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**Alameda County  
Environmental Health**

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

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

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

Re: Quarterly Groundwater Monitoring Report, Second 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 second 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 Health Care Services Agency (ACHCSA) requirements for underground storage tank (UST) investigations.

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

Sincerely,

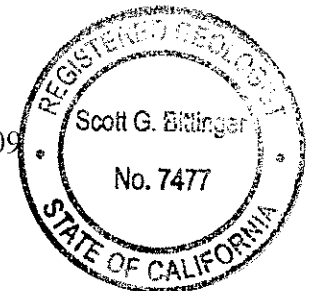
*STRATUS ENVIRONMENTAL, INC.*

*for*   
Allan Dudding  
Project Geologist

  
Scott G. Bittinger, P.G.  
Project Manager

Attachment: Quarterly Groundwater Monitoring Report, Second Quarter 2009

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



Date August 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, ACHCSA / RO0000232

### WORK PERFORMED THIS QUARTER (Second 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 May 5, 2009. Well EX-3 was temporarily inaccessible at the time of the May 5, 2009 monitoring and sampling event
2. Stratus compiled and evaluated groundwater monitoring data.

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

1. Stratus prepared and submitted a Remedial Alternative Evaluation and Proposed Site Specific Cleanup Objectives Report.

### DISCUSSION

In a letter dated July 23, 2009, ACHCSA personnel indicated that the site would be changed from a quarterly groundwater monitoring and sampling program to a semi-annual monitoring and sampling program, under the terms of the recently adopted State Water Resources Control Board (SWRCB) Resolution No. 2009 0042. The July 23, 2009 letter also requested that a proposal to conduct semi-annual monitoring during the first and third quarters of each calendar year, or the second and fourth quarters of each calendar year, be proposed. ACHCSA indicated that the calendar quarter with the highest contaminant concentrations in groundwater should be proposed in the future groundwater monitoring and sampling schedule.

In a letter dated July 28, 2009, Stratus proposed conducting future monitoring and sampling during the second and fourth quarters of each calendar year. This recommendation was based on seasonally high concentrations of gasoline range organics (GRO) and benzene reported for samples collected during the fourth quarters of 2005, 2006, and 2008 from well EX-2 (no sampling of this well was performed during the fourth quarter 2007 due to the operation of remediation equipment on this well at that time). ACHCSA personnel subsequently approved the proposed sampling schedule, in electronic mail correspondence to Stratus personnel. The next groundwater sampling event is tentatively scheduled for completion in November 2009.

Current Phase of Project: Monitoring / Interim Remediation

Frequency of Groundwater Sampling: All Wells = semi-annual

Frequency of Groundwater Monitoring: Semi-annual

Groundwater Sampling Date:	May 5, 2009
Is Free Product (FP) Present on Site:	No
FP Recovered This Quarter:	NA
Cumulative FP Recovered to Date:	NA
Approximate Depth to Groundwater:	12.63 to 23.12 feet below top of well casing
Groundwater Flow Direction:	South and north
Groundwater Gradient:	0.02 to 0.07 ft/ft

## DISCUSSION:

At the time of the second quarter 2009 monitoring event, groundwater elevations had increased between 1.28 and 2.92 feet in all wells since the previous monitoring event (February 10, 2009). Depth-to-water measurements were converted to feet above mean sea level (MSL) and used to construct three groundwater elevation contour maps (Figures 2A, 2B, and 2C). The groundwater elevation data was segregated to include/exclude measurements from select wells in order to address ACHCSA personnel concerns regarding the historical presentation of interpreted groundwater flow beneath the site, expressed in an ACHCSA letter dated February 13, 2009. In general, a convergent groundwater flow pattern beneath the site is observed. A north-northeast groundwater flow direction is predominately observed in the southern section of the site and a south-southeast groundwater flow direction is observed in the northern part of the site.

GRO, benzene, and MTBE were reported in wells S-2, MW-3, EX-1, and EX-4. GRO and benzene were reported in well EX-2; GRO and MTBE were reported in well S-1. MTBE was also reported in well MW-7. The maximum concentration of GRO (10,000 micrograms per liter [ $\mu\text{g/L}$ ]) was reported in well S-2, the maximum concentration of benzene (2,600  $\mu\text{g/L}$ ) was reported in well EX-2, and the maximum concentration of MTBE (670  $\mu\text{g/L}$ ) was reported in well MW-3. TBA was reported in wells S-2 (99  $\mu\text{g/L}$ ), MW-3 (760  $\mu\text{g/L}$ ), and EX-4 (28  $\mu\text{g/L}$ ). DIPE (4.2  $\mu\text{g/L}$ ) and 1,2-DCA (19  $\mu\text{g/L}$ ) were only reported in well MW-3. No concentrations of ETBE, TAME, or EDB were reported in any of the wells. These analytical results are generally consistent with historical analytical data. Analytical results of GRO, benzene, and MTBE for groundwater samples collected during the second quarter 2009 are presented in Figure 3.

## ATTACHMENTS:

- Table 1 Groundwater Elevation and Analytical Summary
- Table 2 Groundwater Analytical Results for Oxygenates and Additional Compounds
- Figure 1 Site Location Map
- Figure 2A Extraction Well Groundwater Elevation Contour Map, 2<sup>nd</sup> Quarter 2009
- Figure 2B Extraction Well With MW-4 and MW-5 Groundwater Elevation Contour Map, 2<sup>nd</sup> Quarter 2009
- Figure 2C Monitoring Well (Without MW-4 and MW-5) Groundwater Elevation Contour Map 2<sup>nd</sup> Quarter 2009
- Figure 3 Groundwater Analytical Summary, 2<sup>nd</sup> Quarter 2009
- Appendix A Field Data Sheets
- Appendix B Sampling and Analyses Procedures
- Appendix C Laboratory Analytical Reports and Chain-of-Custody Documentation
- Appendix D GeoTracker Electronic Submittal Confirmations

**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 Elevation (ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
S-1	02/12/87						630	4.4	3.5	37	NA
	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

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S-1 Cont.	02/02/06	15.27		64.39	<50	NA	<0.50	<0.50	<0.50	<0.50	45
	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
	05/05/09	20.90		58.76	330	NA	<0.50	<0.50	<0.50	<0.50	9.3

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S-2	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
Sheen	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
Sheen	10/10/97	21.21		59.72	13,000	<50	260	38	190	280	600*
Sheen	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*
	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

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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
	05/05/09	23.12		58.78	10,000	NA	300	47	250	220	410

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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	



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Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total 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
	05/05/09	17.00		60.27	830	NA	18	<1.0[3]	<1.0[3]	<1.0[3]	670

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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	
07/19/05	7.55		[4]	NM	<50	NA	<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 (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/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
	05/05/09	NM		NM			Well Not Monitored or Sampled - Covered				

**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	
				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-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	NM	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
07/19/05	11.77	[4]	NM	NM	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
10/24/05	14.29	80.78	66.49	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	73.36	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50	

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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 Xylenes (µg/L)	MTBE (µg/L)
				Elevation (ft msl)	GRO[5] (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)			
MW-5 Cont.	07/12/06	NM		NM			Well Not Monitored or Sampled - Covered					
	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]	
	05/05/09	16.25		64.53	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-6	10/15/07	NM		NM			Well Destroyed					
	10/01/08	NM		NM			Well Destroyed					

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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	
				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	

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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	
				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	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	
	05/05/09	20.07		59.74	<50	NA	<0.50	<0.50	<0.50	<0.50	1.2	

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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	
				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-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		



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 10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater							Total	
				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-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	
	05/05/09	20.98		59.52	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	

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Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater							Total	
				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)	
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				Not Sampled				
	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	
	05/05/09	12.98		64.74	1,800	NA	66	0.77	17	8.03	3.1	
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				Not Sampled				
	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	
	05/05/09	12.63		64.33	8,400	NA	2,600	80	390	470	<15[3]	

**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				
				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)
EX-3	10/24/05	14.85	78.87	63.02	20,000	NA	220	21	660	3,110	<10[3]
	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	9.01		68.86	5,700	NA	79	19	120	657	<2.5[3]
	10/17/06	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					
	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					
	05/05/09	NM		NM		Well Not Monitored or Sampled - Covered					
EX-4	10/24/05	14.93	77.96	63.03	1,900	NA	390	69	8.8	90	11
	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		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
	05/05/09	16.74		61.22	440	NA	190	<1.0[3]	2.6	5.0	10

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

msl = Mean sea level  
µg/L = micrograms per liter  
NA = Not analyzed  
NM = Not measured

**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-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	<4.0[2]	NA	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
	05/05/09	9.3	<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]	<20[1]	NA	NA	NA	NA
	01/09/03	270	<100[1]	<10[1]	<10[1]	<10[1]	NA	NA	NA	NA
	04/14/03	400	95	<5.0[1]	<5.0[1]	<5.0[1]	NA	NA	NA	NA
	07/21/03	410	110	<5.0[1]	<5.0[1]	<5.0[1]	NA	NA	NA	NA
	10/09/03	180	57	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	NA	NA
	01/15/04	130	48	<4.0[1]	<4.0[1]	<4.0[1]	<4.0[1]	<16[1]	NA	NA
	04/08/04	430	130	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	<5,000	<5,000
	08/10/04	92	<100[1]	<10[1]	<10[1]	<10[1]	74	<40[1]	<5,000	<5,000
	11/11/04	420	<200[1]	<20[1]	<20[1]	<20[1]	<20[1]	<80[1]	<5,000	<5,000
	01/19/05	580	200	<5.0[1]	<5.0[1]	<5.0[1]	8.2	<20[1]	<5,000	<5,000
	04/14/05	510	150	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	<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]	<5.0[1]	<20[1]	NA	NA
	05/30/08	340	220	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	NA	NA
	07/10/08	420	150	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	NA	NA
	10/01/08	720	300	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	NA	NA
	02/10/09	480	140	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]	NA	NA
	05/05/09	410	99	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[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-3	04/08/04	19	7.6	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	08/10/04	300	2,000	2.2	<2.0[1]	<2.0[1]	270	<8.0[1]	<5,000	<5,000
	11/11/04	690	1,400	<10[1]	<10[1]	<10[1]	140	<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
05/05/09	670	760	4.2	<2.0[1]	<2.0[1]	19	<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	<1.0	<2.0	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	<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									
	07/12/06	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<5,000	<5,000
	10/17/06									
	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
	05/05/09									



**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-5	11/19/02									
	01/09/03									
	04/14/03									
	07/21/03									
	10/09/03									
	01/15/04									
	04/08/04	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<4.0[2]	<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									
	01/19/05									
	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	<4.0[2]	<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									
	04/27/06	<0.50	<10	<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									
	04/23/07	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA
	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	<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]	<8.0[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	<1.0[2]	<20[2]	<2.0[2]	<2.0[2]	<2.0[2]	<2.0[2]	<8.0[2]	NA	NA	
05/05/09	<0.50	<10	<1.0	<1.0	<1.0	<1.0	<4.0	NA	NA	
MW-6	10/15/07									
	10/01/08									

**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
	05/05/09	1.2	<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)
MW-8	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	<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	<1.0	<2.0	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
	05/05/09	<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]	<2.0[1]	<8.0[1]	NA	NA
	05/05/09	3.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0[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	
05/05/09		<15[1]	<300[1]	<30[1]	<30[1]	<30[1]	<30[1]	<120[1]	NA	NA	

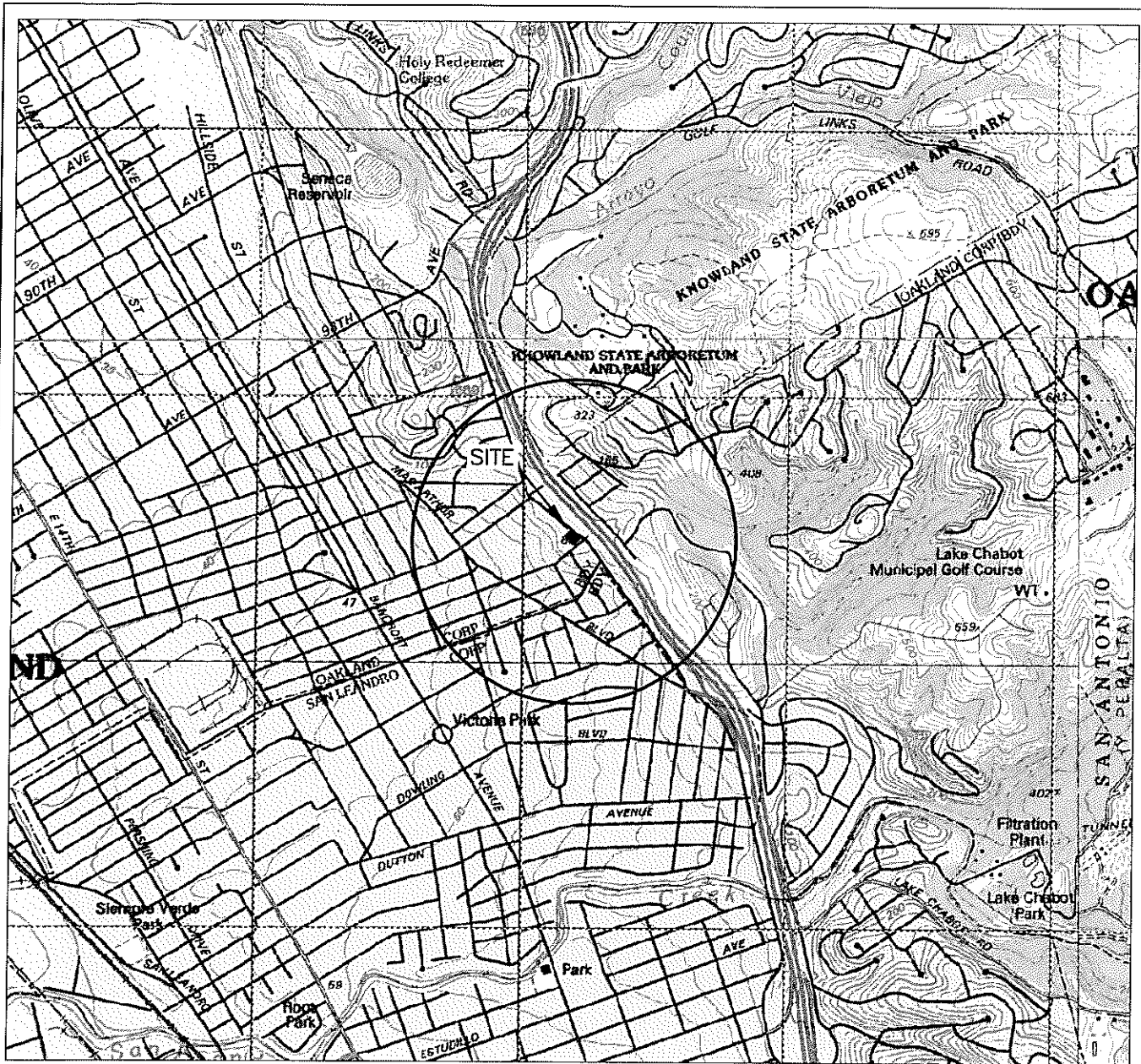
**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR OXYGENATES AND ADDITIONAL COMPOUNDS**

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	Well Not Monitored or Sampled - Under Soil Pile								
	04/27/06	Well Not Monitored or Sampled - Covered								
	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	Well Not Monitored or Sampled - Covered								
	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	Not Sampled								
	03/24/08	Well Not Monitored or Sampled - Covered								
	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	Well Not Monitored or Sampled - Covered								
	05/05/09	Well Not Monitored or Sampled - Covered								
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	Well Not Monitored or Sampled - Under Soil Pile								
	04/27/06	Well Not Monitored or Sampled - Covered								
	07/12/06	35	<200[1]	<10[1]	<10[1]	<10[1]	<10[1]	<40[1]	<5,000	<5,000
	10/17/06	Well Not Monitored or Sampled - Covered								
	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	Not Sampled								
	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	2.0	<4.0[1]	NA	NA
	05/05/09	10	28	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	<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

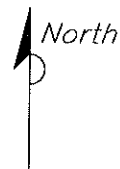
Well Number	Date Collected	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Methanol (µg/L)	Ethanol (µg/L)
<p><u>Note:</u>  Oxygenates analyzed using EPA Method 8260B  µg/L = micrograms per liter  NA = Not analyzed</p> <p>[1] Reporting limits were increased due to high concentrations of target analytes  [2] Reporting limits were increased due to sample foaming</p> <p style="text-align: right;"> 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 </p>										



GENERAL NOTES:  
 BASE MAP FROM U.S.G.S.  
 OAKLAND, CA  
 7.5 MINUTE TOPOGRAPHIC  
 PHOTOREVISED 1980



QUADRANGLE LOCATION



SCALE 1:24,000

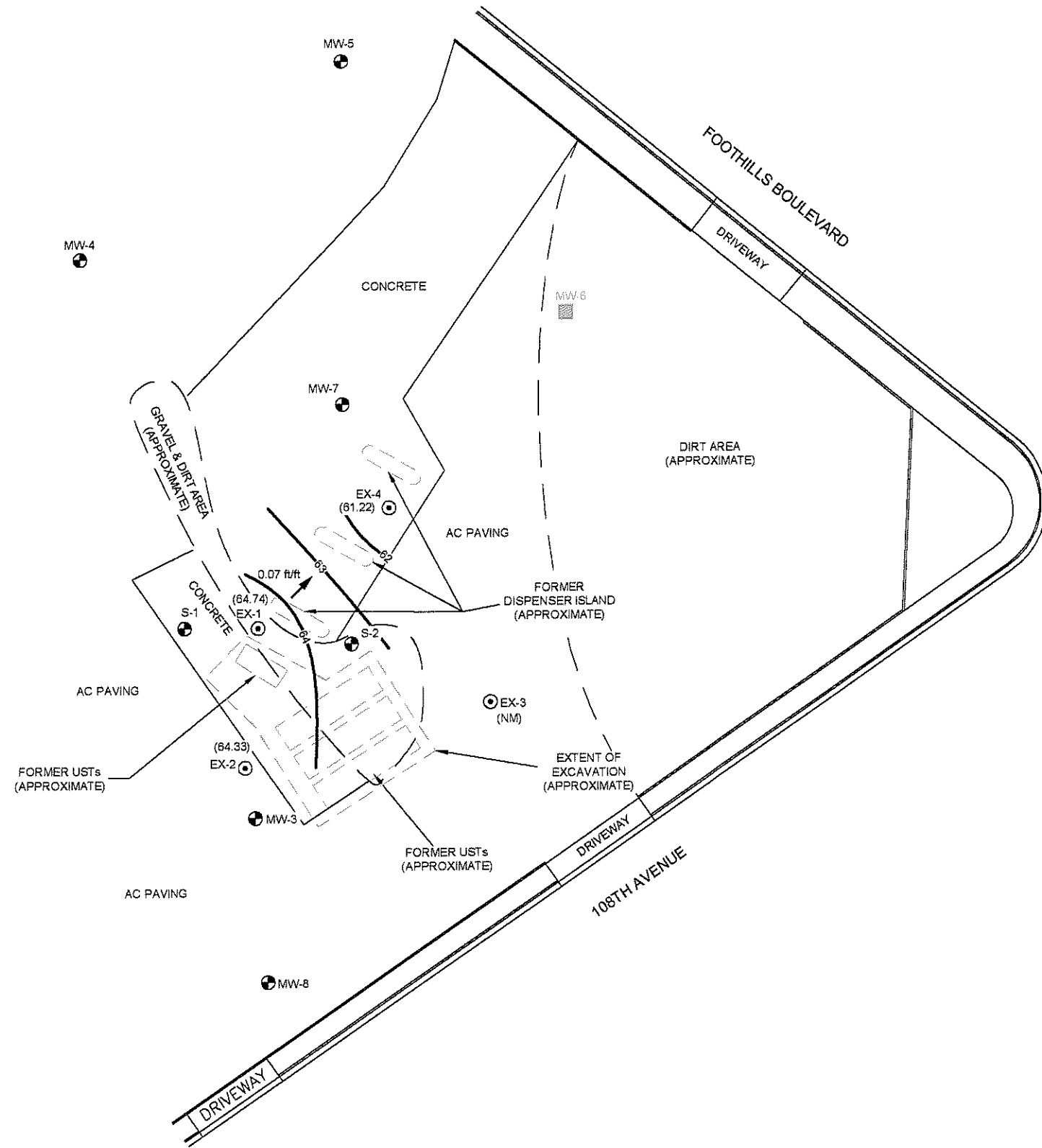
*STRATUS*  
 ENVIRONMENTAL, INC.

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

FIGURE  
**1**  
 PROJECT NO.  
 2007-0057-01

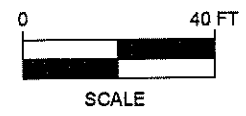


- LEGEND
- MW-3 MONITORING WELL LOCATION
  - ⊙ EX-1 EXTRACTION WELL LOCATION
  - MW-6 ABANDONED MONITORING WELL LOCATION
  - (64.74) GROUND WATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
  - 63— WATER TABLE CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL
  - ➔ INFERRED DIRECTION OF GROUND WATER FLOW
- WELLS MEASURED: 5/05/09  
(NM) = NOT MEASURED



NOTE: LOCATIONS OF ALL CURRENT AND FORMER SITE FEATURES IS APPROXIMATE

USA 57 Quarterly Figures  
REV May 18, 2009  
JMP  
USA 57 Quarterly



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

EXTRACTION WELL GROUNDWATER ELEVATION  
CONTOUR MAP, 2nd QUARTER 2009

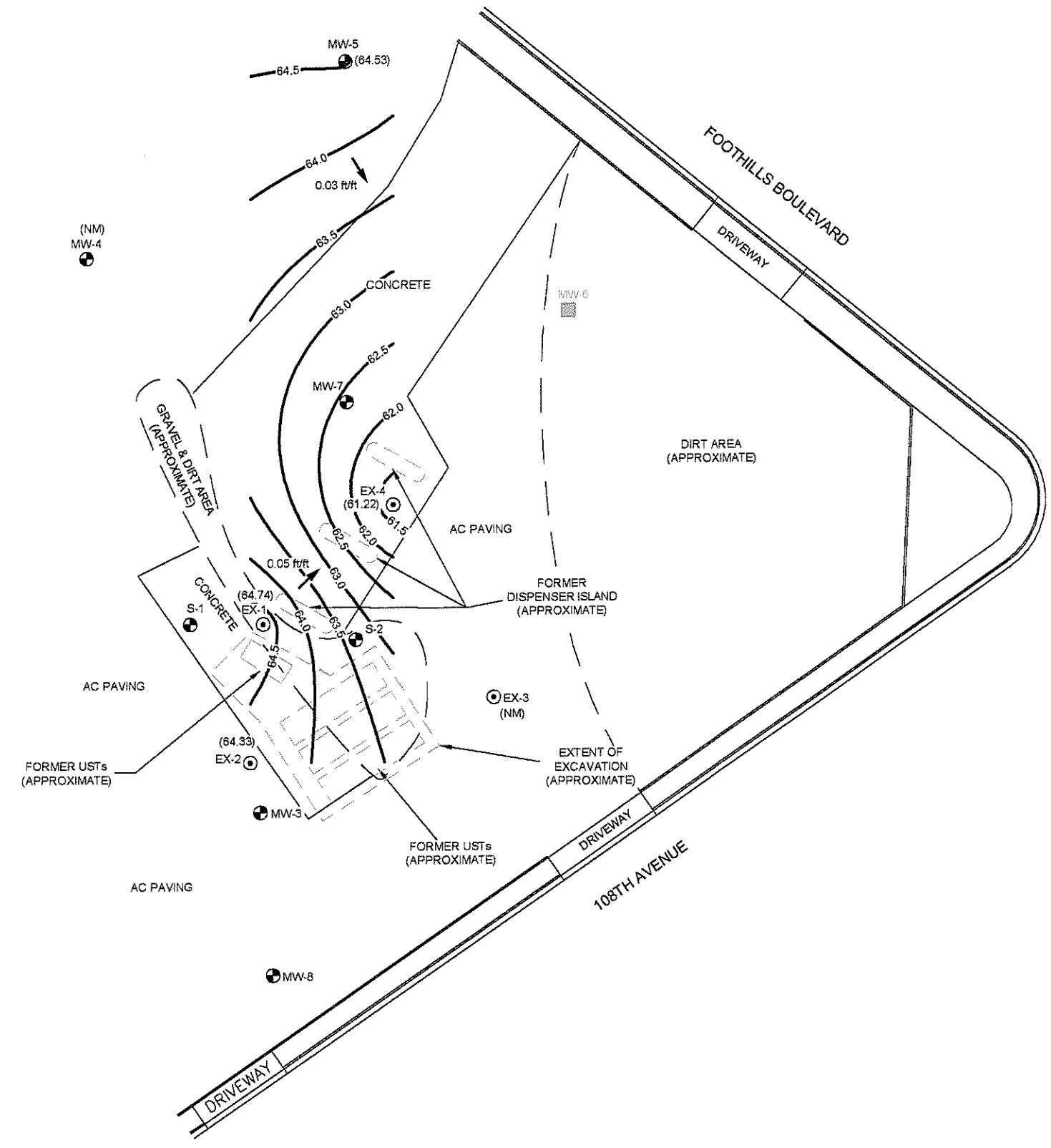
FIGURE  
**2A**

PROJECT NO.  
2007-0057-01





- LEGEND
- MW-3 MONITORING WELL LOCATION
  - EX-1 EXTRACTION WELL LOCATION
  - MW-6 ABANDONED MONITORING WELL LOCATION
  - (64.74) GROUND WATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
  - 60 WATER TABLE CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL
  - INFERRED DIRECTION OF GROUND WATER FLOW
- WELLS MEASURED: 5/05/09  
(NM) = NOT MEASURED



NOTE: LOCATIONS OF ALL CURRENT AND FORMER SITE FEATURES IS APPROXIMATE

USA-57 Quarterly Figures  
REV May 18, 2009  
JMP  
USA-57 Quarterly

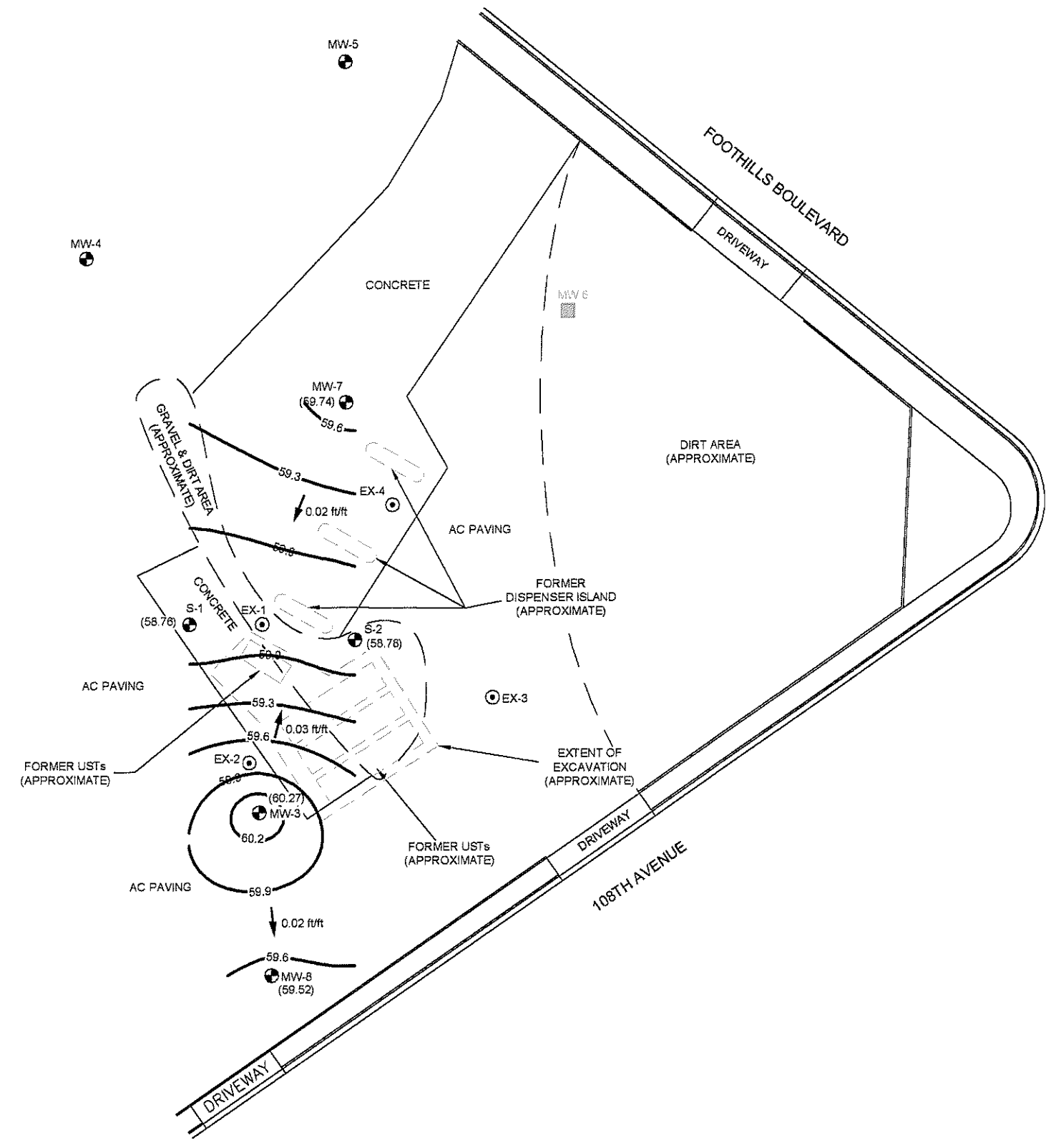


FORMER USA SERVICE STATION NO. 57  
10700 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA  
EXTRACTION WELL WITH MW-4 & MW-5  
GROUNDWATER ELEVATION CONTOUR MAP  
2nd QUARTER 2009

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

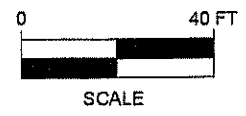


- LEGEND
- MW-3 MONITORING WELL LOCATION
  - ⊙ EX-1 EXTRACTION WELL LOCATION
  - MW-6 ABANDONED MONITORING WELL LOCATION
  - (58.78) GROUND WATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
  - 59.9— WATER TABLE CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL
  - ➔ INFERRED DIRECTION OF GROUND WATER FLOW
- WELLS MEASURED: 5/05/09



NOTE: LOCATIONS OF ALL CURRENT AND FORMER SITE FEATURES IS APPROXIMATE

USA57 Quarterly JMP REV. May 18, 2009 USA57 Quarterly Figures



FORMER USA SERVICE STATION NO. 57  
10700 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA  
MONITORING WELL (WITHOUT MW-4 & MW-5)  
GROUNDWATER ELEVATION CONTOUR MAP  
2nd QUARTER 2009

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

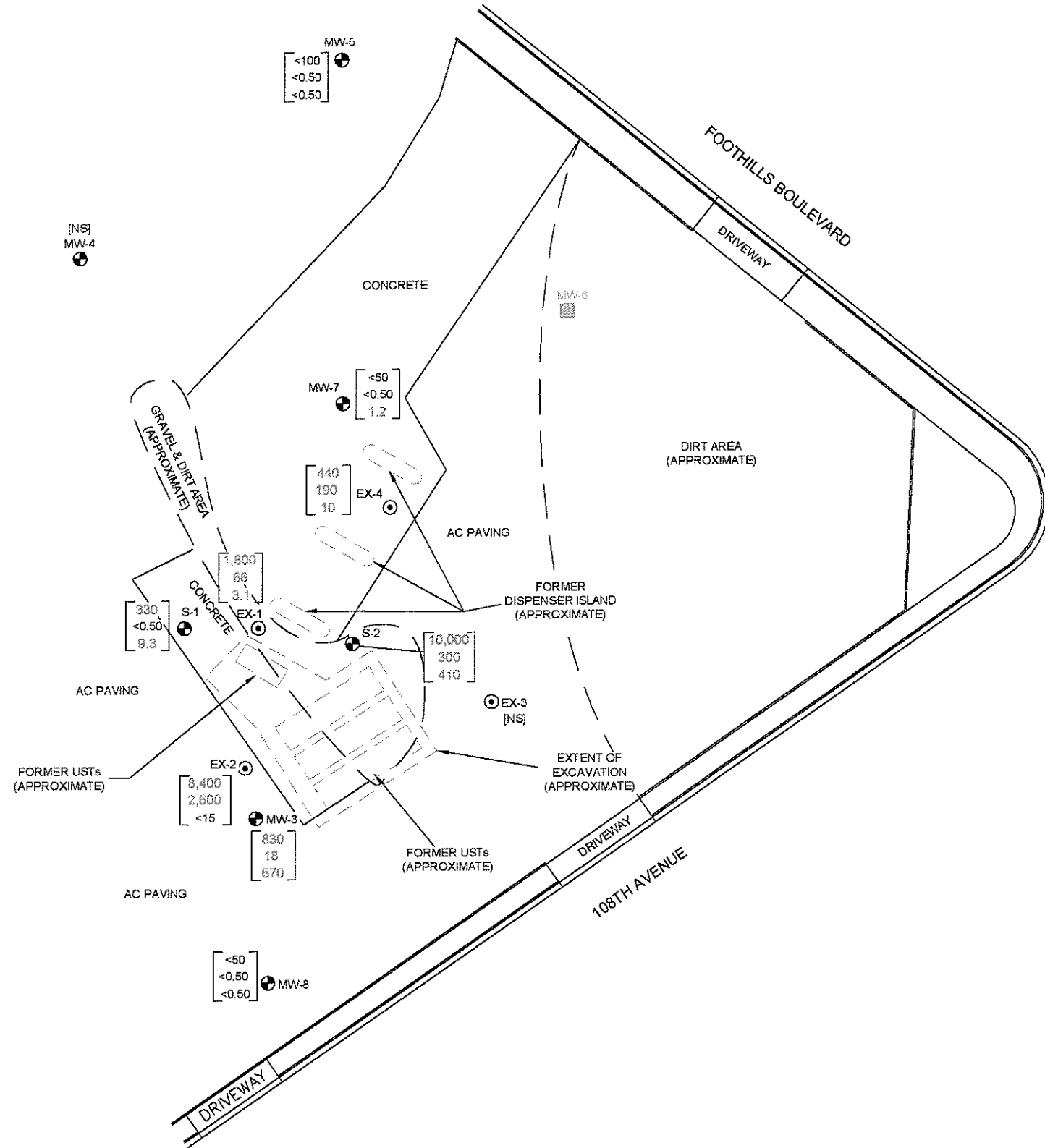


LEGEND

- MW-3 MONITORING WELL LOCATION
- ⊙ EX-1 EXTRACTION WELL LOCATION
- MW-6 ABANDONED MONITORING WELL LOCATION

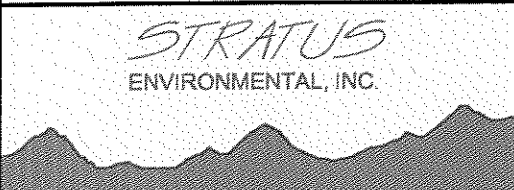
<50	GASOLINE RANGE ORGANICS (GRO) IN µg/L
<0.50	BENZENE CONCENTRATION IN µg/L
<0.50	METHYL TERTIARY BUTYL ETHER (MTBE) IN µg/L

SAMPLES COLLECTED ON 5/05/09  
 GRO ANALYZED BY EPA METHOD 8015B  
 BENZENE & MTBE ANALYZED BY EPA METHOD 8260B



NOTE: LOCATIONS OF ALL CURRENT AND FORMER SITE FEATURES IS APPROXIMATE

USA 57 Quarterly Figures  
REV May 18, 2008  
JMP  
USA 57 Quarterly



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

GROUNDWATER ANALYTICAL SUMMARY  
 2nd QUARTER 2009

FIGURE  
**3**  
 PROJECT NO.  
 2007-0057-01

**APPENDIX A**  
**FIELD DATA SHEETS**



Site Address 10700 MacArthur Blvd  
 City Oakland, CA  
 Sampled by: TH  
 Signature [Signature]

Site Number USA 57  
 Project Number 2007-0057-01  
 Project PM Scott Pinkney  
 DATE 5/5/09

ORIGINAL

Water Level Data					Purge Volume Calculations					Purge Method				Sample Record			Field Data	
Well ID	Time	Depth to Product (feet)	Depth to Water (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	0127		20.90	21.30	13.40	3	1	13.40	10									
S-2	0916		23.10	43.66	20.54	3	1	20.54	10.5		X			23.46	S-1	1405	.25	
MW-3	0948		17.00	40.30	23.50	4	1	47.12	24			X		27.19	S-2	1435	.80	
	4 UNABLE TO SAMPLE					4	1					X		21.56	MW-3	1230	.95	
	5 0940		16.25	27.75	11.50	4	1			X		X						
	7 0935		20.07	41.61	21.54	4	1	23.00	8		X	Dry @ 8						
MW-8	0952		20.98	37.34	16.36	4	1	43.08	43			X		18.53		4		
EX-1	0923		12.98	24.10	11.12	4	1	32.72	23	Dry @ 23		X		24.12		5	1215	1.48
	2 0919		12.63	24.88	12.25	4	1	22.24	8	Dry @ 8		X		24.41	MW-8	1100	2.80	
	3 UNABLE TO LOCATE					4	1	24.50	14	Dry @ 8		X		14.20	EX-1	1410	.76	
EX-4	1000		16.74	24.58	7.84	4	2			X		Dry @ 14		17.24		2	1445	.23
						4	2	15.68	7		X	Dry @ 7				3		
														18.32	EX-4	1030	2.29	

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

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)

CALIBRATION DATE  
 pH 5/11/09  
 Conductivity \_\_\_\_\_  
 DO \_\_\_\_\_



Well ID EX-4 1030					Well ID MW-8 1100				
purge start time bailer					purge start time 1037				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	20.7	7.34	435	0	time	21.3	6.98	1740	0
time	Dry @ 7				time	21.6	7.06	1847	17
time	20	7.27	440	(7)	time	20.9	7.03	1854	(23)
time					time	DRY @ 23			
purge stop time					purge stop time 1054				
Well ID MW-3 1230					Well ID MW-5 1215				
purge start time 1105					purge start time bailer				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	22.0	7.26	793	0	time	21.4	8.75	555	0
time	DRY @ 24				time	Dry @ 8			
time	21.6	7.11	745	(24)	time	21.2	8.56	526	(8)
time					time				
purge stop time 1130					purge stop time				
Well ID MW-7 1340					Well ID EX-1 1410				
purge start time 1220					purge start time 1250				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	22.8	8.46	425	0	time	22.2	7.67	413	0
time	23.3	7.95	371	24	time	Dry @ 8			
time	21.4	7.75	362	43	time	21.2	7.39	423	(8)
time					time				
purge stop time 1240					purge stop time 1300				
Well ID S-2 1435					Well ID S-1 1405				
purge start time 1310					purge start time bailer				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	25.0	7.37	429	0	time	21.8	7.18	926	0
time	23.2	7.39	434	10	time	21.5	7.03	431	6.5
time	Dry @ 10.5				time	Dry @ 10 gal			
time	21.8	7.09	434	(10.5)	time	22.0	7.26	442	(10)
purge stop time 1320					purge stop time				

ORIGINAL



Well ID <u>EX-2</u> <u>1445</u>					Well ID				
purge start time <u>baler</u> <u>odor</u>					purge start time				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	<u>21.3</u>	<u>7.18</u>	<u>594</u>	<u>Ø</u>	time				
time	<u>Dry @ 14</u>				time				
time	<u>21.8</u>	<u>7.19</u>	<u>605</u>	<u>10</u>	time				
time	<u>21.6</u>	<u>7.20</u>	<u>620</u>	<u>(T4)</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				
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: 5/5/09 Technician: A.Hill

Well L.D.	Box in Good Condition? <small>X = Yes Blank = No</small>	Lock Missing? <small>X = Yes (replaced) Blank = No</small>	Water in Wellbox? <small>X = Yes Blank = No</small>	Water Level Relative to Cap? <small>A = Above cap B = Below cap L = Level w/cap</small>	Well Cap? <small>I = Intact M = Missing or Compromised (replaced)</small>	Bolts Missing? <small>X = Yes Blank = No</small>	Bolts Stopped? <small>X = Yes Blank = No</small>	Bolt Holes Stopped? <small>X = Yes Blank = No</small>	Cracked or Broken Lid? <small>X = Yes Blank = No</small>	Cracked or Broken Box? <small>X = Yes Blank = No</small>	Grout Level more than 1ft below TOC? <small>X = Yes Blank = No</small>	Additional Comments <small>Check to ensure lid, cap, etc. are properly replaced in other column</small>
S-1	X											
S-2	X											
MW-3	X											
4												
5	X											
7	X											Well in low spot - Puddle of water
MW-8	X											
EX-1	X											
2	X											
3	<input checked="" type="checkbox"/>											
EX-4	X											Well buried in mud

### DRUM INVENTORY

Drums on site? Yes  No  (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.)

- Fenced in Area has high (5ft) Weeds
- Wells can be recapped, hoses and pvc piping removal



## **APPENDIX B**

### **SAMPLING AND ANALYSES PROCEDURES**

## **SAMPLING AND ANALYSES PROCEDURES**

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The sampling and analyses 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 typically 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, nonconformants, 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<sup>®</sup> 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<sup>®</sup> sheeting and plastic caps. The sample is then placed in a Ziploc<sup>®</sup> 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**

### **LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION**



MAY 22 2009

## ANALYTICAL REPORT

Stratus Environmental  
3330 Cameron Park Drive  
Cameron Park, CA 956828861

Attn: Gowri Kowtha  
Phone: (530) 676-6001  
Fax: (530) 676-6005  
Date Received : 05/07/09

Job#: USA 57

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

	Parameter	Concentration	Reporting	Date	Date
				Limit	Sampled
Client ID :	TPH-P (GRO)	330	50 µg/L	05/05/09	05/08/09
S-1	Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	9.3	0.50 µg/L	05/05/09	05/08/09
STR09050756-01A	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND	1.0 µg/L	05/05/09	05/08/09
	Benzene	ND	0.50 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	05/05/09	05/08/09
	Toluene	ND	0.50 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	05/05/09	05/08/09
	Ethylbenzene	ND	0.50 µg/L	05/05/09	05/08/09
	m,p-Xylene	ND	0.50 µg/L	05/05/09	05/08/09
	o-Xylene	ND	0.50 µg/L	05/05/09	05/08/09
Client ID :	TPH-P (GRO)	10,000	500 µg/L	05/05/09	05/08/09
S-2	Tertiary Butyl Alcohol (TBA)	99	50 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	410	2.5 µg/L	05/05/09	05/08/09
STR09050756-02A	Di-isopropyl Ether (DIPE)	ND	5.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	5.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND	5.0 µg/L	05/05/09	05/08/09
	Benzene	300	2.5 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND	5.0 µg/L	05/05/09	05/08/09
	Toluene	47	2.5 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND	20 µg/L	05/05/09	05/08/09
	Ethylbenzene	250	2.5 µg/L	05/05/09	05/08/09
	m,p-Xylene	200	2.5 µg/L	05/05/09	05/08/09
	o-Xylene	20	2.5 µg/L	05/05/09	05/08/09
Client ID :	TPH-P (GRO)	830	200 µg/L	05/05/09	05/08/09
MW-3	Tertiary Butyl Alcohol (TBA)	760	20 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	670	1.0 µg/L	05/05/09	05/08/09
STR09050756-03A	Di-isopropyl Ether (DIPE)	4.2	2.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	2.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	19	2.0 µg/L	05/05/09	05/08/09
	Benzene	18	1.0 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND	2.0 µg/L	05/05/09	05/08/09
	Toluene	ND	1.0 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND	8.0 µg/L	05/05/09	05/08/09
	Ethylbenzene	ND	1.0 µg/L	05/05/09	05/08/09
	m,p-Xylene	ND	1.0 µg/L	05/05/09	05/08/09
	o-Xylene	ND	1.0 µg/L	05/05/09	05/08/09





# 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	O	100 µg/L	05/05/09	05/08/09
MW-5	Tertiary Butyl Alcohol (TBA)	ND		10 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	ND		0.50 µg/L	05/05/09	05/08/09
STR09050756-04A	Di-isopropyl Ether (DIPE)	ND		1.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND		1.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND		1.0 µg/L	05/05/09	05/08/09
	Benzene	ND		0.50 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND		1.0 µg/L	05/05/09	05/08/09
	Toluene	ND		0.50 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND		4.0 µg/L	05/05/09	05/08/09
	Ethylbenzene	ND		0.50 µg/L	05/05/09	05/08/09
	m,p-Xylene	ND		0.50 µg/L	05/05/09	05/08/09
	o-Xylene	ND		0.50 µg/L	05/05/09	05/08/09

Client ID :	TPH-P (GRO)	ND		50 µg/L	05/05/09	05/08/09
MW-7	Tertiary Butyl Alcohol (TBA)	ND		10 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	1.2		0.50 µg/L	05/05/09	05/08/09
STR09050756-05A	Di-isopropyl Ether (DIPE)	ND		1.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND		1.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND		1.0 µg/L	05/05/09	05/08/09
	Benzene	ND		0.50 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND		1.0 µg/L	05/05/09	05/08/09
	Toluene	ND		0.50 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND		2.0 µg/L	05/05/09	05/08/09
	Ethylbenzene	ND		0.50 µg/L	05/05/09	05/08/09
	m,p-Xylene	ND		0.50 µg/L	05/05/09	05/08/09
	o-Xylene	ND		0.50 µg/L	05/05/09	05/08/09

Client ID :	TPH-P (GRO)	ND		50 µg/L	05/05/09	05/08/09
MW-8	Tertiary Butyl Alcohol (TBA)	ND		10 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	ND		0.50 µg/L	05/05/09	05/08/09
STR09050756-06A	Di-isopropyl Ether (DIPE)	ND		1.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND		1.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND		1.0 µg/L	05/05/09	05/08/09
	Benzene	ND		0.50 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND		1.0 µg/L	05/05/09	05/08/09
	Toluene	ND		0.50 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND		2.0 µg/L	05/05/09	05/08/09
	Ethylbenzene	ND		0.50 µg/L	05/05/09	05/08/09
	m,p-Xylene	ND		0.50 µg/L	05/05/09	05/08/09
	o-Xylene	ND		0.50 µg/L	05/05/09	05/08/09

Client ID :	TPH-P (GRO)	1,800		100 µg/L	05/05/09	05/08/09
EX-I	Tertiary Butyl Alcohol (TBA)	ND		10 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	3.1		0.50 µg/L	05/05/09	05/08/09
STR09050756-07A	Di-isopropyl Ether (DIPE)	ND		1.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND		1.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND		1.0 µg/L	05/05/09	05/08/09
	Benzene	66		0.50 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND		1.0 µg/L	05/05/09	05/08/09
	Toluene	0.77		0.50 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND	V	4.0 µg/L	05/05/09	05/08/09
	Ethylbenzene	17		0.50 µg/L	05/05/09	05/08/09
	m,p-Xylene	7.2		0.50 µg/L	05/05/09	05/08/09
	o-Xylene	0.83		0.50 µg/L	05/05/09	05/08/09



# Alpha Analytical, Inc.

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Client ID :	TPH-P (GRO)	8,400		3,000 µg/L	05/05/09	05/08/09
EX-2	Tertiary Butyl Alcohol (TBA)	ND	V	300 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	ND	V	15 µg/L	05/05/09	05/08/09
STR09050756-08A	Di-isopropyl Ether (DIPE)	ND	V	30 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	V	30 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND	V	30 µg/L	05/05/09	05/08/09
	Benzene	2,600		15 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND	V	30 µg/L	05/05/09	05/08/09
	Toluene	80		15 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND	V	120 µg/L	05/05/09	05/08/09
	Ethylbenzene	390		15 µg/L	05/05/09	05/08/09
	m,p-Xylene	340		15 µg/L	05/05/09	05/08/09
	o-Xylene	130		15 µg/L	05/05/09	05/08/09
Client ID :	TPH-P (GRO)	440		200 µg/L	05/05/09	05/08/09
EX-4	Tertiary Butyl Alcohol (TBA)	28		20 µg/L	05/05/09	05/08/09
Lab ID :	Methyl tert-butyl ether (MTBE)	10		1.0 µg/L	05/05/09	05/08/09
STR09050756-09A	Di-isopropyl Ether (DIPE)	ND	V	2.0 µg/L	05/05/09	05/08/09
	Ethyl Tertiary Butyl Ether (ETBE)	ND	V	2.0 µg/L	05/05/09	05/08/09
	1,2-Dichloroethane	ND	V	2.0 µg/L	05/05/09	05/08/09
	Benzene	190		1.0 µg/L	05/05/09	05/08/09
	Tertiary Amyl Methyl Ether (TAME)	ND	V	2.0 µg/L	05/05/09	05/08/09
	Toluene	ND	V	1.0 µg/L	05/05/09	05/08/09
	1,2-Dibromoethane (EDB)	ND	V	8.0 µg/L	05/05/09	05/08/09
	Ethylbenzene	2.6		1.0 µg/L	05/05/09	05/08/09
	m,p-Xylene	5.0		1.0 µg/L	05/05/09	05/08/09
	o-Xylene	ND	V	1.0 µg/L	05/05/09	05/08/09

### 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 L. 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.

5/14/09

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

## VOC Sample Preservation Report

Work Order: STR09050756

Project: USA 57

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09050756-01A	S-1	Aqueous	2
09050756-02A	S-2	Aqueous	2
09050756-03A	MW-3	Aqueous	2
09050756-04A	MW-5	Aqueous	2
09050756-05A	MW-7	Aqueous	2
09050756-06A	MW-8	Aqueous	2
09050756-07A	EX-1	Aqueous	2
09050756-08A	EX-2	Aqueous	2
09050756-09A	EX-4	Aqueous	2

5/14/09

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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Date:  
12-May-09

## QC Summary Report

Work Order:  
09050756

### Method Blank

Method Blank		Type	Test Code: EPA Method SW8015B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050804.D		MBLK	Batch ID: MS12W0508B					Analysis Date: 05/08/2009 13:03		
Sample ID: MBLK MS12W0508B	Units: µg/L		Run ID: MSD_12_090508A					Prep Date: 05/08/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	50								
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.47		10		95	70	130			
Surr: 4-Bromofluorobenzene	10.5		10		105	70	130			

### Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: EPA Method SW8015B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050803.D		LCS	Batch ID: MS12W0508B					Analysis Date: 05/08/2009 12:40		
Sample ID: GLCS MS12W0508B	Units: µg/L		Run ID: MSD_12_090508A					Prep Date: 05/08/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	412	50	400		103	70	130			
Surr: 1,2-Dichloroethane-d4	11		10		110	70	130			
Surr: Toluene-d8	9.34		10		93	70	130			
Surr: 4-Bromofluorobenzene	10.5		10		105	70	130			

### Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method SW8015B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050824.D		MS	Batch ID: MS12W0508B					Analysis Date: 05/08/2009 20:40		
Sample ID: 09050755-02AGS	Units: µg/L		Run ID: MSD_12_090508A					Prep Date: 05/08/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2170	250	2000		0	108	58	135		
Surr: 1,2-Dichloroethane-d4	54.3		50		109	70	130			
Surr: Toluene-d8	46.7		50		93	70	130			
Surr: 4-Bromofluorobenzene	53.9		50		108	70	130			

### Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method SW8015B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050825.D		MSD	Batch ID: MS12W0508B					Analysis Date: 05/08/2009 21:03		
Sample ID: 09050755-02AGSD	Units: µg/L		Run ID: MSD_12_090508A					Prep Date: 05/08/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2280	250	2000		0	114	58	135	2166	5.2(20)
Surr: 1,2-Dichloroethane-d4	56.3		50		113	70	130			
Surr: Toluene-d8	46.1		50		92	70	130			
Surr: 4-Bromofluorobenzene	52.8		50		106	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.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
12-May-09

## QC Summary Report

Work Order:  
09050756

### Method Blank

Method Blank		Type	Test Code: EPA Method SW8260B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050804.D		MBLK	Batch ID: MS12W0508A				Analysis Date: 05/08/2009 13:03			
Sample ID: MBLK MS12W0508A	Units: µg/L		Run ID: MSD_12_090508A				Prep Date: 05/08/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
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	11.1		10		111	70	130			
Surr: Toluene-d8	9.47		10		95	70	130			
Surr: 4-Bromofluorobenzene	10.5		10		105	70	130			

### Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: EPA Method SW8260B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050802.D		LCS	Batch ID: MS12W0508A				Analysis Date: 05/08/2009 12:17			
Sample ID: LCS MS12W0508A	Units: µg/L		Run ID: MSD_12_090508A				Prep Date: 05/08/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	9.25	0.5	10		93	62	136			
Benzene	9.59	0.5	10		96	70	130			
Toluene	9.33	0.5	10		93	80	120			
Ethylbenzene	9.74	0.5	10		97	80	120			
m,p-Xylene	9.2	0.5	10		92	70	130			
o-Xylene	9.19	0.5	10		92	70	130			
Surr: 1,2-Dichloroethane-d4	10.6		10		106	70	130			
Surr: Toluene-d8	9.54		10		95	70	130			
Surr: 4-Bromofluorobenzene	10.7		10		107	70	130			

### Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method SW8260B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050822.D		MS	Batch ID: MS12W0508A				Analysis Date: 05/08/2009 19:54			
Sample ID: 09050755-02AMS	Units: µg/L		Run ID: MSD_12_090508A				Prep Date: 05/08/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	53.7	1.3	50	1.31	105	56	141			
Benzene	50.5	1.3	50	0.77	99	67	130			
Toluene	45.9	1.3	50	0	92	66	130			
Ethylbenzene	48.6	1.3	50	0	97	68	130			
m,p-Xylene	46.2	1.3	50	0	92	64	130			
o-Xylene	46.6	1.3	50	0	93	70	130			
Surr: 1,2-Dichloroethane-d4	54.6		50		109	70	130			
Surr: Toluene-d8	46.4		50		93	70	130			
Surr: 4-Bromofluorobenzene	54.4		50		109	70	130			

### Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method SW8260B							
File ID: D:\MSDCHEM\MS12\DATA\090508\09050823.D		MSD	Batch ID: MS12W0508A				Analysis Date: 05/08/2009 20:17			
Sample ID: 09050755-02AMSD	Units: µg/L		Run ID: MSD_12_090508A				Prep Date: 05/08/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	53.3	1.3	50	1.31	104	56	141	53.66	0.6(20)	
Benzene	52	1.3	50	0.77	103	67	130	50.46	3.1(20)	
Toluene	47.3	1.3	50	0	95	66	130	45.93	3.0(20)	
Ethylbenzene	50.2	1.3	50	0	100	68	130	48.56	3.4(20)	
m,p-Xylene	47.7	1.3	50	0	95	64	130	46.18	3.2(20)	
o-Xylene	48.2	1.3	50	0	96	70	130	46.58	3.4(20)	
Surr: 1,2-Dichloroethane-d4	55.8		50		112	70	130			
Surr: Toluene-d8	46.4		50		93	70	130			
Surr: 4-Bromofluorobenzene	53.9		50		108	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:**  
*12-May-09*

## QC Summary Report

**Work Order:**  
09050756

**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 : 5/15/2009

Date of Notice : 5/7/2009 9:57:09 AM

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: **Gowri Kowtha**

Client's EMail: **gkowtha@stratusinc.net**

Work Order Number: **STR09050756**

Client's Phone: **(530) 676-6001**

Client's FAX: **(530) 676-6005**

Date Received: **5/7/2009**

Received by: **Tara Dickinson**

### Chain of Custody (COC) Information

Carrier name FedEx

Chain of custody present ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Custody seals intact on shipping container/cooler ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles ?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody signed when relinquished and received ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample ID noted by Client on COC ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Date and time of collection noted by Client on COC ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samplers's name noted on COC ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Internal Chain of Custody (COC) requested ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sub Contract Lab Used :	None <input checked="" type="checkbox"/>	See Comments <input type="checkbox"/>	

### Sample Receipt Information

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

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

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance (0-6°C)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Cooler Temperature 4 °C
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
TOC Water - pH acceptable upon receipt (H2SO4 pH<2)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### Analytical Requirement Information

Are non-Standard or Modified methods requested ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Are there client specific Project requirements ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If YES : see the Chain of Custody (COC)

Comments : Project Manager per pervious work orders. Sampling date taken off voas.

Billing Information :

# CHAIN-OF-CUSTODY RECORD

# CA

## Alpha Analytical, Inc.

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

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

### WorkOrder : STR09050756

### Report Due By : 5:00 PM On : 15-May-09

**Client:**

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

Report Attention	Phone Number	EEmail Address
Gowri Kowtha	(530) 676-6001 x	gkowtha@stratusinc.net

EDD Required : Yes

Sampled by : Client

PO :

Client's COC # : 23986

Job : USA 57

Cooler Temp	Samples Received	Date Printed
4 °C	07-May-09	07-May-09

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

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles			TPHIP_W	VOC_W	Requested Tests				Sample Remarks
				Alpha	Sub	TAT							
STR09050756-01A	S-1	AQ	05/05/09 14:05	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					
STR09050756-02A	S-2	AQ	05/05/09 14:35	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					
STR09050756-03A	MW-3	AQ	05/05/09 12:30	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					
STR09050756-04A	MW-5	AQ	05/05/09 12:15	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					
STR09050756-05A	MW-7	AQ	05/05/09 13:40	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					
STR09050756-06A	MW-8	AQ	05/05/09 11:00	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					
STR09050756-07A	EX-1	AQ	05/05/09 14:10	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					
STR09050756-08A	EX-2	AQ	05/05/09 14:45	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					

Comments: Security seals intact. Frozen ice. Project Manager per pervious work orders. Send copy of receipt checklist with final report. Sampling date taken off voas. :

Logged in by:	Signature	Print Name	Company	Date/Time
	<i>Trace Dickinson</i>	Trace Dickinson	Alpha Analytical, Inc.	5/7/09 1000

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 :

# CHAIN-OF-CUSTODY RECORD

# CA

## WorkOrder : STR09050756

## Report Due By : 5:00 PM On : 15-May-09

### 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

Report Attention	Phone Number	EEmail Address
Gowri Kowtha	(530) 676-6001 x	gkowtha@stratusinc.net

EDD Required : Yes

Sampled by : Client

PO :

Client's COC # : 23986


Job : USA 57

Cooler Temp	Samples Received	Date Printed
4 °C	07-May-09	07-May-09

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

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			Requested Tests				Sample Remarks		
				Alpha	Sub	TAT	TPHIP_W	VOC_W					
STR09050756-09A	EX-4	AQ	05/05/09 10:30	5	0	6	GAS-C	BTEX/OXY/ 1,2 DCA/EDB C					


Comments: Security seals intact. Frozen ice. Project Manager per pervious work orders. Send copy of receipt checklist with final report. Sampling date taken off voas. :

Logged in by:	Signature	Print Name	Company	Date/Time
		Dave Dickerson	Alpha Analytical, Inc.	5/7/09 10:00

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  
 Address 3330 Cameron Park Dr.  
 City, State, Zip Cameron Park, CA  
 Phone Number 530-676-6001 Fax \_\_\_\_\_



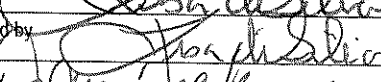
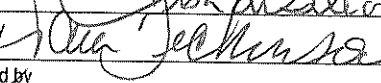


**Alpha Analytical, Inc.**  
 255 Glendale Avenue, Suite 21  
 Sparks, Nevada 89431-5778  
 Phone (775) 355-1044  
 Fax (775) 355-0406

Samples Collected From Which State? 23986  
 AZ \_\_\_\_\_ CA  NV \_\_\_\_\_ WA \_\_\_\_\_  
 ID \_\_\_\_\_ OR  OTHER \_\_\_\_\_ Page # \_\_\_\_\_ of \_\_\_\_\_

Client Name <u>USA 57</u>			P.O. # _____		Job # _____		Analyses Required Required QC Level? I   II   III   IV EDD / EDF? YES <input checked="" type="checkbox"/> NO _____ Global ID # <u>T0600101808</u> REMARKS					
Address <u>10700 MacArthur Blvd</u>			E-Mail Address _____		Phone # _____						Fax # _____	
City, State, Zip <u>Oakland, CA</u>			Report Attention _____		Total and type of containers ** See below							
Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	GRD	BTEX / 50XYS	Va.DA	EDB	
1405		AQ		SI20905075601	S-1	STD		X	X	X	X	
1435				-02	S-2			X	X	X	X	
1030				-03	MW-3			X	X	X	X	
1215				-04	MW-5			X	X	X	X	
1340				-05	MW-7			X	X	X	X	
1100				-06	MW-8			X	X	X	X	
1410				-07	EX-1			X	X	X	X	
1445				-08	EX-2			X	X	X	X	
1030				-09	EX-4			X	X	X	X	

**ADDITIONAL INSTRUCTIONS:**

Signature	Print Name	Company	Date	Time
	Anthony H. II	Stratus	5/6/09	1200
	Lisa de Silva	ALPHA	5-6-09	1200
	Lisa de Silva	ALPHA	5-6-09	1500
	Jane Wilkinson	Alphe	5/7/09	959

\*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  
CONFIRMATIONS**

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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!

<b><u>Submittal Type:</u></b>	GEO_WELL
<b><u>Submittal Title:</u></b>	USA 57, GEO WELL, SECOND QUARTER 2009
<b><u>Facility Global ID:</u></b>	T0600101808
<b><u>Facility Name:</u></b>	USA PETROLEUM
<b><u>File Name:</u></b>	GEO_WELL.zip
<b><u>Organization Name:</u></b>	Stratus Environmental, Inc.
<b><u>Username:</u></b>	STRATUS NOCAL
<b><u>IP Address:</u></b>	12.186.106.98
<b><u>Submittal Date/Time:</u></b>	6/5/2009 3:31:03 PM
<b><u>Confirmation Number:</u></b>	6909877955

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STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A EDF FILE

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<b><u>Submittal Type:</u></b>	EDF - Monitoring Report - Quarterly
<b><u>Submittal Title:</u></b>	usa 57 2nd quarter 2009 well sampling results
<b><u>Facility Global ID:</u></b>	T0600101808
<b><u>Facility Name:</u></b>	USA PETROLEUM
<b><u>File Name:</u></b>	09050756.zip
<b><u>Organization Name:</u></b>	Stratus Environmental, Inc.
<b><u>Username:</u></b>	STRATUS NOCAL
<b><u>IP Address:</u></b>	12.186.106.98
<b><u>Submittal Date/Time:</u></b>	6/4/2009 9:35:19 AM
<b><u>Confirmation Number:</u></b>	3526138782

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[VIEW DETECTIONS REPORT](#)

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