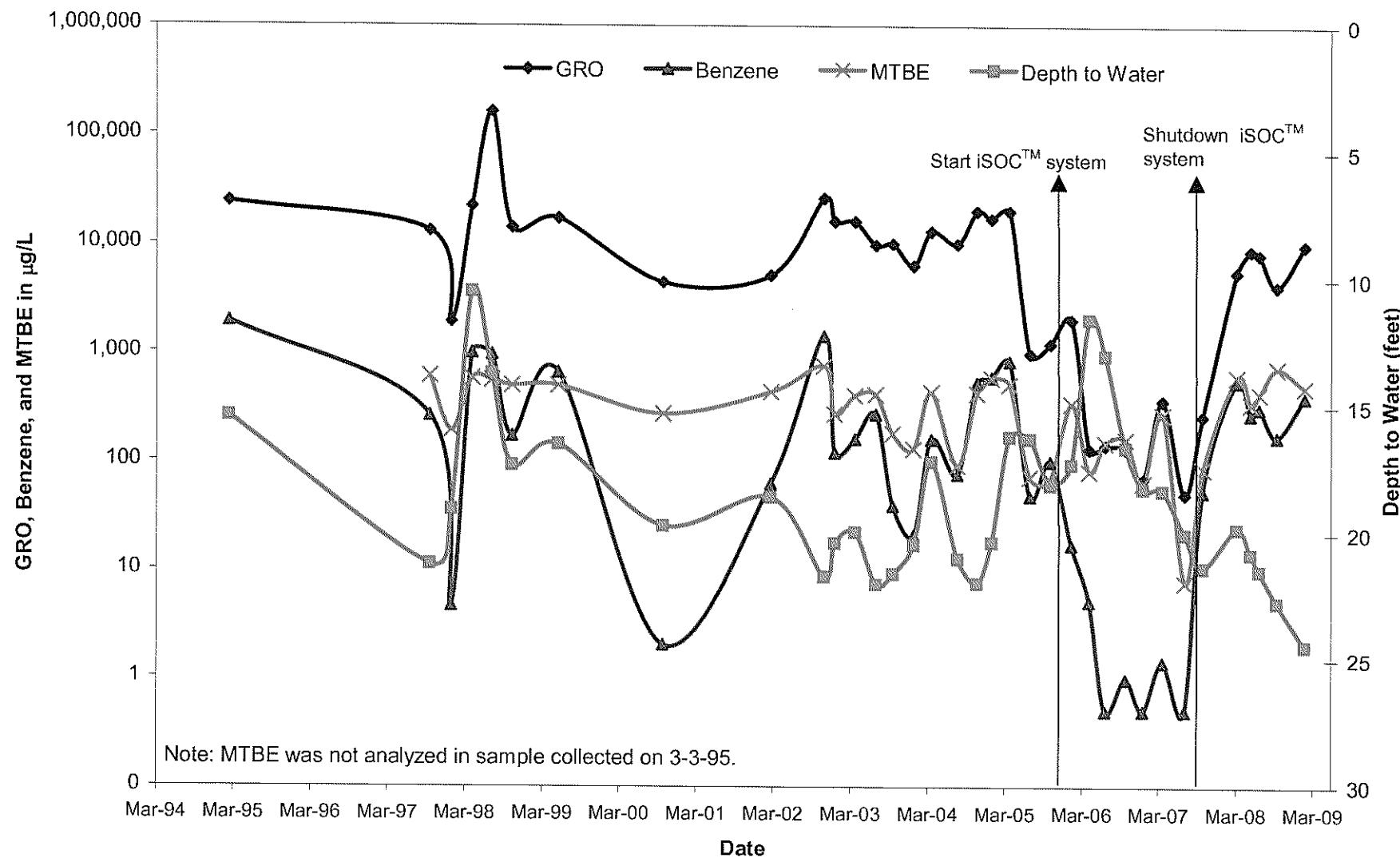
FIGURE  
**2**  
 PROJECT NO.  
 2007-0057-01



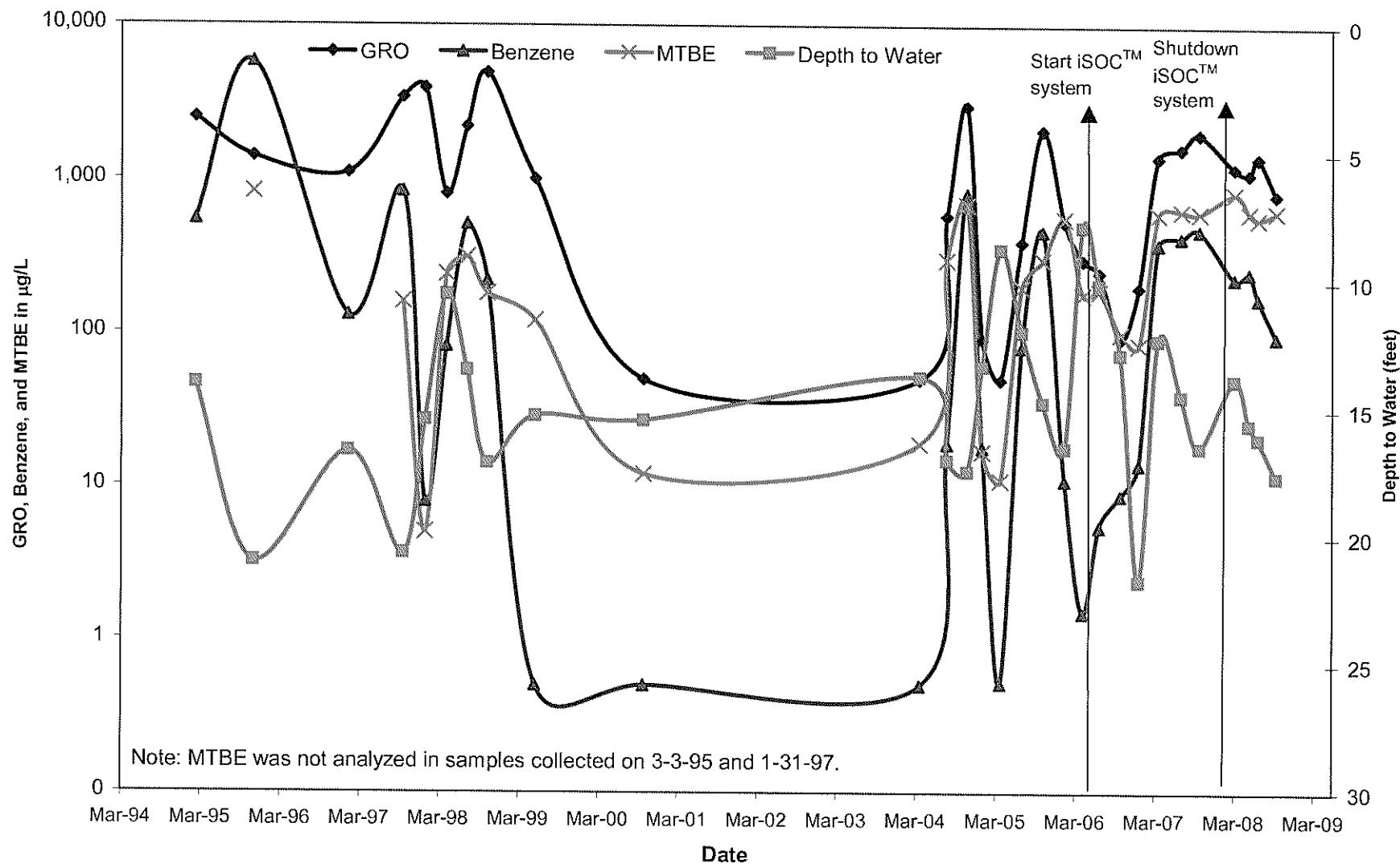
**Figure 4**  
**GRO, Benzene, MTBE Concentration, and Depth to Water Variation with Time at S-1**  
Former USA Service Station No. 57  
10700 MacArthur Boulevard  
Oakland, California



**Figure 5**  
**GRO, Benzene, MTBE Concentration, and Depth to Water Variation with Time at S-2**  
Former USA Service Station No. 57  
10700 MacArthur Boulevard  
Oakland, California



**Figure 6**  
**GRO, Benzene, MTBE Concentration, and Depth to Water Variation with Time at MW-3**  
Former USA Service Station No. 57  
10700 MacArthur Boulevard  
Oakland, California



**APPENDIX A**

**FIELD DATA SHEETS**

Site Address 10700 MacArthur Blvd  
 City Oakland Ca  
 Sampled by: C. Grant  
 Signature Chris J. Grant

Site Number USA 57  
 Project Number 2007-0057-01  
 Project PM SCOTT BITTINGER  
 DATE 02/10/09

Water Level Data				Purge Volume Calculations					Purge Method				Sample Record			Field Data
Well ID	Time	Depth to Product (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	3 casing volumes (gallons)	Actual water purged (gallons)	No Purge	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D.	Sample Time	DO (mg/L)
S - 1	1137		22.31	34.42	12.11	3	1	12.11	8	DRY @ 8	X		27.05	S - 1	1800	2.03
S - 2	1153		24.43	43.72	19.29	3	1	19.29	17	DRY @ 17	X		29.80	S - 2	1620	2.43
MW - 3	1200		18.46	40.71	22.25	4	2	44.50	22	DRY @ 22	X		25.16	MW - 3	1537	1.49
MW - 4	1230		13.38	38.66	25.28	4	2	50.56	50.5			X	21.38	MW - 4	1301	2.47
MW - 5	1225		18.12	27.75	9.63	4	2	19.26	8		XPRY @ 8		20.63	MW - 5	1333	1.45
MW - 7	1219		21.41	41.83	20.42	4	2	40.84	41			X	24.15	MW - 7	1410	1.39
MW - 8	1214		22.26	37.56	15.30	4	2	30.60	30.5			X	27.33	MW - 8	1516	2.25
EX - 1	1142		15.90	24.31	8.41	4	2	16.82	16	DRY @ 10	X		16.96	EX - 1	1720	2.20
EX - 2	1149		14.50	24.98	10.48	4	2	20.96	8.5	DRY @ 8.5	X		18.47	EX - 2	1647	1.40
EX - 3	- covered by dirt		—	—	—	4	2	—	—			X		EX - 3	—	—
EX - 4	1208		18.40	24.79	6.39	4	2	12.78	9.5		XPRY @ 9.5		21.85	EX - 4	1435	1.08
TOT: 205 gal																

\* Bring shovel next time EX - 3 completely covered by pile of dirt

Please refer to groundwater sampling field procedures

pH/Conductivity/temperature Meter - Oakton Model PC-10

DO Meter - Oakton 300 Series (DO is always measured before purge)

Multiplier

2" = 0.5 3" = 1.0 4" = 2.0 6" = 4.4

CALIBRATION DATE

pH 02/06/09 u

Conductivity

DO

# STRATUS

ENVIRONMENTAL, INC.

Site Address 10700 Mac Arthur Blvd

City Oakland, ca

Site Sampled by CG

Site Number USA 57

Project No. 2007-0057-01

Project PM S. Bittinger

Date Sampled 02/10/09

Well ID S-1		1800		Well ID S-2		1620	
purge start time 1732		odor		purge start time 1601		odor	
	Temp C	pH	cond	gallons		Temp C	pH
time	20.9	7.36	1079	Ø	time	23.1	7.29
time	19.9	7.67	974	6	time	21.2	7.13
time	DRY	(@)	8 gal		time	DRY	(@) 17 gal
time	18.8	7.22	1200	(8)	time	19.2	7.10
purge stop time 1740		purge stop time 1612		1085		(17)	
Well ID MW-4		1301		Well ID MW-5		1333	
purge start time 1238		no odor		purge start time Bar'fer		odor	
	Temp C	pH	cond	gallons		Temp C	pH
time	23.6	6.97	974	Ø	time	19.6	8.11
time	21.7	7.25	948	25	time	DRY	(@) 8 gal
time	20.3	7.25	963	50.5	time	18.0	8.39
time					time	1809	(8)
purge stop time 1252		purge stop time					
Well ID MW-7		1410		Well ID MW-8		1516	
purge start time 1346		no odor		purge start time 1448		no odor	
	Temp C	pH	cond	gallons		Temp C	pH
time	20.7	3.00	782	Ø	time	18.4	6.97
time	21.3	7.71	772	20.5	time	20.9	7.27
time	16.5	8.23	816	41	time	18.9	7.06
time					time	845	30.5
purge stop time 1358		purge stop time 1509					
Well ID MW-3		1537		Well ID EX-1		1720	
purge start time 1522		odor		purge start time 1659		odor	
	Temp C	pH	cond	gallons		Temp C	pH
time	20.7	7.09	2-108m	Ø	time	24.1	7.50
time	DRY	(@) 22 gal			time	20.0	7.56
time	19.6	7.00	2-52m	(22)	time	DRY	(@) 10 gal
time					time	19.8	7.58
purge stop time 1531		purge stop time 1708		924		(10)	

# STRATUS

ENVIRONMENTAL, INC.

Site Address 10700 CUTTING Blvd

City oakland, ca

Site Sampled by CG

Site Number USA 57

Project No. 2007 - 6057 - 01

Project PM Scott Bittinger

Date Sampled 02/10/09

Well ID <u>EX - 2</u>					<u>1647</u>	Well ID <u>EX - 3</u>				
purge start time <u>1630</u>					<u>odor</u>	purge start time <u>Covered by dirt</u>				
	Temp C	pH	cond	gallons			Temp C	pH	cond	gallons
time	<u>22.3</u>	<u>6.97</u>	<u>1534</u>	<u>0</u>		time	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
time	<u>DRY (a) 8.5 gal</u>					time	/	/	/	/
time	<u>20.3</u>	<u>7.08</u>	<u>1600</u>	<u>(8.5)</u>		time	/	/	/	/
time						time				
purge stop time <u>1640</u>					purge stop time					
Well ID <u>EX - 4</u>					<u>1435</u>	Well ID				
purge start time <u>Bailer</u>					<u>odor</u>	purge start time				
	Temp C	pH	cond	gallons			Temp C	pH	cond	gallons
time	<u>18.7</u>	<u>7.32</u>	<u>1655</u>	<u>0</u>		time				
time	<u>18.5</u>	<u>7.30</u>	<u>1661</u>	<u>6</u>		time				
time	<u>DRY (a) 9.5 gal</u>					time				
time	<u>18.3</u>	<u>7.25</u>	<u>1077</u>	<u>(9.5)</u>		time				
purge stop time					purge stop time					
Well ID					Well ID					
purge start time					purge start time					
	Temp C	pH	cond	gallons			Temp C	pH	cond	gallons
time						time				
time						time				
time						time				
time						time				
purge stop time					purge stop time					
Well ID					Well ID					
purge start time					purge start time					
	Temp C	pH	cond	gallons			Temp C	pH	cond	gallons
time						time				
time						time				
time						time				
time						time				
purge stop time					purge stop time					

# WELLHEAD OBSERVATION FORM

Site Name/Number: USA 57

Date: 02/10/09 Technician: C. Grant

STRATUS  
ENVIRONMENTAL, INC.

Well I.D.	Box in Good Condition?	Lock Missing?	Water in Wellbox?	Water Level Relative to Cap?	Well Cap?	Bolts Missing?	Bolts Stripped?	Bolt Holes Stripped?	Cracked or Broken Lid?	Cracked or Broken Box?	Grout Level more than 1ft below TOC?	Additional Comments <small>(such as missing lid, concrete needs replacement, or other - explain)</small>
	X = Yes Blank = No	X = Yes (replaced) Blank = No	X = Yes Blank = No	A = Above cap B = Below cap L = Level w/cap	I = intact M = Missing or Compromised (replaced)	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	
S-1	X											
S-2	X											
MW-3	X											
MW-4												
MW-5	X											
MW-7	X											
MW-8	X											
EX-1	X											
EX-2	X											
EX-3	- covered by pile of dirt -											
EX-4	X											

## DRUM INVENTORY

Drums on site? Yes  (circle)

Type and # Steel: \_\_\_\_\_ Plastic: \_\_\_\_\_

Note whether drums are full or empty, solids or liquids:

Drum label info (description, date, contact info):

## GENERAL SITE CONDITIONS

Make notes on housekeeping conditions (such as trash around remediation system enclosure/compound, bent or missing bollards, signs missing from compound fences, graffiti on compound, etc.)

---



---



---



---



---

**APPENDIX B**

**SAMPLING AND ANALYSIS PROCEDURES**

## **SAMPLING AND ANALYSIS PROCEDURES**

---

The sampling and analysis procedures as well as the quality assurance plan are contained in this appendix. The procedures and adherence to the quality assurance plan will provide for consistent and reproducible sampling methods; proper application of analytical methods; accurate and precise analytical results; and finally, these procedures will provide guidelines so that the overall objectives of the monitoring program are achieved.

### **Ground Water and Liquid-Phase Petroleum Hydrocarbon Depth Assessment**

A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the ground water depth in monitoring wells that do not contain LPH. Depth to ground water or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typical a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

### **Subjective Analysis of Ground Water**

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

### **Monitoring Well Purging and Sampling**

Monitoring wells are purged using a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water have been removed. If three well volumes can not be removed in one half hour's time, the well is allowed to recharge to 80% of original level. After recharging, a ground water sample is then removed from each of the wells using a disposable bailer.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These bottles will be filled completely to prevent air from remaining in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped.

The water sample is collected, labeled, and handled according to the Quality Assurance Plan. Water generated during the monitoring event is disposed of according to regulatory accepted method pertaining to the site.

## **QUALITY ASSURANCE PLAN**

Procedures to provide data quality should be established and documented so that conditions adverse to quality, such as deficiencies, deviations, nonconformities, defective material, services, and/or equipment, can be promptly identified and corrected.

### **General Sample Collection and Handling Procedures**

Proper collection and handling are essential to ensure the quality of a sample. Each sample is collected in a suitable container, preserved correctly for the intended analysis, and stored prior to analysis for no longer than the maximum allowable holding time. Details on the procedures for collection and handling of samples used on this project can be found in this section.

### **Soil and Water Sample Labeling and Preservation**

Label information includes a unique sample identification number, job identification number, date, and time. After labeling all soil and water samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Upon recovery, the sample container is sealed to minimize the potential of volatilization and cross-contamination prior to chemical analysis. Soil sampling tubes are typically closed at each end with Teflon® sheeting and plastic caps. The sample is then placed in a Ziploc® type bag and sealed. The sample is labeled and refrigerated at approximately 4° Celsius for delivery, under strict chain-of-custody, to the analytical laboratory.

### **Sample Identification and Chain-of-Custody Procedures**

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded on the borehole log or in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and

noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

### **Equipment Cleaning**

Sample bottles, caps, and septa used in sampling for volatile and semivolatile organics will be triple rinsed with high-purity deionized water. After being rinsed, sample bottles will be dried overnight at a temperature of 200°C. Sample caps and septa will be dried overnight at a temperature of 60°C. Sample bottles, caps, and septa will be protected from solvent contact between drying and actual use at the sampling site. Sampling containers will be used only once and discarded after analysis is complete.

Plastic bottles and caps used in sampling for metals will be soaked overnight in a 1-percent nitric acid solution. Next, the bottles and caps will be triple rinsed with deionized water. Finally, the bottles and caps will be air dried before being used at the site. Plastic bottles and caps will be constructed of linear polyethylene or polypropylene. Sampling containers will be used only once and discarded after analysis is complete. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Before the sampling event is started, equipment that will be placed in the well or will come in contact with groundwater will be disassembled and cleaned thoroughly with detergent water, and then steam cleaned with deionized water. Any parts that may absorb contaminants, such as plastic pump valves, etc. will be cleaned as described above or replaced.

During field sampling, equipment surfaces that are placed in the well or contact groundwater will be steam cleaned with deionized water before the next well is purged or sampled. Equipment blanks will be collected and analyzed from non-disposable sampling equipment that is used for collecting groundwater samples at the rate of one blank per twenty samples collected.

### **Internal Quality Assurance Checks**

Internal quality assurance procedures are designed to provide reliability of monitoring and measurement of data. Both field and laboratory quality assurance checks are necessary to evaluate the reliability of sampling and analysis results. Internal quality assurance procedures generally include:

- Laboratory Quality Assurance

- Documentation of instrument performance checks
- Documentation of instrument calibration
- Documentation of the traceability of instrument standards, samples, and data
- Documentation of analytical and QC methodology (QC methodology includes use of spiked samples, duplicate samples, split samples, use of reference blanks, and check standards to check method accuracy and precision)

- Field Quality Assurance

- Documentation of sample preservation and transportation
- Documentation of field instrument calibration and irregularities in performance

Internal laboratory quality assurance checks will be the responsibility of the contract laboratories. Data and reports submitted by field personnel and the contract laboratory will be reviewed and maintained in the project files.

**Types of Quality Control Checks**

Samples are analyzed using analytical methods outlined in EPA Manual SW 846 and approved by the California Regional Water Quality Control Board-Central Valley Region in the Leaking Underground Fuel Tanks (LUFT) manual and appendices. Standard contract laboratory quality control may include analysis or use of the following:

- Method blanks – reagent water used to prepare calibration standards, spike solutions, etc. is analyzed in the same manner as the sample to demonstrate that analytical interferences are under control.
- Matrix spiked samples – a known amount of spike solution containing selected constituents is added to the sample at concentrations at which the accuracy of the analytical method is to satisfactorily monitor and evaluate laboratory data quality.
- Split samples – a sample is split into two separate aliquots before analysis to assess the reproducibility of the analysis.
- Surrogate samples – samples are spiked with surrogate constituents at known concentrations to monitor both the performance of the analytical system and the effectiveness of the method in dealing with the sample matrix.
- Control charts – graphical presentation of spike or split sample results used to track the accuracy or precision of the analysis.
- Quality control check samples – when spiked sample analysis indicates atypical instrument performance, a quality check sample, which is prepared independently of the calibration standards and contains the constituents of interest, is analyzed to confirm that measurements were performed accurately.

- Calibration standards and devices – traceable standards or devices to set instrument response so that sample analysis results represent the absolute concentration of the constituent.

Field QA samples will be collected to assess sample handling procedures and conditions. Standard field quality control may include the use of the following, and will be collected and analyzed as outlined in EPA Manual SW 846.

- Field blanks – reagent water samples are prepared at the sampling location by the same procedure used to collect field groundwater samples and analyzed with the groundwater samples to assess the impact of sampling techniques on data quality. Typically, one field blank per twenty groundwater samples collected will be analyzed per sampling event.
- Field replicates – duplicate or triplicate samples are collected and analyzed to assess the reproducibility of the analytical data. One replicate groundwater sample per twenty samples collected will be analyzed per sampling event, unless otherwise specified. Triplicate samples will be collected only when specific conditions warrant and generally are sent to an alternate laboratory to confirm the accuracy of the routinely used laboratory.
- Trip blanks – reagent water samples are prepared before field work, transported and stored with the samples and analyzed to assess the impact of sample transport and storage for data quality. In the event that any analyte is detected in the field blank, a trip blank will be included in the subsequent groundwater sampling event.

Data reliability will be evaluated by the certified laboratory and reported on a cover sheet attached to the laboratory data report. Analytical data resulting from the testing of field or trip blanks will be included in the laboratory's report. Results from matrix spike, surrogate, and method blank testing will be reported, along with a statement of whether the samples were analyzed within the appropriate holding time.

Stratus will evaluate the laboratory's report on data reliability and note significant QC results that may make the data biased or unacceptable. Data viability will be performed as outlined in EPA Manual SW 846. If biased or unacceptable data is noted, corrective actions (including re-sample/re-analyze, etc.) will be evaluated on a site-specific basis.

**APPENDIX C**

**CERTIFIED ANALYTICAL REPORTS AND  
CHAIN-OF-CUSTODY DOCUMENTATION**



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**COPY**

## ANALYTICAL REPORT

Stratus Environmental  
 3330 Cameron Park Drive  
 Cameron Park, CA 956828861

Attn: Scott Bittinger  
 Phone: (530) 676-2062  
 Fax: (530) 676-6005  
 Date Received : 02/14/09

Job#: USA 57

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B  
 Volatile Organic Compounds (VOCs) EPA Method SW8260B

Client ID :	Parameter	Concentration	Reporting Limit	Date	Date
				Sampled	Analyzed
S-1	TPH-P (GRO)	ND	50 µg/L	02/10/09	02/17/09
	Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	02/10/09	02/17/09
	Methyl tert-butyl ether (MTBE)	53	0.50 µg/L	02/10/09	02/17/09
	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	02/10/09	02/17/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	02/10/09	02/17/09
	1,2-Dichloroethane	ND	1.0 µg/L	02/10/09	02/17/09
	Benzene	ND	0.50 µg/L	02/10/09	02/17/09
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	02/10/09	02/17/09
	Toluene	ND	0.50 µg/L	02/10/09	02/17/09
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	02/10/09	02/17/09
	Ethylbenzene	ND	0.50 µg/L	02/10/09	02/17/09
	m,p-Xylene	ND	0.50 µg/L	02/10/09	02/17/09
	o-Xylene	ND	0.50 µg/L	02/10/09	02/17/09
S-2	TPH-P (GRO)	9,700	500 µg/L	02/10/09	02/17/09
	Tertiary Butyl Alcohol (TBA)	140	50 µg/L	02/10/09	02/17/09
	Methyl tert-butyl ether (MTBE)	480	2.5 µg/L	02/10/09	02/17/09
	Di-isopropyl Ether (DIPE)	ND	V	5.0 µg/L	02/10/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	V	5.0 µg/L	02/10/09
	1,2-Dichloroethane	ND	V	5.0 µg/L	02/10/09
	Benzene	390		2.5 µg/L	02/10/09
	Tertiary Amyl Methyl Ether (TAME)	ND	V	5.0 µg/L	02/10/09
	Toluene	31		2.5 µg/L	02/10/09
	1,2-Dibromoethane (EDB)	ND	V	20 µg/L	02/10/09
	Ethylbenzene	340		2.5 µg/L	02/10/09
	m,p-Xylene	98		2.5 µg/L	02/10/09
	o-Xylene	9.5		2.5 µg/L	02/10/09
MW-3	TPH-P (GRO)	1,200	200 µg/L	02/10/09	02/17/09
	Tertiary Butyl Alcohol (TBA)	820	20 µg/L	02/10/09	02/17/09
	Methyl tert-butyl ether (MTBE)	660	1.0 µg/L	02/10/09	02/17/09
	Di-isopropyl Ether (DIPE)	4.0		2.0 µg/L	02/10/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	V	2.0 µg/L	02/10/09
	1,2-Dichloroethane	38		2.0 µg/L	02/10/09
	Benzene	50		1.0 µg/L	02/10/09
	Tertiary Amyl Methyl Ether (TAME)	ND	V	2.0 µg/L	02/10/09
	Toluene	ND	V	1.0 µg/L	02/10/09
	1,2-Dibromoethane (EDB)	ND	V	8.0 µg/L	02/10/09
	Ethylbenzene	1.8		1.0 µg/L	02/10/09
	m,p-Xylene	ND	V	1.0 µg/L	02/10/09
	o-Xylene	ND	V	1.0 µg/L	02/10/09



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Client ID :	TPH-P (GRO)	ND	50 µg/L	02/10/09	02/17/09	
<b>MW-4</b>	Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	02/10/09	02/17/09	
Lab ID :	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	02/10/09	02/17/09	
STR09021640-04A	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	02/10/09	02/17/09	
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	02/10/09	02/17/09	
	1,2-Dichloroethane	ND	1.0 µg/L	02/10/09	02/17/09	
	Benzene	ND	0.50 µg/L	02/10/09	02/17/09	
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	02/10/09	02/17/09	
	Toluene	ND	0.50 µg/L	02/10/09	02/17/09	
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	02/10/09	02/17/09	
	Ethylbenzene	ND	0.50 µg/L	02/10/09	02/17/09	
	m,p-Xylene	ND	0.50 µg/L	02/10/09	02/17/09	
	o-Xylene	ND	0.50 µg/L	02/10/09	02/17/09	
Client ID :	TPH-P (GRO)	ND	O	200 µg/L	02/10/09	02/17/09
<b>MW-5</b>	Tertiary Butyl Alcohol (TBA)	ND	O	20 µg/L	02/10/09	02/17/09
Lab ID :	Methyl tert-butyl ether (MTBE)	ND	O	1.0 µg/L	02/10/09	02/17/09
STR09021640-05A	Di-isopropyl Ether (DIPE)	ND	O	2.0 µg/L	02/10/09	02/17/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	O	2.0 µg/L	02/10/09	02/17/09
	1,2-Dichloroethane	ND	O	2.0 µg/L	02/10/09	02/17/09
	Benzene	ND	O	1.0 µg/L	02/10/09	02/17/09
	Tertiary Amyl Methyl Ether (TAME)	ND	O	2.0 µg/L	02/10/09	02/17/09
	Toluene	ND	O	1.0 µg/L	02/10/09	02/17/09
	1,2-Dibromoethane (EDB)	ND	O	8.0 µg/L	02/10/09	02/17/09
	Ethylbenzene	ND	O	1.0 µg/L	02/10/09	02/17/09
	m,p-Xylene	ND	O	1.0 µg/L	02/10/09	02/17/09
	o-Xylene	ND	O	1.0 µg/L	02/10/09	02/17/09
Client ID :	TPH-P (GRO)	ND	50 µg/L	02/10/09	02/17/09	
<b>MW-7</b>	Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	02/10/09	02/17/09	
Lab ID :	Methyl tert-butyl ether (MTBE)	0.67	0.50 µg/L	02/10/09	02/17/09	
STR09021640-06A	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	02/10/09	02/17/09	
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	02/10/09	02/17/09	
	1,2-Dichloroethane	ND	1.0 µg/L	02/10/09	02/17/09	
	Benzene	ND	0.50 µg/L	02/10/09	02/17/09	
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	02/10/09	02/17/09	
	Toluene	ND	0.50 µg/L	02/10/09	02/17/09	
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	02/10/09	02/17/09	
	Ethylbenzene	ND	0.50 µg/L	02/10/09	02/17/09	
	m,p-Xylene	ND	0.50 µg/L	02/10/09	02/17/09	
	o-Xylene	ND	0.50 µg/L	02/10/09	02/17/09	
Client ID :	TPH-P (GRO)	ND	50 µg/L	02/10/09	02/17/09	
<b>MW-8</b>	Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	02/10/09	02/17/09	
Lab ID :	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	02/10/09	02/17/09	
STR09021640-07A	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	02/10/09	02/17/09	
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	02/10/09	02/17/09	
	1,2-Dichloroethane	ND	1.0 µg/L	02/10/09	02/17/09	
	Benzene	ND	0.50 µg/L	02/10/09	02/17/09	
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	02/10/09	02/17/09	
	Toluene	ND	0.50 µg/L	02/10/09	02/17/09	
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	02/10/09	02/17/09	
	Ethylbenzene	ND	0.50 µg/L	02/10/09	02/17/09	
	m,p-Xylene	ND	0.50 µg/L	02/10/09	02/17/09	
	o-Xylene	ND	0.50 µg/L	02/10/09	02/17/09	



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Client ID :	TPH-P (GRO)	1,500		200 µg/L	02/10/09	02/17/09
<b>EX-1</b>	Tertiary Butyl Alcohol (TBA)	ND	V	20 µg/L	02/10/09	02/17/09
Lab ID :	Methyl tert-butyl ether (MTBE)	2.0		1.0 µg/L	02/10/09	02/17/09
STR09021640-08A	Di-isopropyl Ether (DIPE)	ND	V	2.0 µg/L	02/10/09	02/17/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	V	2.0 µg/L	02/10/09	02/17/09
	1,2-Dichloroethane	ND	V	2.0 µg/L	02/10/09	02/17/09
	Benzene	40		1.0 µg/L	02/10/09	02/17/09
	Tertiary Amyl Methyl Ether (TAME)	ND	V	2.0 µg/L	02/10/09	02/17/09
	Toluene	ND	V	1.0 µg/L	02/10/09	02/17/09
	1,2-Dibromoethane (EDB)	ND	V	8.0 µg/L	02/10/09	02/17/09
	Ethylbenzene	11		1.0 µg/L	02/10/09	02/17/09
	m,p-Xylene	9.1		1.0 µg/L	02/10/09	02/17/09
	o-Xylene	ND	V	1.0 µg/L	02/10/09	02/17/09
Client ID :	TPH-P (GRO)	11,000		5,000 µg/L	02/10/09	02/17/09
<b>EX-2</b>	Tertiary Butyl Alcohol (TBA)	ND	V	500 µg/L	02/10/09	02/17/09
Lab ID :	Methyl tert-butyl ether (MTBE)	41		25 µg/L	02/10/09	02/17/09
STR09021640-09A	Di-isopropyl Ether (DIPE)	ND	V	50 µg/L	02/10/09	02/17/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	V	50 µg/L	02/10/09	02/17/09
	1,2-Dichloroethane	ND	V	50 µg/L	02/10/09	02/17/09
	Benzene	5,400		25 µg/L	02/10/09	02/17/09
	Tertiary Amyl Methyl Ether (TAME)	ND	V	50 µg/L	02/10/09	02/17/09
	Toluene	93		25 µg/L	02/10/09	02/17/09
	1,2-Dibromoethane (EDB)	ND	V	200 µg/L	02/10/09	02/17/09
	Ethylbenzene	310		25 µg/L	02/10/09	02/17/09
	m,p-Xylene	330		25 µg/L	02/10/09	02/17/09
	o-Xylene	91		25 µg/L	02/10/09	02/17/09
Client ID :	TPH-P (GRO)	330		100 µg/L	02/10/09	02/17/09
<b>EX-4</b>	Tertiary Butyl Alcohol (TBA)	27		10 µg/L	02/10/09	02/17/09
Lab ID :	Methyl tert-butyl ether (MTBE)	11		0.50 µg/L	02/10/09	02/17/09
STR09021640-10A	Di-isopropyl Ether (DIPE)	ND		1.0 µg/L	02/10/09	02/17/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND		1.0 µg/L	02/10/09	02/17/09
	1,2-Dichloroethane	2.0		1.0 µg/L	02/10/09	02/17/09
	Benzene	130		0.50 µg/L	02/10/09	02/17/09
	Tertiary Amyl Methyl Ether (TAME)	ND		1.0 µg/L	02/10/09	02/17/09
	Toluene	ND		0.50 µg/L	02/10/09	02/17/09
	1,2-Dibromoethane (EDB)	ND	V	4.0 µg/L	02/10/09	02/17/09
	Ethylbenzene	2.5		0.50 µg/L	02/10/09	02/17/09
	m,p-Xylene	1.2		0.50 µg/L	02/10/09	02/17/09
	o-Xylene	ND		0.50 µg/L	02/10/09	02/17/09

#### Gasoline Range Organics (GRO) C4-C13

O = Reporting Limits were increased due to sample foaming.

V = Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Reported in micrograms per Liter, per client request.

Roger I. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 • info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples

Report Date



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## VOC Sample Preservation Report

Work Order: STR09021640

Project: USA 57

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09021640-01A	S-1	Aqueous	2
09021640-02A	S-2	Aqueous	2
09021640-03A	MW-3	Aqueous	2
09021640-04A	MW-4	Aqueous	2
09021640-05A	MW-5	Aqueous	2
09021640-06A	MW-7	Aqueous	2
09021640-07A	MW-8	Aqueous	2
09021640-08A	EX-1	Aqueous	2
09021640-09A	EX-2	Aqueous	2
09021640-10A	EX-4	Aqueous	2

2/23/09  
Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
19-Feb-09

## QC Summary Report

Work Order:  
09021640

### Method Blank

		Type	MBLK	Test Code: EPA Method SW8015B			
File ID: D:\MSDCHEM\MS12\DATA\090217\09021704.D		Batch ID: MS12W0217B			Analysis Date: 02/17/2009 09:33		
Sample ID:	Units : µg/L	Run ID: MSD_12_090217A			Prep Date: 02/17/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)
TPH-P (GRO)	ND	50					Qual
Surr: 1,2-Dichloroethane-d4	10.2		10	102	70	130	
Surr: Toluene-d8	10.1		10	101	70	130	
Surr: 4-Bromofluorobenzene	9.59		10	96	70	130	

### Laboratory Control Spike

		Type	LCS	Test Code: EPA Method SW8015B			
File ID: D:\MSDCHEM\MS12\DATA\090217\09021703.D		Batch ID: MS12W0217B			Analysis Date: 02/17/2009 09:10		
Sample ID:	Units : µg/L	Run ID: MSD_12_090217A			Prep Date: 02/17/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)
TPH-P (GRO)	424	50	400	106	70	130	
Surr: 1,2-Dichloroethane-d4	10.9		10	109	70	130	
Surr: Toluene-d8	9.88		10	99	70	130	
Surr: 4-Bromofluorobenzene	9.67		10	97	70	130	

### Sample Matrix Spike

		Type	MS	Test Code: EPA Method SW8015B			
File ID: D:\MSDCHEM\MS12\DATA\090217\09021722.D		Batch ID: MS12W0217B			Analysis Date: 02/17/2009 16:24		
Sample ID:	Units : µg/L	Run ID: MSD_12_090217A			Prep Date: 02/17/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)
TPH-P (GRO)	2040	250	2000	0	102	58	135
Surr: 1,2-Dichloroethane-d4	53.8		50	108	70	130	
Surr: Toluene-d8	49.4		50	99	70	130	
Surr: 4-Bromofluorobenzene	48.7		50	97	70	130	

### Sample Matrix Spike Duplicate

		Type	MSD	Test Code: EPA Method SW8015B			
File ID: D:\MSDCHEM\MS12\DATA\090217\09021723.D		Batch ID: MS12W0217B			Analysis Date: 02/17/2009 16:47		
Sample ID:	Units : µg/L	Run ID: MSD_12_090217A			Prep Date: 02/17/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)
TPH-P (GRO)	2130	250	2000	0	107	58	135
Surr: 1,2-Dichloroethane-d4	53.6		50	107	70	130	
Surr: Toluene-d8	49.7		50	99	70	130	
Surr: 4-Bromofluorobenzene	48.6		50	97	70	130	

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Reported in micrograms per Liter, per client request.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
19-Feb-09

## QC Summary Report

Work Order:  
09021640

### Method Blank

	Type	MBLK	Test Code: EPA Method SW8260B					
Sample ID:	File ID:	MSD12W0217A	Batch ID: MS12W0217A			Analysis Date: 02/17/2009 09:33		
Analyte	Result	Units : µg/L	Run ID:	MSD_12_090217A	Prep Date:	02/17/2009		
Tertiary Butyl Alcohol (TBA)	ND	10						
Methyl tert-butyl ether (MTBE)	ND	0.5						
Di-isopropyl Ether (DIPE)	ND	1						
Ethyl Tertiary Butyl Ether (ETBE)	ND	1						
1,2-Dichloroethane	ND	1						
Benzene	ND	0.5						
Tertiary Amyl Methyl Ether (TAME)	ND	1						
Toluene	ND	0.5						
1,2-Dibromoethane (EDB)	ND	2						
Ethylbenzene	ND	0.5						
m,p-Xylene	ND	0.5						
o-Xylene	ND	0.5						
Surr: 1,2-Dichloroethane-d4	10.2		10	102	70	130		
Surr: Toluene-d8	10.1		10	101	70	130		
Surr: 4-Bromofluorobenzene	9.59		10	96	70	130		

### Laboratory Control Spike

	Type	LCS	Test Code: EPA Method SW8260B					
Sample ID:	File ID:	MSD12W0217A	Batch ID: MS12W0217A			Analysis Date: 02/17/2009 08:47		
Analyte	Result	Units : µg/L	Run ID:	MSD_12_090217A	Prep Date:	02/17/2009		
Methyl tert-butyl ether (MTBE)	8.76	0.5	10	88	62	136		
Benzene	9.16	0.5	10	92	70	130		
Toluene	9.21	0.5	10	92	80	120		
Ethylbenzene	9.93	0.5	10	99	80	120		
m,p-Xylene	9.66	0.5	10	97	70	130		
o-Xylene	9.7	0.5	10	97	70	130		
Surr: 1,2-Dichloroethane-d4	10.7		10	107	70	130		
Surr: Toluene-d8	10.1		10	101	70	130		
Surr: 4-Bromofluorobenzene	9.74		10	97	70	130		

### Sample Matrix Spike

	Type	MS	Test Code: EPA Method SW8260B					
Sample ID:	File ID:	MSD12W0217A	Batch ID: MS12W0217A			Analysis Date: 02/17/2009 15:39		
Analyte	Result	Units : µg/L	Run ID:	MSD_12_090217A	Prep Date:	02/17/2009		
Methyl tert-butyl ether (MTBE)	50	1.3	50	0 100	56	141		
Benzene	49.3	1.3	50	0 99	67	130		
Toluene	49.4	1.3	50	0 99	66	130		
Ethylbenzene	52.6	1.3	50	0 105	68	130		
m,p-Xylene	51.2	1.3	50	0 102	64	130		
o-Xylene	51.6	1.3	50	0 103	70	130		
Surr: 1,2-Dichloroethane-d4	52.7		50	105	70	130		
Surr: Toluene-d8	50		50	100	70	130		
Surr: 4-Bromofluorobenzene	48.9		50	98	70	130		

### Sample Matrix Spike Duplicate

	Type	MSD	Test Code: EPA Method SW8260B					
Sample ID:	File ID:	MSD12W0217A	Batch ID: MS12W0217A			Analysis Date: 02/17/2009 16:02		
Analyte	Result	Units : µg/L	Run ID:	MSD_12_090217A	Prep Date:	02/17/2009		
Methyl tert-butyl ether (MTBE)	48.5	1.3	50	0 97	56	141	49.99	3.1(20)
Benzene	47.4	1.3	50	0 95	67	130	49.34	4.1(20)
Toluene	46.6	1.3	50	0 93	66	130	49.35	5.8(20)
Ethylbenzene	49.3	1.3	50	0 99	68	130	52.56	6.5(20)
m,p-Xylene	48.3	1.3	50	0 97	64	130	51.2	5.8(20)
o-Xylene	48.7	1.3	50	0 97	70	130	51.64	5.9(20)
Surr: 1,2-Dichloroethane-d4	52.9		50	106	70	130		
Surr: Toluene-d8	49.5		50	99	70	130		
Surr: 4-Bromofluorobenzene	49.8		50	100	70	130		



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

---

Date:  
19-Feb-09

## QC Summary Report

Work Order:  
09021640

**Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

# Alpha Analytical, Inc.

Phone : (775) 355-1044 FAX : (775) 355-0406

## Sample Receipt Checklist

Date Report is due to Client : 2/24/2009

Date of Notice : 2/16/2009 8:38:56 A

Please take note of any NO check marks. If we receive no response concerning these items within 24 hours of the date of this notice, all of the samples will be analyzed as requested.

Client Name: Stratus Environmental

Project ID : USA 57

Project Manager: Scott Bittinger

Client's EMail: sbuttinger@stratusinc.net

Work Order Number: STR09021640

Client's Phone: (530) 676-2062

Client's FAX: (530) 676-6005

Date Received: 2/14/2009

Received by: Latricia Edrosa

### Chain of Custody (COC) Information

Carrier name FedEx

Chain of custody present ? Yes  No

Custody seals intact on shipping container/cooler ? Yes  No  Not Present

Custody seals intact on sample bottles ? Yes  No  Not Present

Chain of custody signed when relinquished and received ? Yes  No

Chain of custody agrees with sample labels ? Yes  No

Sample ID noted by Client on COC ? Yes  No

Date and time of collection noted by Client on COC ? Yes  No

Samplers's name noted on COC ? Yes  No

Internal Chain of Custody (COC) requested ? Yes  No

Sub Contract Lab Used : None   See Comments

### Sample Receipt Information

Shipping container/cooler in good condition? Yes  No  Not Present

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes  No

Cooler Temperature

4 °C

Container/Temp Blank temperature in compliance (0-6°C)? Yes  No

Water - VOA vials have zero headspace / no bubbles? Yes  No

No VOA vials submitted

Sample labels checked for correct preservation? Yes  No

TOC Water - pH acceptable upon receipt (H<sub>2</sub>SO<sub>4</sub> pH<2)? Yes  No  N/A

### Analytical Requirement Information

Are non-Standard or Modified methods requested ? Yes   No

Are there client specific Project requirements ? Yes   No If YES : see the Chain of Custody (COC)

Comments : Saturday delivery, samples kept cold and secure until Monday login.

Billing Information :

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

Client:

Stratus Environmental  
 3330 Cameron Park Drive  
 Suite 550  
 Cameron Park, CA 95682-8861

PO :

Client's COC # : 024756

Job : USA 57

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix			No. of Bottles Alpha	Sub	TAT	Requested Tests		Sample Remarks
		Date						TPH/P_W	VOC_W	
STR09021640-01A	S-1	AQ	02/10/09 18:00		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	
STR09021640-02A	S-2	AQ	02/10/09 16:20		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	
STR09021640-03A	MW-3	AQ	02/10/09 15:37		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	
STR09021640-04A	MW-4	AQ	02/10/09 13:01		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	
STR09021640-05A	MW-5	AQ	02/10/09 13:33		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	
STR09021640-06A	MW-7	AQ	02/10/09 14:10		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	
STR09021640-07A	MW-8	AQ	02/10/09 15:16		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	
STR09021640-08A	EX-1	AQ	02/10/09 17:20		5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C	

Comments: Security seals intact. Frozen ice. Saturday delivery, samples kept cold and secure until Monday login. .

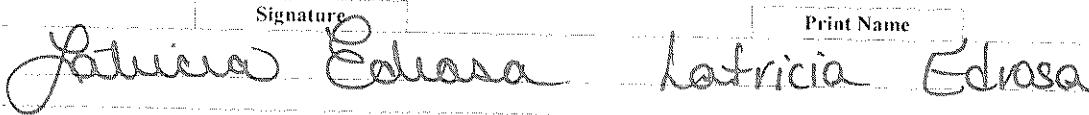
Signature

Print Name

Company

Date/Time

Logged in by:



Alpha Analytical, Inc.

2/16/09 8:38

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other)

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

Client:

Stratus Environmental  
 3330 Cameron Park Drive  
 Suite 550  
 Cameron Park, CA 95682-8861

PO :

Client's COC #: 024756

Job : USA 57

Report Attention	Phone Number	Email Address
Scott Bittinger	(530) 676-2062 x	sbbittinger@stratusinc.net

CA

WorkOrder : STR09021640

Report Due By : 5:00 PM On : 24-Feb-09

EDD Required : Yes

Sampled by : C. Grant

Cooler Temp	Samples Received	Date Printed
4 °C	14-Feb-09	16-Feb-09

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection			No. of Bottles		Requested Tests			Sample Remarks
		Matrix	Date	Alpha	Sub	TAT	TPH/P_W	VOC_W		
STR09021640-09A	EX-2	AQ	02/10/09 16:47	5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C		
STR09021640-10A	EX-4	AQ	02/10/09 14:35	5	0	6	GAS-C	BTEX/OXY/ 1,2- DCA/EDB_C		

Comments:

Security seals intact. Frozen ice. Saturday delivery, samples kept cold and secure until Monday login.:

Signature

Print Name

Company

Date/Time

Logged in by:

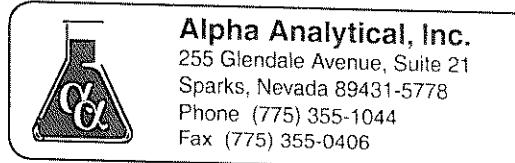
Alpha Analytical, Inc.

2/16/09 8:38

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.  
 The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
 Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other)      Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information:

Name Stratus Environmental Inc.  
 Address 3330 Cameron Park dr  
 City, State, Zip Cameron Park, ca, 95682  
 Phone Number (530) 676-6000 Fax (530) 676-6001



## Samples Collected From Which State?

AZ CA ✓ NV WA  
 ID OR OTHER

Page # 1 of 1

024756

Client Name	P.O. #	Job #	Analyses Required										Required QC Level? I   II   III   IV	
			Sample Type					Analysis						
Address	EMail Address			Phone #	Fax #	Glass	TPEX	S-GX	L-N	DCA	DB	EDD / EDF? YES <input type="checkbox"/> NO <input type="checkbox"/>		
City, State, Zip <u>Oakland, Ca</u>														
Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers " See below						Global ID # <u>I0600101868</u>
1800	02/10	AQ <u>STR 090211640-01</u>	<u>C. Grant</u>	<u>scott Bittinger</u>	5-1	STD		5-hcl-4	X	X	X	X	X	
1620					-02	5-2								
1537					-03	Mw-3								
1361					-04	Mw-4								
1333					-05	Mw-5								
1410					-06	Mw-7								
1516					-07	Mw-8	.							
1720					-08	EX-1								
1647					-09	EX-2								
1435					-10	EX-4								

## ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	Chris Grant	stratus	02/13/09	13:40
Received by	Lisa de Silva	ALPHA	2/13/09	13.40
Relinquished by	Lisa de Silva	ALPHA	2/13/09	1500
Received by	Patricia Edrosa	Alpha	2/16/09	8:38
Relinquished by				
Received by				

\*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air \*\*: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.

**APPENDIX D**

**GEOTRACKER**  
**ELECTRONIC SUBMITTAL INFORMATION**

STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A GEO\_WELL FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	USA 57, GEO WELL, FIRST QUARTER 2009
<u>Facility Global ID:</u>	T0600101808
<u>Facility Name:</u>	USA PETROLEUM
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Stratus Environmental, Inc.
<u>Username:</u>	STRATUS NOCAL
<u>IP Address:</u>	12.186.106.98
<u>Submittal Date/Time:</u>	4/7/2009 3:09:52 PM
<u>Confirmation Number:</u>	8986755847

Copyright © 2008 State of California

UPLOADING A EDF FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

Submittal Type: EDF - Monitoring Report - Quarterly  
Submittal Title: GW Analytical Report First Quarter 09  
Facility Global ID: T0600101808  
Facility Name: USA PETROLEUM  
File Name: USA 57 1Q09.zip  
Organization Name: Stratus Environmental, Inc.  
Username: STRATUS NOCAL  
IP Address: 12.186.106.98  
Submittal Date/Time: 3/11/2009 2:32:10 PM  
Confirmation Number: 2148315906

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)