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March 22, 2004
Project No. 2007-0057-01

Alameda County
MAR 24 2004
Environmental Health

Mr. Don Hwang
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: Quarterly Groundwater Monitoring Report, First Quarter 2004, for USA Service Station No. 57, Located at 10700 MacArthur Boulevard, Oakland, California

Dear Mr. Hwang:

Stratus Environmental, Inc. (Stratus) is submitting the attached report which presents the results of the first quarter 2004 quarterly monitoring and sampling program on behalf of USA Gasoline Corporation (USA) for the former USA Service Station No. 57, located at 10700 MacArthur Boulevard, Oakland, California (Figure 1). This report is in compliance with Alameda County Department of Environmental Health requirements for underground storage tank (UST) investigations.

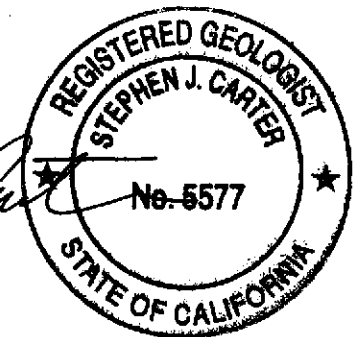
If you have any questions regarding this report, please contact Steve Carter at (530) 676-6008.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Marie H. Adsetts
Staff Geologist

Stephen J. Carter, R.G.
Project Manager



Attachment: Quarterly Groundwater Monitoring Report, First Quarter 2004

cc: Mr. Charles Miller, USA Gasoline Corporation
Mr. Ken Phares, Jay-Phares Corporation
Mr. Peter McIntyre, AEI Consultants

Date March 22, 2004

USA GASOLINE QUARTERLY GROUNDWATER MONITORING REPORT

Facility No: 57 Address: 10700 MacArthur Blvd., Oakland, California
USA Gasoline Project Supervisor: Charles Miller
Consulting Co./Contact Person: Stratus Environmental, Inc./ Stephen J. Carter, R.G.
Consultant Project No: 2007-0057-01
Primary Agency/Regulatory ID No: Don Hwang, Alameda County Department of Environmental Health / 4490

WORK PERFORMED THIS QUARTER (First 2004):

1. Stratus measured groundwater elevations and collected groundwater samples from wells S-1, S-2, MW-4, MW-7, and MW-8 on January 15, 2004. Well MW-5 was damaged and could not be sampled.
2. Stratus compiled and evaluated groundwater monitoring data.
3. Stratus prepared and submitted a *Work Plan for Monitoring Well Replacement* (dated January 14, 2004).
4. The locations and elevations of the monitoring well network were re-surveyed on February 10, 2004. Survey data was forwarded to the GeoTracker database.
5. Wells MW-3, MW-5, and MW-6 have previously been inaccessible due to previous site construction activities. On February 10, 2004, Stratus cleared the access to these wells. Well MW-5 was obstructed at 34 feet below ground surface (bgs) by debris, and well MW-6 was obstructed at 18 feet bgs by tree roots.
6. Stratus prepared and submitted a *Feasibility Test Work Plan* (dated March 15, 2004).

WORK PROPOSED FOR NEXT QUARTER (Second 2004):

1. The next sampling event is tentatively scheduled for April 2004. Groundwater samples will be collected for laboratory analysis from wells S-1, S-2, MW-3, MW-4, MW-7, and MW-8. If obstructions do not interfere, Stratus will also collect samples from wells MW-5 and MW-6.
2. Groundwater samples will be analyzed for total petroleum hydrocarbons as gasoline (TPHG) using U.S. Environmental Protection Agency Method (EPA) Method SW8015B/DHS Luft Manual, and for benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB) using EPA Method SW8260B.

Current Phase of Project: Monitoring
Frequency of Groundwater Sampling: All Wells = Quarterly
Frequency of Groundwater Monitoring: Quarterly

Groundwater Sampling Date:	January 15, 2004
Is Free Product (FP) Present on Site:	No
FP Recovered This Quarter:	No
Cumulative FP Recovered to Date:	NA
Approximate Depth to Groundwater:	12.14 to 20.44 feet below top of well casing
Groundwater Flow Direction:	Southeast
Groundwater Gradient:	0.034 ft/ft

DISCUSSION:

At the time of the first quarter 2004 monitoring event, groundwater elevations had increased between 1.03 and 2.92 feet in the monitoring wells, since the October 9, 2003, monitoring event. Depth-to-water measurements were corrected to mean sea level (MSL) and used to construct a groundwater elevation contour map (Figure 2). The groundwater flow direction on January 15, 2004, appeared to be generally toward the southeast at a gradient of 0.034 ft/ft. This flow pattern appears to be consistent with the past two quarters. Groundwater flow toward the southwest, south, southeast, and north has been observed at this site.

TPHG, benzene, and MTBE were reported in the sample collected from well S-2. TPHG and MTBE were also reported in well S-1, and MTBE was also reported in well MW-7. The highest concentrations of TPHG (6,300 µg/L), benzene (21 µg/L), and MTBE (130 µg/L) were reported in well S-2. TBA was reported in wells S-1, S-2, MW-4, MW-7, and MW-8, with the highest concentration (48 µg/L) reported in well S-2. TAME, DIPE, ETBE, EDB, or 1,2-DCA were not reported in any of the wells. Reporting limits in well S-2 were raised due to high concentrations of target analytes. Concentrations reported during the first quarter 2004 are generally consistent with historical analytical data except for the presence of TBA in wells MW-4, MW-7, and MW-8. Analytical results of TPHG, benzene, and MTBE for groundwater samples collected on January 15, 2004, 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 2 Groundwater Elevation Contour Map (First Quarter 2004)
- Figure 3 Groundwater Analytical Summary (First Quarter 2004)
- Appendix A Field Data Sheets
- Appendix B Sampling and Analysis Procedures
- Appendix C Certified Analytical Reports and Chain-of-Custody Documentation

TABLE 1

GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY

Former USA Station No. 57

10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	TPHG (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
S-1	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	6100	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*
	11/02/98	15.28		63.40	1,000	1,200	<0.5	9.5	1.6	9.1	100
	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	6.0

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Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	TPHG (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
S-2	03/03/95	15.39	76.86	61.47	24,000	6,000	1,900	440	600	2,500	NA
	07/24/95	14.47		62.39	NA	NA	NA	NA	NA	NA	NA
	11/22/95	21.52	80.93	59.41	NA	NA	NA	NA	NA	NA	NA
	12/06/95	21.78		59.15	NA	NA	NA	NA	NA	NA	NA
	01/04/96	21.75		59.18	NA	NA	NA	NA	NA	NA	NA
	01/31/97	17.25		63.68	NA	NA	NA	NA	NA	NA	NA
	10/10/97	21.21		59.72	13,000	<50	260	38	190	280	600*
	01/20/98	19.07		61.86	1,900	2300	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

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				Elevation (ft msl)	TPHG (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-3	03/03/95	13.99	76.30	62.31	2,500	1,600	540	92	36	200	NA
	07/24/95	13.33		62.97	NA	NA	NA	NA	NA	NA	NA
	11/22/95	20.94	80.32	59.38	14,000	5,400	5,700	230	430	650	820*
	12/06/95	17.48		62.84	NA	NA	NA	NA	NA	NA	NA
	01/04/96	20.01		60.31	NA	NA	NA	NA	NA	NA	NA
	01/31/97	16.63		63.69	1,100	<50	130	8	5	5	NA
	10/10/97	20.62		59.70	3,400	1,100	830	4	100	<10	160*
	01/20/98	15.40		64.92	3,900	550	7.9	4.1	<0.5	3.7	<5.0*
	04/28/98	10.51		69.81	800	1,000	82	5.2	5.7	5.4	240*
	07/31/98	13.46		66.86	2,200	610	510	7.6	16	5.27	310*
	11/02/98	17.11		63.21	4,900	1,600	220	16	13	13.7	180*
	06/10/99	15.24		65.08	1,000	120	<0.5	<0.5	<0.5	1.1	120*[1]
	10/18/00	15.41		64.91	<50	<50	<0.5	<0.5	<0.5	<0.5	12

Not Part of the Current Monitoring Well Network

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				Elevation (ft msl)	TPHG (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)			
MW-4	11/22/95	14.99	76.42	61.43	<50	200	<0.5	1.5	<0.5	1.7	6.4*	
	12/06/95	11.21		65.21	NA	NA	NA	NA	NA	NA	NA	
	01/04/96	14.62		61.80	NA	NA	NA	NA	NA	NA	NA	
	01/31/97	8.18		68.24	<50	<50	<0.5	2	<0.5	2	11*	
	10/10/97	14.14		62.28	<50	<50	<0.5	<0.5	<0.5	<2	<5.0*	
	01/20/98	7.05		69.37	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	04/28/98	5.88		70.54	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	07/31/98	8.40		68.02	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	11/02/98	16.08		60.34	NA	NA	NA	NA	NA	NA	NA	
	06/10/99	14.81		61.61	NA	NA	NA	NA	NA	NA	NA	
	10/18/00	12.71		63.71	<50	<50	<0.5	0.59	0.82	0.53	<5.0*	
	03/12/02	8.92		67.50	<50	<50	<0.5	0.61	0.72	2.5	1.8	
	11/19/02	13.24		63.18	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	01/09/03	11.00		65.42	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	04/14/03	11.03		65.39	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	07/21/03	13.10		63.32	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
10/09/03	13.33		63.09	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50		
01/15/04	12.14		64.28	<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)	TPHG (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	

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Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater							Total Xylenes (µg/L)	MTBE (µg/L)
				Elevation (ft msl)	TPHG (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)			
MW-6	11/22/95	21.73	81.64	59.91	<50	140	<0.5	1.2	<0.5	1.5	5.3*	
	12/06/95	18.03		63.61	NA	NA	NA	NA	NA	NA	NA	
	01/04/96	21.67		59.97	NA	NA	NA	NA	NA	NA	NA	
	01/31/97	16.01		65.63	70	<50	<0.5	2	<0.5	<1	5*	
	10/10/97	20.55		61.09	80	<50	<0.5	<0.5	<0.5	<2	<5*	
	01/20/98	15.74		65.90	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	04/28/98	10.78		70.86	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	07/31/98	13.97		67.67	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	11/02/98	17.97		63.67	NA	NA	NA	NA	NA	NA	NA	
	06/10/99	16.92		64.72	NA	NA	NA	NA	NA	NA	NA	

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Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater							Total	
				Elevation (ft msl)	TPHG (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		59.27	<50	NA	<0.50	<0.50	<0.50	<0.50	3.8	
	01/09/03	18.38		60.48	<50	NA	<0.50	<0.50	<0.50	<0.50	2.7	
	04/14/03	18.17		60.69	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	07/21/03	20.29		58.57	<50	NA	<0.50	<0.50	<0.50	<0.50	1.8	
	10/09/03	19.48		59.38	<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		

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				Elevation (ft msl)	TPHG (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (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		58.41	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	01/09/03	17.90		61.65	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	04/14/03	17.84		61.71	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	07/21/03	19.79		59.76	<100[2]	NA	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/09/03	21.02		58.53	<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	

TABLE 1

GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY

Former USA Station No. 57

10700 MacArthur Blvd., Oakland, California

Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	TPHG (µg/L)	TPHD (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
<p><u>Note:</u></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>TPHG = Total petroleum hydrocarbons as gasoline</p> <p>TPHG 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>Monitoring wells re-surveyed by Morrow Surveying on February 10, 2004.</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 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)
S-1	11/19/02	190	<10	<1.0	<1.0	<1.0	NA	NA
	01/09/03	11	<5.0	<1.0	<1.0	<1.0	NA	NA
	04/14/03	27	<20[2]	<2.0[2]	<2.0[2]	<2.0[2]	NA	NA
	07/21/03	11	<10[2]	<1.0	<1.0	<1.0	NA	NA
	10/09/03	8.8	6.4	<1.0	<1.0	<1.0	<1.0	<2.0
	01/15/04	6.0	10	<1.0	<1.0	<1.0	<1.0	<2.0
S-2	11/19/02	750	<200[1]	<20[1]	<20[1]	<20[1]	NA	NA
	01/09/03	270	<100[1]	<10[1]	<10[1]	<10[1]	NA	NA
	04/14/03	400	95	<5.0[1]	<5.0[1]	<5.0[1]	NA	NA
	07/21/03	410	110	<5.0[1]	<5.0[1]	<5.0[1]	NA	NA
	10/09/03	180	57	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	<20[1]
	01/15/04	130	48	<4.0[1]	<4.0[1]	<4.0[1]	<4.0[1]	<16[1]
MW-4	11/19/02	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	01/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	04/14/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	07/21/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	10/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	<1.0	<2.0
	01/15/04	<0.50	7.8	<1.0	<1.0	<1.0	<1.0	<2.0
MW-5	11/19/02				Well Damaged			
	01/09/03				Well Damaged			
	04/14/03				Well Damaged			
	07/21/03				Well Damaged			
	10/09/03				Well Damaged			
	01/15/04				Well Damaged			

TABLE 2

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

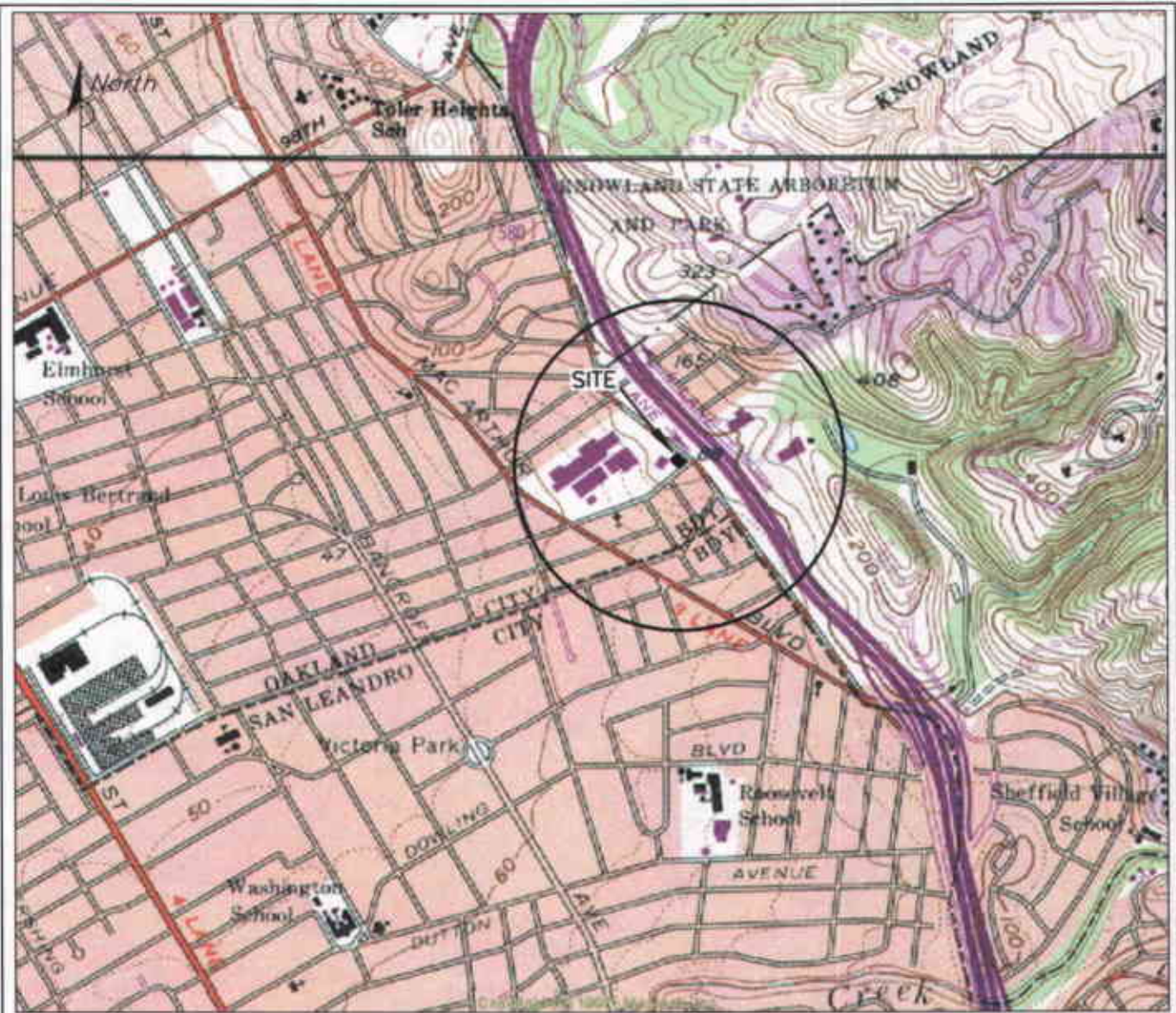
Former USA Station No. 57
10700 MacArthur Blvd., Oakland, California

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)
MW-7	11/19/02	3.8	<5.0	<1.0	<1.0	<1.0	NA	NA
	01/09/03	2.7	<5.0	<1.0	<1.0	<1.0	NA	NA
	04/14/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	07/21/03	1.8	<5.0	<1.0	<1.0	<1.0	NA	NA
	10/09/03	2.9	<5.0	<1.0	<1.0	<1.0	<1.0	<2.0
	01/15/04	2.6	7.9	<1.0	<1.0	<1.0	<1.0	<2.0
MW-8	11/19/02	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	01/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	04/14/03	<0.50	<5.0	<1.0	<1.0	<1.0	NA	NA
	07/21/03	<0.50	<10[2]	<1.0	<1.0	<1.0	NA	NA
	10/09/03	<0.50	<5.0	<1.0	<1.0	<1.0	<1.0	<2.0
	01/15/04	<0.50	9.9	<1.0	<1.0	<1.0	<1.0	<2.0

Note:
Oxygenates analyzed using EPA Method 8260B
µg/L = micrograms per liter
NA = Not analyzed

[1] Reporting limits were increased due to high concentrations of target analytes
[2] Reporting limits were increased due to sample foaming

MTBE = Methyl tertiary butyl ether
TBA = Tertiary butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane



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



QUADRANGLE LOCATION



SCALE 1:24,000

STRATUS
 ENVIRONMENTAL, INC.

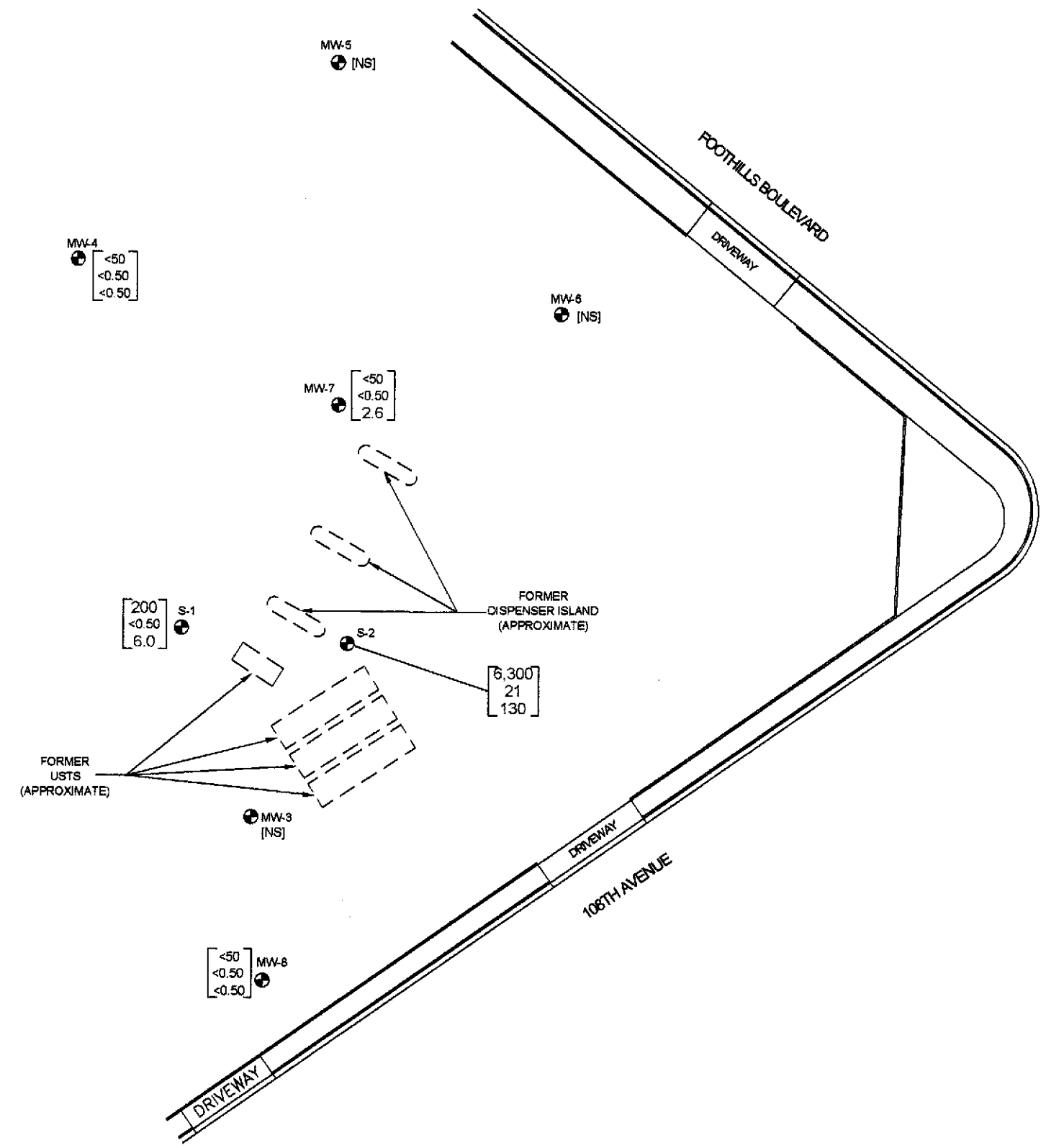
USA SERVICE STATION NO. 57
 10700 MACARTHUR BOULEVARD
 OAKLAND, CALIFORNIA
 SITE LOCATION MAP

FIGURE
1
 PROJECT NO.
 2007-0057-01



LEGEND

- MW-1 MONITORING WELL LOCATION
- [NS] NOT SAMPLED
- [<50] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE IN $\mu\text{g/L}$
- [<0.50] BENZENE CONCENTRATION IN $\mu\text{g/L}$
- [<0.50] METHYL TERTIARY BUTYL ETHER CONCENTRATION IN $\mu\text{g/L}$
- SAMPLES COLLECTED ON 1/15/04
- TPHG ANALYZED BY EPA METHOD 8015B
- BENZENE & MTBE ANALYZED BY EPA METHOD 8260B



USA517-Dwg-001.dwg Feb 27, 2004 REV JMF

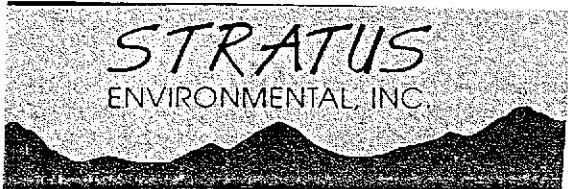
STRATUS
ENVIRONMENTAL, INC.



FORMER USA STATION NO. 57
10500 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

GROUNDWATER ANALYTICAL SUMMARY
1st QUARTER 2004

FIGURE
3
PROJECT NO.
2007-0057-01



Site Address _____
 City _____
 Site Sampled by MILLER

Site Number USA 57
 Project No. _____
 Project PM _____
 Date Sampled 1/15/04

Well ID <u>22-7</u>					Well ID <u>5-2</u>				
purge start time					purge start time				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	<u>19.6</u>	<u>7.21</u>	<u>827</u>	<u>0</u>	time	<u>17.2</u>	<u>6.77</u>	<u>714</u>	<u>0</u>
time	<u>20.9</u>	<u>7.12</u>	<u>853</u>	<u>20</u>	time	<u>19.4</u>	<u>6.46</u>	<u>826</u>	<u>22</u>
time	<u>19.3</u>	<u>7.10</u>	<u>820</u>	<u>46</u>	time				
time					time				
purge stop time					purge stop time				
Well ID <u>22-4</u>					Well ID <u>5-1</u>				
purge start time					purge start time				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	<u>21.7</u>	<u>7.36</u>	<u>219</u>	<u>0</u>	time	<u>21.9</u>	<u>6.90</u>	<u>727</u>	<u>2</u>
time	<u>21.9</u>	<u>7.30</u>	<u>229</u>	<u>30</u>	time	<u>19.5</u>	<u>6.97</u>	<u>746</u>	<u>22</u>
time	<u>19.4</u>	<u>7.07</u>	<u>246</u>	<u>62</u>	time				
time					time				
purge stop time					purge stop time				
Well ID <u>22-9</u>					Well ID				
purge start time					purge start time				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	<u>22.0</u>	<u>6.49</u>	<u>1791</u>	<u>0</u>	time				
time	<u>22.0</u>	<u>6.77</u>	<u>1876</u>	<u>10</u>	time				
time	<u>19.3</u>	<u>6.79</u>	<u>1840</u>	<u>40</u>	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				

APPENDIX B

SAMPLING AND ANALYSIS PROCEDURES

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

Ground Water and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the ground water depth in monitoring wells that do not contain LPH. Depth to ground water or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is 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[®] type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

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

Sample Identification and Chain-of-Custody Procedures

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

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

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

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

Equipment Cleaning

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

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

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

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

Internal Quality Assurance Checks

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

- Laboratory Quality Assurance

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

- Field Quality Assurance

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

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

Types of Quality Control Checks

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

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

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

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

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

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

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



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FEB 04 2004
COPY

ANALYTICAL REPORT

Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861

Attn: Gowri Kowtha
Phone: (530) 676-6002
Fax: (530) 676-6005
Date Received 01/17/04

Job#: USA 57

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

	Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	TPH Purgeable	ND	50 µg/L	01/15/04	01/20/04
MW-4	Tertiary Butyl Alcohol (TBA)	7.8	5.0 µg/L	01/15/04	01/20/04
Lab ID :	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	01/15/04	01/20/04
STR04011922-01A	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	01/15/04	01/20/04
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	01/15/04	01/20/04
	1,2-Dichloroethane	ND	1.0 µg/L	01/15/04	01/20/04
	Benzene	ND	0.50 µg/L	01/15/04	01/20/04
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	01/15/04	01/20/04
	Toluene	ND	0.50 µg/L	01/15/04	01/20/04
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	01/15/04	01/20/04
	Ethylbenzene	ND	0.50 µg/L	01/15/04	01/20/04
	m,p-Xylene	ND	0.50 µg/L	01/15/04	01/20/04
	o-Xylene	ND	0.50 µg/L	01/15/04	01/20/04
Client ID :	TPH Purgeable	ND	50 µg/L	01/15/04	01/20/04
MW-7	Tertiary Butyl Alcohol (TBA)	7.9	5.0 µg/L	01/15/04	01/20/04
Lab ID :	Methyl tert-butyl ether (MTBE)	2.6	0.50 µg/L	01/15/04	01/20/04
STR04011922-02A	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	01/15/04	01/20/04
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	01/15/04	01/20/04
	1,2-Dichloroethane	ND	1.0 µg/L	01/15/04	01/20/04
	Benzene	ND	0.50 µg/L	01/15/04	01/20/04
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	01/15/04	01/20/04
	Toluene	ND	0.50 µg/L	01/15/04	01/20/04
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	01/15/04	01/20/04
	Ethylbenzene	ND	0.50 µg/L	01/15/04	01/20/04
	m,p-Xylene	ND	0.50 µg/L	01/15/04	01/20/04
	o-Xylene	ND	0.50 µg/L	01/15/04	01/20/04
Client ID :	TPH Purgeable	ND	50 µg/L	01/15/04	01/20/04
MW-8	Tertiary Butyl Alcohol (TBA)	9.9	5.0 µg/L	01/15/04	01/20/04
Lab ID :	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	01/15/04	01/20/04
STR04011922-03A	Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	01/15/04	01/20/04
	Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	01/15/04	01/20/04
	1,2-Dichloroethane	ND	1.0 µg/L	01/15/04	01/20/04
	Benzene	ND	0.50 µg/L	01/15/04	01/20/04
	Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	01/15/04	01/20/04
	Toluene	ND	0.50 µg/L	01/15/04	01/20/04
	1,2-Dibromoethane (EDB)	ND	2.0 µg/L	01/15/04	01/20/04
	Ethylbenzene	ND	0.50 µg/L	01/15/04	01/20/04
	m,p-Xylene	ND	0.50 µg/L	01/15/04	01/20/04
	o-Xylene	ND	0.50 µg/L	01/15/04	01/20/04



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Client ID :	TPH Purgeable	200		50 µg/L	01/15/04	01/20/04
S-1	Tertiary Butyl Alcohol (TBA)	10		5.0 µg/L	01/15/04	01/20/04
Lab ID :	Methyl tert-butyl ether (MTBE)	6.0		0.50 µg/L	01/15/04	01/20/04
STR04011922-04A	Di-isopropyl Ether (DIPE)	ND		1.0 µg/L	01/15/04	01/20/04
	Ethyl Tertiary Butyl Ether (ETBE)	ND		1.0 µg/L	01/15/04	01/20/04
	1,2-Dichloroethane	ND		1.0 µg/L	01/15/04	01/20/04
	Benzene	ND		0.50 µg/L	01/15/04	01/20/04
	Tertiary Amyl Methyl Ether (TAME)	ND		1.0 µg/L	01/15/04	01/20/04
	Toluene	ND		0.50 µg/L	01/15/04	01/20/04
	1,2-Dibromoethane (EDB)	ND		2.0 µg/L	01/15/04	01/20/04
	Ethylbenzene	ND		0.50 µg/L	01/15/04	01/20/04
	m,p-Xylene	ND		0.50 µg/L	01/15/04	01/20/04
	o-Xylene	ND		0.50 µg/L	01/15/04	01/20/04
Client ID :	TPH Purgeable	6,300		400 µg/L	01/15/04	01/20/04
S-2	Tertiary Butyl Alcohol (TBA)	48		40 µg/L	01/15/04	01/20/04
Lab ID :	Methyl tert-butyl ether (MTBE)	130		2.0 µg/L	01/15/04	01/20/04
STR04011922-05A	Di-isopropyl Ether (DIPE)	ND	V	4.0 µg/L	01/15/04	01/20/04
	Ethyl Tertiary Butyl Ether (ETBE)	ND	V	4.0 µg/L	01/15/04	01/20/04
	1,2-Dichloroethane	ND	V	4.0 µg/L	01/15/04	01/20/04
	Benzene	21		2.0 µg/L	01/15/04	01/20/04
	Tertiary Amyl Methyl Ether (TAME)	ND	V	4.0 µg/L	01/15/04	01/20/04
	Toluene	ND	V	2.0 µg/L	01/15/04	01/20/04
	1,2-Dibromoethane (EDB)	ND	V	16 µg/L	01/15/04	01/20/04
	Ethylbenzene	20		2.0 µg/L	01/15/04	01/20/04
	m,p-Xylene	3.1		2.0 µg/L	01/15/04	01/20/04
	o-Xylene	ND	V	2.0 µg/L	01/15/04	01/20/04

Reported in micrograms per liter, per client request.

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

ND = Not Detected

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) 281-4848 / Wichita, KS • (316) 722-5890 / info@alpha-analytical.com

1/26/04

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 pH Report

Work Order STR04011922

Project: USA 57

Alpha's Sample ID	Client's Sample ID	Matrix	pH
04011922-01A	MW-4	Aqueous	2
04011922-02A	MW-7	Aqueous	2
04011922-03A	MW-8	Aqueous	2
04011922-04A	S-1	Aqueous	2
04011922-05A	S-2	Aqueous	2

1/26/04
Report Date



Alpha Analytical, Inc.

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

Date:
26-Jan-04

QC Summary Report

Work Order:
04011922

Method Blank

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Tertiary Butyl Alcohol (TBA)	ND	5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
Di-isopropyl Ether (DIPE)	ND	1								
Ethyl Tertiary Butyl Ether (ETBE)	ND	1								
1,2-Dichloroethane	ND	1								
Benzene	ND	0.5								
Tertiary Amyl Methyl Ether (TAME)	ND	1								
Toluene	ND	0.5								
1,2-Dibromoethane (EDB)	ND	2								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
o-Xylene	ND	0.5								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	72	126			
Surr: Toluene-d8	10.2		10		102	71	128			
Surr: 4-Bromofluorobenzene	9.94		10		99	76	121			

Laboratory Control Spike

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	10.8	0.5	10		108	83	119			
Toluene	10.6	0.5	10		106	80	120			
Ethylbenzene	10.6	0.5	10		106	80	120			
m,p-Xylene	20.9	0.5	20		105	77	125			
o-Xylene	10.3	0.5	10		103	77	124			
Surr: 1,2-Dichloroethane-d4	9.58		10		96	72	126			
Surr: Toluene-d8	10.4		10		104	71	128			
Surr: 4-Bromofluorobenzene	10.2		10		102	76	121			

Sample Matrix Spike

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	52.8	1.3	50	0	106	59	145			
Toluene	51.1	1.3	50	0	102	39	161			
Ethylbenzene	51.9	1.3	50	0	104	57	145			
m,p-Xylene	102	1.3	100	0	102	37	163			
o-Xylene	50.3	1.3	50	0	101	47	156			
Surr: 1,2-Dichloroethane-d4	48.4		50		97	72	126			
Surr: Toluene-d8	50.3		50		101	71	128			
Surr: 4-Bromofluorobenzene	50.9		50		102	76	121			

Sample Matrix Spike Duplicate

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
Benzene	52.2	1.3	50	0	104	59	145	52.83	1.2(22)	
Toluene	49.1	1.3	50	0	98	39	161	51.11	3.9(22)	
Ethylbenzene	52.6	1.3	50	0	105	57	145	51.92	1.4(22)	
m,p-Xylene	106	1.3	100	0	106	37	163	102.3	3.8(23)	
o-Xylene	52.7	1.3	50	0	105	47	156	50.29	4.7(50)	
Surr: 1,2-Dichloroethane-d4	48.5		50		97	72	126			
Surr: Toluene-d8	48		50		96	71	128			
Surr: 4-Bromofluorobenzene	50.1		50		100	76	121			



Alpha Analytical, Inc.

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

Date:
26-Jan-04

QC Summary Report

Work Order:
04011922

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.



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Date:
26-Jan-04

QC Summary Report

Work Order:
04011922

Method Blank

Type **MBLK** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: **D:\HPCHEM\MS10\DATA\040120\04012005.D**

Batch ID: **MS10W0120B**

Analysis Date: **01/20/2004 09:07**

Sample ID: **MBLK MS10W0120B**

Units: **µg/L**

Run ID: **GC/MSD_10_040120A**

Prep Date: **01/20/2004**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	ND	50								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	72	126			
Surr: Toluene-d8	10.2		10		102	71	128			
Surr: 4-Bromofluorobenzene	9.94		10		99	76	121			

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: **D:\HPCHEM\MS10\DATA\040120\04012003.D**

Batch ID: **MS10W0120B**

Analysis Date: **01/20/2004 08:26**

Sample ID: **GLCS MS10W0120B**

Units: **µg/L**

Run ID: **GC/MSD_10_040120A**

Prep Date: **01/20/2004**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	427	50	400		107	67	136			
Surr: 1,2-Dichloroethane-d4	9.35		10		94	72	126			
Surr: Toluene-d8	9.84		10		98	71	128			
Surr: 4-Bromofluorobenzene	10.1		10		101	76	121			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: **D:\HPCHEM\MS10\DATA\040120\04012015.D**

Batch ID: **MS10W0120B**

Analysis Date: **01/20/2004 12:34**

Sample ID: **04011922-01AGS**

Units: **µg/L**

Run ID: **GC/MSD_10_040120A**

Prep Date: **01/20/2004**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	1980	250	2000		0	99	54	154		
Surr: 1,2-Dichloroethane-d4	52.9		50		106	72	126			
Surr: Toluene-d8	49.8		50		99.6	71	128			
Surr: 4-Bromofluorobenzene	49.2		50		98	76	121			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8015B/DHS LUFT Manual**

File ID: **D:\HPCHEM\MS10\DATA\040120\04012016.D**

Batch ID: **MS10W0120B**

Analysis Date: **01/20/2004 12:55**

Sample ID: **04011922-01AGSD**

Units: **µg/L**

Run ID: **GC/MSD_10_040120A**

Prep Date: **01/20/2004**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LowLimit	HighLimit	RPDRefVal	%RPD(Limit)	Qual
TPH Purgeable	2160	250	2000		0	108	54	154	1982	8.6(66)
Surr: 1,2-Dichloroethane-d4	51.9		50		104	72	126			
Surr: Toluene-d8	48.4		50		97	71	128			
Surr: 4-Bromofluorobenzene	49.6		50		99	76	121			

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.

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

Sample Receipt Checklist

Date Report is due to Client : 1/27/2004

Date of Notice : 1/19/2004 9:10:12 A

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

Client Name **Stratus Environmental**

Project ID : **USA 57**

Project Manager : **Gowri Kowtha**

Client's Phone **(530) 676-6002**

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

Work Order Number **STR04011922**

Date Received : 1/17/2004

Received by: **Graciela Navarrete**

Chain of Custody (COC) Information

Carrier name FedEx

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

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

Analytical Requirement Information

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

Comments : Saturday shipment, sample kept @ 4°C in secured area until logged in on Monday.

Billing Information :

CHAIN-OF-CUSTODY RECORD

NV CA DBB

Alpha Analytical, Inc.
 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : STR04011922

Report Due By : 5:00 PM On : 27-Jan-04

Client:

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

Gowri Kowtha
 TEL : (530) 676-6002
 FAX : (530) 676-6005

Job : USA 57
 PO :

Client's COC # : 3280

EDD Required : Yes

Sampled by : Mike Cornwell

Cooler Temp : 4 °C

19-Jan-04

Report Attention : Gowri Kowtha

CC Report :

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

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles			PWS #	Requested Tests						Sample Remarks		
				ORG	SUB	TAT		TPH/P_W	VOC_W							
STR04011922-01A	MW-4	AQ	01/15/04 06:05	5	0	6		BTXE/GAS/ 5oxys/ EDB/ EDC_C	BTXE/GAS/ 5oxys/ EDB/ EDC_C							
STR04011922-02A	MW-7	AQ	01/15/04 05:01	5	0	6		BTXE/GAS/ 5oxys/ EDB/ EDC_C	BTXE/GAS/ 5oxys/ EDB/ EDC_C							
STR04011922-03A	MW-8	AQ	01/15/04 06:58	5	0	6		BTXE/GAS/ 5oxys/ EDB/ EDC_C	BTXE/GAS/ 5oxys/ EDB/ EDC_C							
STR04011922-04A	S-1	AQ	01/15/04 06:31	5	0	6		BTXE/GAS/ 5oxys/ EDB/ EDC_C	BTXE/GAS/ 5oxys/ EDB/ EDC_C							
STR04011922-05A	S-2	AQ	01/15/04 05:23	5	0	6		BTXE/GAS/ 5oxys/ EDB/ EDC_C	BTXE/GAS/ 5oxys/ EDB/ EDC_C							


Comments: Security seals intact, ice frozen. Ca samples. Send copy of receipt checklist with final report. Saturday shipment, sample kept @ 4°C in secured area until logged in on Monday.:

Received by:	<i>Graciela Navarrete</i>	Signature	<i>Graciela Navarrete</i>	Print Name	Alpha Analytical, Inc.	Company	1-19-04 9:10	Date/Time
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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 ENV.
 Address 3330 CAMERON PAUL DR
 City, State, Zip CAMERON PAUL CA
 Phone Number 5306766047 Fax 5306766005



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

Client Name		P.O. #		Job #		Analyses Required				REMARKS	
Lisa 57						TPH6-DTEX	50XYS	LEDB	LEDC		
Address		PWS #		DWR #							
OAKLAND CA											
City, State, Zip		Phone #		Fax #							
Time Sampled	Date Sampled	Matrix* See Key Below	Office Use Only	Sampled by	Report Attention	Total and type of containers ** See below					
			Lab ID Number								
0605	1/15/04	AQ	04011922-01	MLC	67001	5L	X	X	X	X	
0601			02								
0608			03								
0603			04								
0603	1/15/04	AQ	05			5L	X	X	X	X	

LEDF
STANDARD
TAT
GLOBAL

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	MILK CORNWELL	STRATUS	1/16/04	0910
<i>[Signature]</i>	LISA BRYLA	ALPHA	1-16-04	2:10
<i>[Signature]</i>	Graciela Navarrete	Alpha	1-19-04	9:10

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other **: 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.