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9 May 2008
Project No. 01LV

Jerry Wickham
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **First Quarter 2008 Status Report**
1619 1st Street, Livermore, California
Tesoro No. 67076 (Former Beacon 3604); ACEH Case No. RO0434

Dear Mr. Wickham:

Arctos Environmental (Arctos), on behalf of Tesoro Companies, Inc. (Tesoro), has prepared this letter report summarizing project tasks completed during the first quarter 2008 at the subject site (Figure 1).

Executive Summary

Arctos conducted quarterly groundwater monitoring at the site on 14 February 2008. Water levels increased by approximately 11.9 to 12.8 feet since November 2007. Well VW-3 was the only well on site that did not have sufficient water for groundwater monitoring. The highest total petroleum hydrocarbons as gasoline (TPHg) and benzene concentrations of 31,000 and 5,400 micrograms per liter (µg/l), respectively, were at well MW-2 on site. The highest methyl tert-butyl ether (MTBE) concentration of 17,000 µg/l was at well TP-2 on site.

During the first quarter of 2008, Arctos also completed the following activities:

- Conducted a meeting with Alameda County Environmental Health (ACEH) on 12 March 2008
- Submitted an interim remedial action plan (IRAP) for groundwater to meet requirements of a 28 December 2007 letter from ACEH

- Obtained authorization from Livermore Arcade Shopping Center property owner to install deep monitoring wells downgradient of the site and scheduled well installation for the second quarter 2008.

The following activities are scheduled to be completed during the second quarter of 2008:

- Installation and sampling of deep monitoring wells at and downgradient of the site
- Quarterly groundwater monitoring
- Installation and sampling of oxygen injection wells at the site.

Site Background

The site description and background are included in Arctos's IRAP dated 21 March 2008 (Arctos, 2008).

Field Activities

Arctos's subcontractor, Blaine Tech Services, Inc. (Blaine Tech), of San Jose, California, performed groundwater monitoring at the site on 14 February 2008. Samples were collected from wells MW-1 through MW-10, VW-2, TP-1, and TP-2 (Figure 2). Groundwater monitoring was performed in accordance with the guidelines of the California Underground Storage Tank Regulations - Title 23, Division 3, Chapter 16, California Code of Regulations. Groundwater sampling quality assurance/quality control (QA/QC) procedures are in Attachment A. Field data sheets are in Attachment B.

Analytical Program

The groundwater samples were analyzed in accordance with the analytical plan in Attachment A.

Groundwater Results

The groundwater elevations were recorded at approximately 431 to 439 feet above mean sea level (34 to 40 feet below ground surface). Water levels increased by approximately 11.9 to 12.8 feet since November 2007 (Table 1). Well VW-3 was the only well on site that did not have sufficient water for groundwater monitoring during the first quarter. The water level data indicate that the general direction of water flow is toward the northwest with an estimated gradient of 0.023 (1 foot/43 feet; Figure 2). Historical water elevations are in Attachment C.

The highest TPHg and benzene concentrations of 31,000 and 5,400 µg/l, respectively, were at well MW-2. The highest MTBE concentration of 17,000 µg/l was at well TP-2. Groundwater analytical results are summarized in Table 2. Elevated benzene and MTBE concentrations in groundwater (2,000 and 810 µg/l, respectively) are also present approximately 140 feet downgradient of the site at well MW-6. Figures 3 and 4 show the isoconcentration contours for benzene and MTBE, respectively. Historical analytical results are in Attachment D, and the laboratory report and the chain-of-custody form are in Attachment E.

Agency Correspondence

The IRAP was prepared in response to an ACEH letter to Tesoro dated 28 December 2007 and submitted to ACEH on 21 March 3008. It includes the consensus reached at a meeting on 12 March 2008 with ACEH, Tesoro, and Arctos. The ACEH letter requested additional remediation and groundwater assessment activities be conducted at the site. As requested in the letter, the IRAP proposed (1) the installation of deep monitoring wells to monitor water quality in the lower intervals of the aquifer and (2) installation of an in situ remediation system consisting of an oxygen injection system and a soil vapor extraction (SVE) system.

Conclusions

Results of the groundwater sampling indicate the following conclusions:

- The fluctuation in water levels and results from off site investigations require the installation of deep monitoring wells to monitor water quality in the lower intervals of the aquifer
- The concentrations of petroleum hydrocarbons in groundwater at the site require remediation.

Recommendations

Based on the activities proposed in the IRAP and the results of the groundwater monitoring, Arctos will perform the following tasks during the second quarter of 2008:

- Installation and sampling of deep monitoring wells at and downgradient of the site
- Quarterly groundwater monitoring
- Installation and sampling of oxygen injection wells at the site.

If you have questions or comments, please call Mike Purchase at 510/525-2180 or Matthew Nelson at 562/988-2755.

Very truly yours,

ARCTOS ENVIRONMENTAL

Matthew J. Nelson
Senior Staff Engineer

Michael P. Purchase, P.E.
Senior Project Manager

Copy: Jeffrey M. Baker, P.E. – Tesoro Companies, Inc.
Colleen Winey – Zone 7 Water Agency

Attachments: Table 1 – Well and Groundwater Elevations
Table 2 – Groundwater Analytical Results
Figure 1 – Site Location Map
Figure 2 – Grouwater Elevation Contours
Figure 3 – Benzene Concentration Contours
Figure 4 – MTBE Concentration Contours
Attachment A – Groundwater Sampling QA/QC Procedures
Attachment B – Field Data Sheets
Attachment C – Historical Well and Groundwater Elevations
Attachment D – Historical Groundwater Analytical Results
Attachment E – Laboratory Analytical Report and Chain-of-Custody Form

References

Arctos Environmental, 2008. *Interim Remedial Action Plan for Groundwater, 1619 1st Street, Livermore, California, Tesoro Station No. 67076, Former Beacon Station No. 3604, ACEH Case No. RO0434*, 21 March.

TABLE 1

WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-1	2/14/2007	30.00	474.29	444.29
	5/17/2007	33.75		440.54
	8/2/2007	40.00		434.29
	11/12/2007	48.55		425.74
	2/14/2008	35.74		438.55
MW-2	2/14/2007	31.27	472.98	441.71
	5/17/2007	34.40		438.58
	8/2/2007	41.23		431.75
	11/12/2007	48.22		424.76
	2/14/2008	36.31		436.67
MW-3	2/14/2007	30.20	473.37	443.17
	5/17/2007	33.64		439.73
	8/2/2007	41.74		431.63
	11/12/2007	47.41		425.96
	2/14/2008	34.73		438.64
MW-4	2/14/2007	30.46	473.64	443.18
	5/17/2007	33.92		439.72
	8/2/2007	40.68		432.96
	11/12/2007	Dry[(c)]		--
	2/14/2008	34.53		439.11
MW-5	2/14/2007	34.00	472.67	438.67
	5/17/2007	34.29		438.38
	8/2/2007	41.72		430.95
	11/12/2007	Dry		--
	2/14/2008	35.66		437.01
MW-6	2/14/2007	33.43	471.93	438.50
	5/17/2007	36.50		435.43
	8/2/2007	42.24		429.69
	11/12/2007	Dry		--
	2/14/2008	38.67		433.26
MW-7	2/14/2007	30.39	472.33	441.94
	5/17/2007	33.31		439.02
	8/2/2007	37.09		435.24
	11/12/2007	Dry		--
	2/14/2008	36.51		435.82

TABLE 1

WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-8	2/14/2007	30.94	471.18	440.24
	5/17/2007	34.14		437.04
	8/2/2007	41.24		429.94
	11/12/2007	Dry		--
	2/14/2008	35.55		435.63
MW-9	2/14/2007	34.00	470.78	436.78
	5/17/2007	36.88		433.90
	8/2/2007	44.11		426.67
	11/12/2007	Dry		--
	2/14/2008	39.32		431.46
MW-10	2/14/2007	32.81	471.63	438.82
	5/17/2007	35.85		435.78
	8/2/2007	43.46		428.17
	11/12/2007	Dry		--
	2/14/2008	39.71		431.92
VW-2	2/14/2007	30.77	473.28	442.51
	5/17/2007	33.17		440.11
	8/2/2007	36.33		436.95
	11/12/2007	Dry		--
	2/14/2008	35.55		437.73
VW-3	2/14/2007	30.48	474.38	443.90
	5/17/2007	31.70		442.68
	8/2/2007	35.55		438.83
	11/12/2007	Dry		--
	2/14/2008	Dry		--
TP-1	2/14/2007	33.59	472.82	439.23
	5/17/2007	33.52		439.30
	8/2/2007	40.30		432.52
	11/12/2007	Dry		--
	2/14/2008	36.17		436.65
TP-2	2/14/2007	30.32	472.93	442.61
	5/17/2007	33.28		439.65
	8/2/2007	39.35		433.58

TABLE 1

WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
TP-2	11/12/2007	Dry	472.93	--
(cont.)	2/14/2008	35.62		437.31

(a) Elevation of PVC well casing (north edge) surveyed relative to mean sea level (MSL).
Wells were surveyed by Cross Land Surveying, Inc., per AB 2886 requirements on 31 August 2005.
Benchmark K2-741, elevation is 467.835 feet above MSL.

(b) Potentiometric Surface Elevation = (Casing Elevation - Depth to Water)

(c) Depth of groundwater assumed to be below screened interval; well had 6 inches or less of water.

TABLE 2

GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date	TPHg[a] (µg/l)	Benzene[a] (µg/l)	Toluene[a] (µg/l)	Ethylbenzene[a] (µg/l)	Xylenes[a] (µg/l)	MTBE[a] (µg/l)	DIPE[a] (µg/l)	ETBE[a] (µg/l)	TAME[a] (µg/l)	TBA[a] (µg/l)	Methanol[a] (µg/l)	Ethanol[a] (µg/l)	1,2-DCA[a] (µg/l)	EDB[a] (µg/l)
MW-1	2/14/2007	410	ND<0.5[b]	ND<0.5	2.2	2.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	2,300	ND<0.5	0.66	17	21	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<8	--[c]	--
	8/2/2007	580	5.7	0.64	6.8	12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	750	0.85	2.7	4.2	9.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<20	ND<0.5	ND<0.5
	2/14/2008	1,700	3.3	17	38	83	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-2	2/14/2007	36,000	4,600	740	1,600	2,100	1,800	ND<5	ND<5	20	910	ND<700	ND<50	ND<5	ND<5
	5/17/2007	37,000	7,400	680	1,900	2,400	3,000	ND<9	ND<9	24	2,600	ND<4000	ND<90	--	--
	8/2/2007	37,000	4,200	500	1,800	2,200	1,300	ND<9	ND<9	18	1,200	ND<2000	ND<90	ND<9	ND<9
	11/12/2007	25,000	5,900	120	1,700	820	1,400	ND<15	ND<15	16	720	ND<1500	ND<150	ND<15	ND<15
	2/14/2008	31,000	5,400	450	1,900	2,000	1,200	ND<15	ND<15	16	410	ND<1500	ND<150	ND<15	ND<15
MW-3	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.54	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	190	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2008	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.83	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-4	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS[d]	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-5	2/14/2007	200	ND<0.5	ND<0.5	ND<0.5	1.1	2.1	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	85	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.9	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	980	ND<0.5	ND<0.5	2.1	ND<0.5	1.0	ND<0.5	ND<0.5	ND<0.5	34	ND<50	ND<5	ND<0.5	ND<0.5
MW-6	2/14/2007	5,900	480	10	73	23	1,600	ND<2	ND<2	14	1,100	ND<500	ND<20	ND<2	ND<2
	5/17/2007	3,700	240	3.4	30	10	770	ND<0.5	ND<0.5	9.2	800	ND<2000	ND<5	--	--
	8/2/2007	15,000	1,800	120	980	510	310	ND<2.5	ND<2.5	3.0	180	ND<250	ND<25	ND<2.5	ND<2.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	14,000	2,000	63	750	190	810	ND<2.5	ND<2.5	7.7	600	ND<250	ND<25	ND<2.5	ND<2.5

TABLE 2

GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date	TPHg[a] (µg/l)	Benzene[a] (µg/l)	Toluene[a] (µg/l)	Ethylbenzene[a] (µg/l)	Xylenes[a] (µg/l)	MTBE[a] (µg/l)	DIPE[a] (µg/l)	ETBE[a] (µg/l)	TAME[a] (µg/l)	TBA[a] (µg/l)	Methanol[a] (µg/l)	Ethanol[a] (µg/l)	1,2-DCA[a] (µg/l)	EDB[a] (µg/l)
MW-7	2/14/2007	800	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	700	ND<0.5	ND<0.5	ND<0.5	0.71	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	3,200	1.3	ND<0.5	50	120	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	1,600	1.2	ND<0.5	4.5	1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-8	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-9	2/14/2007	1,000	ND<0.5	ND<0.5	0.51	ND<0.5	0.51	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	870	ND<0.5	ND<0.5	0.54	ND<0.5	0.93	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	3,300	68	2.1	110	7.8	16	ND<0.5	ND<0.5	ND<0.5	13	ND<50	ND<5	ND<0.5	ND<0.5
MW-10	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
VW-2	2/14/2007	3,300	75	4.6	50	82	580	ND<2	ND<2	7.0	4,100	ND<500	ND<20	ND<2	ND<2
	5/17/2007	3,500	51	7.3	17	24	100	ND<2.5	ND<2.5	ND<2.5	7,100	ND<250	ND<25	--	--
	8/2/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	5,700	180	14	150	120	530	ND<2.5	ND<2.5	4.1	5,000	ND<250	ND<25	ND<2.5	ND<2.5
VW-3	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TP-1	2/14/2007	15,000	820	37	810	1,000	8,300	ND<15	ND<15	58	8,500	ND<4000	ND<150	ND<15	ND<15
	5/17/2007	16,000	850	35	810	1,200	6,700	ND<10	ND<10	42	12,000	ND<2000	ND<100	--	--
	8/2/2007	15,000	2,000	100	970	630	3,400	ND<7	ND<7	25	4,000	ND<700	ND<70	ND<7	ND<7
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	18,000	1,100	49	1,200	910	7,000	ND<15	ND<15	58	4,200	ND<1500	ND<150	ND<15	ND<15

TABLE 2

GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

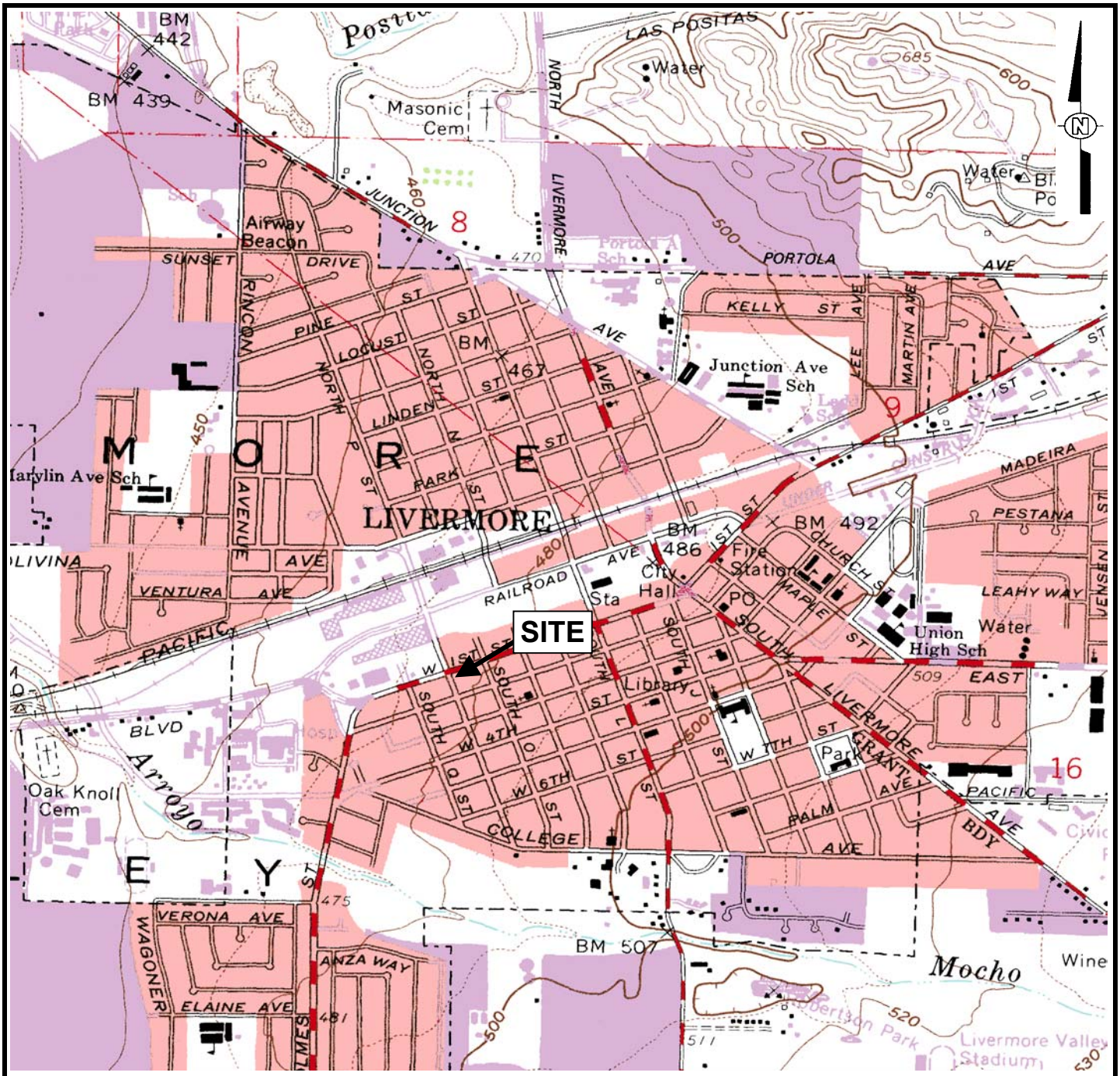
Monitoring Well	Sample Date	TPHg[(a)] (µg/l)	Benzene[(a)] (µg/l)	Toluene[(a)] (µg/l)	Ethylbenzene[(a)] (µg/l)	Xylenes[(a)] (µg/l)	MTBE[(a)] (µg/l)	DIPE[(a)] (µg/l)	ETBE[(a)] (µg/l)	TAME[(a)] (µg/l)	TBA[(a)] (µg/l)	Methanol[(a)] (µg/l)	Ethanol[(a)] (µg/l)	1,2-DCA[(a)] (µg/l)	EDB[(a)] (µg/l)
TP-2	2/14/2007	22,000	1,900	230	1,700	1,600	53,000	ND<90	ND<90	400	2,800	ND<20000	ND<900	ND<90	ND<90
	5/17/2007	ND<25000	2,400	51	1,500	510	69,000	ND<2	ND<0.5	550	4,300	ND<25000	ND<5	--	--
	8/2/2007	10,000	1,200	ND<25	640	140	14,000	ND<25	ND<25	110	16,000	ND<10000	ND<250	ND<25	ND<25
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	12,000	920	28	850	740	17,000	ND<25	ND<25	120	5,900	ND<4000	ND<250	ND<25	ND<25

(a) Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes, methyl tert-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB) analyzed by EPA Method 8260; reported in micrograms per liter (µg/l).

(b) ND - Not detected at the reporting limit listed.

(c) "-" Not analyzed.

(d) Not sampled; well dry during sampling event.



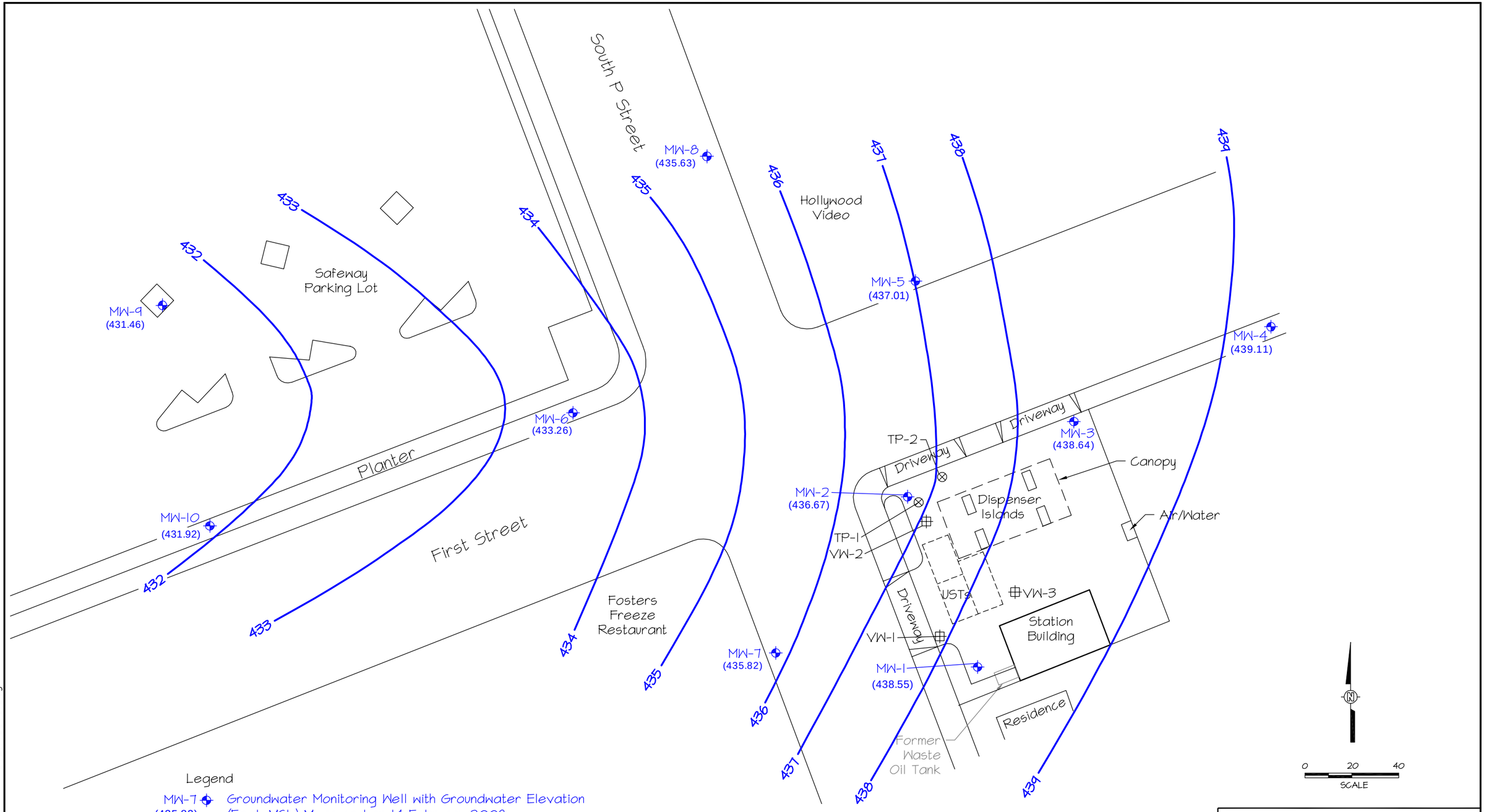
SCALE

0 2000 4000 FEET

REFERENCE

7.5 MINUTE USGS TOPOGRAPHIC MAP OF
LIVERMORE, CALIFORNIA QUADRANGLE
DATE: 1961, PHOTOREVISED 1980
SCALE = 1:24,000

ARCTOS ENVIRONMENTAL			
TESORO - LIVERMORE			
SITE LOCATION MAP			
PROJECT NO. 01LV	DRAWN BY MP	CHECKED BY MP	APPROVED BY JG
FILE NO. Site Map.xls		FIGURE 1	



Legend

MW-7 (435.82) — Groundwater Monitoring Well with Groundwater Elevation (Feet, MSL) Measured on 14 February 2008

VW-2 — Vapor Extraction Well

TP-2 — Temporary Monitoring Well

439 — Groundwater Elevation Contour (Dashed Where Inferred)

REVISION	NO.	BY	DATE	DESCRIPTION
10	2	MY	4/28/06	Investigation Report
	3	MY	7/15/06	Second Quarter 2006 Monitoring Report
	4	MY	12/15/06	Third Quarter 2006 Monitoring Report
	5	MY	3/13/07	Fourth Quarter 2006 Monitoring Report
	6	MY	5/15/07	First Quarter 2007 Monitoring Report
	7	MY	8/1/07	Second Quarter 2007 Monitoring Report
	8	MY	8/20/07	Third Quarter 2007 Monitoring Report
	9	MY	2/1/08	Fourth Quarter 2007 Monitoring Report
	10	MY	4/30/08	First Quarter 2008 Monitoring Report

ARCTOS ENVIRONMENTAL

TESORO - LIVERMORE

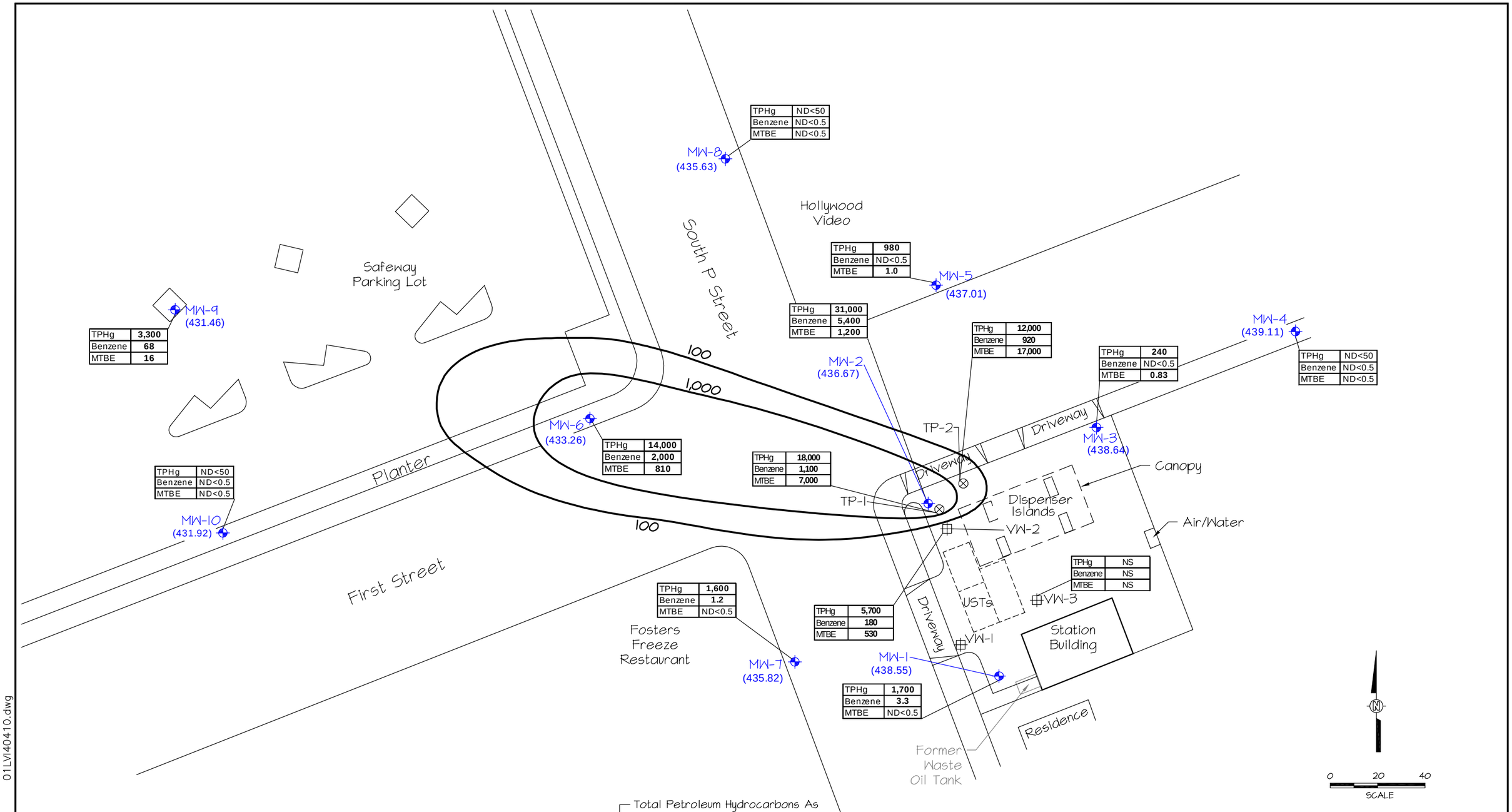
GROUNDWATER ELEVATION CONTOURS

PROJECT NO.	DRAWN BY	CHECKED BY	APPROVED BY
01LV	MY	MP	JPG

FILE NO. 01LV140610.DWG

FIGURE 2

4/21/2008 6:17PM 01LV140610.dwg



Legend

MW-7 (435.82) — Groundwater Monitoring Well with Groundwater Elevation (Feet, MSL) and 14 February 2008 Results

VW-2 — Vapor Extraction Well

TP-2 — Temporary Monitoring Well

ND — Not Detected at Reporting Limit Listed

TPHg 1,700
Benzene 3.3
MTBE ND<0.5

- Total Petroleum Hydrocarbons As Gasoline (THPg) (µg/l)
- Benzene (µg/l)
- Methyl Tert-Butyl Ether (MTBE) (µg/l)

100 — Benzene Concentration Contour (µg/l), Queried Where Uncertain

REVISION	NO.	BY	DATE	DESCRIPTION
10	3	MY	7/15/06	Second Quarter 2006 Monitoring Report
	4	MY	12/5/06	Fourth Quarter 2006 Monitoring Report
	5	MY	12/15/06	Third Quarter 2006 Monitoring Report
	6	MY	5/15/07	First Quarter 2007 Monitoring Report
	7	MY	8/1/07	Second Quarter 2007 Monitoring Report
	8	MY	10/15/07	Third Quarter 2007 Monitoring Report
	9	MY	2/1/08	Fourth Quarter 2007 Monitoring Report
	10	MY	4/30/08	First Quarter 2008 Monitoring Report

ARCTOS ENVIRONMENTAL

TESORO - LIVERMORE

BENZENE CONCENTRATION CONTOURS

PROJECT NO.	DRAWN BY	CHECKED BY	APPROVED BY
01LV	MY	MP	JPG

FILE NO. 01LV140410.DWG

FIGURE 3

4/17/2008 3:28PM 01LV140410.dwg

TPHg	ND<50
Benzene	ND<0.5
MTBE	ND<0.5

MW-8
(435.63)

Hollywood Video

TPHg	980
Benzene	ND<0.5
MTBE	1.0

MW-5
(437.01)

South P Street

TPHg	3,300
Benzene	68
MTBE	16

Safeway Parking Lot

MW-9
(431.46)

TPHg	14,000
Benzene	2,000
MTBE	810

MW-6
(433.26)

TPHg	12,000
Benzene	920
MTBE	17,000

MW-4
(439.11)

TPHg	ND<50
Benzene	ND<0.5
MTBE	ND<0.5

100

1,000

TP-2

Driveway

TPHg	240
Benzene	ND<0.5
MTBE	0.83

MW-3
(438.64)

TPHg	31,000
Benzene	5,400
MTBE	1,200

TPHg	18,000
Benzene	1,100
MTBE	7,000

MW-2
(436.67)

Driveway

10,000

Dispenser Islands

Canopy

Air/Water

TP-1

1,000

100

VW-2

TPHg	NS
Benzene	NS
MTBE	NS

VW-3

TPHg	5,700
Benzene	180
MTBE	530

Driveway

USTs

VW-1

Station Building

TPHg	1,700
Benzene	3.3
MTBE	ND<0.5

MW-7
(435.82)

MW-1
(438.55)

Residence

TPHg	ND<50
Benzene	ND<0.5
MTBE	ND<0.5

MW-10
(431.92)

Planter

First Street

Fosters Freeze Restaurant

TPHg	1,600
Benzene	1.2
MTBE	ND<0.5

Former Waste Oil Tank

N

0 20 40
SCALE

Legend

MW-7 (435.82) — Groundwater Monitoring Well with Groundwater Elevation (Feet, MSL) and 14 February 2008 Results

VW-2 — Vapor Extraction Well

TP-2 — Temporary Monitoring Well

ND — Not Detected at Reporting Limit Listed

TPHg	1,700
Benzene	3.3
MTBE	ND<0.5

- Total Petroleum Hydrocarbons As Gasoline (TPHg) (µg/l)
- Benzene (µg/l)
- Methyl Tert-Butyl Ether (MTBE) (µg/l)

100 — MTBE Concentration Contour (µg/l), Queried Where Uncertain

REVISION	NO.	BY	DATE	DESCRIPTION
10	2	MY	4/28/06	Investigation Report
	3	MY	7/15/06	Second Quarter 2006 Monitoring Report
	4	MY	12/15/06	Third Quarter 2006 Monitoring Report
	5	MY	3/13/07	Fourth Quarter 2006 Monitoring Report
	6	MY	5/15/07	First Quarter 2007 Monitoring Report
	7	MY	8/1/07	Second Quarter 2007 Monitoring Report
	8	MY	10/15/07	Third Quarter 2007 Monitoring Report
	9	MY	2/7/08	Fourth Quarter 2007 Monitoring Report
	10	MY	4/30/08	First Quarter 2008 Monitoring Report

ARCTOS ENVIRONMENTAL

TESORO - LIVERMORE

MTBE CONCENTRATION CONTOURS

PROJECT NO.	DRAWN BY	CHECKED BY	APPROVED BY
01LV	MY	MP	JPG

FILE NO. 01LV140210.DWG

FIGURE 4

01LV140210.dwg 5/9/2008 12:15PM

ATTACHMENT A

GROUNDWATER SAMPLING QA/QC PROCEDURES

ATTACHMENT A
GROUNDWATER SAMPLING QA/QC PROCEDURES

A.1 Groundwater Sampling

Before groundwater sampling, the depth to groundwater of each well is measured and recorded on field data sheets. Depth to groundwater and groundwater elevations are summarized in the attached tables.

During groundwater sampling, field observations of the groundwater are recorded on the field data sheets. Groundwater samples are collected after the temperature, pH, and specific conductivity of the groundwater have stabilized to within approximately 10 percent of the previous reading and at least 3 casing volumes of groundwater are removed from the well, unless the well purges dry. Well purge water is stored temporarily on site in 55-gallon drums.

Sampling is performed using new disposable polyethylene bailers suspended from new nylon line. The bailers are equipped with a bottom-release device. Water samples are collected from the wells in new 40-milliliter glass bottles with Teflon-lined caps provided by the analytical laboratory.

A.2 Analytical Program

The groundwater samples are analyzed by Kiff Analytical LLC (Kiff), a State-certified laboratory in Davis, California, for total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl tert-butyl ether (MTBE); and other oxygenates using EPA Method 8260B.

Arctos, as Tesoro's Authorized Responsible Party for the site, also electronically submits the groundwater monitoring results to the State Water Resources Control Board (SWRCB). The data are submitted in the State-mandated Electronic Data Format (EDF), in accordance with Assembly Bill 2886 requirements for underground storage tank (UST) sites in California.

ATTACHMENT B

FIELD DATA SHEETS

SrH or Purge Water Drum Log

Client: Arctos Environmental

Site Address: 1619 1st St Livermore

STATUS OF DRUM(S) UPON ARRIVAL						
Date	8-2-07	11/12/07	2-14-08			
Number of drum(s) empty:						
Number of drum(s) 1/4 full:	1		1			
Number of drum(s) 1/2 full:						
Number of drum(s) 3/4 full:						
Number of drum(s) full:	3					
Total drum(s) on site:	4	0	1			
Are the drum(s) properly labeled?	y		y			
Drum ID & Contents:	purge H_2O		purge H_2O			
If any drum(s) are partially or totally filled, what is the first use date:			Drum badly damaged!			

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	8.2.07	11/12/07	2-14-08			
Number of drums empty:						
Number of drum(s) 1/4 full:		1	1			
Number of drum(s) 1/2 full:			1			
Number of drum(s) 3/4 full:	1					
Number of drum(s) full:	4		2			
Total drum(s) on site:	5	1	4			
Are the drum(s) properly labeled?	y	y	y			
Drum ID & Contents:	purge H_2O	purge H_2O	→			

LOCATION OF DRUM(S)
Describe location of drum(s): side of bldg

FINAL STATUS						
Number of new drum(s) left on site this event	1	1	3			
Date of inspection:	8.2.07	11/12/07	2-14.08			
Drum(s) labelled properly:	y	y	y			
Logged by BTS Field Tech:	DL	DL	DL			
Office reviewed by:			PC			

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME				PROJECT NUMBER 080214-DW-1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
Myron L Ultrameter	617813	0810 2-14-08	conductivity 3900 µs	4053 µs	3900 µs	15.3	DW
↓	↓	↓	pH 4.0 7.0 10.0	4.24 6.85 10.02	4.00 7.00 10.00	16.1	DW
YSI 550A DO meter	04B0822AE	↓	DO 100%	96.3%	100%	—	DW
Hach 2100P Turbidimeter	15604	↓	Turbidity 20 100	20 100	✓	—	DW

WELL GAUGING DATA

Project # 080214-DW-1 Date 2-14-08 Client Arcos Env.

Site 1619 1st St Livermore

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	0820	4					35.74	54.39		
MW-2	0857	4					36.31	53.97		
MW-3	0833	4					34.73	50.77		
MW-4	0829	2					34.53	46.75		
MW-5	0837	2					35.66	46.22		
MW-6	0851	2					38.67	47.65		
MW-7	0953	2					36.51	46.75		
MW-8	0932	2					35.55	44.41		
MW-9	0844	2					39.32	44.62		
MW-10	0841	2					39.71	45.06		
TP-1	0905	2					36.17	43.12		
TP-2	0907	2					35.62	41.15		
VW-2	0902	2					35.55	36.85		
VW-3	0825	2					Dry	36.04		

WELLHEAD INSPECTION CHECKLIST

Date 2-14-08 Client Arctos Env

Site Address 1619 1st St Livermore

Job Number 080216-OW-1 Technician OW

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
mw-1		no lock					①	
mw-2		No bolts					①	
mw-3		tabs stripped					①	
mw-4		No bolts					①	
mw-5							①	
mw-6		tabs stripped					①	
mw-7		no bolts, cap broken					①	
mw-8		tabs broken					①	
mw-9							①	
mw-10							①	
TP-1							①	
TP-2		tabs broken					①	
VW-2		cap broken					①	
VW-3		cap broken					①	

NOTES: ① Needs cap + lock replaced

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arctos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 54.39	Depth to Water (DTW): 35.74
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 39.47	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

12.1 (Gals.) X 3 = 36.3 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1019	16.8	7.1	2320	131	12.1	
1022	18.7	7.3	1211	627	24.2	
	well dewatered @ 25 g/s.					
1505	17.5	7.3	918	48	—	

Did well dewater? (Yes) No Gallons actually evacuated: 25

Sampling Date: 2-14-08 Sampling Time: 1505 Depth to Water: 35.74

Sample I.D.: MW-1 Laboratory: (Kiff) CalScience Other_____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arcadis Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 53.97	Depth to Water (DTW): 36.31
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 39.84	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

1 Case Volume		Specified Volumes		Calculated Volume
11.5	(Gals.) X	3	=	34.5 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1347	16.3	7.0	1023	628	11.5	odor/grey
1350	18.3	7.0	1040	305	23.0	" "
1352	19.0	7.0	1035	263	34.5	" "

Did well dewater? Yes (No) Gallons actually evacuated: 34.5

Sampling Date: 2-14-08 Sampling Time: 1402 Depth to Water:

Sample I.D.: MW-2 Laboratory: (Kiff) CalScience Other____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: Tom's, Lead Scavengers, see sow

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	0.19 mg/L	Post-purge:	0.52 mg/L	
O.R.P. (if req'd):	Pre-purge:	-42 mV	Post-purge:	-98 mV	

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arctos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 52.77	Depth to Water (DTW): 34.73
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 38.33	

Purge Method:
- Bailer
- Disposable Bailer
- Positive Air Displacement
- X Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method:
- Bailer
- X Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1 Case Volume	(Gals.) X	Specified Volumes	=	Calculated Volume
11.7		3		35.1 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1158	18.2	7.3	955	>1000	11.7	Brown
1200	18.7	7.2	958	>1000	23.4	"
1203	18.6	7.2	955	737	35.1	"

Did well dewater? Yes (No) Gallons actually evacuated: 35.1

Sampling Date: 2-14-08 Sampling Time: 1210 Depth to Water: 38.10

Sample I.D.: MW-3 Laboratory: (Kiff) CalScience Other _____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: Tony's, Lead Scavengers (see SOW)

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	0.26 mg/L	Post-purge:	0.16	mg/L
O.R.P. (if req'd):	Pre-purge:	95 mV	Post-purge:	86	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arcadis Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 46.75	Depth to Water (DTW): 34.53
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 36.97	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

2 (Gals.) X	3	=	6 Gals.
1 Case Volume	Specified Volumes		Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1116	18.2	7.4	1022	>1000	2	Brown
1119	19.1	7.3	1032	>1000	4	"
1122	19.1	7.3	1025	>1000	6	"

Did well dewater? Yes (No) Gallons actually evacuated: 6

Sampling Date: 2-14-08 Sampling Time: 1132 Depth to Water: 36.95

Sample I.D.: MW-4 Laboratory: (Kiff) CalScience Other ____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: Tony's, Lead Scavengers, See SOW

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	(Pre-purge):	0.49 mg/L	(Post-purge):	2.44 mg/L	
O.R.P. (if req'd):	(Pre-purge):	-48 mV	(Post-purge):	36 mV	

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arcadis Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 46.22	Depth to Water (DTW): 35.66
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 37.77	

Purge Method: Bailer / X Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other____

Sampling Method: Bailer / X Disposable Bailer / Extraction Port / Dedicated Tubing / Other: ____

1.7 (Gals.) X 3 = 5.1 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1053	18.9	7.1	1152	>1000	1.7	Brown/odor
1055	19.3	7.0	1158	>1000	3.4	" "
1058	19.6	7.0	1172	>1000	5.1	" "

Did well dewater? Yes (No) Gallons actually evacuated: 5.1

Sampling Date: 2-14-08 Sampling Time: 1103 Depth to Water: 37.70

Sample I.D.: MW-5 Laboratory: (Kiff) CalScience Other____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arctos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 47.65	Depth to Water (DTW): 38.67
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 40.46	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

1.4 (Gals.) X	3	=	4.2 Gals.
1 Case Volume	Specified Volumes		Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1250	17.9	6.9	1052	337	1.4	odor/gray
1253	18.9	6.9	1078	631	2.8	" "
1555	19.4	6.9	1110	714	4.2	" "

Did well dewater? Yes (No) Gallons actually evacuated: 4.2

Sampling Date: 2-14-08 Sampling Time: 1300 Depth to Water: 39.42

Sample I.D.: MW-6 Laboratory: (Kiff) CalScience Other_____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavenger(s) see SOW

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	1.01 mg/L	Post-purge:	1.01	mg/L
O.R.P. (if req'd):	Pre-purge:	-82 mV	Post-purge:	-84	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arctos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-7	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 46.75	Depth to Water (DTW): 36.51
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 38.55	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

1.6 (Gals.) X	3	= 4.8 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0957	18.9	7.1	998	>1000	1.6	gray/odor
1000	19.6	7.1	1014	>1000	3.2	" "
1003	19.9	7.1	1001	>1000	4.8	" "

Did well dewater? Yes (No) Gallons actually evacuated: 4.8

Sampling Date: 2-14-08 Sampling Time: 1008 Depth to Water: 38.45

Sample I.D.: MW-7 Laboratory: (Kiff) CalScience Other____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV	

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arcadis Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 44.41	Depth to Water (DTW): 35.55
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 37.32	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

1.4 (Gals.) X 3 = 4.2 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0936	18.0	7.1	1007	>1000	1.4	Brown
0939	19.6	7.2	977	>1000	2.8	"
0941	19.7	7.2	971	>1000	4.2	"

Did well dewater? Yes (No) Gallons actually evacuated: 4.2

Sampling Date: 2-14-08 Sampling Time: 0945 Depth to Water: 37.30

Sample I.D.: MW-8 Laboratory: (Kiff) CalScience Other ____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: Tony's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arctos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-9	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 44.62	Depth to Water (DTW): 39.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 40.38	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other ____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

0.8 (Gals.) X	3	=	2.4 Gals.
1 Case Volume	Specified Volumes		Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1236	19.4	7.0	1043	492	0.8	odor / grayish
1238	20.2	7.1	1056	521	1.6	" "
1239	20.4	7.1	1049	>1000	2.4	" "

Did well dewater? Yes (No) Gallons actually evacuated: 2.4

Sampling Date: 2-14-08 Sampling Time: 1330 Depth to Water:

Sample I.D.: MW-9 Laboratory: (Kiff) CalScience Other ____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavengers, Ice Sow

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	0.65 mg/L	Post-purge:	0.96 mg/L	
O.R.P. (if req'd):	Pre-purge:	-116 mV	Post-purge:	-127 mV	

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arcadis Env.
Sampler: DW	Date: 2-14-08
Well I.D.: MW-10	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 45.00	Depth to Water (DTW): 39.71
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 40.76	

Purge Method: Bailer / X Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other_____

Sampling Method: Bailer / X Disposable Bailer / Extraction Port / Dedicated Tubing / Other: _____

0.8 (Gals.) X 3 = 2.4 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1034	19.2	7.5	1248	652	0.8	
1036	20.0	7.5	1270	546	1.6	
1038	20.3	7.5	1275	716	2.4	

Did well dewater? Yes (No) Gallons actually evacuated: 2.4

Sampling Date: 2-14-08 Sampling Time: 1458 Depth to Water: 39.71

Sample I.D.: MW-10 Laboratory: (Kiff) CalScience Other_____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arcfos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: TP-1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 43.12	Depth to Water (DTW): 36.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 37.56	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

1.1 (Gals.) X 3 = 3.3 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1443	17.7	7.0	1175	>1000	1.1	gray/odor
1445	18.8	6.9	1167	>1000	2.2	" "
1447	19.1	6.9	1176	>1000	3.3	" "

Did well dewater? Yes (No) Gallons actually evacuated: 3.3

Sampling Date: 2-14-08 Sampling Time: 1450 Depth to Water: 37.50

Sample I.D.: TP-1 Laboratory: (Kiff) CalScience Other____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 oxy's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 080214-OW-1	Client: Arcadis Env.
Sampler: DW	Date: 2-14-08
Well I.D.: TP-2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 41.15	Depth to Water (DTW): 35.62
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 36.72	

Purge Method: Bailer / X Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other_____

Sampling Method: Bailer / X Disposable Bailer / Extraction Port / Dedicated Tubing / Other: _____

0.9 (Gals.) X 3 = 2.7 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1412	18.6	6.9	1173	>1000	0.9	gray/odor
1414	19.0	6.9	1168	>1000	1.8	
1416	19.3	6.9	1158	>1000	2.7	

Did well dewater? Yes (No) Gallons actually evacuated: 2.7

Sampling Date: 2-14-08 Sampling Time: 1425 Depth to Water: 36.70

Sample I.D.: TP-2 Laboratory: (Kiff) CalScience Other_____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavengers, See SOW

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	(Pre-purge):	0.08 mg/L	(Post-purge):	1.13	mg/L
O.R.P. (if req'd):	(Pre-purge):	-78 mV	(Post-purge):	-66	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arctos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: VW-2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 36.65	Depth to Water (DTW): 35.55
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other_____

Sampling Method: Bailer / (X) Disposable Bailer / Extraction Port / Dedicated Tubing / Other: _____

_____(Gals.) X (3) No purge = _____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0915	15.0	6.4	1811	>1000	—	gray/silty

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 2-14-08 Sampling Time: 0915 Depth to Water:

Sample I.D.: VW-2 Laboratory: (Kiff) CalScience Other_____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: 7 Oxy's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 080214-DW-1	Client: Arctos Env.
Sampler: DW	Date: 2-14-08
Well I.D.: VW-3	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 36.24	Depth to Water (DTW): Dry
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other ____

Sampling Method: Bailer, (X) Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ____

____ (Gals.) X 3 = ____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	Well dry. No samples					

Did well dewater? Yes No Gallons actually evacuated:

Sampling Date: 2-14-08 Sampling Time: Depth to Water:

Sample I.D.: Laboratory: (Kiff) CalScience Other ____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Oxygenates (5) Other: Tony's, Lead Scavengers

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ATTACHMENT C

HISTORICAL WELL AND GROUNDWATER ELEVATIONS

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-1	6/1/1993	37.50	474.29	436.79
	6/22/1993	38.46		435.83
	10/6/1993	42.22		432.07
	1/13/1994	34.52		439.77
	3/30/1994	31.93		442.36
	4/25/1994	33.49		440.80
	8/12/1994	41.03		433.26
	12/14/1994	38.63		435.66
	2/10/1995	30.80		443.49
	6/15/1995	25.46		448.83
	9/26/1995	31.05		443.24
	12/15/1995	28.11		446.18
	3/21/1996	17.67		456.62
	6/13/1996	22.86		451.43
	9/16/1996	30.04		444.25
	12/2/1996	26.74		447.55
	3/7/1997	20.84		453.45
	6/12/1997	28.71		445.58
	9/29/1997	33.91		440.38
	12/1/1997	34.88		439.41
	3/19/1998	19.83		454.46
	5/29/1998	21.57		452.72
	9/15/1998	31.68		442.61
	11/30/1998	36.80		437.49
	1/17/1999	30.02		444.27
	6/10/1999	29.30		444.99
	9/7/1999	31.41		442.88
	12/13/1999	32.95		441.34
	3/13/2000	25.74		448.55
	6/12/2000	28.24		446.05
	11/10/2000	30.56		443.73
	12/31/2000	31.71		442.58
	3/27/2001	30.43		443.86
	6/30/2001	36.61		437.68
	9/26/2001	45.10		429.19

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-1	12/18/2001	39.39	474.29	434.90
(cont.)	3/18/2002	38.24		436.05
	8/21/2002	36.71		437.58
	12/3/2002	36.85		437.44
	3/4/2003	33.72		440.57
	6/10/2003	31.31		442.98
	9/9/2003	35.05		439.24
	12/23/2003	30.15		444.14
	3/23/2004	26.61		447.68
	5/10/2004	30.31		443.98
	8/4/2004	34.77		439.52
	11/4/2004	33.93		440.36
	1/12/2005	27.82		446.47
	5/2/2005	24.87		449.42
	7/19/2005	29.26		445.03
	11/21/2005	31.15		443.14
	2/9/2006	26.24		448.05
	5/16/2006	24.87		449.42
	8/9/2006	31.64		442.65
	11/8/2006	31.16		443.13
	2/14/2007	30.00		444.29
	5/17/2007	33.75		440.54
	8/2/2007	40.00		434.29
	11/12/2007	48.55		425.74
	2/14/2008	35.74		438.55
MW-2	6/1/1993	38.02	472.98	434.96
	6/22/1993	39.07		433.91
	10/6/1993	43.72		429.26
	1/13/1994	35.85		437.13
	3/30/1994	32.82		440.16
	4/25/1994	34.76		438.22
	8/12/1994	44.33		428.65
	12/14/1994	40.00		432.98
	2/10/1995	32.16		440.82
	6/15/1995	25.93		447.05

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-2	9/26/1995	32.42	472.98	440.56
(cont.)	12/15/1995	29.41		443.57
	3/21/1996	17.47		455.51
	6/13/1996	23.69		449.29
	9/16/1996	31.24		441.74
	12/2/1996	26.90		446.08
	3/7/1997	21.33		451.65
	6/12/1997	29.94		443.04
	9/29/1997	34.22		438.76
	12/1/1997	35.94		437.04
	3/19/1998	20.34		452.64
	5/29/1998	22.63		450.35
	9/15/1998	32.30		440.68
	11/30/1998	36.90		436.08
	1/17/1999	30.17		442.81
	6/10/1999	29.98		443.00
	9/7/1999	31.85		441.13
	12/13/1999	33.72		439.26
	3/13/2000	26.54		446.44
	6/12/2000	28.44		444.54
	11/10/2000	31.31		441.67
	12/31/2000	32.68		440.30
	3/27/2001	30.81		442.17
	6/30/2001	37.58		435.40
	9/26/2001	44.97		428.01
	12/18/2001	40.67		432.31
	3/18/2002	38.94		434.04
	6/5/2002	36.45		436.53
	8/21/2002	37.15		435.83
	12/3/2002	36.76		436.22
	3/4/2003	33.60		439.38
	6/10/2003	32.89		440.09
	9/9/2003	35.45		437.53
	12/23/2003	31.79		441.19
	3/23/2004	28.25		444.73

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-2	5/10/2004	30.91	472.98	442.07
(cont.)	8/4/2004	35.36		437.62
	11/4/2004	34.92		438.06
	1/12/2005	29.46		443.52
	5/2/2005	25.61		447.37
	7/19/2005	30.11		442.87
	11/21/2005	32.04		440.94
	2/9/2006	27.11		445.87
	5/17/2006	25.18		447.80
	8/9/2006	32.69		440.29
	11/8/2006	33.21		439.77
	2/14/2007	31.27		441.71
	5/17/2007	34.40		438.58
	8/2/2007	41.23		431.75
	11/12/2007	48.22		424.76
	2/14/2008	36.31		436.67
MW-3	6/1/1993	36.18	473.37	437.19
	6/22/1993	37.11		436.26
	10/6/1993	41.15		432.22
	1/13/1994	33.95		439.42
	3/30/1994	30.97		442.40
	4/25/1994	32.46		440.91
	8/12/1994	41.72		431.65
	12/14/1994	37.62		435.75
	2/10/1995	29.96		443.41
	6/15/1995	23.66		449.71
	9/26/1995	29.62		443.75
	12/15/1995	27.10		446.27
	3/21/1996	15.85		457.52
	6/13/1996	21.31		452.06
	9/16/1996	28.62		444.75
	12/2/1996	25.55		447.82
	3/7/1997	19.77		453.60
	6/12/1997	27.67		445.70
	9/29/1997	29.60		443.77

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-3	12/1/1997	33.37	473.37	440.00
(cont.)	3/19/1998	18.76		454.61
	5/29/1998	20.64		452.73
	9/15/1998	30.70		442.67
	11/30/1998	34.96		438.41
	1/17/1999	28.81		444.56
	6/10/1999	28.10		445.27
	9/7/1999	30.38		442.99
	12/13/1999	31.46		441.91
	3/13/2000	24.28		449.09
	6/12/2000	26.80		446.57
	11/10/2000	29.47		443.90
	12/31/2000	31.38		441.99
	3/27/2001	29.94		443.43
	6/30/2001	37.54		435.83
	9/26/2001	45.17		428.20
	12/18/2001	39.41		433.96
	3/18/2002	37.73		435.64
	6/5/2002	35.35		438.02
	8/21/2002	36.21		437.16
	12/3/2002	35.92		437.45
	3/4/2003	32.75		440.62
	6/10/2003	31.26		442.11
	9/9/2003	34.72		438.65
	12/23/2003	30.47		442.90
	3/23/2004	26.67		446.70
	5/10/2004	30.25		443.12
	8/4/2004	34.70		438.67
	11/4/2004	33.94		439.43
	1/12/2005	28.21		445.16
	5/2/2005	24.56		448.81
	7/19/2005	29.39		443.98
	11/21/2005	31.30		442.07
	2/9/2006	26.21		447.16
	5/16/2006	24.36		449.01

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-3	8/9/2006	31.90	473.37	441.47
(cont.)	11/8/2006	31.30		442.07
	2/14/2007	30.20		443.17
	5/17/2007	33.64		439.73
	8/2/2007	41.74		431.63
	11/12/2007	47.41		425.96
	2/14/2008	34.73		438.64
MW-4	3/30/1994	31.56	473.64	442.08
	4/25/1994	32.73		440.91
	8/12/1994	41.61		432.03
	12/14/1994	38.11		435.53
	2/10/1995	30.50		443.14
	6/15/1995	23.63		450.01
	9/26/1995	29.70		443.94
	12/15/1995	27.56		446.08
	3/21/1996	15.63		458.01
	6/13/1996	21.07		452.57
	9/16/1996	28.99		444.65
	12/2/1996	26.04		447.60
	3/7/1997	19.69		453.95
	6/12/1997	28.04		445.60
	9/29/1997	29.91		443.73
	12/1/1997	33.88		439.76
	3/19/1998	18.67		454.97
	5/29/1998	20.16		453.48
	9/15/1998	30.46		443.18
	11/30/1998	34.50		439.14
	1/17/1999	28.30		445.34
	6/10/1999	27.60		446.04
	9/7/1999	30.79		442.85
	12/13/1999	31.60		442.04
	3/13/2000	24.35		449.29
	6/12/2000	26.91		446.73
	11/10/2000	29.71		443.93
	12/31/2000	31.79		441.85

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-4	3/27/2001	29.98	473.64	443.66
(cont.)	6/30/2001	36.88		436.76
	9/26/2001	43.87		429.77
	12/18/2001	39.30		434.34
	3/18/2002	37.75		435.89
	6/5/2002	35.68		437.96
	8/21/2002	36.58		437.06
	12/3/2002	35.90		437.74
	3/4/2003	32.73		440.91
	6/10/2003	31.20		442.44
	9/9/2003	34.64		439.00
	12/23/2003	31.30		442.34
	3/23/2004	26.71		446.93
	5/10/2004	30.33		443.31
	8/4/2004	34.87		438.77
	11/4/2004	34.28		439.36
	1/12/2005	28.67		444.97
	5/2/2005	24.46		449.18
	7/19/2005	29.36		444.28
	11/21/2005	31.80		441.84
	2/9/2006	26.34		447.30
	5/16/2006	24.30		449.34
	8/9/2006	32.05		441.59
	11/8/2006	32.85		440.79
	2/14/2007	30.46		443.18
	5/17/2007	33.92		439.72
	8/2/2007	40.68		432.96
	11/12/2007	Dry[(c)]		--
	2/14/2008	34.53		439.11
MW-5	3/30/1994	32.07	472.67	440.60
	4/25/1994	33.65		439.02
	8/12/1994	42.73		429.94
	12/14/1994	38.89		433.78
	2/10/1995	31.44		441.23
	6/15/1995	24.99		447.68

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-5	9/26/1995	30.20	472.67	442.47
(cont.)	12/15/1995	28.56		444.11
	3/21/1996	16.82		455.85
	6/13/1996	22.61		450.06
	9/16/1996	29.78		442.89
	12/2/1996	26.51		446.16
	3/7/1997	21.91		450.76
	9/29/1997	31.74		440.93
	12/1/1997	34.05		438.62
	3/19/1998	20.93		451.74
	5/29/1998	21.30		451.37
	9/15/1998	31.32		441.35
	11/30/1998	35.44		437.23
	1/17/1999	29.59		443.08
	6/10/1999	28.05		444.62
	9/7/1999	31.11		441.56
	12/13/1999	32.66		440.01
	3/13/2000	25.87		446.80
	6/12/2000	28.15		444.52
	11/10/2000	30.05		442.62
	12/31/2000	31.81		440.86
	3/27/2001	30.57		442.10
	6/30/2001	37.24		435.43
	9/26/2001	44.53		428.14
	12/18/2001	40.65		432.02
	3/18/2002	38.75		433.92
	6/5/2002	36.21		436.46
	8/21/2002	36.76		435.91
	12/3/2002	36.12		436.55
	3/4/2003	32.90		439.77
	6/10/2003	33.04		439.63
	9/9/2003	34.20		438.47
	12/23/2003	31.38		441.29
	3/23/2004	27.51		445.16
	5/10/2004	31.12		441.55

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-5	8/4/2004	35.09	472.67	437.58
(cont.)	11/4/2004	34.34		438.33
	1/12/2005	29.19		443.48
	5/2/2005	25.31		447.36
	7/19/2005	30.49		442.18
	11/21/2005	32.35		440.32
	2/9/2006	27.19		445.48
	5/16/2006	25.30		447.37
	8/9/2006	32.68		439.99
	11/8/2006	32.22		440.45
	2/14/2007	34.00		438.67
	5/17/2007	34.29		438.38
	8/2/2007	41.72		430.95
	11/12/2007	Dry		--
	2/14/2008	35.66		437.01
MW-6	3/30/1994	33.38	471.93	438.55
	4/25/1994	35.49		436.44
	8/12/1994	45.14		426.79
	12/14/1994	40.99		430.94
	2/10/1995	33.34		438.59
	6/15/1995	26.88		445.05
	9/26/1995	33.55		438.38
	12/15/1995	30.32		441.61
	3/21/1996	18.89		453.04
	6/13/1996	24.62		447.31
	9/16/1996	32.64		439.29
	12/2/1996	27.42		444.51
	3/7/1997	22.13		449.80
	6/12/1997	31.02		440.91
	9/29/1997	35.77		436.16
	12/1/1997	37.14		434.79
	3/19/1998	21.10		450.83
	5/29/1998	23.26		448.67
	9/15/1998	33.50		438.43
	11/30/1998	38.73		433.20

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-6	1/17/1999	32.05	471.93	439.88
(cont.)	6/10/1999	31.44		440.49
	9/7/1999	33.94		437.99
	12/13/1999	35.84		436.09
	3/13/2000	28.45		443.48
	6/12/2000	30.52		441.41
	11/10/2000	32.99		438.94
	12/31/2000	34.95		436.98
	3/27/2001	32.72		439.21
	6/30/2001	39.86		432.07
	9/26/2001	Dry		Dry
	12/18/2001	43.36		428.57
	3/18/2002	41.29		430.64
	6/5/2002	38.35		433.58
	8/21/2002	39.02		432.91
	12/3/2002	38.76		433.17
	3/4/2003	35.13		436.80
	6/10/2003	34.15		437.78
	9/9/2003	37.66		434.27
	12/23/2003	33.43		438.50
	3/23/2004	29.96		441.97
	5/10/2004	32.98		438.95
	8/4/2004	37.02		434.91
	11/4/2004	37.03		434.90
	1/12/2005	32.01		439.92
	5/2/2005	27.30		444.63
	7/19/2005	32.27		439.66
	11/21/2005	33.23		438.70
	2/9/2006	29.07		442.86
	5/17/2006	27.23		444.70
	8/9/2006	35.22		436.71
	11/8/2006	33.41		438.52
	2/14/2007	33.43		438.50
	5/17/2007	36.50		435.43
	8/2/2007	42.24		429.69

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-6	11/12/2007	Dry	471.93	--
(cont.)	2/14/2008	38.67		433.26
MW-7	3/30/1994	31.98	472.33	440.35
	4/25/1994	33.56		438.77
	8/12/1994	43.35		428.98
	12/14/1994	39.34		432.99
	2/10/1995	32.11		440.22
	6/15/1995	25.51		446.82
	9/26/1995	31.43		440.90
	12/15/1995	28.97		443.36
	3/21/1996	17.36		454.97
	6/13/1996	23.47		448.86
	9/16/1996	31.35		440.98
	12/2/1996	27.11		445.22
	3/7/1997	21.33		451.00
	6/12/1997	29.90		442.43
	9/29/1997	34.37		437.96
	12/1/1997	36.46		435.87
	3/19/1998	20.33		452.00
	5/29/1998	22.30		450.03
	9/15/1998	32.54		439.79
	11/30/1998	37.96		434.37
	1/17/1999	31.04		441.29
	6/10/1999	29.89		442.44
	9/7/1999	32.38		439.95
	12/13/1999	33.98		438.35
	3/13/2000	27.09		445.24
	6/12/2000	28.76		443.57
	11/10/2000	31.54		440.79
	12/31/2000	32.76		439.57
	3/27/2001	30.97		441.36
	6/30/2001	37.50		434.83
	9/26/2001	45.11		427.22
	12/18/2001	41.13		431.20
	3/18/2002	39.22		433.11

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-7	6/5/2002	36.55	472.33	435.78
(cont.)	8/21/2002	36.81		435.52
	12/3/2002	36.52		435.81
	3/4/2003	32.60		439.73
	6/10/2003	31.33		441.00
	9/9/2003	34.71		437.62
	12/23/2003	30.80		441.53
	3/23/2004	26.41		445.92
	5/10/2004	29.86		442.47
	8/4/2004	34.06		438.27
	11/4/2004	34.12		438.21
	1/12/2005	28.83		443.50
	5/2/2005	24.66		447.67
	7/19/2005	29.07		443.26
	11/21/2005	30.42		441.91
	2/9/2006	26.15		446.18
	5/16/2006	24.44		447.89
	8/9/2006	31.77		440.56
	11/8/2006	31.14		441.19
	2/14/2007	30.39		441.94
	5/17/2007	33.31		439.02
	8/2/2007	37.09		435.24
	11/12/2007	Dry		--
	2/14/2008	36.51		435.82
MW-8	12/23/2003	32.01	471.18	439.17
	3/23/2004	28.50		442.68
	5/10/2004	31.44		439.74
	8/4/2004	35.11		436.07
	11/4/2004	34.77		436.41
	1/12/2005	29.66		441.52
	5/2/2005	25.91		445.27
	7/19/2005	30.56		440.62
	11/21/2005	32.48		438.70
	2/9/2006	27.40		443.78
	5/16/2006	25.60		445.58

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-8	8/9/2006	32.77	471.18	438.41
(cont.)	11/8/2006	32.10		439.08
	2/14/2007	30.94		440.24
	5/17/2007	34.14		437.04
	8/2/2007	41.24		429.94
	11/12/2007	Dry		--
	2/14/2008	35.55		435.63
MW-9	12/23/2003	34.03	470.78	436.75
	3/23/2004	30.01		440.77
	5/10/2004	33.61		437.17
	8/4/2004	37.47		433.31
	11/4/2004	37.44		433.34
	5/2/2005	27.73		443.05
	7/19/2005	32.90		437.88
	11/21/2005	34.15		436.63
	2/9/2006	29.44		441.34
	5/16/2006	27.50		443.28
	8/9/2006	35.85		434.93
	11/8/2006	34.18		436.60
	2/14/2007	34.00		436.78
	5/17/2007	36.88		433.90
	8/2/2007	44.11		426.67
	11/12/2007	Dry		--
	2/14/2008	39.32		431.46
MW-10	12/23/2003	33.80	471.63	437.83
	3/23/2004	28.68		442.95
	5/10/2004	32.15		439.48
	8/4/2004	36.40		435.23
	11/4/2004	36.21		435.42
	1/12/2005	31.64		439.99
	5/2/2005	27.01		444.62
	7/19/2005	31.59		440.04
	11/21/2005	32.96		438.67
	2/9/2006	28.36		443.27
	5/16/2006	26.83		444.80

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
MW-10	8/9/2006	34.37	471.63	437.26
(cont.)	11/8/2006	33.41		438.22
	2/14/2007	32.81		438.82
	5/17/2007	35.85		435.78
	8/2/2007	43.46		428.17
	11/12/2007	Dry		--
	2/14/2008	39.71		431.92
VW-2	8/4/2004	34.13	473.28	439.15
	11/4/2004	34.75		438.53
	1/12/2005	29.35		443.93
	5/2/2005	25.34		447.94
	7/19/2005	29.76		443.52
	11/21/2005	31.81		441.47
	2/9/2006	27.21		446.07
	5/17/2006	25.26		448.02
	8/9/2006	31.74		441.54
	11/8/2006	33.52		439.76
	2/14/2007	30.77		442.51
	5/17/2007	33.17		440.11
	8/2/2007	36.33		436.95
	11/12/2007	Dry		--
	2/14/2008	35.55		437.73
VW-3	8/4/2004	32.89	474.38	441.49
	11/4/2004	34.78		439.60
	1/12/2005	29.51		444.87
	5/2/2005	24.79		449.59
	7/19/2005	28.91		445.47
	11/21/2005	31.07		443.31
	2/9/2006	26.60		447.78
	5/16/2006	24.19		450.19
	8/9/2006	30.53		443.85
	11/8/2006	31.62		442.76
	2/14/2007	30.48		443.90
	5/17/2007	31.70		442.68
	8/2/2007	35.55		438.83

TABLE C-1

HISTORICAL WELL AND GROUNDWATER ELEVATIONS
TESORO - LIVERMORE, 67076

Monitoring Well	Date of Measurement	Depth to Water (feet below casing)	PVC Casing Elevation[(a)] (feet MSL)	Water Table Elevation[(b)] (feet MSL)
VW-3	11/12/2007	Dry	474.38	--
(cont.)	2/14/2008	Dry		--
TP-1	7/19/2005	29.91	472.82	442.91
	11/21/2005	32.28		440.54
	2/9/2006	28.02		444.80
	5/17/2006	25.18		447.64
	8/9/2006	32.81		440.01
	11/8/2006	32.02		440.80
	2/14/2007	33.59		439.23
	5/17/2007	33.52		439.30
	8/2/2007	40.30		432.52
	11/12/2007	Dry		--
	2/14/2008	36.17		436.65
TP-2	7/19/2005	29.67	472.93	443.26
	11/21/2005	31.43		441.50
	2/9/2006	27.27		445.66
	5/17/2006	25.00		447.93
	8/9/2006	31.74		441.19
	11/8/2006	32.80		440.13
	2/14/2007	30.32		442.61
	5/17/2007	33.28		439.65
	8/2/2007	39.35		433.58
	11/12/2007	Dry		--
	2/14/2008	35.62		437.31
MW-A	1/17/1999	30.13	NM[(d)]	NM
MW-B	1/17/1999	30.29	NM	NM
MW-C	1/17/1999	30.60	NM	NM
MW-D	1/17/1999	31.32	NM	NM
MW-E	1/17/1999	31.36	NM	NM
MW-W	1/17/1999	30.91	NM	NM

(a) Elevation of PVC well casing (north edge) surveyed relative to mean sea level (MSL).
Wells were surveyed by Cross Land Surveying, Inc., per AB 2886 requirements on 31 August 2005.
Benchmark K2-741, elevation is 467.835 feet above MSL.

(b) Potentiometric Surface Elevation = (Casing Elevation - Depth to Water)

(c) Depth of groundwater assumed to be below screened interval; well had 6 inches or less of water.

(d) NM = Well not surveyed.

ATTACHMENT D

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-1	6/1/1993	27,000	2,200	400	ND<0.5[c]	4,900	--[d]	--	--	--	--	--	--	--	--
	6/22/1993	87,000	8,000	10,000	260	10,000	--	--	--	--	--	--	--	--	--
	10/6/1993	40,000	4,700	6,500	740	5,300	--	--	--	--	--	--	--	--	--
	1/13/1994	9,400	1,300	9,500	110	850	--	--	--	--	--	--	--	--	--
	3/30/1994	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/1994	11,000	1,500	1,800	290	1,700	--	--	--	--	--	--	--	--	--
	8/12/1994	11,000	550	330	260	1,400	--	--	--	--	--	--	--	--	--
	12/14/1994	11,000	1,000	1,200	320	1,500	--	--	--	--	--	--	--	--	--
	2/10/1995	9,300	1,200	1,500	280	1,500	--	--	--	--	--	--	--	--	--
	6/15/1995	140	5.6	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	9/26/1995	410	140	ND<0.5	ND<0.5	43	--	--	--	--	--	--	--	--	--
	12/15/1995	740	250	ND<1.3	ND<1.3	87	--	--	--	--	--	--	--	--	--
	3/21/1996	ND<50	0.52	ND<0.5	ND<0.5	0.51	--	--	--	--	--	--	--	--	--
	6/13/1996	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	9/16/1996	720	70	ND<0.5	1.0	5.1	ND<5	--	--	--	--	--	--	--	--
	12/2/1996	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	3/7/1997	600	6.7	ND<0.5	1.2	1.8	ND<5	--	--	--	--	--	--	--	--
	6/12/1997	18,000	180	800	410	1,800	ND<5	--	--	--	--	--	--	--	--
	9/29/1997	350	120	1.5	ND<0.5	12	ND<5	--	--	--	--	--	--	--	--
	12/1/1997	ND<50	7.0	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	3/19/1998	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	5/29/1998	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	9/15/1998	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	11/30/1998	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	1/17/1999	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	6/10/1999	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	9/7/1999	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	12/13/1999	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	3/13/2000	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	6/12/2000	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	11/10/2000	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	12/31/2000	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	3/27/2001	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	6/30/2001	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	9/26/2001	90	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	12/18/2001	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-1	11/4/2004	4,500	2.5	5.8	79	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
(cont.)	1/12/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	78	0.80	0.70	0.86	2.4	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<40	ND<5	ND<0.5	ND<0.5
	7/19/2005	290	ND<0.5	ND<0.5	4.0	4.1	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/21/2005	370	ND<0.5	ND<0.5	0.75	1.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	140	ND<0.5	ND<0.5	0.67	1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	190	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	400	ND<0.5	ND<0.5	1.7	1.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	410	ND<0.5	ND<0.5	2.2	2.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	2,300	ND<0.5	0.66	17	21	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<8	--	--
	8/2/2007	580	5.7	0.64	6.8	12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	750	0.85	2.7	4.2	9.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<20	ND<0.5	ND<0.5
	2/14/2008	1,700	3.3	17	38	83	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-2	6/1/1993	170,000	20,000	21,000	ND<3300	18,000	--	--	--	--	--	--	--	--	--
	6/22/1993	160,000	19,000	22,000	3,500	18,000	--	--	--	--	--	--	--	--	--
	10/6/1993	110,000	17,000	17,000	3,000	15,000	--	--	--	--	--	--	--	--	--
	1/13/1994	93,000	20,000	19,000	2,300	14,000	--	--	--	--	--	--	--	--	--
	3/30/1994	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/1994	41,000	9,600	7,300	840	7,800	--	--	--	--	--	--	--	--	--
	8/12/1994	59,000	11,000	11,000	2,300	11,000	--	--	--	--	--	--	--	--	--
	12/14/1994	63,000	13,000	13,000	2,200	12,000	--	--	--	--	--	--	--	--	--
	2/10/1995	63,000	12,000	12,000	2,200	11,000	--	--	--	--	--	--	--	--	--
	6/15/1995	61,000	11,000	12,000	1,900	11,000	--	--	--	--	--	--	--	--	--
	9/26/1995	61,000	9,400	11,000	2,300	12,000	--	--	--	--	--	--	--	--	--
	12/15/1995	48,000	8,000	8,300	2,200	12,000	--	--	--	--	--	--	--	--	--
	3/21/1996	48,000	8,000	7,700	2,400	12,000	--	--	--	--	--	--	--	--	--
	6/13/1996	33,000	7,300	8,800	1,900	1,200	ND<250	--	--	--	--	--	--	--	--
	9/16/1996	8,600	510	640	180	1,300	ND<250	--	--	--	--	--	--	--	--
	12/2/1996	29,000	4,400	4,000	1,300	6,100	ND<130	--	--	--	--	--	--	--	--
	3/7/1997	13,000	1,800	1,100	270	2,000	ND<250	--	--	--	--	--	--	--	--
	6/12/1997	68,000	7,800	6,600	2,300	11,000	ND<500	--	--	--	--	--	--	--	--
	9/29/1997	15,000	1,500	97	740	1,800	ND<250	--	--	--	--	--	--	--	--
	12/1/1997	13,000	900	37	860	2,400	ND<250	--	--	--	--	--	--	--	--
	3/19/1998	42,000	5,000	3,600	2,000	8,300	ND<250	--	--	--	--	--	--	--	--
	5/29/1998	68,000	5,600	4,700	2,400	11,000	ND<250	--	--	--	--	--	--	--	--

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-2	9/15/1998	36,000	3,900	1,200	1,400	7,800	ND<250	--	--	--	--	--	--	--	--
(cont.)	11/30/1998	16,000	2,200	59	1,200	1,500	ND<250	--	--	--	--	--	--	--	--
	1/17/1999	30,000	4,000	2,200	2,100	9,500	ND<250	--	--	--	--	--	--	--	--
	6/10/1999	70,000	6,300	1,800	3,600	14,000	ND<500	--	--	--	--	--	--	--	--
	9/7/1999	42,000	3,800	840	1,900	8,000	150	--	--	--	--	--	--	--	--
	12/13/1999	14,000	1,400	87	690	110	34	--	--	--	--	--	--	--	--
	3/13/2000	38,000	2,400	2,300	1,600	6,400	2,400	--	--	--	--	--	--	--	--
	6/12/2000	56,000	4,000	950	2,300	7,200	ND<50	--	--	--	--	--	--	--	--
	11/10/2000	35,000	5,100	850	1,500	3,200	230	--	--	--	--	--	--	--	--
	12/31/2000	21,000	3,200	420	1,300	1,200	440	--	--	--	--	--	--	--	--
	3/27/2001	3,500	420	64	16	280	120	--	--	--	--	--	--	--	--
	6/30/2001	1,200	88	4.5	65	37	29	--	--	--	--	--	--	--	--
	9/26/2001	53,000	8,500	1,500	2,400	4,600	270	--	--	--	--	--	--	--	--
	12/18/2001	26,000	5,400	900	1,500	2,200	430	--	--	--	--	--	--	--	--
	1/22/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/18/2002	4,200	240	7.3	200	53	89	--	--	--	--	--	--	--	--
	6/5/2002	25,000	3,500	390	1,400	2,400	550	--	--	--	--	--	--	--	--
	8/21/2002	10,000	1,200	32	620	300	160	--	--	--	--	--	--	--	--
	12/3/2002	3,700	110	2.5	130	11	29	--	--	--	--	--	--	--	--
	3/4/2003	8,700	1,100	77	350	540	230	ND<0.5	ND<0.5	ND<10	21	ND<150	ND<5	ND<0.5	ND<0.5
	6/10/2003	6,300	660	35	190	120	410	ND<2.5	ND<2.5	ND<5	ND<25	ND<250	ND<25	ND<2.5	ND<2.5
	9/9/2003	6,900	500	ND<20	360	29	9,500	ND<20	ND<20	60	ND<200	ND<2,000	ND<200	ND<20	ND<20
	12/23/2003	22,000	4,900	1,300	720	2,300	1,700	ND<20	ND<20	21	ND<200	ND<2,000	ND<200	ND<20	ND<20
	3/23/2004	45,000	5,200	1,500	1,800	5,000	750	ND<20	ND<20	34	ND<200	ND<2,000	ND<200	ND<20	ND<20
	5/10/2004	7,300	1,000	51	240	290	1,800	ND<5	ND<5	14	ND<50	ND<500	ND<50	ND<5	ND<5
	8/4/2004	45,000	7,200	1,900	1,800	5,100	2,500	ND<25	ND<25	31	ND<250	ND<2,500	ND<250	ND<25	ND<25
	11/4/2004	27,000	4,400	1,100	840	2,200	3,500	ND<9	ND<9	29	ND<50	ND<900	ND<90	ND<9	ND<9
	1/12/2005	16,000	1,900	640	570	1,500	1,900	ND<4	ND<4	19	28[e]	ND<400	ND<40	ND<4	ND<4
	5/2/2005	44,000	5,200	1,100	1,800	4,800	2,200	ND<20	ND<20	30	ND<200	ND<2,000	ND<200	ND<20	ND<20
	7/20/2005	21,000	3,000	500	1,000	1,500	4,400	ND<7	ND<7	32	74[e]	ND<700	ND<70	ND<7	ND<7
	11/22/2005	33,000	4,400	880	1,200	2,600	2,200	ND<9	ND<9	19	480	ND<900	ND<90	ND<9	ND<9
	2/9/2006	25,000	3,300	720	1,300	2,200	2,500	ND<7	ND<7	27	490	ND<700	ND<70	ND<7	ND<7
	5/17/2006	22,000	3,200	240	1,200	2,100	4,600	ND<7	ND<7	46	1,000	ND<700	ND<70	ND<7	ND<7
	8/9/2006	34,000	4,200	830	1,300	2,400	2,900	ND<9	ND<9	25	1,600	ND<900	ND<90	ND<9	ND<9
	11/8/2006	27,000	3,600	300	1,200	1,800	1,500	ND<9	ND<9	15	1,100	ND<900	ND<90	ND<9	ND<9
	2/14/2007	36,000	4,600	740	1,600	2,100	1,800	ND<5	ND<5	20	910	ND<700	ND<50	ND<5	ND<5

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-2	5/17/2007	37,000	7,400	680	1,900	2,400	3,000	ND<9	ND<9	24	2,600	ND<4,000	ND<90	--	--
(cont.)	8/2/2007	37,000	4,200	500	1,800	2,200	1,300	ND<9	ND<9	18	1,200	ND<2,000	ND<90	ND<9	ND<9
	11/12/2007	25,000	5,900	120	1,700	820	1,400	ND<15	ND<15	16	720	ND<1,500	ND<150	ND<15	ND<15
	2/14/2008	31,000	5,400	450	1,900	2,000	1,200	ND<15	ND<15	16	410	ND<1,500	ND<150	ND<15	ND<15
MW-3	6/1/1993	270	4.6	ND<0.5	ND<0.5	1.9	--	--	--	--	--	--	--	--	--
	6/22/1993	160	8.2	ND<0.5	ND<0.5	0.72	--	--	--	--	--	--	--	--	--
	10/6/1993	740	57	110	24	120	--	--	--	--	--	--	--	--	--
	1/13/1994	83	2.6	0.67	0.78	4.2	--	--	--	--	--	--	--	--	--
	3/30/1994	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/1994	60	0.75	3.2	0.50	3.6	--	--	--	--	--	--	--	--	--
	8/12/1994	310	7.3	14	2.6	13	--	--	--	--	--	--	--	--	--
	12/14/1994	75	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	2/10/1995	96	1.4	ND<0.5	ND<0.5	1.8	--	--	--	--	--	--	--	--	--
	6/15/1995	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	9/26/1995	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	12/15/1995	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	11/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	140	ND<0.5	ND<0.5	ND<0.5	0.81	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	7/19/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.6	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/21/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.9	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.71	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.54	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	190	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2008	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.83	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-4	3/30/1994	120	4.2	15	2.5	26	--	--	--	--	--	--	--	--	--
	4/25/1994	65	ND<0.5	1.8	ND<0.5	2.1	--	--	--	--	--	--	--	--	--
	8/12/1994	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	12/14/1994	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	2/10/1995	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	6/15/1995	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-4	9/26/1995	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
(cont.)	12/15/1995	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	11/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	ND<50	1.8	1.1	1.4	4.4	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	7/19/2005	97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5	ND<0.5
	11/21/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS[f]	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-5	3/30/1994	7,500	1,300	20	ND<13	160	--	--	--	--	--	--	--	--	--
	4/25/1994	6,500	1,100	41	130	740	--	--	--	--	--	--	--	--	--
	8/12/1994	4,000	420	2.9	41	98	--	--	--	--	--	--	--	--	--
	12/14/1994	4,800	660	ND<2.5	33	13	--	--	--	--	--	--	--	--	--
	2/10/1995	5,200	490	ND<13	23	19	--	--	--	--	--	--	--	--	--
	6/15/1995	460	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--	--
	9/26/1995	1,400	61	ND<0.5	3.1	ND<0.5	--	--	--	--	--	--	--	--	--
	12/15/1995	2,100	77	1.5	10	1.5	--	--	--	--	--	--	--	--	--
	3/21/1996	930	35	2.0	2.0	18	--	--	--	--	--	--	--	--	--
	6/13/1996	610	38	0.72	1.9	2.0	ND<5	--	--	--	--	--	--	--	--
	9/16/1996	380	29	ND<0.5	0.95	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	12/2/1996	200	1.1	0.64	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	3/7/1997	520	74	ND<0.5	0.58	1.5	ND<5	--	--	--	--	--	--	--	--
	6/12/1997	140	5.3	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	9/29/1997	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	12/1/1997	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	3/19/1998	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	5/29/1998	540	4.1	ND<0.5	ND<0.5	0.52	ND<5	--	--	--	--	--	--	--	--
	9/15/1998	67	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	11/30/1998	430	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-5	1/17/1999	500	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
(cont.)	6/10/1999	66	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	9/7/1999	820	46	1.7	10	21	ND<5	--	--	--	--	--	--	--	--
	12/13/1999	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	3/13/2000	270	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	6/12/2000	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--	--	--	--	--
	11/10/2000	2,200	42	1.1	25	30	8.6	--	--	--	--	--	--	--	--
	12/31/2000	1,300	21	ND<0.5	4.3	2.6	10	--	--	--	--	--	--	--	--
	3/27/2001	1,200	11	ND<0.5	2.6	ND<0.5	21	--	--	--	--	--	--	--	--
	6/30/2001	1,400	4.8	ND<0.5	1.5	0.56	14	--	--	--	--	--	--	--	--
	9/26/2001	660	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.0	--	--	--	--	--	--	--	--
	12/18/2001	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	1/22/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/18/2002	890	0.65	ND<0.5	ND<0.5	ND<0.5	3.1	--	--	--	--	--	--	--	--
	6/5/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/21/2002	2,100	20	ND<0.5	63	4.0	7.0	--	--	--	--	--	--	--	--
	12/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/4/2003	490	10	ND<0.5	2.2	ND<0.5	1.0	ND<0.5	ND<0.5	ND<0.5	5.0	ND<50	ND<5	ND<0.5	ND<0.5
	6/10/2003	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/9/2003	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	12/23/2003	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/23/2004	440	2.3	ND<0.5	1.0	5.9	2.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/10/2004	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/4/2004	160	ND<0.5	ND<0.5	ND<0.5	0.71	0.94	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/4/2004	290	0.74	ND<0.5	0.58	1.3	0.61	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	300	ND<0.5	ND<0.5	0.51	1.6	0.73	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	120	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	7/20/2005	97	ND<0.5	ND<0.5	ND<0.5	1.1	ND<0.5	ND<0.5	ND<0.5	ND<5	330	ND<5	ND<0.5	ND<0.5	1,200
	11/21/2005	210	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.2	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	ND<50	ND<0.5	ND<0.5	0.63	1.0	1.0	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.79	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	220	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.8	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	120	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	200	ND<0.5	ND<0.5	ND<0.5	1.1	2.1	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	85	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.9	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-5	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(cont.)	2/14/2008	980	ND<0.5	ND<0.5	2.1	ND<0.5	1.0	ND<0.5	ND<0.5	ND<0.5	34	ND<50	ND<5	ND<0.5	ND<0.5
MW-6	3/30/1994	63,000	21,000	8,600	1,700	12,000	--	--	--	--	--	--	--	--	--
	4/25/1994	77,000	22,000	12,000	2,300	16,000	--	--	--	--	--	--	--	--	--
	8/12/1994	65,000	12,000	8,100	2,200	16,000	--	--	--	--	--	--	--	--	--
	12/14/1994	65,000	18,000	9,500	2,200	14,000	--	--	--	--	--	--	--	--	--
	2/10/1995	63,000	21,000	8,400	2,000	14,000	--	--	--	--	--	--	--	--	--
	6/15/1995	75,000	20,000	11,000	2,100	15,000	--	--	--	--	--	--	--	--	--
	9/26/1995	62,000	15,000	9,600	1,700	12,000	--	--	--	--	--	--	--	--	--
	12/15/1995	61,000	15,000	9,000	2,300	15,000	--	--	--	--	--	--	--	--	--
	3/21/1996	65,000	18,000	9,800	2,400	16,000	--	--	--	--	--	--	--	--	--
	6/13/1996	29,000	8,600	3,300	2,200	12,000	ND<250	--	--	--	--	--	--	--	--
	9/16/1996	42,000	6,400	1,800	2,100	11,000	ND<250	--	--	--	--	--	--	--	--
	12/2/1996	28,000	3,000	1,100	970	8,300	ND<500	--	--	--	--	--	--	--	--
	3/7/1997	12,000	2,000	190	520	2,300	ND<250	--	--	--	--	--	--	--	--
	6/12/1997	37,000	3,900	470	1,600	6,200	ND<100	--	--	--	--	--	--	--	--
	9/29/1997	34,000	3,500	370	1,600	5,200	ND<100	--	--	--	--	--	--	--	--
	12/1/1997	20,000	2,100	ND<10	1,200	2,200	ND<100	--	--	--	--	--	--	--	--
	3/19/1998	24,000	2,900	460	1,100	3,400	ND<100	--	--	--	--	--	--	--	--
	5/29/1998	38,000	3,500	700	1,800	5,200	ND<100	--	--	--	--	--	--	--	--
	9/15/1998	22,000	1,900	110	1,400	3,000	ND<100	--	--	--	--	--	--	--	--
	11/30/1998	9,900	770	16	820	710	ND<100	--	--	--	--	--	--	--	--
	1/17/1999	14,000	2,200	160	1,700	3,600	ND<100	--	--	--	--	--	--	--	--
	6/10/1999	22,000	1,600	160	1,400	2,900	5.5	--	--	--	--	--	--	--	--
	9/7/1999	17,000	1,400	33	1,300	1,800	ND<50	--	--	--	--	--	--	--	--
	12/13/1999	16,000	790	9.2	840	780	ND<25	--	--	--	--	--	--	--	--
	3/13/2000	16,000	790	85	780	1,600	ND<25	--	--	--	--	--	--	--	--
	6/12/2000	24,000	1,100	150	1,300	2,300	5,600	--	--	--	--	--	--	--	--
	11/10/2000	13,000	440	7.0	760	350	1,000	--	--	--	--	--	--	--	--
	12/31/2000	12,000	680	8.0	820	190	1,400	--	--	--	--	--	--	--	--
	3/27/2001	14,000	330	17	940	670	380	--	--	--	--	--	--	--	--
	6/30/2001	750	45	ND<0.93	47	14	54	--	--	--	--	--	--	--	--
	9/26/2001	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/18/2001	43,000	3,800	350	1,900	3,000	900	--	--	--	--	--	--	--	--
	1/22/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/18/2002	33,000	2,600	120	1,800	2,800	740	--	--	--	--	--	--	--	--

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-6	6/5/2002	10,000	1,100	16	700	180	600	--	--	--	--	--	--	--	--
(cont.)	8/21/2002	10,000	1,200	ND<23	710	290	370	--	--	--	--	--	--	--	--
	12/3/2002	16,000	1,700	63	970	630	1,500	--	--	--	--	--	--	--	--
	3/4/2003	16,000	1,700	25	1,200	40	7,700	ND<20	ND<20	ND<70	200	ND<2,000	ND<200	ND<20	ND<20
	6/10/2003	9,500	860	15	380	47	2,600	ND<5	ND<5	18	ND<50	ND<500	ND<50	ND<5	ND<5
	9/9/2003	11,000	1,000	16	630	120	2,500	ND<5	ND<5	20	52	ND<500	ND<50	ND<5	ND<5
	12/23/2003	18,000	2,100	41	1,100	390	4,900	ND<10	ND<10	42	ND<100	ND<1,000	ND<100	ND<10	ND<10
	3/23/2004	24,000	1,400	71	1,500	2,000	7,500	ND<20	ND<20	66	ND<200	ND<2,000	ND<200	ND<20	ND<20
	5/10/2004	6,500	550	ND<10	71	43	3,700	ND<10	ND<10	31	ND<100	ND<1,000	ND<100	ND<10	ND<10
	8/4/2004	8,200	990	19	300	120	3,300	ND<5	ND<5	23	ND<50	ND<500	ND<50	ND<5	ND<5
	11/4/2004	9,600	1,100	30	320	160	2,200	ND<4	ND<4	18	22[e]	ND<400	ND<40	ND<4	ND<4
	1/12/2005	12,000	1,100	34	600	500	3,600	ND<4	ND<4	31	30[e]	ND<400	ND<40	ND<4	ND<4
	5/2/2005	14,000	630	22	610	920	4,000	ND<10	ND<10	32	120[e]	ND<3,000	ND<100	ND<10	ND<10
	7/20/2005	97	21	340	150	1,800	ND<2.5	ND<2.5	14	140	9,800	ND<25	ND<2.5	ND<2.5	1.1
	11/21/2005	6,600	150	26	580	640	100	ND<1	ND<1	ND<1	13	ND<100	ND<10	ND<1	ND<1
	2/9/2006	7,100	340	11	370	360	910	ND<2	ND<2	9.3	120	ND<200	ND<20	ND<2	ND<2
	5/17/2006	7,100	270	5.1	320	290	930	ND<2	ND<2	8.4	260	ND<200	ND<20	ND<2	ND<2
	8/9/2006	5,800	440	7.5	120	45	670	ND<2	ND<2	7.3	380	ND<2,000	ND<50	ND<2	ND<2
	11/8/2006	9,200	990	37	390	140	310	ND<2	ND<2	3.2	110	ND<200	ND<20	ND<2	ND<2
	2/14/2007	5,900	480	10	73	23	1,600	ND<2	ND<2	14	1,100	ND<500	ND<20	ND<2	ND<2
	5/17/2007	3,700	240	3.4	30	10	770	ND<0.5	ND<0.5	9.2	800	ND<2,000	ND<5	--	--
	8/2/2007	15,000	1,800	120	980	510	310	ND<2.5	ND<2.5	3.0	180	ND<250	ND<25	ND<2.5	ND<2.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	14,000	2,000	63	750	190	810	ND<2.5	ND<2.5	7.7	600	ND<250	ND<25	ND<2.5	ND<2.5
MW-7	3/30/1994	43,000	7,200	2,400	1,600	11,000	--	--	--	--	--	--	--	--	--
	4/25/1994	30,000	3,900	1,000	940	6,900	--	--	--	--	--	--	--	--	--
	8/12/1994	30,000	3,800	1,400	1,300	7,500	--	--	--	--	--	--	--	--	--
	12/14/1994	31,000	3,600	1,200	900	6,400	--	--	--	--	--	--	--	--	--
	2/10/1995	27,000	4,000	900	890	5,100	--	--	--	--	--	--	--	--	--
	6/15/1995	17,000	920	680	740	4,100	--	--	--	--	--	--	--	--	--
	9/26/1995	7,000	200	150	170	810	--	--	--	--	--	--	--	--	--
	12/15/1995	11,000	350	170	540	1,900	--	--	--	--	--	--	--	--	--
	3/21/1996	12,000	320	100	730	2,500	--	--	--	--	--	--	--	--	--
	6/13/1996	5,900	98	19	370	620	ND<50	--	--	--	--	--	--	--	--
	9/16/1996	7,800	140	43	440	590	ND<25	--	--	--	--	--	--	--	--
	12/2/1996	6,300	87	29	290	430	ND<50	--	--	--	--	--	--	--	--

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-7	3/7/1997	4,500	35	19	360	470	ND<25	--	--	--	--	--	--	--	--
(cont.)	6/12/1997	3,900	29	5.2	170	48	ND<5	--	--	--	--	--	--	--	--
	9/29/1997	6,100	56	9.0	340	190	ND<25	--	--	--	--	--	--	--	--
	12/1/1997	6,500	24	ND<2.5	400	250	ND<25	--	--	--	--	--	--	--	--
	3/19/1998	2,000	20	ND<2.5	73	79	ND<25	--	--	--	--	--	--	--	--
	5/29/1998	5,700	22	7.3	290	350	ND<25	--	--	--	--	--	--	--	--
	9/15/1998	1,700	15	ND<2.5	44	5.1	ND<25	--	--	--	--	--	--	--	--
	11/30/1998	4,800	42	12	270	640	ND<25	--	--	--	--	--	--	--	--
	1/17/1999	3,400	33	ND<5	200	190	ND<50	--	--	--	--	--	--	--	--
	6/10/1999	1,700	7.8	1.5	23	4.1	ND<5	--	--	--	--	--	--	--	--
	9/7/1999	1,900	9.7	2.1	70	2.9	ND<5	--	--	--	--	--	--	--	--
	12/13/1999	1,900	8.0	1.1	10	1.1	ND<5	--	--	--	--	--	--	--	--
	3/13/2000	1,500	7.5	ND<0.5	6.7	2.9	ND<5	--	--	--	--	--	--	--	--
	6/12/2000	1,200	5.4	ND<0.5	5.2	1.0	ND<5	--	--	--	--	--	--	--	--
	11/10/2000	1,000	3.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	12/31/2000	620	1.8	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	--	--	--	--
	3/27/2001	1,200	4.8	ND<0.5	6.7	0.94	ND<0.5	--	--	--	--	--	--	--	--
	6/30/2001	2,800	10	1.7	75	170	ND<0.5	--	--	--	--	--	--	--	--
	9/26/2001	1,900	16	0.89	2.3	25	ND<0.5	--	--	--	--	--	--	--	--
	12/18/2001	3,000	13	0.88	3.4	3.4	ND<0.5	--	--	--	--	--	--	--	--
	1/22/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/18/2002	3,100	7.3	1.5	38	110	ND<0.5	--	--	--	--	--	--	--	--
	6/5/2002	1,800	7.6	1.0	39	20	ND<0.5	--	--	--	--	--	--	--	--
	8/21/2002	3,300	7.6	0.70	85	36	ND<0.5	--	--	--	--	--	--	--	--
	12/3/2002	1,700	5.4	ND<0.5	15	5.5	ND<0.5	--	--	--	--	--	--	--	--
	3/4/2003	440	1.8	ND<0.5	0.54	2.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	6/10/2003	550	0.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	0.50
	9/9/2003	120	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	12/23/2003	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	3/23/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/10/2004	67	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/4/2004	2,600	2.5	ND<0.5	36	31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/4/2004	1,600	2.0	ND<0.5	16	16	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	830	1.6	ND<0.5	15	12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	710	ND<0.5	ND<0.5	0.75	0.52	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	7/20/2005	95	ND<0.5	9.2	8.6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	1,400	ND<5	ND<0.5	ND<0.5	ND<0.5

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-7	11/21/2005	1,100	0.56	ND<0.5	3.4	23	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
(cont.)	2/9/2006	270	ND<0.5	ND<0.5	1.2	0.98	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	930	0.84	ND<0.5	10	7.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	650	ND<0.5	ND<0.5	1.2	1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	800	ND<0.5	ND<0.5	1.0	0.62	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	800	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	700	ND<0.5	ND<0.5	ND<0.5	0.71	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	3,200	1.3	ND<0.5	50	120	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	1,600	1.2	ND<0.5	4.5	1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-8	9/5/2003	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--
	12/23/2003	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	7.3	ND<0.5	ND<0.5
	3/23/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/10/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	0.86	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	7/19/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/21/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.57	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	ND<50	1.2	1.9	ND<0.5	0.66	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
MW-9	9/5/2003	3,400	23	1.5	110	10	10	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--
	12/23/2003	1,100	2.4	ND<0.5	0.80	0.80	2.1	ND<0.5	ND<0.5	ND<0.5	5.9	ND<50	ND<5	ND<0.5	ND<0.5
	3/23/2004	760	8.5	ND<0.5	4.9	0.95	18	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/10/2004	1,100	4.4	ND<0.5	1.3	0.67	11	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/4/2004	1,200	3.4	0.59	16	7.6	6.1	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/4/2004	610	0.52	ND<0.5	1.3	ND<0.5	2.0	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	1,400	1.6	0.55	5.5	1.1	2.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
MW-9	5/2/2005	1,500	10	0.55	6.7	1.1	27	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
(cont.)	7/20/2005	1,800	5.5	0.69	12	1.6	10	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/21/2005	1,200	0.94	ND<0.5	1.4	ND<0.5	3.3	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	1,200	2.8	0.51	6.4	0.84	4.4	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	1,600	3.8	0.57	12	1.8	4.9	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	760	ND<0.5	ND<0.5	1.0	ND<0.5	2.6	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	1,700	1.7	0.53	6.7	1.4	1.7	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	1,000	ND<0.5	ND<0.5	0.51	ND<0.5	0.51	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	870	ND<0.5	ND<0.5	0.54	ND<0.5	0.93	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	3,300	68	2.1	110	7.8	16	ND<0.5	ND<0.5	ND<0.5	13	ND<50	ND<5	ND<0.5	ND<0.5
MW-10	9/5/2003	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	--	--	--	--
	12/23/2003	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	3/23/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/10/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	0.61	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	7/19/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/21/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
VW-2	8/4/2004	5,700	480	ND<20	600	ND<20	12,000	ND<20	ND<20	110	ND<90	ND<2,000	ND<200	ND<20	ND<20
	11/4/2004	5,800	340	ND<20	38	ND<20	10,000	ND<20	ND<20	120	ND<90	ND<2,000	ND<200	ND<20	ND<20
	1/12/2005	3,800	210	ND<5	90	54	2,900	ND<5	ND<5	33	26[e]	ND<500	ND<50	ND<5	ND<5
	5/2/2005	2,600	84	ND<2	13	7.0	960	ND<2	ND<2	12	57	ND<500	ND<20	ND<2	ND<2
	7/20/2005	6,200	240	13	290	480	6,600	ND<2	ND<2	56	59[e]	ND<2,000	ND<20	ND<2	ND<2

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
VW-2	11/21/2005	3,100	100	ND<9	22	10	5,300	ND<9	ND<9	54	76[e]	ND<900	ND<90	ND<9	ND<9
(cont.)	2/9/2006	3,500	140	ND<25	130	36	12,000	ND<25	ND<25	65	2,800	ND<2,500	ND<250	ND<25	ND<25
	5/17/2006	1,800	90	2.6	39	11	1,200	ND<2.5	ND<2.5	12	700	ND<250	ND<25	ND<2.5	ND<2.5
	8/9/2006	4,300	86	3.5	200	16	2,500	ND<2.5	ND<2.5	28	2,800	ND<5,000	ND<25	ND<2.5	ND<2.5
	11/8/2006	3,200	46	3.1	10	4.8	1,500	ND<3	ND<3	11	7,100	ND<800	ND<30	ND<3	ND<3
	2/14/2007	3,300	75	4.6	50	82	580	ND<2	ND<2	7.0	4,100	ND<500	ND<20	ND<2	ND<2
	5/17/2007	3,500	51	7.3	17	24	100	ND<2.5	ND<2.5	ND<2.5	7,100	ND<250	ND<25	--	--
	8/2/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	5,700	180	14	150	120	530	ND<2.5	ND<2.5	4.1	5,000	ND<250	ND<25	ND<2.5	ND<2.5
VW-3	8/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/4/2004	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	1/12/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/2/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	7/20/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/21/2005	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	8/9/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/8/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	2/14/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	5/17/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	--	--
	8/2/2007	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<50	ND<5	ND<0.5	ND<0.5
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TP-1	7/20/2005	42,000	2,800	1,100	1,700	4,800	12,000	ND<20	ND<20	92	130[e]	ND<2,000	ND<200	ND<20	ND<20
	11/22/2005	36,000	2,100	290	1,400	2,600	11,000	ND<20	ND<20	70	810	ND<2,000	ND<200	ND<20	ND<20
	2/9/2006	19,000	1,400	230	990	1,700	8,900	ND<15	ND<15	72	2,200	ND<1,500	ND<150	ND<15	ND<15
	5/17/2006	20,000	1,400	200	920	1,800	9,200	ND<20	ND<20	37	2,500	ND<10,000	ND<200	ND<20	ND<20
	8/9/2006	28,000	1,600	150	1,200	2,200	13,000	ND<15	ND<15	84	4,900	ND<2,500	ND<150	ND<15	ND<15
	11/8/2006	97	78	990	1,600	6,800	ND<15	ND<15	47	4,400	20,000	ND<150	ND<15	ND<15	1,300
	2/14/2007	15,000	820	37	810	1,000	8,300	ND<15	ND<15	58	8,500	ND<4,000	ND<150	ND<15	ND<15
	5/17/2007	16,000	850	35	810	1,200	6,700	ND<10	ND<10	42	12,000	ND<2,000	ND<100	--	--
	8/2/2007	15,000	2,000	100	970	630	3,400	ND<7	ND<7	25	4,000	ND<700	ND<70	ND<7	ND<7
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	18,000	1,100	49	1,200	910	7,000	ND<15	ND<15	58	4,200	ND<1,500	ND<150	ND<15	ND<15

TABLE D-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

TESORO - LIVERMORE, 67076

Monitoring Well	Sample Date[a]	TPHg[b] (ug/L)	Benzene[b] (ug/L)	Toluene[b] (ug/L)	Ethylbenzene[b] (ug/L)	Total Xylenes[b] (ug/L)	MTBE[b] (ug/L)	DIPE[b] (ug/L)	ETBE[b] (ug/L)	TAME[b] (ug/L)	TBA[b] (ug/L)	Methanol[b] (ug/L)	Ethanol[b] (ug/L)	1,2-DCA[b] (ug/L)	EDB[b] (ug/L)
TP-2	7/20/2005	26,000	1,800	1,100	1,100	2,500	63,000	ND<150	ND<150	400	ND<700	ND<15,000	ND<1,500	ND<150	ND<150
	11/22/2005	16,000	1,200	140	840	820	52,000	ND<90	ND<90	340	1200[e]	ND<9,000	ND<900	ND<90	ND<90
	2/9/2006	2,700	94	2.9	28	14	1,200	ND<2.5	ND<2.5	13	1,600	ND<250	ND<25	ND<2.5	ND<2.5
	5/17/2006	ND<31000	2,200	1,100	1,500	3,300	87,000	ND<90	ND<90	680	4,800	ND<15,000	ND<1500	ND<90	ND<90
	8/9/2006	14,000	1,400	86	1,200	830	56,000	ND<2.5	ND<2.5	350	2,800	ND<4,000	ND<25	ND<2.5	ND<2.5
	11/8/2006	16,000	1,300	ND<90	930	370	38,000	ND<90	ND<90	280	3,600	ND<40,000	ND<900	ND<90	ND<90
	2/14/2007	22,000	1,900	230	1,700	1,600	53,000	ND<90	ND<90	400	2,800	ND<20,000	ND<900	ND<90	ND<90
	5/17/2007	ND<25000	2,400	51	1,500	510	69,000	ND<2	ND<0.5	550	4,300	ND<25,000	ND<5	--	--
	8/2/2007	10,000	1,200	ND<25	640	140	14,000	ND<25	ND<25	110	16,000	ND<10,000	ND<250	ND<25	ND<25
	11/12/2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/14/2008	12,000	920	28	850	740	17,000	ND<25	ND<25	120	5,900	ND<4,000	ND<250	ND<25	ND<25
MW-A	1/17/1999	5,800	1,700	85	65	320	ND<5	--	--	--	--	--	--	--	--
MW-B	1/17/1999	4,400	240	30	21	39	ND<5	--	--	--	--	--	--	--	--
MW-C	1/17/1999	1,800	0.80	ND<0.5	ND<0.5	0.55	ND<5	--	--	--	--	--	--	--	--
MW-D	1/17/1999	5,600	1,600	130	66	220	ND<5	--	--	--	--	--	--	--	--
MW-E	1/17/1999	5,700	1,600	180	180	310	ND<50	--	--	--	--	--	--	--	--
	6/10/1999	5,000	1,300	130	320	450	ND<25	--	--	--	--	--	--	--	--
MW-W	1/17/1999	23,000	7,600	760	1,400	5,000	ND<50	--	--	--	--	--	--	--	--
	6/10/1999	16,000	4,100	420	1,300	4,000	ND<50	--	--	--	--	--	--	--	--

(a) Samples collected before July 2005 collected by others; data provided by Delta Environmental Consultants, Inc., Second Quarter 2005 Groundwater Monitoring Report dated 31 July 2005.

(b) Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes, methyl tert-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB) analyzed by EPA Method 8260; reported in micrograms per liter (µg/l).

(c) ND - Not detected at the reporting limit listed.

(d) "-" Not analyzed.

(e) TBA results may be biased slightly high. A fraction of MTBE (typically less than 10 percent) converts to TBA during the analysis of water samples. This conversion effect is considered to be mathematically significant in samples that contain MTBE/TBA ratios of over 20:1.

(f) Not sampled; well dry during sampling event.

ATTACHMENT F

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY FORM

KIFF Analytical LLC

Report Number : 61093
Date : 2/22/2008

Mike Purchase
Arctos Environmental
1332 Peralta Avenue
Berkeley, CA 94702

Subject : 7 Water Samples
Project Name : Tesoro - Livermore
Project Number : 01LV

Dear Mr. Purchase,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 61093

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-1** Matrix : Water Lab Number : 61093-01

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**3.3**	0.50	ug/L	EPA 8260B	2/21/2008
Toluene	**17**	0.50	ug/L	EPA 8260B	2/21/2008
Ethylbenzene	**38**	0.50	ug/L	EPA 8260B	2/21/2008
Total Xylenes	**83**	0.50	ug/L	EPA 8260B	2/21/2008
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/21/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
TPH as Gasoline	**1700**	50	ug/L	EPA 8260B	2/21/2008
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/21/2008
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	2/21/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61093

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-5** Matrix : Water Lab Number : 61093-02

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethylbenzene	**2.1**	0.50	ug/L	EPA 8260B	2/21/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Methyl-t-butyl ether (MTBE)	**1.0**	0.50	ug/L	EPA 8260B	2/21/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-Butanol	**34**	5.0	ug/L	EPA 8260B	2/21/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/21/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
TPH as Gasoline	**980**	50	ug/L	EPA 8260B	2/21/2008
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	2/21/2008
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	2/21/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61093

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-7** Matrix : Water Lab Number : 61093-03

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1.2**	0.50	ug/L	EPA 8260B	2/21/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethylbenzene	**4.5**	0.50	ug/L	EPA 8260B	2/21/2008
Total Xylenes	**1.0**	0.50	ug/L	EPA 8260B	2/21/2008
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/21/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
TPH as Gasoline	**1600**	50	ug/L	EPA 8260B	2/21/2008
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	2/21/2008
4-Bromofluorobenzene (Surr)	107		% Recovery	EPA 8260B	2/21/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61093

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-8** Matrix : Water Lab Number : 61093-04

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/19/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/19/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/19/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	2/19/2008
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/19/2008
4-Bromofluorobenzene (Surr)	97.4		% Recovery	EPA 8260B	2/19/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61093

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-10** Matrix : Water Lab Number : 61093-05

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/19/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/19/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/19/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/19/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	2/19/2008
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	2/19/2008
4-Bromofluorobenzene (Surr)	97.6		% Recovery	EPA 8260B	2/19/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61093

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **TP-1** Matrix : Water Lab Number : 61093-06

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1100**	15	ug/L	EPA 8260B	2/19/2008
Toluene	**49**	15	ug/L	EPA 8260B	2/19/2008
Ethylbenzene	**1200**	15	ug/L	EPA 8260B	2/19/2008
Total Xylenes	**910**	15	ug/L	EPA 8260B	2/19/2008
Methyl-t-butyl ether (MTBE)	**7000**	15	ug/L	EPA 8260B	2/19/2008
Diisopropyl ether (DIPE)	**< 15**	15	ug/L	EPA 8260B	2/19/2008
Ethyl-t-butyl ether (ETBE)	**< 15**	15	ug/L	EPA 8260B	2/19/2008
Tert-amyl methyl ether (TAME)	**58**	15	ug/L	EPA 8260B	2/19/2008
Tert-Butanol	**4200**	70	ug/L	EPA 8260B	2/19/2008
Methanol	**< 1500**	1500	ug/L	EPA 8260B	2/19/2008
Ethanol	**< 150**	150	ug/L	EPA 8260B	2/19/2008
1,2-Dichloroethane	**< 15**	15	ug/L	EPA 8260B	2/19/2008
1,2-Dibromoethane	**< 15**	15	ug/L	EPA 8260B	2/19/2008
TPH as Gasoline	**18000**	1500	ug/L	EPA 8260B	2/19/2008
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	2/19/2008
4-Bromofluorobenzene (Surr)	97.4		% Recovery	EPA 8260B	2/19/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61093

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **VW-2** Matrix : Water Lab Number : 61093-07

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**180**	2.5	ug/L	EPA 8260B	2/19/2008
Toluene	**14**	2.5	ug/L	EPA 8260B	2/19/2008
Ethylbenzene	**150**	2.5	ug/L	EPA 8260B	2/19/2008
Total Xylenes	**120**	2.5	ug/L	EPA 8260B	2/19/2008
Methyl-t-butyl ether (MTBE)	**530**	2.5	ug/L	EPA 8260B	2/19/2008
Diisopropyl ether (DIPE)	**< 2.5**	2.5	ug/L	EPA 8260B	2/19/2008
Ethyl-t-butyl ether (ETBE)	**< 2.5**	2.5	ug/L	EPA 8260B	2/19/2008
Tert-amyl methyl ether (TAME)	**4.1**	2.5	ug/L	EPA 8260B	2/19/2008
Tert-Butanol	**5000**	15	ug/L	EPA 8260B	2/19/2008
Methanol	**< 250**	250	ug/L	EPA 8260B	2/19/2008
Ethanol	**< 25**	25	ug/L	EPA 8260B	2/19/2008
1,2-Dichloroethane	**< 2.5**	2.5	ug/L	EPA 8260B	2/19/2008
1,2-Dibromoethane	**< 2.5**	2.5	ug/L	EPA 8260B	2/19/2008
TPH as Gasoline	**5700**	250	ug/L	EPA 8260B	2/19/2008
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	2/19/2008
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	2/19/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 61093

Date : 2/22/2008

QC Report : Method Blank Data

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/19/2008
Methanol	< 50	50	ug/L	EPA 8260B	2/19/2008
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	2/19/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	2/19/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/19/2008
Toluene - d8 (Surr)	100		%	EPA 8260B	2/19/2008
4-Bromofluorobenzene (Surr)	98.4		%	EPA 8260B	2/19/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/20/2008
Methanol	< 50	50	ug/L	EPA 8260B	2/20/2008
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	2/20/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/20/2008
Toluene - d8 (Surr)	98.4		%	EPA 8260B	2/20/2008
4-Bromofluorobenzene (Surr)	105		%	EPA 8260B	2/20/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61093

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	61104-09	1.5	39.8	39.6	41.9	41.7	ug/L	EPA 8260B	2/19/08	101	102	0.246	70-130	25
Toluene	61104-09	<0.50	39.8	39.6	39.8	39.8	ug/L	EPA 8260B	2/19/08	100	100	0.490	70-130	25
Tert-Butanol	61104-09	5.4	199	198	236	224	ug/L	EPA 8260B	2/19/08	115	110	4.53	70-130	25
Methyl-t-Butyl Ether	61104-09	26	39.8	39.6	59.2	61.3	ug/L	EPA 8260B	2/19/08	84.4	90.3	6.67	70-130	25
Benzene	61083-08	<0.50	40.0	40.0	38.4	38.9	ug/L	EPA 8260B	2/20/08	96.1	97.3	1.25	70-130	25
Toluene	61083-08	<0.50	40.0	40.0	42.0	42.4	ug/L	EPA 8260B	2/20/08	105	106	0.952	70-130	25
Tert-Butanol	61083-08	<5.0	200	200	197	199	ug/L	EPA 8260B	2/20/08	98.4	99.4	1.04	70-130	25
Methyl-t-Butyl Ether	61083-08	<0.50	40.0	40.0	36.7	37.4	ug/L	EPA 8260B	2/20/08	91.7	93.6	1.99	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61093

QC Report : Laboratory Control Sample (LCS)

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	2/19/08	103	70-130
Toluene	40.0	ug/L	EPA 8260B	2/19/08	99.2	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/19/08	108	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/19/08	91.6	70-130
Benzene	40.0	ug/L	EPA 8260B	2/20/08	96.8	70-130
Toluene	40.0	ug/L	EPA 8260B	2/20/08	105	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/20/08	98.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/20/08	90.6	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 080214-DW-1

CLIENT: Arctos Environmental, Inc.

SITE: Tesoro - Livermore
1619 1st Street
Livermore, CA

LAB: KIFF 61093 | DHS #

CONDUCT ANALYSIS TO DETECT

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS

Invoice and Report to : Arctos Environmental, Inc.
Attn: Mike Purchase
1332 Peralta Ave. Berkeley, CA 94702
Ph. 510-525-2180
mpurchase@arctosenv.com

SAMPLE I.D.	DATE	TIME	MATRIX S= SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS VOA/HCL	C = COMPOSITE ALL CONTAINERS	TPH-G + BTEX + MTBE (8260)	(7) Oxygenates (8260)	Lead Scavengers	Ferrous Iron (24 hr. Hold time)	Nitrate, Sulfate, Phosphorous	Major anions (Chloride, Nitrite, Sulfide)	Total Alkalinity (SM2320B)	Carbon Dioxide (SM4500-CO2D) & Methane	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-1	2-14	1505	W	3	HCL VOAs		X	X	X									01
MW-5		1103					X	X	X									02
MW-7		1008					X	X	X									03
MW-8		0945					X	X	X									04
MW-10		1458					X	X	X									05
TP-1		1450					X	X	X									06
VW-2		0915					X	X	X									07

SAMPLE RECEIPT
Temp °C 1.2 Therm. ID# IR-1
Initial JST Date 021408
Time 2101 Coolant present: Yes / No

SAMPLING COMPLETED	DATE	TIME
	2-14-08	1520

SAMPLING PERFORMED BY Dave Walter

RESULTS NEEDED NO LATER THAN: Standard TAT

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
David C. Walt	2-14-08	1545			
			Tim Loff Analytical	021408	1538

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

KIFF Analytical LLC

Report Number : 61091
Date : 2/22/2008

Mike Purchase
Arctos Environmental
1332 Peralta Avenue
Berkeley, CA 94702

Subject : 6 Water Samples
Project Name : Tesoro - Livermore
Project Number : 01LV

Dear Mr. Purchase,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 61091
Date : 2/22/2008

Subject : 6 Water Samples
Project Name : Tesoro - Livermore
Project Number : 01LV

Case Narrative

The Method Reporting Limit for Methanol has been increased due to the presence of an interfering compound for sample TP-2.

Approved By: Joel Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61091

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-2** Matrix : Water Lab Number : 61091-01

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**5400**	15	ug/L	EPA 8260B	2/20/2008
Toluene	**450**	15	ug/L	EPA 8260B	2/20/2008
Ethylbenzene	**1900**	15	ug/L	EPA 8260B	2/20/2008
Total Xylenes	**2000**	15	ug/L	EPA 8260B	2/20/2008
Methyl-t-butyl ether (MTBE)	**1200**	15	ug/L	EPA 8260B	2/20/2008
Diisopropyl ether (DIPE)	**< 15**	15	ug/L	EPA 8260B	2/20/2008
Ethyl-t-butyl ether (ETBE)	**< 15**	15	ug/L	EPA 8260B	2/20/2008
Tert-amyl methyl ether (TAME)	**16**	15	ug/L	EPA 8260B	2/20/2008
Tert-Butanol	**410**	70	ug/L	EPA 8260B	2/20/2008
Methanol	**< 1500**	1500	ug/L	EPA 8260B	2/20/2008
Ethanol	**< 150**	150	ug/L	EPA 8260B	2/20/2008
1,2-Dichloroethane	**< 15**	15	ug/L	EPA 8260B	2/20/2008
1,2-Dibromoethane	**< 15**	15	ug/L	EPA 8260B	2/20/2008
TPH as Gasoline	**31000**	1500	ug/L	EPA 8260B	2/20/2008
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	2/20/2008
4-Bromofluorobenzene (Surr)	94.9		% Recovery	EPA 8260B	2/20/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61091

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-4** Matrix : Water Lab Number : 61091-02

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/21/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	2/21/2008
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/21/2008
4-Bromofluorobenzene (Surr)	93.8		% Recovery	EPA 8260B	2/21/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61091

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-3** Matrix : Water Lab Number : 61091-03

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Methyl-t-butyl ether (MTBE)	**0.83**	0.50	ug/L	EPA 8260B	2/21/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/21/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
TPH as Gasoline	**240**	50	ug/L	EPA 8260B	2/21/2008
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/21/2008
4-Bromofluorobenzene (Surr)	93.5		% Recovery	EPA 8260B	2/21/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61091

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-6** Matrix : Water Lab Number : 61091-04

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2000**	2.5	ug/L	EPA 8260B	2/20/2008
Toluene	**63**	2.5	ug/L	EPA 8260B	2/20/2008
Ethylbenzene	**750**	2.5	ug/L	EPA 8260B	2/20/2008
Total Xylenes	**190**	2.5	ug/L	EPA 8260B	2/20/2008
Methyl-t-butyl ether (MTBE)	**810**	2.5	ug/L	EPA 8260B	2/20/2008
Diisopropyl ether (DIPE)	**< 2.5**	2.5	ug/L	EPA 8260B	2/20/2008
Ethyl-t-butyl ether (ETBE)	**< 2.5**	2.5	ug/L	EPA 8260B	2/20/2008
Tert-amyl methyl ether (TAME)	**7.7**	2.5	ug/L	EPA 8260B	2/20/2008
Tert-Butanol	**600**	15	ug/L	EPA 8260B	2/20/2008
Methanol	**< 250**	250	ug/L	EPA 8260B	2/20/2008
Ethanol	**< 25**	25	ug/L	EPA 8260B	2/20/2008
1,2-Dichloroethane	**< 2.5**	2.5	ug/L	EPA 8260B	2/20/2008
1,2-Dibromoethane	**< 2.5**	2.5	ug/L	EPA 8260B	2/20/2008
TPH as Gasoline	**14000**	250	ug/L	EPA 8260B	2/20/2008
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	2/20/2008
4-Bromofluorobenzene (Surr)	99.7		% Recovery	EPA 8260B	2/20/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61091

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **MW-9** Matrix : Water Lab Number : 61091-05

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**68**	0.50	ug/L	EPA 8260B	2/21/2008
Toluene	**2.1**	0.50	ug/L	EPA 8260B	2/21/2008
Ethylbenzene	**110**	0.50	ug/L	EPA 8260B	2/21/2008
Total Xylenes	**7.8**	0.50	ug/L	EPA 8260B	2/21/2008
Methyl-t-butyl ether (MTBE)	**16**	0.50	ug/L	EPA 8260B	2/21/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
Tert-Butanol	**13**	5.0	ug/L	EPA 8260B	2/21/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	2/21/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	2/21/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	2/21/2008
TPH as Gasoline	**3300**	50	ug/L	EPA 8260B	2/21/2008
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	2/21/2008
4-Bromofluorobenzene (Surr)	96.2		% Recovery	EPA 8260B	2/21/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61091

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Sample : **TP-2** Matrix : Water Lab Number : 61091-06

Sample Date :2/14/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**920**	25	ug/L	EPA 8260B	2/20/2008
Toluene	**28**	25	ug/L	EPA 8260B	2/20/2008
Ethylbenzene	**850**	25	ug/L	EPA 8260B	2/20/2008
Total Xylenes	**740**	25	ug/L	EPA 8260B	2/20/2008
Methyl-t-butyl ether (MTBE)	**17000**	25	ug/L	EPA 8260B	2/20/2008
Diisopropyl ether (DIPE)	**< 25**	25	ug/L	EPA 8260B	2/20/2008
Ethyl-t-butyl ether (ETBE)	**< 25**	25	ug/L	EPA 8260B	2/20/2008
Tert-amyl methyl ether (TAME)	**120**	25	ug/L	EPA 8260B	2/20/2008
Tert-Butanol	**5900**	150	ug/L	EPA 8260B	2/20/2008
Methanol	**< 4000**	4000	ug/L	EPA 8260B	2/20/2008
Ethanol	**< 250**	250	ug/L	EPA 8260B	2/20/2008
1,2-Dichloroethane	**< 25**	25	ug/L	EPA 8260B	2/20/2008
1,2-Dibromoethane	**< 25**	25	ug/L	EPA 8260B	2/20/2008
TPH as Gasoline	**12000**	2500	ug/L	EPA 8260B	2/20/2008
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	2/20/2008
4-Bromofluorobenzene (Surr)	94.6		% Recovery	EPA 8260B	2/20/2008

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 61091

Date : 2/22/2008

QC Report : Method Blank Data

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/20/2008
Methanol	< 50	50	ug/L	EPA 8260B	2/20/2008
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	2/20/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/20/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	2/20/2008
4-Bromofluorobenzene (Surr)	97.6		%	EPA 8260B	2/20/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/20/2008
Methanol	< 50	50	ug/L	EPA 8260B	2/20/2008
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	2/20/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	2/20/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/20/2008
Toluene - d8 (Surr)	100		%	EPA 8260B	2/20/2008
4-Bromofluorobenzene (Surr)	95.2		%	EPA 8260B	2/20/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61091

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	61090-02	7.7	39.9	39.9	46.0	45.9	ug/L	EPA 8260B	2/20/08	96.0	95.8	0.262	70-130	25
Toluene	61090-02	<0.50	39.9	39.9	38.6	38.6	ug/L	EPA 8260B	2/20/08	96.7	96.8	0.157	70-130	25
Tert-Butanol	61090-02	96	200	200	291	290	ug/L	EPA 8260B	2/20/08	97.5	97.3	0.119	70-130	25
Methyl-t-Butyl Ether	61090-02	1.7	39.9	39.9	40.6	39.0	ug/L	EPA 8260B	2/20/08	97.6	93.4	4.32	70-130	25
Benzene	61083-06	68	40.0	40.0	115	110	ug/L	EPA 8260B	2/20/08	115	105	9.57	70-130	25
Toluene	61083-06	4.6	40.0	40.0	43.9	42.8	ug/L	EPA 8260B	2/20/08	98.2	95.5	2.71	70-130	25
Tert-Butanol	61083-06	20	200	200	222	220	ug/L	EPA 8260B	2/20/08	101	100	0.659	70-130	25
Methyl-t-Butyl Ether	61083-06	62	40.0	40.0	98.3	98.5	ug/L	EPA 8260B	2/20/08	91.0	91.4	0.403	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61091

QC Report : Laboratory Control Sample (LCS)

Date : 2/22/2008

Project Name : **Tesoro - Livermore**

Project Number : **01LV**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	2/20/08	99.3	70-130
Toluene	40.0	ug/L	EPA 8260B	2/20/08	96.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/20/08	98.7	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/20/08	94.5	70-130
Benzene	40.0	ug/L	EPA 8260B	2/20/08	99.1	70-130
Toluene	40.0	ug/L	EPA 8260B	2/20/08	100	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/20/08	98.3	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/20/08	99.1	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

February 21, 2008

CLS Work Order #: CRB0542
COC #: 61091

Christie Dumas
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project Name: Tesoro Livermore

Enclosed are the results of analyses for samples received by the laboratory on 02/14/08 19:22. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Livermore	
2795 Second St. Suite 300	Project Number: 080214-OW-1	**CLS Work Order #: CRB0542**
Davis, CA 95616	Project Manager: Christie Dumas	COC #: 61091

CRB 0542

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

California Lab Services
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
tel: (916) 638-7301 COC# 61091 Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Christie Dumas
EDF Report? __ Yes _x_ No
Recommended but not mandatory to complete this section:
Company/Address: Kiff Analytical, LLC
Sampling Company Log Code:
Phone No.: FAX No.:
Global ID:
Project Number: 08C214-OW-1
P.O. No.: 61091
EDF Deliverable to (Email Address):
Project Name: Tesoro- Livermore
E-mail address: inbox@kiffanalytical.com
Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: VOA	Container: Poly	Container: Sleeve	Container: Amber	Container: Glass Jar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: NONE	Matrix: WATER	Matrix: SOIL	Matrix: Air	Analysis Request: Nitrite (EPA 300.0)	Analysis Request: Ferrous Iron SM 3500-Fe-D	Analysis Request: Carbon Dioxide SM 4500-CO2 D	Date due: February 22, 2008	For Lab Use Only
MW-2	02/14/08	1402		2								2	2			X	X	X	X	
MW-4	02/14/08	1132		2								2	2			X	X	X	X	
MW-3	02/14/08	1218		2								2	2			X	X	X	X	
MW-6	02/14/08	1300		2								2	2			X	X	X	X	
MW-9	02/14/08	1330		2								2	2			X	X	X	X	
TP-2	02/14/08	1425		2								2	?			X	X	X	X	

Relinquished by: Kiff Analytical	Date 021408	Time 1922	Received by:	Remarks: 4°C
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory: JonR 2-14-8 1922	Bill to: Accounts Payable

p.1 5302974802 Kiff Analytical Feb 14 08 08:45p

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Livermore
Project Number: 080214-OW-1
Project Manager: Christie Dumas

CLS Work Order #: CRB0542
COC #: 61091

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (CRB0542-01) Water	**Sampled: 02/14/08 14:02**	**Received: 02/14/08 19:22**							
Carbon Dioxide as CO2	**88**	5.0	mg/L	1	CR01301	02/15/08	02/15/08	SM 4500C	
Ferrous Iron	**2.6**	0.20	"	2	CR01293	02/15/08	02/15/08	SM3500-Fe D	
Nitrite as N	ND	0.10	"	1	CR01284	02/15/08	02/16/08	EPA 300.0	
MW-4 (CRB0542-02) Water	**Sampled: 02/14/08 11:32**	**Received: 02/14/08 19:22**							
Carbon Dioxide as CO2	**37**	5.0	mg/L	1	CR01301	02/15/08	02/15/08	SM 4500C	
Ferrous Iron	ND	0.10	"	"	CR01293	02/15/08	02/15/08	SM3500-Fe D	
Nitrite as N	ND	0.10	"	"	CR01284	02/15/08	02/16/08	EPA 300.0	
MW-3 (CRB0542-03) Water	**Sampled: 02/14/08 12:18**	**Received: 02/14/08 19:22**							
Carbon Dioxide as CO2	**46**	5.0	mg/L	1	CR01301	02/15/08	02/15/08	SM 4500C	
Ferrous Iron	ND	0.10	"	"	CR01293	02/15/08	02/15/08	SM3500-Fe D	
Nitrite as N	ND	0.10	"	"	CR01284	02/15/08	02/16/08	EPA 300.0	
MW-6 (CRB0542-04) Water	**Sampled: 02/14/08 13:00**	**Received: 02/14/08 19:22**							
Carbon Dioxide as CO2	**70**	5.0	mg/L	1	CR01301	02/15/08	02/15/08	SM 4500C	
Ferrous Iron	**1.8**	0.10	"	"	CR01293	02/15/08	02/15/08	SM3500-Fe D	
Nitrite as N	ND	0.10	"	"	CR01284	02/15/08	02/16/08	EPA 300.0	
MW-9 (CRB0542-05) Water	**Sampled: 02/14/08 13:30**	**Received: 02/14/08 19:22**							
Carbon Dioxide as CO2	**71**	5.0	mg/L	1	CR01301	02/15/08	02/15/08	SM 4500C	
Ferrous Iron	**0.25**	0.10	"	"	CR01293	02/15/08	02/15/08	SM3500-Fe D	
Nitrite as N	ND	0.10	"	"	CR01284	02/15/08	02/16/08	EPA 300.0	
TP-2 (CRB0542-06) Water	**Sampled: 02/14/08 14:25**	**Received: 02/14/08 19:22**							
Carbon Dioxide as CO2	**110**	5.0	mg/L	1	CR01301	02/15/08	02/15/08	SM 4500C	
Ferrous Iron	**1.2**	0.10	"	"	CR01293	02/15/08	02/15/08	SM3500-Fe D	
Nitrite as N	ND	0.10	"	"	CR01284	02/15/08	02/16/08	EPA 300.0	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Livermore
Project Number: 080214-OW-1
Project Manager: Christie Dumas

CLS Work Order #: CRB0542
COC #: 61091

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01284 - General Prep										
Blank (CR01284-BLK1)				Prepared: 02/15/08 Analyzed: 02/16/08						
Nitrite as N	ND	0.10	mg/L							
LCS (CR01284-BS1)				Prepared: 02/15/08 Analyzed: 02/16/08						
Nitrite as N	0.599	0.10	mg/L	0.610		98.3	80-120			
LCS Dup (CR01284-BSD1)				Prepared: 02/15/08 Analyzed: 02/16/08						
Nitrite as N	0.592	0.10	mg/L	0.610		97.0	80-120	1.28	20	
Matrix Spike (CR01284-MS1)		**Source: CRB0542-01**		Prepared: 02/15/08 Analyzed: 02/16/08						
Nitrite as N	0.591	0.10	mg/L	0.610	ND	97.0	75-125			
Matrix Spike Dup (CR01284-MSD1)		**Source: CRB0542-01**		Prepared: 02/15/08 Analyzed: 02/16/08						
Nitrite as N	0.603	0.10	mg/L	0.610	ND	98.9	75-125	1.99	25	
Batch CR01293 - General Preparation										
Blank (CR01293-BLK1)				Prepared & Analyzed: 02/15/08						
Ferrous Iron	ND	0.10	mg/L							
LCS (CR01293-BS1)				Prepared & Analyzed: 02/15/08						
Ferrous Iron	0.260	0.10	mg/L	0.250		104	80-120			
LCS Dup (CR01293-BSD1)				Prepared & Analyzed: 02/15/08						
Ferrous Iron	0.255	0.10	mg/L	0.250		102	80-120	1.79	25	
Matrix Spike (CR01293-MS1)		**Source: CRB0542-02**		Prepared & Analyzed: 02/15/08						
Ferrous Iron	0.255	0.10	mg/L	0.250	0.00	102	75-125			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Livermore
Project Number: 080214-OW-1
Project Manager: Christie Dumas

CLS Work Order #: CRB0542
COC #: 61091

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01293 - General Preparation										
Matrix Spike Dup (CR01293-MSD1)		**Source: CRB0542-02**		Prepared & Analyzed: 02/15/08						
Ferrous Iron	0.250	0.10	mg/L	0.250	0.00	100	75-125	1.82	30	
Batch CR01301 - General Preparation										
Blank (CR01301-BLK1)				Prepared & Analyzed: 02/15/08						
Carbon Dioxide as CO2	ND	5.0	mg/L							

CALIFORNIA LABORATORY SERVICES

02/21/08 15:10

KIFF Analytical	Project: Tesoro Livermore	
2795 Second St. Suite 300	Project Number: 080214-OW-1	**CLS Work Order #: CRB0542**
Davis, CA 95616	Project Manager: Christie Dumas	COC #: 61091

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Calscience
Environmental
Laboratories, Inc.

ACCREDITED IN ACCORDANCE WITH nelac

February 22, 2008

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-02-1269**
Client Reference: Tesoro - Livermore

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/16/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/16/08
Work Order No: 08-02-1269
Preparation: N/A
Method: RSK-175M

Project: Tesoro - Livermore

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**08-02-1269-1-A**	**02/14/08 14:02**	**Aqueous**	**GC 33**	**N/A**	**02/19/08 00:00**	**080219L01**

Parameter	Result	RL	DF	Qual	Units
Methane	3800	20.0	20		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**08-02-1269-2-B**	**02/14/08 11:32**	**Aqueous**	**GC 33**	**N/A**	**02/19/08 00:00**	**080219L01**

Parameter	Result	RL	DF	Qual	Units
Methane	ND	1.00	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**08-02-1269-3-A**	**02/14/08 12:10**	**Aqueous**	**GC 33**	**N/A**	**02/19/08 00:00**	**080219L01**

Parameter	Result	RL	DF	Qual	Units
Methane	157	1.00	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**08-02-1269-4-A**	**02/14/08 13:00**	**Aqueous**	**GC 33**	**N/A**	**02/19/08 00:00**	**080219L01**

Parameter	Result	RL	DF	Qual	Units
Methane	4020	80.0	80		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-9	**08-02-1269-5-A**	**02/14/08 13:30**	**Aqueous**	**GC 33**	**N/A**	**02/19/08 00:00**	**080219L01**

Parameter	Result	RL	DF	Qual	Units
Methane	614	8.00	8		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TP-2	**08-02-1269-6-A**	**02/14/08 14:25**	**Aqueous**	**GC 33**	**N/A**	**02/19/08 00:00**	**080219L01**

Parameter	Result	RL	DF	Qual	Units
Methane	703	8.00	8		ug/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/16/08
Work Order No: 08-02-1269
Preparation: N/A
Method: RSK-175M

Project: Tesoro - Livermore

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-663-56**	**N/A**	**Aqueous**	**GC 33**	**N/A**	**02/19/08 00:00**	**080219L01**

Parameter	Result	RL	DF	Qual	Units
Methane	ND	1.00	1		ug/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/16/08
Work Order No: 08-02-1269

Project: Tesoro - Livermore

Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-2	**08-02-1269-1**	**02/14/08**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Chloride	78	50	50		mg/L	N/A	02/16/08	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	02/16/08	EPA 300.0
Sulfate	2.4	1.0	1		mg/L	N/A	02/16/08	EPA 300.0
Alkalinity, Total (as CaCO3)	514	5.0	1		mg/L	N/A	02/20/08	SM 2320B
Phosphorus, Total	0.43	0.10	1		mg/L	02/22/08	02/22/08	SM 4500 P B/E
Sulfide, Total	2.2	0.050	1		mg/L	02/18/08	02/18/08	SM 4500 S2 - D

Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-4	**08-02-1269-2**	**02/14/08**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Chloride	61	10	10		mg/L	N/A	02/16/08	EPA 300.0
Nitrate (as N)	2.0	0.10	1		mg/L	N/A	02/16/08	EPA 300.0
Sulfate	75	10	10		mg/L	N/A	02/16/08	EPA 300.0
Alkalinity, Total (as CaCO3)	470	5.0	1		mg/L	N/A	02/20/08	SM 2320B
Phosphorus, Total	0.64	0.10	1		mg/L	02/22/08	02/22/08	SM 4500 P B/E
Sulfide, Total	ND	0.050	1		mg/L	02/18/08	02/18/08	SM 4500 S2 - D

Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-3	**08-02-1269-3**	**02/14/08**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Chloride	88	10	10		mg/L	N/A	02/16/08	EPA 300.0
Nitrate (as N)	0.56	0.10	1		mg/L	N/A	02/16/08	EPA 300.0
Sulfate	72	10	10		mg/L	N/A	02/16/08	EPA 300.0
Alkalinity, Total (as CaCO3)	372	5.0	1		mg/L	N/A	02/20/08	SM 2320B
Phosphorus, Total	0.56	0.10	1		mg/L	02/22/08	02/22/08	SM 4500 P B/E
Sulfide, Total	ND	0.050	1		mg/L	02/18/08	02/18/08	SM 4500 S2 - D

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/16/08
Work Order No: 08-02-1269

Project: Tesoro - Livermore

Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-6	**08-02-1269-4**	**02/14/08**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Chloride	76	50	50		mg/L	N/A	02/16/08	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	02/16/08	EPA 300.0
Sulfate	1.6	1.0	1		mg/L	N/A	02/16/08	EPA 300.0
Alkalinity, Total (as CaCO3)	562	5.0	1		mg/L	N/A	02/20/08	SM 2320B
Phosphorus, Total	0.61	0.10	1		mg/L	02/22/08	02/22/08	SM 4500 P B/E
Sulfide, Total	ND	0.050	1		mg/L	02/18/08	02/18/08	SM 4500 S2 - D

Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-9	**08-02-1269-5**	**02/14/08**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Chloride	83	50	50		mg/L	N/A	02/16/08	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	02/16/08	EPA 300.0
Sulfate	1.9	1.0	1		mg/L	N/A	02/16/08	EPA 300.0
Alkalinity, Total (as CaCO3)	574	5.0	1		mg/L	N/A	02/20/08	SM 2320B
Phosphorus, Total	0.62	0.10	1		mg/L	02/22/08	02/22/08	SM 4500 P B/E
Sulfide, Total	ND	0.050	1		mg/L	02/18/08	02/18/08	SM 4500 S2 - D

Client Sample Number	Lab Sample Number	Date Collected	Matrix
TP-2	**08-02-1269-6**	**02/14/08**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Chloride	86	50	50		mg/L	N/A	02/16/08	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	02/16/08	EPA 300.0
Sulfate	15	2.0	2		mg/L	N/A	02/16/08	EPA 300.0
Alkalinity, Total (as CaCO3)	600	5.0	1		mg/L	N/A	02/20/08	SM 2320B
Phosphorus, Total	0.46	0.10	1		mg/L	02/22/08	02/22/08	SM 4500 P B/E
Sulfide, Total	ND	0.050	1		mg/L	02/18/08	02/18/08	SM 4500 S2 - D

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/16/08
Work Order No: 08-02-1269

Project: Tesoro - Livermore

Client Sample Number	Lab Sample Number	Date Collected	Matrix
Method Blank		**N/A**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Chloride	ND	1.0	1		mg/L	N/A	02/16/08	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	02/16/08	EPA 300.0
Sulfate	ND	1.0	1		mg/L	N/A	02/16/08	EPA 300.0
Alkalinity, Total (as CaCO3)	ND	1.0	1		mg/L	N/A	02/20/08	SM 2320B
Phosphorus, Total	ND	0.10	1		mg/L	02/22/08	02/22/08	SM 4500 P B/E
Sulfide, Total	ND	0.050	1		mg/L	02/18/08	02/18/08	SM 4500 S2 - D

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1269

Project: Tesoro - Livermore

Matrix: Aqueous

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	MS% REC	MSD % REC	%REC CL	RPD	RPD CL	Qualifiers
Phosphorus, Total	SM 4500 P B/E	08-02-1284-1	02/22/08	2/22/08	96	102	70-130	4	0-25	
Chloride	EPA 300.0	MW-2	02/16/08	N/A	97	99	56-134	1	0-3	
Nitrate (as N)	EPA 300.0	MW-2	02/16/08	N/A	102	102	58-142	0	0-6	
Sulfate	EPA 300.0	MW-2	02/16/08	N/A	103	104	49-133	1	0-3	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1269

Project: Tesoro - Livermore

Matrix: Aqueous

Parameter	Method	QC Sample ID	Date Analyzed	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Alkalinity, Total (as CaCO3)	SM 2320B	MW-3	02/20/08	372	374	1	0-25	
Sulfide, Total	SM 4500 S2 - D	08-02-1204-2	02/18/08	ND	ND	NA	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1269
Preparation: N/A
Method: RSK-175M

Project: Tesoro - Livermore

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-663-56	**Aqueous**	**GC 33**	**N/A**	**02/19/08**	**080219L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Methane	97	95	79-109	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1269

Project: Tesoro - Livermore

Matrix: Aqueous

Parameter	Method	Quality Control Sample ID	Date Extracted	Date Analyzed	LCS % REC	LCSD % REC	%REC CL	RPD	RPD CL	Qual
Chloride	EPA 300.0	099-05-118-4,350	N/A	02/16/08	97	97	81-111	0	0-5	
Nitrate (as N)	EPA 300.0	099-05-118-4,350	N/A	02/16/08	101	100	87-111	0	0-12	
Sulfate	EPA 300.0	099-05-118-4,350	N/A	02/16/08	101	102	89-107	1	0-13	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1269

Project: Tesoro - Livermore

Matrix : Aqueous

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Phosphorus, Total	SM 4500 P B/E	099-05-098-1,900	02/22/08	02/22/08	0.400	0.409	102	80-120	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-1269

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

1269

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
tel: (714-895-5494 COC# 61091 Page 1 of 1

Project Contact (Hardcopy or PDF to): Christie Dumas

EDF Report? ___ Yes _x_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical, LLC

Recommended but not mandatory to complete this section:

Phone No.: FAX No.:

Sampling Company Log Code:

Project Number: 080214-OW-1 P.O. No.: 61091

Global ID:

EDF Deliverable to (Email Address):

Project Name: Tesoro- Livermore

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: VOA	Poly	Sleeve	Amber	Glass	Preservative: HCl	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	NONE	Matrix: WATER	SOIL	Air	Analysis Request: Nitrate, Sulfate, Chloride (EPA 300.0)	Methane (RSK 175M)	Total Phosphorus (EPA 365.3)	Total Sulfide (EPA 376.2)	Total Alkalinity (SM 2320B)				Date due: February 22, 2008	For Lab Use Only
MW-2	02/14/08	1402		3		2	2	2	2		1	2	2			X	X	X	X	X				X	1
MW-4	02/14/08	1132		3		2	2	2	2		1	2	2			X	X	X	X	X				X	2
MW-3	02/14/08	1210		3		2	2	2	2		1	2	2			X	X	X	X	X				X	3
MW-6	02/14/08	1300		3		2	2	2	2		1	2	2			X	X	X	X	X				X	4
MW-9	02/14/08	1330		3		2	2	2	2		1	2	2			X	X	X	X	X				X	5
TP-2	02/14/08	1425		3		2	2	2	2		1	2	2			X	X	X	X	X				X	6

Relinquished by:	Date	Time	Received by:
Kiff Analytical	021508	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: C.O. # B1020132 1163	Date 02408	Time 1030	Received by Laboratory: CO

Remarks: Please provide XLS for all data.

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 1269

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 02/16/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.2 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

LAB KIFF 61091 DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION
☐ LIA
☐ OTHER

CHAIN OF CUSTODY BTS # 080214-QW-1

CLIENT: Arctos Environmental, Inc.

SITE: Tesoro - Livermore
1619 1st Street
Livermore, CA

SPECIAL INSTRUCTIONS

Invoice and Report to : Arctos Environmental, Inc.
Attn: Mike Purchase
1332 Peralta Ave. Berkeley, CA 94702
Ph. 510-525-2180
mpurchase@arctosenv.com

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS VOA/HCL	C = COMPOSITE ALL CONTAINERS	TPH-G + BTEX + MTBE (8260)	(7) Oxygenates (8260)	Lead Scavengers	Ferrous Iron (24 hr. Hold time)	Nitrate, Sulfate, Phosphorous	Major anions (Chloride, Nitrite, Sulfide)	Total Alkalinity (SM2320B)	Carbon Dioxide (SM4500-CO2D) & Methane	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-2	2-14	1402	W	12			X	X	X	X	X	X	X	X				01
MW-4		1132					X	X	X	X	X	X	X	X				02
MW-3		1210					X	X	X	X	X	X	X	X				03
MW-6		1300					X	X	X	X	X	X	X	X				04
MW-9		1330					X	X	X	X	X	X	X	X				05
TP-2		1425					X	X	X	X	X	X	X	X				06

SAMPLE RECEIPT
Temp °C 2.4 Therm. ID# IR-1
Initial JJ Date 021408
Time 2045 Coolant present (Yes) No

SAMPLING COMPLETED DATE 2-14-08 TIME 1520
SAMPLING PERFORMED BY Dave Walter

RESULTS NEEDED NO LATER THAN Standard TAT

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
David C. Walter	2-14-08	1545			
			to Hi Analytical	021408	1545

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #