

RO-216

**Kelleher & Associates**  
**Environmental Management**

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**San Jose, CA 95121**  
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February 27, 2003

Scott Seery  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room 250  
Alameda, CA 94502-6577

**Site:** TESORO STATION # 67106 (former Beacon # 3720), 1088 Marina Blvd, San Leandro, CA  
**Re:** Technical report submittal

Dear Mr. Seery:

Please find enclosed herewith a copy of the following technical report prepared by RDM, Roseville, CA:

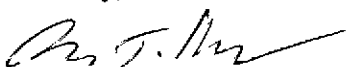
*Quarterly Groundwater Monitoring and Remediation Status Report Fourth Quarter 2002* dated February 12, 2003.

As an authorized representative of Tesoro Petroleum and Refining Company (Tesoro), I have reviewed the enclosed report and declare under penalty of perjury that to the best of my knowledge the information contained in the report is true and correct.

The report covers the groundwater-monitoring event Doulas Environmental conducted on November 14, 2002 during which they sounded, purged and sampled nine wells and provided for certified analyses of total petroleum hydrocarbon constituents, BTEX, and MTBE using EPA Method 8260B. The next groundwater-monitoring event is scheduled for the first quarter 2003.

The report also covers operation of sparging-enhanced soil vapor extraction (SESVE) remedial processes during the fourth quarter 2002. During this period the SESVE system extracted 22 pounds of gasoline vapors. Tesoro has contracted RDM to continue operations through the end of calendar year 2003.

Sincerely,



Brian T. Kelleher  
Project Coordinator

Enclosure: CC with enclosure: Robert Donovan, Tesoro; Glenn Dembroff, Ultramar; Richard Munsch, RDM (cover letter only).



Environmental

1704 Via Riata, Roseville, CA 95747  
February 12, 2003

Tel: (916) 771-7098, FAX: (916) 771-4584

Mr. Rob Donovan  
Tesoro Petroleum Companies  
3450 S. 344<sup>th</sup> Way Suite 100  
Auburn, WA 98001-5931

Subject: *Quarterly Ground Water Monitoring and  
Remediation System Status Report, Fourth Quarter 2002*  
Tesoro Station No. 67106  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California  
RDM Project No. 00-67106

Dear Mr. Donovan:

On Behalf of Tesoro Refining and Marketing Company, RDM Environmental (RDM) is submitting the following quarterly ground water monitoring and remediation system status report for the subject site. This report describes quarterly ground water monitoring and remediation system status for the **Fourth Quarter 2002**.

**Work Performed During the Fourth Quarter 2002:**

- Doulos Environmental Inc. performed ground water sampling on **November 14, 2002**.
- RDM continued operation and maintenance on the remediation system.

**STATUS OF GROUND WATER MONITORING**

Cumulative ground water sampling information is tabulated in Table 1. A site topographic map, site map, and ground water elevation contour map are shown as Figures 1 through 3, respectively. Analytical isoconcentration maps are presented as Figures 4 through 6. The site history is included in Enclosure A, the quarterly monitoring data sheets are included in Enclosure B and the ground water analytical results are included in Enclosure C. Historical ground water monitoring data is included in Enclosure D.

- Historical ground water flow direction is to the southwest.

**STATUS OF REMEDIATION SYSTEM**

Operation and maintenance is performed bi-monthly by RDM on a remediation system consisting of ground water treatment, soil vapor extraction (SVE) and air sparging components. A process flow diagram showing details of the system is shown as Figure 7.

**Operation & Maintenance Site Visits:**

- Operation and maintenance site visits were conducted for the **Fourth Quarter 2002** on:
  - **October 8 and 21, 2002**
  - **November 12 and 24, 2002**
  - **December 11 and 20, 2002**

**Ground Water Extraction System Performance:**

- The ground water treatment system did not operate during the **Fourth Quarter 2002**.
- During the **Fourth Quarter 2002**, the ground water system processed **Zero (0)** gallons. The ground water treatment system was shut off in March 1998 at which time the ground water system had processed approximately **228,500** gallons.
- Due to the elevated concentrations reported in recent ground water sampling events, Tesoro may start-up the ground water system in the future. The sanitary sewer agency will be notified of system modification or system start-up.
- Monitoring wells MW-4, MW-5 and MW-9 are used as recovery wells.

**Soil Vapor Extraction System Performance:**

- The SVE system operated continuously during the **Fourth Quarter 2002**.
- During the **Fourth Quarter 2002**, the SVE system removed approximately **22** pounds of vapor equivalent gasoline.
- As of **December 20, 2002**, the SVE system has removed approximately **2,571** pounds (**421** gallons) of vapor equivalent gasoline.
- Soil vapor extraction is conducted on MW-1 through MW-5, MW-8, MW-9 and vapor well VW-1.
- The SVE analytical results are included in Table 2 and the SVE performance data is included in Table 3. Remediation system analytical results are included in Enclosure E.

**Air Sparging System Performance:**

- The air sparging system operated continuously during the **Fourth Quarter 2002**.
- Air sparging system is connected to sparge points SP-1 through SP-6.

**CONCLUSIONS/RECOMMENDATIONS**

RDM recommends continued operation of the remediation system and quarterly ground water monitoring.

The interpretations contained in this report represent our professional opinions and are based, in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

Mr. Rob Donovan  
Tesoro Petroleum  
February 12, 2003  
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RDM recommends a copy of this report be forward to the following people.


Mr. Scott Seery  
Alameda County Health Care Agency  
Department of Environmental Health  
1131 Harbor Parkway, Room 250  
Alameda, CA 94502-6577

Mr. Paul Zolfarelli  
Environmental Compliance Inspector  
City of San Leandro  
3000 Davis Street  
San Leandro, CA 94577

Case Worker  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

If you have any questions concerning this project, please contact Richard Munsch at (916) 771-7098.

RDM ENVIRONMENTAL

  
Richard D. Munsch  
Project Manager

  
Michael G. Lee, P.E.  
California Registered Civil Engineer No.C055795



RDM (67106 4Q GWM 11-14-02)

**Enclosures:**

- Enclosure A: Site Background Information
- Enclosure B: Ground Water Sampling Information
- Enclosure C: Ground Water Analytical Results
- Enclosure D: Historical Ground Water Monitoring Data
- Enclosure E: Remediation System Analytical Results

TABLE 1  
GROUND WATER MONITORING DATA

Tesoro Station No. 67107  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

Monitoring Well	Date	Reference Elevation (ft) <sup>a</sup>	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments
MW-1	03/12/98	33.10	11.09	22.01	<0.5	<0.5	5.0	2.8	100	<5.0	NA	No sheen
	05/28/98		11.36	21.74	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen
	08/31/98		12.61	20.49	<0.5	<0.5	6.4	1.4	130	<5.0	NA	No sheen
	11/19/98		13.84	19.26	0.75	<0.5	<0.5	3.0	120	<5.0	NA	No sheen
	03/15/99		11.95	21.15	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen
	06/07/99		13.45	19.65	1.6	1.9	230	110	5,200	<5.0	NA	No sheen
	09/07/99		13.10	20.00	1.0	<0.5	22	15	490	<5.0	NA	No sheen
	12/13/99		14.29	18.81	<2.5	<2.5	170	110	4,100	<25	NA	No sheen
	03/08/00		11.22	21.88	<0.5	<0.5	21	7.7	1,200	150	NA	No sheen
	06/12/00		12.85	20.25	1.5	0.9	160	98	3,000	34	NA	No sheen
	11/15/00		14.19	18.91	<20	<20	470	390	8,500	14,000	NA	No sheen
	02/27/01		12.35	20.75	5.4	2.6	260	190	6,100	4,300	NA	No sheen
	05/22/01		14.18	18.92	8.9	13	1,100	1,300	21,000	2,300	NA	No sheen
	09/05/01		13.70	19.10	<2.0	3.6	600	850	12,000	93	NA	No sheen
	11/07/01		14.25	18.85	<5.0	<5.0	1,300	1,600	23,000	87	NA	No sheen
	02/11/02		35.47	13.05	22.42	<0.5	<0.5	140	150	4,500	18	NA
06/03/02	13.31	22.16	<2.5	<2.5	520	460	12,000	12	NA	No sheen		
08/06/02	13.75	21.72	<0.5	<0.5	710	580	22,000	15	NA	No sheen		
11/14/02	14.10	21.37	<5.0	<5.0	300	250	16,000	8.1	ND	No sheen		
MW-2	03/12/98	32.80	10.92	21.88	32	1.0	12	6.5	440	20	NA	No sheen
	05/28/98		10.41	22.39	<0.5	<0.5	<0.5	<0.5	<50	27	NA	No sheen
	08/31/98		12.29	20.51	9.3	0.95	4.9	8.8	270	20	NA	No sheen
	11/19/98		13.47	19.33	16	0.72	<0.5	4.3	180	7.4	NA	No sheen
	03/15/99		11.95	20.85	12	3.5	59	840	2,400	10	NA	No sheen
	06/07/99		13.11	19.69	21	0.99	6.9	10	690	6.1	NA	No sheen
	09/07/99		12.92	19.88	7.8	1.2	42	100	610	<5.0	NA	No sheen
	12/13/99		13.96	18.84	26	0.93	52	96	3,000	<5.0	NA	No sheen
	03/08/00		10.87	21.93	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen
	06/12/00		12.53	20.27	51	17	170	320	5,500	18	NA	No sheen
	11/15/00		13.96	18.84	75	48	1,200	2,800	16,000	19,000	NA	No sheen
	02/27/01		12.29	20.51	54	24	320	870	10,000	6,000	NA	No sheen
	05/22/01		15.51	17.29	12	5.0	79	100	2,400	3,500	NA	No sheen
	09/05/01		15.75	19.05	120	180	1,500	5,100	34,000	400	NA	No sheen
	11/07/01		13.99	18.81	87	170	1,400	3,700	32,000	870	NA	No sheen
	02/11/02		35.11	12.98	22.13	170	250	1,600	4,700	34,000	390	NA
06/03/02	13.24	21.87	130	260	1,700	5,100	29,000	110	NA	No sheen		
08/06/02	13.73	21.38	110	240	1,700	4,700	34,000	84	NA	No sheen		
11/14/02	13.55	21.56	51	150	1,300	3,600	35,000	39	ND	No sheen		

TABLE 1

## GROUND WATER MONITORING DATA

Tesoro Station No. 67107  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

Monitoring Well	Date	Reference Elevation (ft) <sup>a</sup>	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments
MW-3	03/12/98	32.30	10.81	21.49	0.67	<0.5	7.1	3.4	1,200	7.3	NA	No sheen
	05/28/98		11.45	20.85	<0.5	0.5	<0.5	<0.5	350	<5.0	NA	No sheen
	08/31/98		12.21	20.09	<0.5	0.89	0.69	<0.5	240	<5.0	NA	No sheen
	11/19/98		13.26	19.04	5.3	0.72	0.86	4.2	440	<5.0	NA	No sheen
	03/15/99		11.89	20.41	3.3	1.3	0.77	<0.5	410	<5.0	NA	No sheen
	06/07/99		12.91	19.39	<0.5	2.0	<0.5	0.66	680	<5.0	NA	No sheen
	09/07/99		12.81	19.49	<0.5	0.62	<0.5	8.7	150	12	NA	No sheen
	12/13/99		13.75	18.55	<0.5	0.52	<0.5	1.0	830	<5.0	NA	No sheen
	03/08/00		11.39	20.91	0.58	<0.5	0.77	<0.5	960	<5.0	NA	No sheen
	06/12/00		12.58	19.72	1.7	<0.5	46	6.3	1,700	<5.0	NA	No sheen
	11/15/00	13.85	18.45	<200	<200	<200	<200	<20,000	84,000	NA	No sheen	
	02/27/01	12.22	20.08	98	<20	130	30	3,500	16,000	NA	No sheen	
	05/22/01	13.66	18.64	41	<20	20	<20	<2,000	5,800	NA	No sheen	
	09/05/01	13.41	18.89	9.9	1.5	49	8.2	5,300	430	NA	No sheen	
	11/07/01	13.85	18.45	9.4	1.8	47	8.8	6,500	1,600	NA	No sheen	
	02/11/02	34.84	12.86	21.98	8.9	<2.0	14	<2.0	2,400	530	NA	No sheen
	06/03/02	13.10	21.74	13	0.77	19	0.94	2,100	110	NA	No sheen	
08/06/02	13.52	21.32	25	2.5	12	1.1	2,800	120	NA	No sheen		
11/14/02	13.49	21.35	29	0.89	3.7	<0.5	2,200	420	1.1 <sup>b</sup> , 19 <sup>c</sup>	No sheen		
MW-4	03/12/98	32.90	11.31	21.59	2,200	1,500	630	3,000	14,000	440	NA	No sheen
	05/28/98		10.40	22.50	<0.5	0.75	0.68	6.9	67	26	NA	No sheen
	08/31/98		12.54	20.36	1.8	2.5	0.65	3.4	<50	<5.0	NA	No sheen
	11/19/98		13.99	18.91	<0.5	<0.5	<0.5	0.61	<50	17	NA	No sheen
	03/15/99		12.06	20.84	1.2	1.6	0.76	4.5	160	9.3	NA	No sheen
	06/07/99		13.57	19.33	210	370	350	2,000	5,800	<20	NA	No sheen
	09/07/99		10.30	22.60	2.2	2.8	4.8	25	130	12	NA	No sheen
	12/13/99		14.18	18.72	1.3	1.0	1.2	4.8	<50	12	NA	No sheen
	03/08/00		11.77	21.13	78	200	160	750	3,700	11	NA	No sheen
	06/12/00		13.47	19.43	<0.5	<0.5	<0.5	<0.5	<50	24	NA	No sheen
	11/15/00	14.33	18.57	12	38	28	130	710	1,300	NA	No sheen	
	02/27/01	14.25	18.65	67	300	310	1,400	6,500	1,000	NA	No sheen	
	05/22/01	13.99	18.91	2.1	5.6	4.8	20	130	350	NA	No sheen	
	09/05/01	15.75	17.15	110	670	250	1,300	6,200	600	NA	No sheen	
	11/07/01	16.10	16.80	40	270	180	940	4,100	110	NA	No sheen	
	02/11/02	35.33	15.04	20.29	91	590	620	3,000	14,000	350	NA	No sheen
	06/03/02	13.61	21.72	69	390	190	1,100	4,300	240	NA	No sheen	
08/06/02	15.01	20.32	100	690	570	2,900	13,000	170	NA	No sheen		
11/14/02	13.98	21.35	65	380	550	3,400	20,000	130	ND	No sheen		

TABLE 1

## GROUND WATER MONITORING DATA

Tesoro Station No. 67107  
 Former Beacon Station No. 3720  
 1088 Marina Boulevard  
 San Leandro, California

Monitoring Well	Date	Reference Elevation (ft) <sup>a</sup>	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Nylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments	
MW-5	03/12/98	32.70	11.11	21.59	2,600	160	470	2,200	12,000	<250	NA	No sheen	
	05/28/98		10.92	21.78	450	99	160	730	4,700	<250	NA	No sheen	
	08/31/98		12.79	19.91	290	14	55	220	1,400	180	NA	No sheen	
	11/19/98		13.39	19.31	1.4	<0.5	<0.5	<0.5	<50	39	NA	No sheen	
	03/15/99		11.71	20.99	320	17	290	780	3,400	33	NA	No sheen	
	06/07/99		13.26	19.44	220	8.9	240	290	3,200	<25	NA	No sheen	
	09/07/99		9.70	23.00	3.5	<0.5	8.5	12	140	38	NA	No sheen	
	12/13/99		14.06	18.64	<0.5	<0.5	<0.5	13	140	<5.0	NA	No sheen	
	03/08/00		11.80	20.90	0.66	<0.5	2.5	30	280	<5.0	NA	No sheen	
	06/12/00		12.99	19.71	22	1.2	79	170	2,700	6.4	NA	No sheen	
	11/15/00		14.23	18.47	36	1.6	180	180	4,500	10	NA	No sheen	
	02/27/01		12.66	20.04	33	1.6	160	220	2,800	110	NA	No sheen	
	05/22/01		13.58	19.12	49	2.2	180	230	3,200	240	NA	No sheen	
	09/05/01		14.05	18.65	28	1.0	100	100	2,400	560	NA	No sheen	
	11/07/01		14.32	18.38	<2.0	<2.0	2.1	20	390	590	NA	No sheen	
	02/11/02		35.09	13.31	21.78	19	<5.0	59	52	1,200	1,800	NA	No sheen
	06/03/02		13.55	21.54	44	<2.0	150	210	3,200	610	NA	No sheen	
08/06/02	14.10	20.99	42	<2.0	140	150	3,200	820	NA	No sheen			
11/14/02	14.03	21.06	29	1.3	94	100	2,900	560	100 <sup>c</sup>	NA	No sheen		
MW-6	03/12/98	30.40	10.49	19.91	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	05/28/98		10.58	19.82	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	08/31/98		10.85	19.55	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	11/19/98		10.88	19.52	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	03/15/99		10.83	19.57	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	06/07/99		11.01	19.39	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	09/07/99		11.89	18.51	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	12/13/99		12.09	18.31	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	03/08/00		10.02	20.38	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	06/12/00		11.07	19.33	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	11/15/00		12.34	18.06	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	02/27/01		10.75	19.65	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	05/22/01		11.55	18.85	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	09/05/01		12.10	18.30	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	11/07/01		12.31	18.09	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	02/11/02		32.74	11.05	21.69	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen
	06/03/02		11.70	21.40	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
08/06/02	12.28	20.46	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen			
11/14/02	12.46	20.28	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	No sheen			

TABLE 1

## GROUND WATER MONITORING DATA

Tesoro Station No. 67107  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

Monitoring Well	Date	Reference Elevation (ft) <sup>a</sup>	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	TPH as gasoline (ug/L)	MTBE (ug/L)	Oxygenates (ug/L)	Comments	
MW-7	03/12/98	31.20	10.14	21.06	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	05/28/98		10.93	20.27	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	08/31/98		12.01	19.19	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	11/19/98		12.54	18.66	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	03/15/99		10.94	20.26	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	06/07/99		12.05	19.15	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	09/07/99		12.67	18.53	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	12/13/99		12.73	18.47	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	03/08/00		10.90	20.30	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	06/12/00		12.61	18.59	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	11/15/00		13.06	18.14	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	02/27/01		11.85	19.35	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	05/22/01		12.31	18.89	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	09/05/01		12.85	18.35	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	11/07/01		12.75	18.45	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen	
	02/11/02		33.64	NM	NC	NS	NS	NS	NS	NS	NS	NA	No sheen
	06/03/02		12.58	21.06	<0.5	<0.5	<0.5	<0.5	<50	0.95	NA	No sheen	
	08/06/02	12.93	20.71	<0.5	<0.5	<0.5	<0.5	<50	<0.5	NA	No sheen		
	11/14/02	13.04	20.60	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	No sheen		
MW-8	03/12/98	33.80	11.81	21.99	1.4	<0.5	<0.5	<0.5	72	<5.0	NA	No sheen	
	05/28/98		12.14	21.66	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	08/31/98		13.16	20.64	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	11/19/98		14.56	19.24	510	24	1,200	2,800	14,000	<5.0	NA	No sheen	
	03/15/99		12.40	21.40	160	16	910	2,100	14,000	<50	NA	No sheen	
	06/07/99		14.06	19.74	330	14	470	880	7,800	<50	NA	No sheen	
	09/07/99		14.01	19.79	150	2.6	260	370	3,200	<5.0	NA	No sheen	
	12/13/99		14.91	18.89	35	<5.0	280	730	6,700	<50	NA	No sheen	
	03/08/00		11.85	21.95	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen	
	06/12/00		13.59	20.21	4.0	<0.5	4.9	2.1	140	<5.0	NA	No sheen	
	11/15/00		14.94	18.86	2.0	<0.5	3.1	2.6	100	110	NA	No sheen	
	02/27/01		NM	NC	NS	NS	NS	NS	NS	NS	NA	Tank Over Well	
	05/22/01		NM	NC	NS	NS	NS	NS	NS	NS	NA	Tank Over Well	
	09/05/01		14.68	19.12	160	<2.0	200	330	4,800	850	NA	No sheen	
	11/07/01		15.10	18.70	1.1	<1.0	2.0	6.1	<100	590	NA	No sheen	
	02/11/02		36.08	14.06	22.02	7.9	<5.0	16	22	<500	1,700	NA	No sheen
	06/03/02		14.25	21.83	20.0	<2.0	19	35	550	650	NA	No sheen	
	08/06/02	14.55	21.53	220	<2.0	170	280	4,800	1,000	NA	No sheen		
	11/14/02	14.73	21.35	250	<2.5	160	220	4,800	1,200	47 <sup>c</sup>	No sheen		



TABLE I  
GROUND WATER MONITORING DATA

Tesoro Station No. 67107  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

Monitoring Well	Date	Reference Elevation (ft) <sup>a</sup>	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments
MW-9	03/12/98	32.56	10.93	21.63	320	23	180	720	3,700	190	NA	No sheen
	05/28/98		11.31	21.25	110	6.4	87	300	2,200	220	NA	No sheen
	08/31/98		12.16	20.40	240	23	690	1,900	11,000	<50	NA	No sheen
	11/19/98		11.04	21.52	7.7	<0.5	10	22	280	67	NA	No sheen
	03/15/99		11.81	20.75	<0.5	<0.5	<0.5	1.2	<50	<5.0	NA	No sheen
	06/07/99		12.21	20.35	9.3	0.86	9.7	12	340	<5.0	NA	No sheen
	09/07/99		10.10	22.46	0.76	<0.5	1.9	0.8	72	9.9	NA	No sheen
	12/13/99		13.64	18.92	<0.5	<0.5	<0.5	<0.5	60	<5.0	NA	No sheen
	03/08/00		10.88	21.68	<0.5	<0.5	<0.5	<0.5	<50	<5.0	NA	No sheen
	06/12/00		12.50	20.06	0.9	<0.5	2.7	1.3	640	10	NA	No sheen
	11/15/00	13.60	18.96	<0.5	<0.5	0.69	<0.5	200	12	NA	No sheen	
	02/27/01	12.15	20.41	0.61	<0.5	2.2	1.2	360	42	NA	No sheen	
	05/22/01	13.20	19.36	0.57	<0.5	2.1	0.61	330	290	NA	No sheen	
	09/05/01	13.10	19.46	<2.0	<2.0	<2.0	<2.0	<200	1,100	NA	No sheen	
	11/07/01	13.85	18.71	1.0	<1.0	<1.0	<1.0	230	510	NA	No sheen	
	02/11/02	34.63	12.98	21.65	<0.5	<0.5	<0.5	<0.5	<50	41	NA	No sheen
	06/03/02		12.48	22.15	<0.5	<0.5	<0.5	<0.5	<50	55	NA	No sheen
	08/06/02		13.16	21.47	<0.5	<0.5	<0.5	<0.5	<50	65	NA	No sheen
11/14/02		13.15	21.48	<0.5	<0.5	<0.5	<0.5	<50	47	ND	No sheen	

a =Referenced to mean sea level.

b =tert-amyl methyl ether

c = tert-butanol

TPH = Total petroleum hydrocarbons.

MTBE = Methyl tertiary butyl ether.

µg/L = Micrograms per liter.

Oxygenates = methyl-t-butyl ether, diisopropyl ether, ethyl-t-butyl ether, tert-amyl methyl ether, tert-butanol, 1,2-dichloroethane, 1,2-dibromoethane

TABLE 2

## SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106  
 Former Beacon Station No. 3720  
 1088 Marina Boulevard  
 San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethyl- benzene (ppmv)	Total Xylenes (ppmv)	TPH as gasoline (ppmv)	MTBE (ppmv)
Influent	06/05/97	3.2	0.72	1.2	2.5	220	NA
Effluent	06/05/97	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	07/03/97	0.30	0.67	0.23	1.8	86	NA
Effluent	07/03/97	<0.05	0.054	<0.05	0.13	<5.0	NA
Influent	07/22/97	0.76	1.6	0.92	5.3	270	NA
Effluent	07/22/97	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	08/07/97	2.0	1.3	0.53	2.7	130	NA
Effluent	08/07/97	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	09/04/97	1.8	0.73	1.3	5.9	190	NA
Effluent	09/04/97	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	10/24/97	0.49	0.52	0.35	2.3	54	NA
Effluent	10/24/97	<0.05	<0.05	<0.05	0.057	<5.0	NA
Effluent	11/26/97	0.094	0.089	<0.05	0.062	5.3	NA
Influent	12/10/97	<0.05	0.44	0.076	0.37	5.8	NA
Effluent	12/10/97	<0.05	0.062	<0.05	<0.05	<5.0	NA
Influent	12/12/97	0.59	0.17	0.49	2.0	26	NA
Effluent	12/12/97	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	01/12/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/12/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	04/23/98	0.18	0.32	0.072	0.47	18	NA
Mid-Carbon	04/23/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	04/23/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	06/09/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Mid-Carbon	06/09/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	06/09/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	07/07/98	0.067	<0.05	<0.05	<0.05	<5.0	NA
Mid-Carbon	07/07/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	07/07/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA

TABLE 2

## SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106  
 Former Beacon Station No. 3720  
 1088 Marina Boulevard  
 San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	TPH as gasoline (ppmv)	MTBE (ppmv)
Mid-Carbon	07/21/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	08/11/98	<0.05	0.06	<0.05	0.071	<5.0	NA
Mid-Carbon	08/11/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	08/11/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	09/10/98	0.16	0.46	0.062	0.20	16	NA
Mid-Carbon	09/10/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	09/10/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	09/23/98	0.16	0.32	<0.05	0.20	9.4	NA
Mid-Carbon	09/23/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	10/20/98	0.63	0.19	0.062	0.17	28	NA
Mid-Carbon	10/20/98	0.79	0.37	<0.05	0.088	48	NA
Effluent	10/20/98	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	11/26/97	0.13	0.43	0.072	0.35	9.2	NA
Influent	12/08/99	0.73	2.2	0.15	0.71	43	NA
Mid-Carbon	12/08/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	12/08/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	01/13/99	0.068	0.057	<0.05	0.095	6.5	NA
Mid-Carbon	01/13/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/13/99	<0.05	<0.05	<0.05	<0.05	5.4	NA
Effluent	01/28/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	02/10/99	1.1	1.2	0.071	0.28	56	NA
Mid-Carbon	02/10/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	02/10/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	03/10/99	0.070	<0.05	<0.05	<0.05	<5.0	NA
Mid-Carbon	03/10/99	0.069	<0.05	<0.05	<0.05	28	NA
Effluent	03/10/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	04/07/99	0.22	0.078	<0.05	0.060	17	NA

TABLE 2

## SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	TPH as gasoline (ppmv)	MTBE (ppmv)
Influent	06/08/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Mid-Carbon	06/08/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	06/08/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	07/12/99	0.16	0.77	<0.05	0.18	11	NA
Mid-Carbon	07/12/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	07/12/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	08/09/99	0.092	1.0	0.20	0.94	12	NA
Mid-Carbon	08/09/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	08/09/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	09/07/99	0.069	0.41	0.07	0.38	16	NA
Mid-Carbon	09/07/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	09/07/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	10/12/99	0.96	8.6	1.1	4.7	150	NA
Mid-Carbon	10/12/99	<0.05	<0.05	<0.05	0.064	<5.0	NA
Effluent	10/12/99	<0.05	<0.05	<0.05	0.063	<5.0	NA
Influent	11/17/99	0.22	1.9	0.32	1.7	21	NA
Mid-Carbon	11/17/99	0.067	<0.05	<0.05	<0.05	<5.0	NA
Effluent	11/17/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	12/28/99	1.2	22	2.4	12	570	NA
Mid-Carbon	12/28/99	0.052	<0.05	<0.05	<0.05	<5.0	NA
Effluent	12/28/99	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	01/12/00	0.45	1.7	0.18	1.0	110	NA
Mid-Carbon	01/12/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/12/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	01/26/00	0.059	0.77	0.19	1.1	14	NA
Mid-Carbon	01/26/00	0.20	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/26/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	02/06/00	0.095	1.4	0.18	0.87	22	NA
Mid-Carbon	02/06/00	0.20	<0.05	<0.05	<0.05	<5.0	NA
Effluent	02/06/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	02/09/00	0.45	3.1	0.52	2.8	59	NA
Mid-Carbon	02/09/00	0.18	<0.05	<0.05	<0.05	<5.0	NA
Effluent	02/09/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	03/16/00	0.10	3.5	0.54	4.1	46	NA
Mid-Carbon	03/16/00	0.83	0.31	<0.05	<0.05	22	NA
Effluent	03/16/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA

TABLE 2

## SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106  
 Former Beacon Station No. 3720  
 1088 Marina Boulevard  
 San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethyl- benzene (ppmv)	Total Nylenes (ppmv)	TPH as gasoline (ppmv)	MTBE (ppmv)
Influent	04/04/00	0.17	1.9	0.29	2.0	23	NA
Mid	04/04/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	04/04/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	05/12/00	<0.05	0.059	<0.05	0.091	<5.0	NA
Mid	05/12/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	05/12/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	06/19/00	<0.05	0.12	<0.05	<0.05	<5.0	NA
Mid	06/19/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	06/19/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	07/25/00	2.4	8.1	0.80	3.5	140	NA
Mid	07/25/00	<0.050	0.07	<0.050	<0.050	12	NA
Effluent	07/25/00	<0.05	<0.05	<0.05	<0.05	5.4	NA
Influent	07/25/00	2.4	8.1	0.80	3.5	140	NA
Mid	07/25/00	<0.050	0.07	<0.050	<0.050	12	NA
Effluent	07/25/00	<0.05	<0.05	<0.05	<0.05	5.4	NA
Influent	08/09/00	2.4	8.1	0.80	3.5	140	NA
Mid	08/09/00	<0.050	0.07	<0.050	<0.050	12	NA
Effluent	08/09/00	<0.05	<0.05	<0.05	<0.05	5.4	NA
Influent	09/06/00	2.4	8.1	0.80	3.5	140	NA
Mid	09/06/00	<0.050	0.07	<0.050	<0.050	12	NA
Effluent	09/06/00	<0.05	<0.05	<0.05	<0.05	5.4	NA
Influent	10/17/00	<0.05	0.075	<0.05	0.14	<5.0	NA
Mid	10/17/00	<0.050	0.07	<0.050	<0.050	<5.0	NA
Effluent	10/17/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	11/29/00	<0.05	0.24	0.08	0.29	<5.0	NA
Mid	11/29/00	<0.05	0.07	<0.05	0.18	<5.0	NA
Effluent	11/29/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	12/07/00	<0.05	0.13	<0.05	0.064	<5.0	NA
Mid	12/07/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	12/07/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA

TABLE 2

## SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106  
 Former Beacon Station No. 3720  
 1088 Marina Boulevard  
 San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethyl- benzene (ppmv)	Total Xylenes (ppmv)	TPH as gasoline (ppmv)	MTBE (ppmv)
Influent	01/07/01	0.12	0.85	0.16	0.92	17	NA
Mid	01/07/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/07/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	02/23/01	0.19	1.6	0.19	1.1	32	NA
Mid	02/23/01	<0.05	0.07	<0.05	<0.05	<5.0	NA
Effluent	02/23/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	03/01/01	0.97	1.2	0.13	0.64	18	NA
Mid	03/01/01	<0.05	0.053	<0.05	<0.098	<5.0	NA
Effluent	03/01/01	<0.05	0.053	<0.05	0.13	<5.0	NA
Influent	10/17/00	<0.05	0.075	<0.05	0.14	<5.0	NA
Mid-Carbon	10/17/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	10/17/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	11/29/00	<0.05	0.24	0.08	0.29	<5.0	NA
Mid-Carbon	11/29/00	<0.05	0.07	<0.05	0.18	<5.0	NA
Effluent	11/29/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	12/07/00	<0.05	0.13	<0.05	0.064	<5.0	NA
Mid-Carbon	12/07/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	12/07/00	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	01/07/01	0.12	0.85	0.16	0.92	17	NA
Mid-Carbon	01/07/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/07/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	02/23/01	0.19	1.6	0.19	1.1	32	NA
Mid-Carbon	02/23/01	<0.05	0.07	<0.05	<0.05	<5.0	NA
Effluent	02/23/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	03/01/01	0.97	1.2	0.13	0.64	18	NA
Mid-Carbon	03/01/01	<0.05	0.053	<0.05	0.098	<5.0	NA
Effluent	03/01/01	<0.05	0.11	<0.05	0.13	<5.0	NA

TABLE 2

## SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106  
 Former Beacon Station No. 3720  
 1088 Marina Boulevard  
 San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethyl- benzene (ppmv)	Total Xylenes (ppmv)	TPH as gasoline (ppmv)	MTBE (ppmv)
Influent	04/18/01	0.1	0.63	0.12	0.56	18	NA
Mid-Carbon	04/18/01	<0.05	<0.05	<0.05	0.078	<5.0	NA
Effluent	04/18/01	<0.05	<0.05	<0.05	0.11	<5.0	NA
Influent	05/21/01	0.088	1.0	0.31	1.5	20	NA
Mid-Carbon	05/21/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	05/21/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	06/05/01	0.15	1.5	0.36	1.6	24	NA
Mid-Carbon	06/05/01	<0.05	0.053	<0.05	0.098	9.1	NA
Effluent	06/05/01	<0.05	<0.05	<0.05	<0.05	5.6	NA
Influent	07/16/01	<0.05	0.11	<0.05	0.14	<5.0	NA
Mid-Carbon	07/16/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	07/16/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	08/24/01	0.15	1.1	0.16	0.71	19	NA
Mid-Carbon	08/24/01	<0.05	0.055	<0.05	<0.05	<5.0	NA
Effluent	08/24/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	09/06/01	0.28	1.8	0.38	1.6	37	NA
Mid-Carbon	09/06/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	09/06/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	11/23/01	0.11	0.17	<0.05	0.10	<5.0	NA
Mid-Carbon	11/23/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	11/23/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	12/13/01	0.076	0.16	<0.05	0.063	<5.0	NA
Mid-Carbon	12/13/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	12/13/01	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	01/29/02	<0.05	0.12	<0.05	0.067	<5.0	NA
Mid-Carbon	01/29/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/29/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	03/20/02	0.054	0.12	<0.05	<0.05	<5.0	NA
Mid-Carbon	03/20/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	03/20/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA

TABLE 2

## SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106  
 Former Beacon Station No. 3720  
 1088 Marina Boulevard  
 San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethyl- benzene (ppmv)	Total Nylenes (ppmv)	TPH as gasoline (ppmv)	MTBE (ppmv)
Influent	04/18/02	<0.05	0.076	<0.05	0.092	<5.0	0.16
Mid-Carbon	04/18/02	<0.05	<0.05	<0.05	<0.05	<5.0	2.1
Effluent	04/18/02	<0.05	<0.05	<0.05	<0.05	<5.0	0.32
Influent	05/13/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Mid-Carbon	05/13/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	05/13/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	06/13/02	<0.05	0.07	<0.05	<0.05	<5.0	NA
Mid-Carbon	06/13/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	06/13/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	07/22/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Mid-Carbon	07/22/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	07/22/02	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	08/21/02	<0.05	<0.05	<0.05	<0.05	<5.0	0.2
Mid-Carbon	08/21/02	<0.05	<0.05	<0.05	<0.05	<5.0	0.94
Effluent	08/21/02	<0.05	<0.05	<0.05	<0.05	<5.0	1.5
Influent	09/23/02	<0.05	0.19	<0.05	0.12	<5.0	1.2
Mid-Carbon	09/23/02	<0.05	<0.05	<0.05	<0.05	<5.0	1.9
Effluent	09/23/02	<0.05	<0.05	<0.05	<0.05	<5.0	2.0
Influent	10/21/02	<0.05	0.46	0.068	0.33	7.3	0.93
Mid-Carbon	10/21/02	<0.05	<0.05	<0.05	<0.05	<5.0	<0.1
Effluent	10/21/02	<0.05	<0.05	<0.05	<0.05	<5.0	<0.1
Influent	11/24/02	0.064	0.8	0.11	0.56	12	2.3
Mid-Carbon	11/24/02	<0.05	<0.05	<0.05	<0.05	<5.0	<0.1
Effluent	11/24/02	<0.05	<0.05	<0.05	<0.05	<5.0	<0.1
Influent	12/20/02	0.18	2.6	0.34	1.4	27	4.7
Mid-Carbon	12/20/02	<0.05	<0.05	<0.05	<0.05	<5.0	0.63
Effluent	12/20/02	<0.05	0.13	<0.05	0.052	<5.0	0.24

TPH = Total petroleum hydrocarbons.

MTBE = methyl -t-butyl ether

mg/L = Micrograms per liter.

ppmv = parts per million by volume.



**TABLE 3**  
**SVE SYSTEM THROUGHPUT CALCULATIONS**

Tesoro Station No. 67106  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

Date	Influent	Effluent	TPH		Benzene		TPH		Benzene	Benzene	FID or LAB	Cumulative	Cumulative	Change in hours of operation			
	Flow Rate (ft <sup>3</sup> /min)	Flow Rate (ft <sup>3</sup> /min)	Influent (ppmv)	Effluent (ppmv)	Influent (ppmv)	Effluent (ppmv)	Removal (%)	Removal (%)	Extraction Rate (lbs/day)	Mass Emission (lbs/day)		Extraction Rate (lbs/day)	Extraction Rate (lbs/day)		TPH Extraction (lbs)	TPH Extraction (gallons)	Total Hours
08/18/98	---	---	---	---	---	---	---	---	---	---	---	---	1,715	---	---	---	
09/10/98	98	98	16	<5.0	0.16	<0.05	NC	NC	0.50	< 0.16	0.005	< 0.002	LAB	1,721	282	2,587	552
09/23/98	98	98	9.4	<5.0	0.16	<0.05	NC	NC	0.29	< 0.16	0.005	< 0.002	LAB	1,726	283	2,907	320
10/20/98	59	59	28	<5.0	0.63	<0.05	NC	NC	0.53	< 0.09	0.012	< 0.001	LAB	1,727	283	2,962	55
12/08/98	49	49	43	<5.0	0.73	<0.05	NC	NC	0.67	< 0.08	0.011	< 0.001	LAB	1,727	283	3,803	0*
01/13/99	49	49	6.5	5.4	0.068	<0.05	16.9	NC	0.10	0.08	0.001	< 0.001	LAB	1,738	285	4,495	692
02/10/99	44	44	56	<5.0	1.1	<0.05	NC	NC	0.79	< 0.07	0.016	< 0.001	LAB	1,738	285	4,496	1
03/10/99	15	15	<5.0	<5.0	0.07	<0.05	NC	NC	< 0.02	< 0.02	0.001	< 0.001	LAB	1,750	287	5,172	676
06/08/99	35	35	<5.0	<5.0	<0.05	<0.05	NC	NC	< 0.06	< 0.06	< 0.001	< 0.001	LAB	1,750	287	5,173	1
07/12/99	39	39	11	<5.0	0.16	<0.05	NC	NC	0.14	< 0.06	0.002	< 0.001	LAB	1,753	287	5,982	809
08/04/99	39	39	12	<5.0	0.092	<0.05	NC	NC	0.15	< 0.06	0.001	< 0.001	LAB	1,756	288	6,534	552
09/07/99	39	39	16	<5.0	0.069	<0.05	NC	NC	0.20	< 0.06	0.001	< 0.001	LAB	1,762	289	7,351	817
10/12/99	54	54	150	<5.0	0.96	<0.05	NC	NC	2.59	< 0.09	0.015	< 0.001	LAB	1,772	290	7,998	167**
11/17/99	49	49	21	<5.0	0.22	<0.05	NC	NC	0.33	< 0.08	0.003	< 0.001	LAB	1,825	299	8,866	868
12/28/00	49	49	570	<5.0	1.2	<0.05	NC	NC	8.96	< 0.08	0.017	< 0.001	LAB	1,825	299	8,867	1
01/12/00	79	79	110	<5.0	0.45	<0.05	NC	NC	2.77	< 0.13	0.010	< 0.001	LAB	1,907	313	9,202	335
01/26/00	79	79	14	<5.0	0.059	<0.05	NC	NC	0.35	< 0.13	0.001	< 0.001	LAB	1,929	316	9,540	338
02/09/00	79	79	59	<5.0	0.45	<0.05	NC	NC	1.48	< 0.13	0.010	< 0.001	LAB	1,933	317	9,662	122
03/16/00	79	79	46	<5.0	0.1	<0.05	NC	NC	1.16	< 0.13	0.002	< 0.001	LAB	1,981	325	10,525	863
04/04/00	41	41	23	<5.0	0.17	<0.05	NC	NC	0.30	< 0.07	0.002	< 0.001	LAB	1,981	325	10,526	2
05/12/00	41	41	<5.0	<5.0	<0.05	<0.05	NC	NC	< 0.07	< 0.07	< 0.001	< 0.001	LAB	1,986	326	11,164	638
06/19/00	41	41	<5.0	<5.0	<0.05	<0.05	NC	NC	< 0.07	< 0.07	< 0.001	< 0.001	LAB	1,988	326	12,071	907
07/11/00	41	41	<5.0	<5.0	<0.05	<0.05	NC	NC	< 0.07	< 0.07	< 0.001	< 0.001	LAB	1,990	326	12,601	530
07/25/00	41	41	140	< 5.4	2.4	<0.05	96.1	NC	1.85	0.07	0.029	< 0.001	LAB	2,003	328	12,937	336
08/09/00	41	41	2200	<5.0	25	<0.05	NC	NC	29.05	< 0.07	0.299	< 0.001	LAB	2,004	329	12,938	1
09/06/00	41	41	6.8	<5.0	<0.05	<0.05	NC	NC	0.09	< 0.07	< 0.001	< 0.001	LAB	2,409	395	13,606	668

**TABLE 3  
SVE SYSTEM THROUGHPUT CALCULATIONS**

Tesoro Station No. 67106  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

Date	Influent Flow Rate	Effluent Flow Rate	TPH Influent	TPH Effluent	Benzene Influent	Benzene Effluent	TPH Removal (%)	Benzene Removal (%)	TPH Extraction Rate (lbs/day)	TPH Mass Emission (lbs/day)	Benzene Extraction Rate (lbs/day)	Benzene Emission Rate (lbs/day)	FID or LAB	Cumulative TPH Extraction (lbs)	Cumulative TPH Extraction (gallons)	Total Hours	Change in hours of operation
	(ft <sup>3</sup> /min)	(ft <sup>3</sup> /min)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(%)	(%)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	LAB	(lbs)	(gallons)	Hours	hours of operation
10/17/00	40	40	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.06	<0.06	<0.001	<0.001	LAB	2,411	395	14,054	448
11/29/00	40	40	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.06	<0.06	<0.001	<0.001	LAB	2,414	396	15,062	1,008
12/07/00	40	40	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.06	<0.06	<0.001	<0.001	LAB	2,414	396	15,328	266
01/19/01	87	87	17.0	<5.0	0.12	<0.05	NC	NC	<0.47	<0.14	<0.003	<0.001	LAB	2,425	397	16,259	931
02/23/01	67	67	32.0	<5.0	0.19	<0.05	NC	NC	<0.69	<0.11	<0.004	<0.001	LAB	2,445	401	17,096	837
03/01/01	60	60	18.0	<5.0	0.097	<0.05	NC	NC	<0.35	<0.10	<0.002	<0.001	LAB	2,448	401	17,247	151
04/18/01	62	62	18.0	<5.0	0.1	<0.05	NC	NC	<0.36	<0.10	<0.002	<0.001	LAB	2,465	404	18,396	1,149
05/21/01	65	65	20.0	<5.0	0.088	<0.05	NC	NC	<0.42	<0.10	<0.002	<0.001	LAB	2,477	406	19,160	764
06/05/01	78	78	24.0	<5.0	0.15	<0.05	NC	NC	<0.60	<0.12	<0.003	<0.001	LAB	2,485	407	19,514	354
07/16/01	40	40	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.06	<0.06	<0.001	<0.001	LAB	2,494	409	20,157	643
08/24/01	45	45	19.0	<5.0	0.15	<0.05	NC	NC	<0.27	<0.07	<0.002	<0.001	LAB	2,500	410	21,098	941
09/06/01	50	50	37.0	<5.0	0.28	<0.05	NC	NC	<0.59	<0.08	<0.004	<0.001	LAB	2,506	411	21,406	308
11/23/01	60	60	<5.0	<5.0	0.11	<0.05	NC	NC	<0.10	<0.10	<0.002	<0.001	LAB	2,518	413	22,246	840
12/13/01	65	65	<5.0	<5.0	0.076	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,520	413	22,728	482
01/29/02	62	62	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,525	414	23,850	1,122
03/20/02	65	65	<5.0	<5.0	0.054	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,530	415	25,054	1,204
04/18/02	65	65	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,533	415	25,743	689
05/13/02	64	65	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,535	416	26,358	615
06/13/02	65	65	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,538	416	27,071	713
07/22/02	68	68	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.11	<0.11	<0.001	<0.001	LAB	2,543	417	28,027	956
08/21/02	68	68	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.11	<0.11	<0.001	<0.001	LAB	2,546	417	28,750	722
09/23/02	65	65	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,549	418	29,536	787
10/21/02	69	69	7.3	<5.0	<0.05	<0.05	NC	NC	<0.16	<0.11	<0.001	<0.001	LAB	2,553	419	30,212	676
11/24/02	70	70	12.0	<5.0	0.064	<0.05	NC	NC	<0.27	<0.11	<0.001	<0.001	LAB	2,560	420	31,024	812
12/20/02	62	62	27.0	<5.0	0.18	<0.05	NC	NC	<0.54	<0.10	<0.003	<0.001	LAB	2,571	421	31,654	630

\* The system was running on ambient air, thus change in hours are zero.

\*\* The system was running on ambient air from 9/22/99 to 10/12/99, the change in hours only represents time the system was extracting soil vapor.

NC = Not Calculated



R.3.W.

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



QUADRANGLE LOCATION

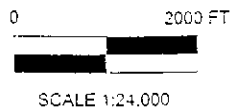


FIGURE 1  
 SITE LOCATION MAP

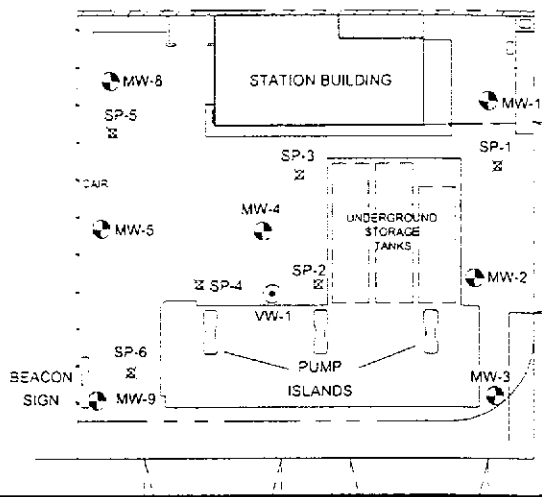
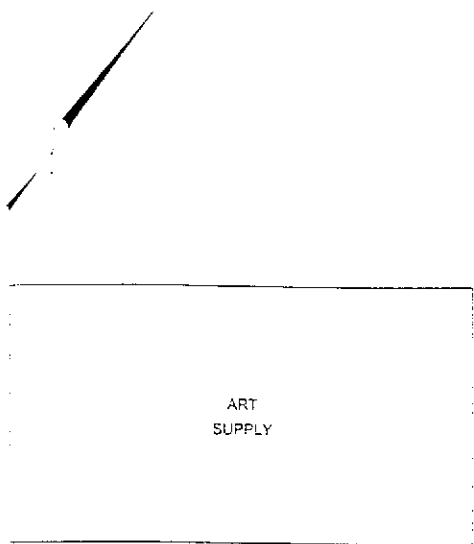
TESORO STATION NO. 67106  
 (FORMER BEACON STATION NO. 3720)  
 1088 MARINA BOULEVARD  
 SAN LEANDRO, CA.

PROJECT NO. 00-3720	DRAWN BY M.L. 12/18/01
FILE NO. 00-3720-1A	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY

R  M  
 Environmental

WAYNE AVENUE

MW-7



MARINA BOULEVARD

MW-6

LEGEND:

- PROPERTY LINE
- - - FENCE
- MW-1 MONITORING WELL LOCATION
- ⊙ VW-1 VAPOR EXTRACTION WELL LOCATION
- ⊗ SP-1 AIR SPARGING WELL LOCATION



FIGURE 2  
SITE MAP

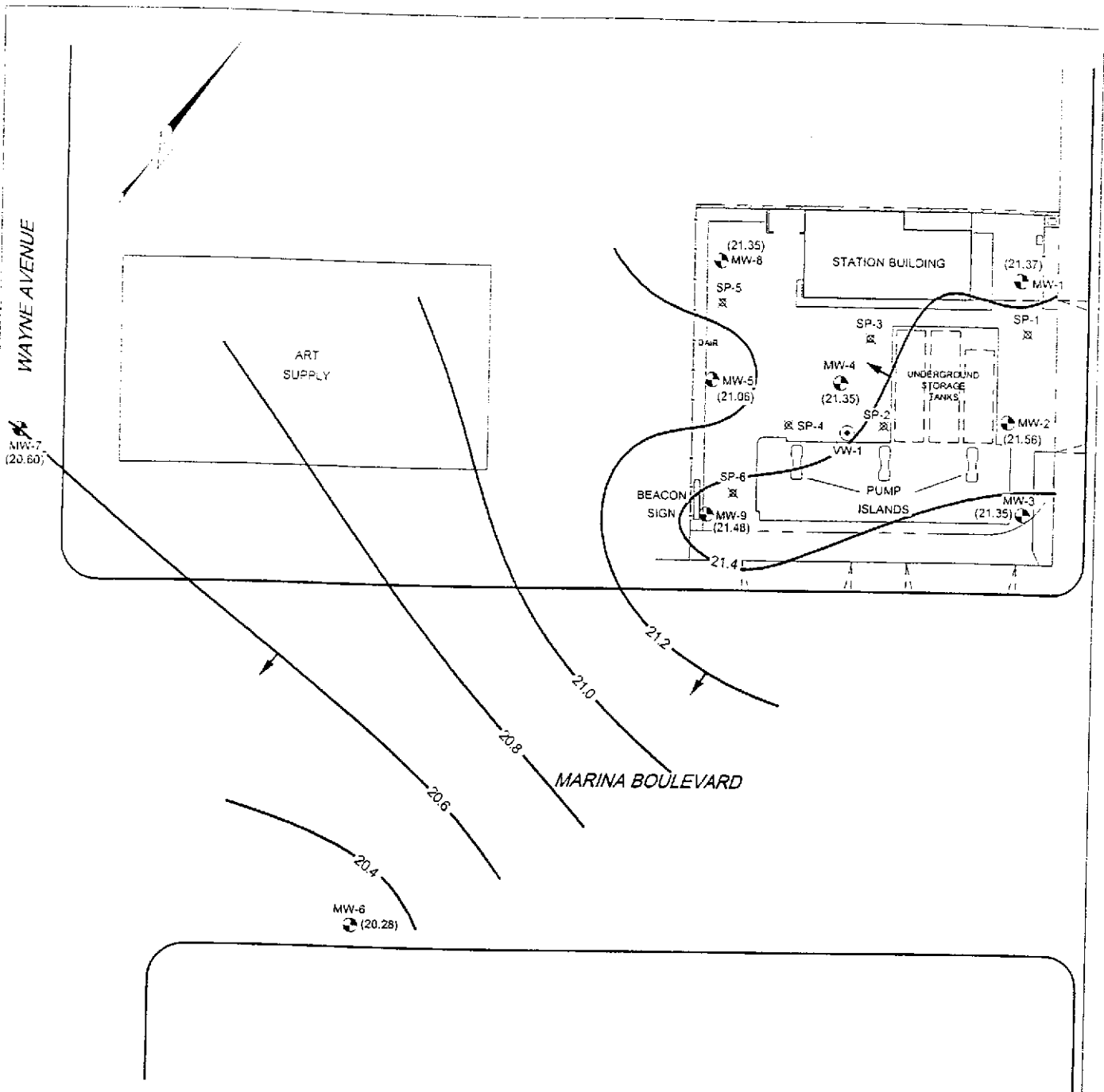
TESORO STATION NO. 67106  
 (FORMER BEACON STATION NO. 3720)  
 1088 MARINA BOULEVARD  
 SAN LEÁNDRO, CA.

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95  
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

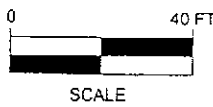
PROJECT NO. 00-3720	DRAWN BY M.L. 12/18/01
FILE NO. 00-3720-6	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY





LEGEND:

- PROPERTY LINE
- FENCE
- MW-1 MONITORING WELL LOCATION
- VW-1 VAPOR EXTRACTION WELL LOCATION
- SP-1 AIR SPARGING WELL LOCATION
- (21.37) GROUND WATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- 21.2 WATER ELEVATION CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL
- GROUND WATER FLOW DIRECTION
- \* MW-4 NOT USED FOR CONTOUR CONSTRUCTION



NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95  
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

**FIGURE 3**  
**GROUND WATER ELEVATION CONTOUR MAP**  
 11/14/02

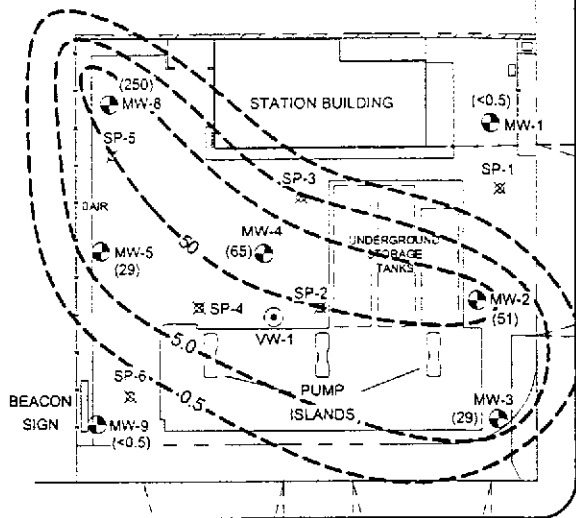
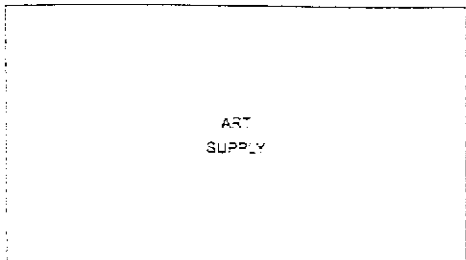
TESORO STATION NO. 67106  
 (FORMER BEACON STATION NO. 3720)  
 1088 MARINA BOULEVARD  
 SAN LEANDRO, CA.

PROJECT NO. 00-3720	DRAWN BY M.L. 2/13/03
FILE NO. 00-3720-6	PREPARED BY RDM
REVISION NO. 2	REVIEWED BY

**R M**  
Environmental

WAYNE AVENUE

(<0.5)  
MW-7

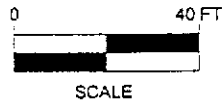


MARINA BOULEVARD

MW-6 (<0.5)

LEGEND:

- PROPERTY LINE
- FENCE
- MW-1 MONITORING WELL LOCATION
- ⊙ VW-1 VAPOR EXTRACTION WELL LOCATION
- ⊗ SP-1 AIR SPARGING WELL LOCATION
- (<0.5) BENZENE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 5.0— BENZENE ISOCONCENTRATION CONTOUR



NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

FIGURE 4  
BENZENE ISOCONCENTRATION MAP  
11/14/02

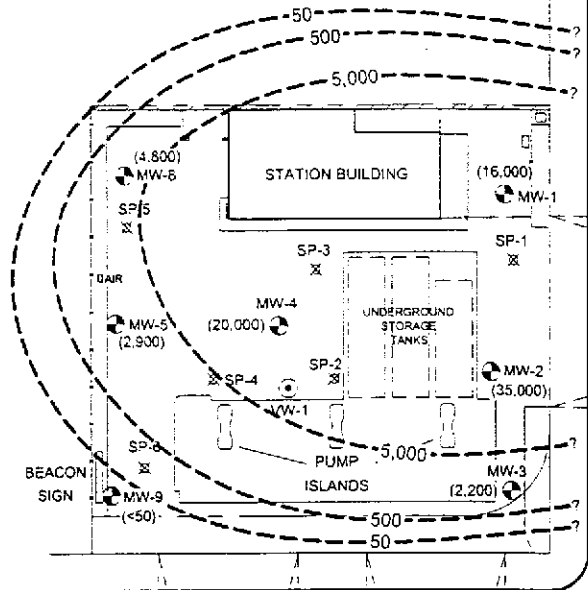
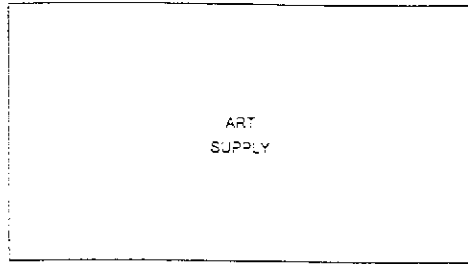
TESORO STATION NO. 67106  
(FORMER BEACON STATION NO. 3720)  
1088 MARINA BOULEVARD  
SAN LEANDRO, CA.

PROJECT NO. 00-3720	DRAWN BY M.L. 1/15/03
FILE NO. 00-3720-6	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY



WAYNE AVENUE

(<50)  
MW-7

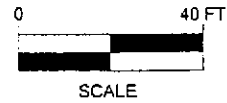


MARINA BOULEVARD

MW-6  
(<50)

LEGEND:

- PROPERTY LINE
- - - FENCE
- MW-1 MONITORING WELL LOCATION
- ⊙ VW-1 VAPOR EXTRACTION WELL LOCATION
- ⊗ SP-1 AIR SPARGING WELL LOCATION
- (35,000) TPHg CONCENTRATION (IN MICROGRAMS PER LITER (ug/L))
- 500— TPHg ISOCONCENTRATION CONTOUR



NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

FIGURE 5  
TPHg ISOCONCENTRATION MAP  
11/14/02

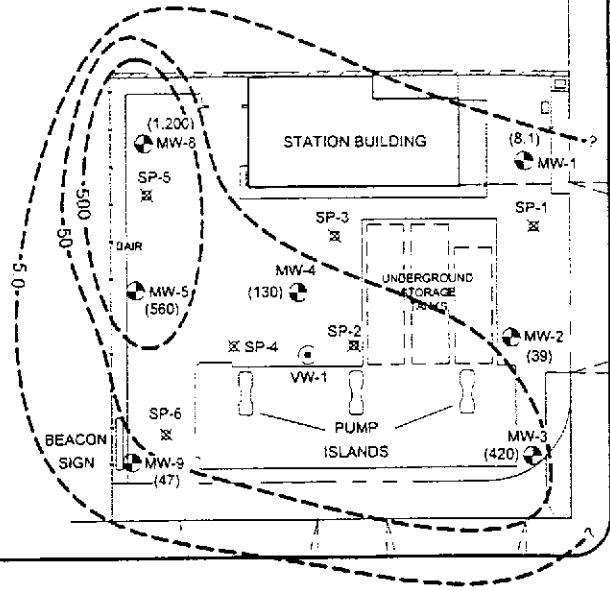
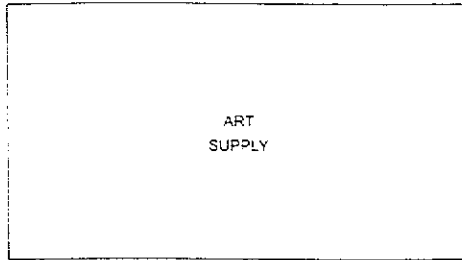
TESORO STATION NO. 67106  
(FORMER BEACON STATION NO. 3720)  
1088 MARINA BOULEVARD  
SAN LEANDRO, CA.

PROJECT NO. 00-3720	DRAWN BY M.L. 1/15/03
FILE NO. 00-3720-6	PREPARED BY ROM
REVISION NO. 1	REVIEWED BY



WAYNE AVENUE

(<0.5)  
MW-7

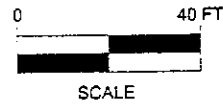


MARINA BOULEVARD

MW-6  
(<0.5)

LEGEND:

- PROPERTY LINE
- FENCE
- MW-1 MONITORING WELL LOCATION
- ⊙ VW-1 VAPOR EXTRACTION WELL LOCATION
- ⊗ SP-1 AIR SPARGING WELL LOCATION
- (1,200) MTBE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 5.0— MTBE ISOCONCENTRATION CONTOUR



NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

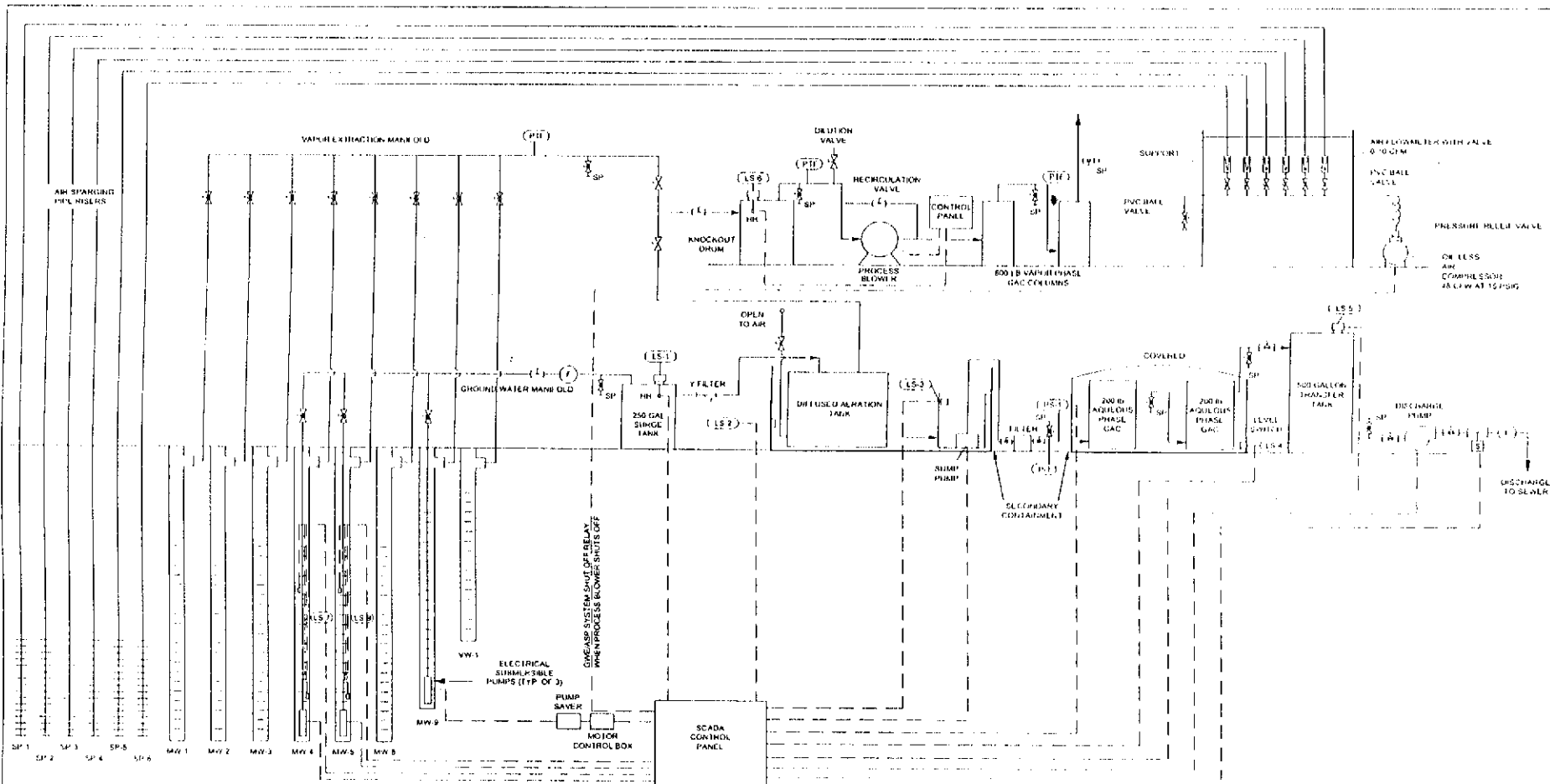
FIGURE 6  
MTBE ISOCONCENTRATION MAP  
11/14/02

TESORO STATION NO. 67106  
(FORMER BEACON STATION NO. 3720)  
1088 MARINA BOULEVARD  
SAN LEANDRO, CA.

PROJECT NO. 00-3720	DRAWN BY M.L. 1/15/03
FILE NO. 00-3720-6	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY







- (LS-1) SURGE TANK  
HIGH-HIGH SHUTS OFF WELL PUMPS (W/REMOTE RESET)
- (LS-2) SECONDARY CONTAINMENT VESSEL FOR DATS:  
HIGH-HIGH SHUTS OFF WELL PUMPS
- (LS-3) DATS/SUMP:  
HIGH-HIGH SHUTS OFF WELL PUMPS  
HIGH-TURNS ON DATS SUMP PUMP  
LOW-TURNS OFF DATS SUMP PUMP
- (LS-4) SECONDARY CONTAINMENT VESSEL FOR AQUEOUS PHASE CARBON:  
HIGH-HIGH SHUTS OFF DATS/SUMP PUMP AND WELL PUMPS
- (LS-5) DUAL-PHASE TREATMENT TANK:  
HIGH-HIGH SHUTS OFF DATS SUMP PUMP (W/REMOTE RESET)  
HIGH-TURNS ON TRANSFER PUMP AND OPENS SEWER SOLENOID VALVE  
LOW-TURNS OFF TRANSFER PUMP AND CLOSES SEWER SOLENOID VALVE
- (LS-6) RECOVERY WELL PROBES  
HIGH-TURNS ON SUBMERSIBLE WELL PUMP (MW-4) TO BE CONTROLLED BY RELAY IN PANEL  
LOW-TURNS OFF SUBMERSIBLE WELL PUMP (MW-4) TO BE CONTROLLED BY RELAY IN PANEL
- (LS-7) RECOVERY WELL PROBES  
HIGH-TURNS ON SUBMERSIBLE WELL PUMP (MW-5) TO BE CONTROLLED BY RELAY IN PANEL  
LOW-TURNS OFF SUBMERSIBLE WELL PUMP (MW-5) TO BE CONTROLLED BY RELAY IN PANEL

- LEGEND
- (B) BALL VALVE  
(G) GATE VALVE  
(S) SOLENOID VALVE  
H&I-SP SAMPLE PORT  
(PTE) PRESSURE, TEMPERATURE, FLDW MONITORING POINT  
(F) FLOW TOTALIZER  
(P-G) PRESSURE GAUGE  
(PS-1) AQUEOUS PHASE CARBON PRESSURE SWITCH  
PRESSURE SWITCH SHUTS DATS/SUMP PUMP AND WELL PUMPS (W/REMOTE RESET)

**FIGURE 7**  
**SOIL VAPOR EXTRACTION, AIR SPARGING,**  
**& GROUNDWATER PUMPING SYSTEM SCHEMATIC**  
**TESORO STATION NO. 67106**  
**(FORMER BEACON STATION NO. 3720)**  
**1088 MARINA BLVD.**  
**SAN LEANDRO, CA.**

PROJECT NO. 00-3720	DRAWN BY M.L. 6/1/01
FILE NO. 00-3720-3	PREPARED BY RDM
REVISION NO. 4	REVIEWED BY

**R M**  
**Environmental**

## HISTORICAL BACKGROUND INFORMATION

Tesoro Station No. 67106  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

### PREVIOUS OWNER

- January 1987 - Three underground gasoline storage tanks and one waste oil tank were excavated and removed from two tank cavities. Samples collected from beneath the former tanks indicated that hydrocarbons were present in the soil.
- March 1987 - Five monitoring wells (MW-1 through MW-5) were installed by Conoco. Hydrocarbons were detected in soil and ground-water samples collected from the wells with the highest concentrations being detected in the area of MW-4.
- July 1987 - Four soil borings were drilled in the vicinity of MW-4 to further characterize the soil contamination in that area. TPH concentrations above 100 ppm were detected in each boring. The site has been on a monitoring program since June 1987.

### ULTRAMAR INC.

- July 1990 - The site was purchased by Ultramar Inc. from Conoco. The monitoring program has continued.
- August 1991 - A shallow ground water study was performed as a screening tool to locate wells.
- October 1991 - Three additional wells were installed to further define the extent of the dissolved hydrocarbon plume.
- October 1993 - Performed a ground-water pump test, a vapor extraction test, and an air-sparging test.
- May 1994 - A Problem Assessment Report/Remedial Action Plan was submitted.
- December 1994 - One additional monitoring well, six air sparging points and one vapor extraction well were installed.
- June 1997 - Began operation of vapor extraction system.
- July 1997 - The ground water recovery system and the air sparging system began operation.
- September 7, 1999 - Performed quarterly monitoring. Continued to operate the vapor extraction and air sparging systems. The ground-water system did not operate during the quarter.
- As of March 1998, the ground water extraction system has processed approximately 228,850 gallons of water.
- On October 4, 2000, 1,500 gallons of ground water were over purged from Monitoring wells MW-2 and MW-3 using a vacuum truck. Analytical results are included in Table 2.
- On October 17, 2000, 1,200 gallons of ground water were over purged from Monitoring wells MW-2 and MW-3 using a vacuum truck. Analytical results are included in Table 2.

## HISTORICAL BACKGROUND INFORMATION

Tesoro Station No. 67106  
Former Beacon Station No. 3720  
1088 Marina Boulevard  
San Leandro, California

- On November 29, 2000, approximately 1,800 gallons of ground water were extracted during the dual phased extraction (DPE) test from MW-1 and MW-2.
- On December 4, 2000, approximately 1,600 gallons of ground water were extracted during the DPE test.
- On January 4, 2001, approximately 1,000 gallons of ground water were extracted during the DPE test.
- The evaluation of these interim remediation events is included in the Doulos report entitled *Evaluation of Interim Remediation with Vacuum Truck/Dual Phase Extraction Events*.
- On May 17, 2002, Tesoro Petroleum purchased the facility from Ultramar.

DOULOS ENVIRONMENTAL, INC.  
GROUNDWATER/LIQUID LEVEL DATA  
(measurements in feet)

Project Address: 1088 Marina Blvd.

Date: 11-14-02

San Leandro

Project No.: 67106

Recorded by: \_\_\_\_\_

Well No.	Time	Well Elev. TOC	Depth to Groundwater	Measured Total Depth	Groundwater Elevation	Depth to Product	Product Thickness	Comments
MW-1	9:44		14.10	17.74				U.V.
MW-2	9:41		13.55	22.71				U.V.
MW-3	9:39		13.49	28.40				U.V.
MW-4	9:50		13.98	27.45				U.V.
MW-5	9:56		14.03	28.80				
MW-6	9:34		12.46	14.86				
MW-7	9:30		13.04	25.45				
MW-8	9:53		14.73	28.05				U.V.
MW-9	10:00		13.15	24.60				

Notes: NEW CAP + LOCK / MW-6  
UV = UNDER VAC.

Client: Tesoro 67106

Sampling Date: 11-14-02

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: mw-1

Is setup of traffic control devices required? NO YES

Is there standing water in the well box? NO YES

Is top of casing cut level? NO YES

Is well cap sealed and locked? NO YES

Height of well casing riser (in inches): 1

Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_

12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_

12" CNI X 36" CNI \_\_\_\_\_ 12" Pomeco \_\_\_\_\_ Other: \_\_\_\_\_

General condition of wellhead assembly: Excellent \_\_\_\_\_ Good X Fair \_\_\_\_\_ Poor \_\_\_\_\_

time: \_\_\_\_\_ hours

Above TOC \_\_\_\_\_ Below TOC \_\_\_\_\_

If no, see remarks

If no, see remarks

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump

\_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer

\_\_\_\_\_ 4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer X Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2" X 4" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement

Time: 9:44

Recharge Measurement

Time: 11:15

Calculated purge: 2.3

Depth of well: 17.74

Depth to water: 15.30

Actual purge: 2.3

Depth to water: 14.10

Start purge: 11:06

Sampling time: 11:16

Time	Temperatura	E.C.	pH	Turbidity	Volume
11:07	72.0	708	7.85		1
11:07	72.3	699	7.46		2
11:08	74.1	690	7.40		3
11:10	74.2	681	7.39		4

Sample appearance: clear

Lock: Delphina

Equipment replaced: (check all that apply)

Note condition of replaced item(s)

2" Locking Cap: \_\_\_\_\_

Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_

4" Locking Cap: \_\_\_\_\_

Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_

6" Locking Cap: \_\_\_\_\_

Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

Client: Tesoro 67106

Sampling Date: 11-14-09

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: mw-2

Is setup of traffic control devices required?  YES  NO

Is there standing water in the well box?  YES  NO

Is top of casing cut level?  YES  NO

Is well cap sealed and locked?  YES  NO

time: \_\_\_\_\_ hours

Above TOC \_\_\_\_\_ Below TOC \_\_\_\_\_

If no, see remarks

If no, see remarks

Height of well casing riser (in inches): 3

Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_

12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_

12" CNI  36" CNI \_\_\_\_\_ 12" Pomeco \_\_\_\_\_ Other: \_\_\_\_\_

General condition of wellhead assembly: Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump

\_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer

\_\_\_\_\_ 4" PVC bailer  Centrifugal pump

Sampled with: Disposable bailer  Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2"  4" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_

Purge Vol. Multiplier: 0.16 \_\_\_\_\_ 0.65 \_\_\_\_\_ 1.47 \_\_\_\_\_ 2.61 gal/ft.

Initial Measurement

Recharge Measurement

Time: 9:41

Time: 10:54

Calculated purge: 5.8

Depth of well: 22.71

Depth to water: 14.50

Actual purge: 5.8

Depth to water: 13.55

Start purge: 10:46

Sampling time: 10:56

Time	Temperature	E.C.	pH	Turbidity	Volume
10:47	72.6	611	7.33		1
10:48	72.5	603	7.25		2
10:49	73.0	599	7.21		3
10:50	73.1	593	7.18		4

Sample appearance: clear

Lock: Dolphin

Equipment replaced: (check all that apply) Note condition of replaced item(s)

2" Locking Cap: \_\_\_\_\_ Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_

4" Locking Cap: \_\_\_\_\_ Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_

6" Locking Cap: \_\_\_\_\_ Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

**DOULOS ENVIRONMENTAL, INC.**

**SAMPLING INFORMATION SHEET**

Client: Tesoro 67106

Sampling Date: 11-14-02

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: MW-3

Is setup of traffic control devices required?  NO YES time: \_\_\_\_\_ hours  
 Is there standing water in the well box?  NO YES Above TOC Below TOC  
 Is top of casing cut level? NO  YES If no, see remarks  
 Is well cap sealed and locked? NO  YES If no, see remarks  
 Height of well casing riser (in inches): 1  
 Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_  
 12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_  
 12" CNI  36" CNI \_\_\_\_\_ 12" Pomeco \_\_\_\_\_ Other: \_\_\_\_\_  
 General condition of wellhead assembly: Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump  
 \_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer  
 \_\_\_\_\_ 4" PVC bailer  Centrifugal pump  
 Sampled with: Disposable bailer  Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2"  4" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_  
 Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal./ft.

Initial Measurement Recharge Measurement  
 Time: 9:39 Time: 10:42 Calculated purge: 9.5  
 Depth of well: 28.40 Depth to water: 15.32 Actual purge: 9.5  
 Depth to water: 13.49

Start purge: 10:36 Sampling time: 10:43

Time	Temperature	E.C.	pH	Turbidity	Volume
10:37	73.6	861	7.12		1
10:38	74.0	814	7.07		2
10:39	74.2	810	7.06		3
10:40	74.0	801	7.04		4

Sample appearance: Clear Lock: Dolby/min

Equipment replaced: (check all that apply) Note condition of replaced item(s)  
 2" Locking Cap: \_\_\_\_\_ Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_  
 4" Locking Cap: \_\_\_\_\_ Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_  
 6" Locking Cap: \_\_\_\_\_ Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

Signature: \_\_\_\_\_

Client: Tesoro 67106

Sampling Date: 11-14-02

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: MW-4

Is setup of traffic control devices required?  NO YES

time: \_\_\_\_\_ hours

Is there standing water in the well box?  NO YES

Above TOC Below TOC

Is top of casing cut level? NO  YES

If no, see remarks

Is well cap sealed and locked? NO  YES

If no, see remarks

Height of well casing riser (in inches): 8

Well cover type: 8" or 12" UV \_\_\_\_\_

12" EMCO \_\_\_\_\_

8" or 12" BK \_\_\_\_\_

8" Christy \_\_\_\_\_

12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_

12" M&D \_\_\_\_\_

12" DWP \_\_\_\_\_

12" CNI 18 36" CNI \_\_\_\_\_

12" Pomoco \_\_\_\_\_

Other: \_\_\_\_\_

General condition of wellhead assembly: Excellent \_\_\_\_\_

Good

Fair \_\_\_\_\_

Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer

\_\_\_\_\_ Submersible pump

\_\_\_\_\_ 2" PVC bailer

\_\_\_\_\_ Dedicated bailer

\_\_\_\_\_ 4" PVC bailer

Centrifugal pump

Sampled with: Disposable bailer

Teflon bailer \_\_\_\_\_

Disposable Tubing \_\_\_\_\_

Well Diameter: 2"

4" \_\_\_\_\_

6" \_\_\_\_\_

8" \_\_\_\_\_

Purge Vol. Multiplier: \_\_\_\_\_

0.16

0.65

1.47

2.61 gal/ft.

Initial Measurement

Recharge Measurement

Time: 9:50

Time: 11:33

Calculated purge: 8.6

Depth of well: 27.45

Depth to water: 14.80

Actual purge: 8.6

Depth to water: 13.98

Start purge: 11:20

Sampling time: 11:35

Time	Temperature	E.C.	pH	Turbidity	Volume
11:21	72.3	904	7.26		1
11:22	72.6	893	7.23		2
11:23	73.1	851	7.19		3
11:24	73.2	840	7.18		4

Sample appearance: clear

Lock: Dolphin

Equipment replaced: (check all that apply)

Note condition of replaced item(s)

2" Locking Cap: \_\_\_\_\_

Lock: \_\_\_\_\_

7/32 Allenhead: \_\_\_\_\_

4" Locking Cap: \_\_\_\_\_

Lock-Dolphin: \_\_\_\_\_

9/16 Bolt: \_\_\_\_\_

6" Locking Cap: \_\_\_\_\_

Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_



Client: Tesoro 67106

Sampling Date: 11-14-09

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: MW-5

Is setup of traffic control devices required?  NO  YES

time: \_\_\_\_\_ hours

Is there standing water in the well box?  NO  YES

Above TOC \_\_\_\_\_ Below TOC \_\_\_\_\_

Is top of casing cut level?  NO  YES

If no, see remarks

Is well cap sealed and locked?  NO  YES

If no, see remarks

Height of well casing riser (in inches): 6

Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_

12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_

12" CNI 16 36" CNI \_\_\_\_\_ 12" Pomeco \_\_\_\_\_ Other: \_\_\_\_\_

General condition of wellhead assembly: Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump

\_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer

\_\_\_\_\_ 4" PVC bailer  Centrifugal pump

Sampled with: Disposable bailer  Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2"  4" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_

Purge Vol. Multiplier: 0.16 \_\_\_\_\_ 0.65 \_\_\_\_\_ 1.47 \_\_\_\_\_ 2.61 gal/ft.

Initial Measurement

Recharge Measurement

Time: 9:56

Time: 12:14

Calculated purge: 9.4

Depth of well: 28.80

Depth to water: 15.06

Actual purge: 9.4

Depth to water: 14.03

Start purge: 12:05

Sampling time: 12:16

Time	Temperature	E.C.	pH	Turbidity	Volume
12:06	72.8	710	7.34		1
12:07	73.0	704	7.22		2
12:08	73.1	696	7.16		3
12:09	73.8	691	7.13		4

Sample appearance: Clear

Lock: Dolphin

Equipment replaced: (check all that apply)

Note condition of replaced item(s)

2" Locking Cap: \_\_\_\_\_

Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_

4" Locking Cap: \_\_\_\_\_

Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_

6" Locking Cap: \_\_\_\_\_

Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

Client: Tesoro 67106

Sampling Date: 11-14-09

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: MW-6

Is setup of traffic control devices required?  NO YES time: \_\_\_\_\_ hours  
 Is there standing water in the well box?  NO YES Above TOC Below TOC  
 Is top of casing cut level? NO  YES If no, see remarks  
 Is well cap sealed and locked? NO  YES If no, see remarks  
 Height of well casing riser (in inches): 6  
 Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_  
 12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_  
 12" CNI \_\_\_\_\_ 36" CNI \_\_\_\_\_ 12" Pomeco  Other: \_\_\_\_\_  
 General condition of wellhead assembly: Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump  
 \_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer  
 \_\_\_\_\_ 4" PVC bailer  Centrifugal pump  
 Sampled with: Disposable bailer  Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2"  4" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_  
 Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement Recharge Measurement  
 Time: 9:34 Time: 10:30 Calculated purge: 1.5  
 Depth of well: 14.86 Depth to water: 12.52 Actual purge: 1.5  
 Depth to water: 12.46

Start purge: 10:20 Sampling time: 10:31

Time	Temperature	E.C.	pH	Turbidity	Volume
10:21	72.5	706	7.24		1
10:21	73.0	700	7.16		2
10:22	73.6	690	7.13		3
10:23	73.9	681	7.10		4

Sample appearance: clear Lock: Dolphins

Equipment replaced: (check all that apply) Note condition of replaced item(s)  
 2" Locking Cap: \_\_\_\_\_ Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_  
 4" Locking Cap: \_\_\_\_\_ Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_  
 6" Locking Cap: \_\_\_\_\_ Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

Client: Tesoro 67106

Sampling Date: 11-14-08

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: MW-7

Is setup of traffic control devices required?  NO  YES

time: \_\_\_\_\_ hours

Is there standing water in the well box?  NO  YES

Above TOC \_\_\_\_\_ Below TOC \_\_\_\_\_

Is top of casing cut level?  NO  YES

If no, see remarks

Is well cap sealed and locked?  NO  YES

If no, see remarks

Height of well casing riser (in inches): 6

Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_

12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_

12" CNI  36" CNI \_\_\_\_\_ 12" Pomeco \_\_\_\_\_ Other: \_\_\_\_\_

General condition of wellhead assembly: Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump

\_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer

\_\_\_\_\_ 4" PVC bailer  Centrifugal pump

Sampled with: Disposable bailer  Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2"  4" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_  
 Purge Vol. Multiplier: 0.16 \_\_\_\_\_ 0.65 \_\_\_\_\_ 1.47 \_\_\_\_\_ 2.61 gal/ft.

Initial Measurement

Recharge Measurement

Time: 9:30

Time: 10:15

Calculated purge: 7.9

Depth of well: 25.45

Depth to water: 16.88

Actual purge: 7.9

Depth to water: 13.04

Start purge: 10:08

Sampling time: 10:16

Time	Temperature	E.C.	pH	Turbidity	Volume
10:09	71.2	860	7.40		1
10:10	72.5	844	7.32		2
10:11	73.0	810	7.22		3
10:12	73.2	808	7.20		4

Sample appearance: Clear

Lock: Dolphin

Equipment replaced: (check all that apply)

Note condition of replaced item(s)

2" Locking Cap: \_\_\_\_\_

Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_

4" Locking Cap: \_\_\_\_\_

Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_

6" Locking Cap: \_\_\_\_\_

Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

Client: Tesoro 67106

Sampling Date: 11-14-02

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: MW-8

Is setup of traffic control devices required?  NO  YES

time: \_\_\_\_\_ hours

Is there standing water in the well box?  NO  YES

Above TOC \_\_\_\_\_ Below TOC \_\_\_\_\_

Is top of casing cut level?  NO  YES

If no, see remarks

Is well cap sealed and locked?  NO  YES

If no, see remarks

Height of well casing riser (in inches): 6

Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_

12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_

12" CNI  36" CNI \_\_\_\_\_ 12" Pomoco \_\_\_\_\_ Other: \_\_\_\_\_

General condition of wellhead assembly: Excellent \_\_\_\_\_ Good  Fair: \_\_\_\_\_ Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump

\_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer

\_\_\_\_\_ 4" PVC bailer  Centrifugal pump

Sampled with: Disposable bailer  Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2"  4" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_

Purge Vol. Multiplier: 0.16 \_\_\_\_\_ 0.65 \_\_\_\_\_ 1.47 \_\_\_\_\_ 2.61 gal/ft.

Initial Measurement

Recharge Measurement

Time: 9:53 Time: 11:51 Calculated purge: 8.5

Depth of well: 28.05 Depth to water: 16.30 Actual purge: 8.5

Depth to water: 14.73

Start purge: 11:40

Sampling time: 11:52

Time	Temperature.	E.C.	pH	Turbidity	Volume
11:41	73.2	808	7.26		1
11:42	73.1	800	7.20		2
11:43	74.0	751	7.14		3
11:44	74.2	746	7.12		4

Sample appearance: clear

Lock: Dolphin

Equipment replaced: (check all that apply)

Note condition of replaced item(s)

2" Locking Cap: \_\_\_\_\_

Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_

4" Locking Cap: \_\_\_\_\_

Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_

6" Locking Cap: \_\_\_\_\_

Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

Client: Tesoro 67106

Sampling Date: 11-14-02

Site: 1088 Marina Blvd.

Project No.: \_\_\_\_\_

San Leandro, Ca.

Well Designation: MW-9

Is setup of traffic control devices required?  NO  YES

Is there standing water in the well box?  NO  YES

Is top of casing cut level?  NO  YES

Is well cap sealed and locked?  NO  YES

Height of well casing riser (in inches): 6

time: \_\_\_\_\_ hours  
 Above TOC \_\_\_\_\_ Below TOC  
 If no, see remarks  
 If no, see remarks

Well cover type: 8" or 12" UV \_\_\_\_\_ 12" EMCO \_\_\_\_\_ 8" or 12" BK \_\_\_\_\_ 8" Christy \_\_\_\_\_

12" Christy \_\_\_\_\_ 8" M&D \_\_\_\_\_ 12" M&D \_\_\_\_\_ 12" DWP \_\_\_\_\_

12" CNI 16 36" CNI \_\_\_\_\_ 12" Pomeco \_\_\_\_\_ Other: \_\_\_\_\_

General condition of wellhead assembly: Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_

Purging Equipment: \_\_\_\_\_ 2" disposable bailer \_\_\_\_\_ Submersible pump

\_\_\_\_\_ 2" PVC bailer \_\_\_\_\_ Dedicated bailer

\_\_\_\_\_ 4" PVC bailer  Centrifugal pump

Sampled with: Disposable bailer  Teflon bailer \_\_\_\_\_ Disposable Tubing \_\_\_\_\_

Well Diameter: 2" \_\_\_\_\_ 4"  6" \_\_\_\_\_ 8" \_\_\_\_\_

Purge Vol. Multiplier: 0.16 \_\_\_\_\_ 0.65 \_\_\_\_\_ 1.47 \_\_\_\_\_ 2.61 gal/ft.

Initial Measurement

Recharge Measurement

Time: 10:00

Time: 12:41

Calculated purge: 29.7

Depth of well: 24.60

Depth to water: 14.30

Actual purge: 29.7

Depth to water: 13.15

Start purge: 12:24

Sampling time: 12:44

Time	Temperature	E.C.	pH	Turbidity	Volume
12:26	71.8	991	7.13		1
12:28	71.9	980	7.10		2
12:30	72.0	951	7.01		3
12:33	72.6	940	7.02		4

Sample appearance: clear

Lock: Dolphin

Equipment replaced: (check all that apply)

Note condition of replaced item(s)

2" Locking Cap: \_\_\_\_\_

Lock: \_\_\_\_\_ 7/32 Allenhead: \_\_\_\_\_

4" Locking Cap: \_\_\_\_\_

Lock-Dolphin: \_\_\_\_\_ 9/16 Bolt: \_\_\_\_\_

6" Locking Cap: \_\_\_\_\_

Pinned Allenhead (DWP): \_\_\_\_\_

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_



Report Number : 29844

Date : 11/25/2002

Richard Munsch  
RDM Environmental  
1704 Via Riata  
Roseville, CA 95747

Subject : 9 Water Samples  
Project Name : Tesoro  
Project Number : 67106 San Leandro  
P.O. Number : AFE 23139622

Dear Mr. Munsch,

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



Report Number : 29844

Date : 11/25/2002

Subject : 9 Water Samples  
Project Name : Tesoro  
Project Number : 67106 San Leandro  
P.O. Number : AFE 23139622

## Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-8, MW-5 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample. Matrix Spike/Matrix Spike Duplicate Results associated with sample MW-3 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

  
Approved By: Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-1

Matrix : Water

Lab Number : 29844-01

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 5.0	5.0	ug/L	EPA 8260B	11/22/2002
Toluene	< 5.0	5.0	ug/L	EPA 8260B	11/22/2002
Ethylbenzene	300	5.0	ug/L	EPA 8260B	11/22/2002
Total Xylenes	250	5.0	ug/L	EPA 8260B	11/22/2002
Methyl-t-butyl ether (MTBE)	8.1	5.0	ug/L	EPA 8260B	11/22/2002
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	11/22/2002
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	11/22/2002
Tert-amyl methyl ether (TAME)	< 5.0	5.0	ug/L	EPA 8260B	11/22/2002
Tert-Butanol	< 50	50	ug/L	EPA 8260B	11/22/2002
TPH as Gasoline	16000	500	ug/L	EPA 8260B	11/22/2002
1,2-Dichloroethane	< 5.0	5.0	ug/L	EPA 8260B	11/22/2002
1,2-Dibromoethane	< 5.0	5.0	ug/L	EPA 8260B	11/22/2002
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	11/22/2002
4-Bromofluorobenzene (Surr)	92.2		% Recovery	EPA 8260B	11/22/2002
Dibromofluoromethane (Surr)	104		% Recovery	EPA 8260B	11/22/2002
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	11/22/2002

Approved By: Joel Kiff





Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-2

Matrix : Water

Lab Number : 29844-02

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	51	10	ug/L	EPA 8260B	11/22/2002
Toluene	150	10	ug/L	EPA 8260B	11/22/2002
Ethylbenzene	1300	10	ug/L	EPA 8260B	11/22/2002
Total Xylenes	3600	10	ug/L	EPA 8260B	11/22/2002
Methyl-t-butyl ether (MTBE)	39	10	ug/L	EPA 8260B	11/22/2002
Diisopropyl ether (DIPE)	< 10	10	ug/L	EPA 8260B	11/22/2002
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	11/22/2002
Tert-amyl methyl ether (TAME)	< 10	10	ug/L	EPA 8260B	11/22/2002
Tert-Butanol	< 100	100	ug/L	EPA 8260B	11/22/2002
TPH as Gasoline	35000	1000	ug/L	EPA 8260B	11/22/2002
1,2-Dichloroethane	< 10	10	ug/L	EPA 8260B	11/22/2002
1,2-Dibromoethane	< 10	10	ug/L	EPA 8260B	11/22/2002
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	11/22/2002
4-Bromofluorobenzene (Surr)	99.8		% Recovery	EPA 8260B	11/22/2002
Dibromofluoromethane (Surr)	99.1		% Recovery	EPA 8260B	11/22/2002
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	11/22/2002

Approved By: Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-3

Matrix : Water

Lab Number : 29844-03

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	29	0.50	ug/L	EPA 8260B	11/18/2002
Toluene	0.89	0.50	ug/L	EPA 8260B	11/18/2002
Ethylbenzene	3.7	0.50	ug/L	EPA 8260B	11/18/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Methyl-t-butyl ether (MTBE)	420	2.0	ug/L	EPA 8260B	11/19/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Tert-amyl methyl ether (TAME)	1.1	0.50	ug/L	EPA 8260B	11/18/2002
Tert-Butanol	19	5.0	ug/L	EPA 8260B	11/18/2002
TPH as Gasoline	2200	50	ug/L	EPA 8260B	11/18/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	11/18/2002
4-Bromofluorobenzene (Surr)	99.2		% Recovery	EPA 8260B	11/18/2002
Dibromofluoromethane (Surr)	95.0		% Recovery	EPA 8260B	11/18/2002
1,2-Dichloroethane-d4 (Surr)	99.5		% Recovery	EPA 8260B	11/18/2002

Approved By:  Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-4

Matrix : Water

Lab Number : 29844-04

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	65	10	ug/L	EPA 8260B	11/22/2002
Toluene	380	10	ug/L	EPA 8260B	11/22/2002
Ethylbenzene	550	10	ug/L	EPA 8260B	11/22/2002
Total Xylenes	3400	10	ug/L	EPA 8260B	11/22/2002
Methyl-t-butyl ether (MTBE)	130	10	ug/L	EPA 8260B	11/22/2002
Diisopropyl ether (DIPE)	< 10	10	ug/L	EPA 8260B	11/22/2002
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	11/22/2002
Tert-amyl methyl ether (TAME)	< 10	10	ug/L	EPA 8260B	11/22/2002
Tert-Butanol	< 100	100	ug/L	EPA 8260B	11/22/2002
TPH as Gasoline	20000	1000	ug/L	EPA 8260B	11/22/2002
1,2-Dichloroethane	< 10	10	ug/L	EPA 8260B	11/22/2002
1,2-Dibromoethane	< 10	10	ug/L	EPA 8260B	11/22/2002
Toluene - d8 (Surr)	96.7		% Recovery	EPA 8260B	11/22/2002
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	11/22/2002
Dibromofluoromethane (Surr)	100		% Recovery	EPA 8260B	11/22/2002
1,2-Dichloroethane-d4 (Surr)	97.9		% Recovery	EPA 8260B	11/22/2002

Approved By:  Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-5

Matrix : Water

Lab Number : 29844-05

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	29	1.0	ug/L	EPA 8260B	11/23/2002
Toluene	1.3	1.0	ug/L	EPA 8260B	11/23/2002
Ethylbenzene	94	1.0	ug/L	EPA 8260B	11/23/2002
Total Xylenes	100	1.0	ug/L	EPA 8260B	11/23/2002
Methyl-t-butyl ether (MTBE)	560	1.0	ug/L	EPA 8260B	11/23/2002
Diisopropyl ether (DIPE)	< 1.0	1.0	ug/L	EPA 8260B	11/23/2002
Ethyl-t-butyl ether (ETBE)	< 1.0	1.0	ug/L	EPA 8260B	11/23/2002
Tert-amyl methyl ether (TAME)	< 1.0	1.0	ug/L	EPA 8260B	11/23/2002
Tert-Butanol	100	10	ug/L	EPA 8260B	11/23/2002
TPH as Gasoline	2900	100	ug/L	EPA 8260B	11/23/2002
1,2-Dichloroethane	< 1.0	1.0	ug/L	EPA 8260B	11/23/2002
1,2-Dibromoethane	< 1.0	1.0	ug/L	EPA 8260B	11/23/2002
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	11/23/2002
4-Bromofluorobenzene (Surr)	93.7		% Recovery	EPA 8260B	11/23/2002
Dibromofluoromethane (Surr)	112		% Recovery	EPA 8260B	11/23/2002
1,2-Dichloroethane-d4 (Surr)	95.7		% Recovery	EPA 8260B	11/23/2002

Approved By: Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-6

Matrix : Water

Lab Number : 29844-06

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/19/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/19/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	11/19/2002
4-Bromofluorobenzene (Surr)	91.4		% Recovery	EPA 8260B	11/19/2002
Dibromofluoromethane (Surr)	102		% Recovery	EPA 8260B	11/19/2002
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	11/19/2002

Approved By:  Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-7

Matrix : Water

Lab Number : 29844-07

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/19/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/19/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	11/19/2002
4-Bromofluorobenzene (Surr)	97.4		% Recovery	EPA 8260B	11/19/2002
Dibromofluoromethane (Surr)	96.2		% Recovery	EPA 8260B	11/19/2002
1,2-Dichloroethane-d4 (Surr)	99.1		% Recovery	EPA 8260B	11/19/2002

Approved By: Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

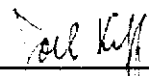
Sample : MW-8

Matrix : Water

Lab Number : 29844-08

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	250	2.5	ug/L	EPA 8260B	11/22/2002
Toluene	< 2.5	2.5	ug/L	EPA 8260B	11/22/2002
Ethylbenzene	160	2.5	ug/L	EPA 8260B	11/22/2002
Total Xylenes	220	2.5	ug/L	EPA 8260B	11/22/2002
Methyl-t-butyl ether (MTBE)	1200	2.5	ug/L	EPA 8260B	11/22/2002
Diisopropyl ether (DIPE)	< 2.5	2.5	ug/L	EPA 8260B	11/22/2002
Ethyl-t-butyl ether (ETBE)	< 2.5	2.5	ug/L	EPA 8260B	11/22/2002
Tert-amyl methyl ether (TAME)	< 2.5	2.5	ug/L	EPA 8260B	11/22/2002
Tert-Butanol	47	25	ug/L	EPA 8260B	11/22/2002
TPH as Gasoline	4800	250	ug/L	EPA 8260B	11/22/2002
1,2-Dichloroethane	< 2.5	2.5	ug/L	EPA 8260B	11/22/2002
1,2-Dibromoethane	< 2.5	2.5	ug/L	EPA 8260B	11/22/2002
Toluene - d8 (Surr)	97.6		% Recovery	EPA 8260B	11/22/2002
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	11/22/2002
Dibromofluoromethane (Surr)	106		% Recovery	EPA 8260B	11/22/2002
1,2-Dichloroethane-d4 (Surr)	99.1		% Recovery	EPA 8260B	11/22/2002

Approved By:  Joel Kiff



Report Number : 29844

Date : 11/25/2002

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-9

Matrix : Water

Lab Number : 29844-09

Sample Date : 11/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Methyl-t-butyl ether (MTBE)	47	0.50	ug/L	EPA 8260B	11/18/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/18/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/18/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	11/18/2002
4-Bromofluorobenzene (Surr)	91.1		% Recovery	EPA 8260B	11/18/2002
Dibromofluoromethane (Surr)	102		% Recovery	EPA 8260B	11/18/2002
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	11/18/2002

Approved By:  Joel Kiff



## QC Report : Method Blank Data

Project Name : Tesoro

Project Number : 67106 San Leandro

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/21/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/21/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Toluene - d8 (Surr)	109		%	EPA 8260B	11/21/2002
4-Bromofluorobenzene (Surr)	80.5		%	EPA 8260B	11/21/2002
Dibromofluoromethane (Surr)	100		%	EPA 8260B	11/21/2002
1,2-Dichloroethane-d4 (Surr)	92.8		%	EPA 8260B	11/21/2002

Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/18/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/18/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/18/2002
Toluene - d8 (Surr)	102		%	EPA 8260B	11/18/2002
4-Bromofluorobenzene (Surr)	97.7		%	EPA 8260B	11/18/2002
Dibromofluoromethane (Surr)	95.7		%	EPA 8260B	11/18/2002
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	11/18/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/19/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/19/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene - d8 (Surr)	104		%	EPA 8260B	11/19/2002
4-Bromofluorobenzene (Surr)	97.4		%	EPA 8260B	11/19/2002
Dibromofluoromethane (Surr)	96.8		%	EPA 8260B	11/19/2002
1,2-Dichloroethane-d4 (Surr)	99.4		%	EPA 8260B	11/19/2002

Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/19/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/19/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene - d8 (Surr)	97.9		%	EPA 8260B	11/19/2002
4-Bromofluorobenzene (Surr)	92.2		%	EPA 8260B	11/19/2002
Dibromofluoromethane (Surr)	99.0		%	EPA 8260B	11/19/2002
1,2-Dichloroethane-d4 (Surr)	105		%	EPA 8260B	11/19/2002

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 29844

Date : 11/25/2002

**QC Report : Method Blank Data**

Project Name : **Tesoro**

Project Number : **67106 San Leandro**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/19/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/19/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/19/2002
Toluene - d8 (Surr)	98.8		%	EPA 8260B	11/19/2002
4-Bromofluorobenzene (Surr)	91.5		%	EPA 8260B	11/19/2002
Dibromofluoromethane (Surr)	101		%	EPA 8260B	11/19/2002
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	11/19/2002
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/21/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/21/2002
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	11/21/2002
Toluene - d8 (Surr)	103		%	EPA 8260B	11/21/2002
4-Bromofluorobenzene (Surr)	90.6		%	EPA 8260B	11/21/2002
Dibromofluoromethane (Surr)	108		%	EPA 8260B	11/21/2002
1,2-Dichloroethane-d4 (Surr)	104		%	EPA 8260B	11/21/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By: Joel Kiff

Report Number : 29844

Date : 11/25/2002

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : Tesoro

Project Number : 67106 San Leandro

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	29846-02	<0.50	38.2	38.7	38.2	39.7	ug/L	EPA 8260B	11/21/02	99.9	103	2.71	70-130	25
Toluene	29846-02	<0.50	38.2	38.7	41.2	42.9	ug/L	EPA 8260B	11/21/02	108	111	2.79	70-130	25
Tert-Butanol	29846-02	36	191	193	230	233	ug/L	EPA 8260B	11/21/02	101	102	0.580	70-130	25
Methyl-t-Butyl Ether	29846-02	210	38.2	38.7	229	237	ug/L	EPA 8260B	11/21/02	48.0	68.6	35.4	70-130	25
Benzene	29844-03	29	40.0	40.0	73.8	71.8	ug/L	EPA 8260B	11/18/02	112	106	4.70	70-130	25
Toluene	29844-03	0.89	40.0	40.0	44.6	43.1	ug/L	EPA 8260B	11/18/02	109	106	3.56	70-130	25
Tert-Butanol	29844-03	19	200	200	211	224	ug/L	EPA 8260B	11/18/02	95.9	102	6.59	70-130	25
Methyl-t-Butyl Ether	29844-03	430	40.0	40.0	512	520	ug/L	EPA 8260B	11/18/02	212	232	8.79	70-130	25
Benzene	29844-07	<0.50	40.0	40.0	42.0	41.9	ug/L	EPA 8260B	11/19/02	105	105	0.334	70-130	25
Toluene	29844-07	<0.50	40.0	40.0	43.6	43.9	ug/L	EPA 8260B	11/19/02	109	110	0.594	70-130	25
Tert-Butanol	29844-07	<5.0	200	200	204	207	ug/L	EPA 8260B	11/19/02	102	104	1.54	70-130	25
Methyl-t-Butyl Ether	29844-07	<0.50	40.0	40.0	41.8	44.0	ug/L	EPA 8260B	11/19/02	105	110	4.94	70-130	25
Benzene	29844-09	<0.50	40.0	40.0	41.6	39.7	ug/L	EPA 8260B	11/18/02	104	99.2	4.70	70-130	25
Toluene	29844-09	<0.50	40.0	40.0	31.9	37.6	ug/L	EPA 8260B	11/18/02	79.7	93.9	16.3	70-130	25
Tert-Butanol	29844-09	<5.0	200	200	205	199	ug/L	EPA 8260B	11/18/02	103	99.7	2.85	70-130	25
Methyl-t-Butyl Ether	29844-09	47	40.0	40.0	91.6	85.9	ug/L	EPA 8260B	11/18/02	111	97.2	13.6	70-130	25
Benzene	29836-01	<0.50	40.0	40.0	40.2	40.0	ug/L	EPA 8260B	11/19/02	100	100	0.524	70-130	25
Toluene	29836-01	<0.50	40.0	40.0	37.2	35.4	ug/L	EPA 8260B	11/19/02	93.1	88.4	5.12	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 29844

Date : 11/25/2002

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Tesoro**

Project Number : **67106 San Leandro**

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
Tert-Butanol	29836-01	<5.0	200	200	210	185	ug/L	EPA 8260B	11/19/02	105	92.7	12.3	70-130	25
Methyl-t-Butyl Ether	29836-01	<0.50	40.0	40.0	37.2	37.4	ug/L	EPA 8260B	11/19/02	92.9	93.4	0.537	70-130	25
Benzene	29841-01	<0.50	40.0	40.0	37.4	36.8	ug/L	EPA 8260B	11/21/02	93.5	92.0	1.56	70-130	25
Toluene	29841-01	<0.50	40.0	40.0	32.7	32.0	ug/L	EPA 8260B	11/21/02	81.6	80.0	2.01	70-130	25
Tert-Butanol	29841-01	<5.0	200	200	199	178	ug/L	EPA 8260B	11/21/02	99.5	89.0	11.1	70-130	25
Methyl-t-Butyl Ether	29841-01	8.2	40.0	40.0	40.5	39.6	ug/L	EPA 8260B	11/21/02	80.8	78.4	3.04	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 29844

Date : 11/25/2002

QC Report : Laboratory Control Sample (LCS)

Project Name : Tesoro

Project Number : 67106 San Leandro

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	11/21/02	99.4	70-130
Toluene	40.0	ug/L	EPA 8260B	11/21/02	109	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/21/02	104	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/21/02	93.5	70-130
Benzene	40.0	ug/L	EPA 8260B	11/18/02	101	70-130
Toluene	40.0	ug/L	EPA 8260B	11/18/02	107	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/18/02	99.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/18/02	102	70-130
Benzene	40.0	ug/L	EPA 8260B	11/19/02	101	70-130
Toluene	40.0	ug/L	EPA 8260B	11/19/02	109	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/19/02	98.9	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/19/02	104	70-130
Benzene	40.0	ug/L	EPA 8260B	11/18/02	97.5	70-130
Toluene	40.0	ug/L	EPA 8260B	11/18/02	93.9	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/18/02	96.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/18/02	89.1	70-130
Benzene	40.0	ug/L	EPA 8260B	11/19/02	101	70-130

KIFF ANALYTICAL, LLC

Approved By:

*Joel Kiff*  
 \_\_\_\_\_  
 Joel Kiff

Report Number : 29844

Date : 11/25/2002

QC Report : Laboratory Control Sample (LCS)

Project Name : **Tesoro**

Project Number : **67106 San Leandro**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Toluene	40.0	ug/L	EPA 8260B	11/19/02	99.7	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/19/02	94.6	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/19/02	94.6	70-130
Benzene	40.0	ug/L	EPA 8260B	11/21/02	93.8	70-130
Toluene	40.0	ug/L	EPA 8260B	11/21/02	90.3	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/21/02	96.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/21/02	91.4	70-130

KIFF ANALYTICAL, LLC

Approved By:  Joel Kiff

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



**TABLE 1**  
**GROUND WATER ELEVATION DATA**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
**(Measurements in feet)**

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>1</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-1	03/30/92	33.10	13.58	19.52	---	
	07/01/92		14.80	18.30	---	
	09/30/92		16.12	16.98	---	
	11/19/92		16.34	16.76	27.76	
	02/03/93		12.61	20.49	27.72	
	05/25/93		13.12	19.98	27.70	
	09/22/93		14.18	18.92	27.73	
	12/21/93		14.36	18.74	27.70	
	03/18/94		13.64	19.46	27.67	
	06/15/94		14.30	18.80	27.69	
	09/14/94		15.18	17.92	27.66	
	12/19/94		13.79	19.31	27.70	
	12/21/95		13.86	19.24	---	
	03/07/95		12.74	20.36	29.51	
	06/08/95		12.95	20.15	29.54	
	09/22/95		13.94	19.16	29.54	
	12/27/95		13.57	19.53	29.92	
	03/26/96		12.13	20.97	29.90	
	06/13/96		13.10	20.00	17.02	
	09/10/96		14.08	19.02	17.03	
12/05/96	13.41	19.69	17.05			
03/10/97	12.70	20.40	17.04			
06/12/97	13.68	19.42	17.04			
08/19/97	14.31	18.79	17.01			
12/13/97	13.19	19.91	17.01			
MW-2	03/30/92	32.80	13.32	19.48	---	
	07/01/92		14.42	18.38	---	
	09/30/92		15.78	17.02	---	
	11/19/92		15.99	16.81	24.56	
	02/03/93		12.31	20.49	25.37	
	05/25/93		12.97	19.83	25.31	
	09/22/93		14.32	18.48	25.34	
	12/21/93		14.52	18.28	25.31	
	03/18/94		13.45	19.35	25.49	
	06/15/94		14.07	18.73	25.50	
	09/14/94		14.96	17.84	25.50	
	12/19/94		13.64	19.16	25.52	
	12/21/95		13.71	19.09	---	
	03/07/95		12.54	20.26	25.87	
	06/08/95		12.81	19.99	25.86	
	09/22/95		13.66	19.14	25.80	
	12/27/95		13.42	19.38	25.83	
	03/26/96		12.05	20.75	25.83	
	06/13/96		12.79	20.01	26.39	
	09/10/96		13.73	19.07	26.43	
12/05/96	13.29	19.51	26.45			
03/10/97	12.42	20.38	26.48			
06/12/97	13.18	19.62	26.50			
08/19/97	13.94	18.86	26.52			
12/13/97	12.91	19.89	19.02			

NOTES: 1 = Measurement and reference elevation taken from notch/mark on top north side of well casing  
2 = Elevation referenced to mean sea level.  
Well Depth = Measurement from top of casing to bottom of well.  
--- = Not measured.  
\* = Well paved over.



**TABLE I**  
**GROUND WATER ELEVATION DATA**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
**(Measurements in feet)**

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>1</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-3	03/30/92	32.30	12.96	19.34	---	
	07/01/92		14.00	18.30	---	
	09/30/92		15.36	16.94	---	
	11/19/92		15.57	16.73	24.45	
	02/03/93		11.96	20.34	24.54	
	05/25/93		14.12	18.18	24.50	
	09/22/93		13.88	18.42	24.50	
	12/21/93		14.12	18.18	24.50	
	03/18/94		13.04	19.26	24.57	
	06/15/94		13.65	18.65	24.78	
	09/14/94		14.54	17.76	24.59	
	12/19/94		13.28	19.02	24.71	
	12/21/95		13.30	19.00	---	
	03/07/95		12.26	20.04	26.03	
	06/08/95		12.42	19.88	26.02	
	09/22/95		13.25	19.05	26.00	
	12/27/95		13.04	19.26	26.00	
	03/26/96		11.62	20.68	26.01	
	06/13/96		12.61	19.69	28.45	
	09/10/96		13.49	18.81	28.42	
12/05/96	13.07	19.23	28.42			
03/10/97	12.23	20.07	28.41			
06/12/97	12.94	19.36	28.44			
08/19/97	12.85	19.45	28.45			
12/13/97	12.45	19.85	28.43			
MW-4	03/30/92	32.90	13.60	19.30	---	
	07/01/92		15.72	17.18	---	
	09/30/92		16.04	16.86	---	
	11/19/92		16.21	16.69	26.92	
	02/03/93		12.70	20.20	27.00	
	05/25/93		12.97	19.93	26.88	
	09/22/93		14.51	18.39	26.90	
	12/21/93		14.75	18.15	26.90	
	03/18/94		13.68	19.22	27.24	
	06/15/94		14.37	18.53	28.54	
	09/14/94		15.23	17.67	27.25	
	12/19/94		13.93	18.97	28.61	
	12/21/95		13.99	18.91	---	
	03/07/95		12.86	20.04	28.64	
	06/08/95		13.10	19.80	28.68	
	09/22/95		13.98	18.92	28.71	
	12/27/95		13.74	19.16	28.71	
	03/26/96		12.30	20.60	28.70	
	06/13/96		13.18	19.72	27.86	
	09/10/96		14.22	18.68	27.40	
12/05/96	13.65	19.25	27.40			
03/10/97	12.79	20.11	27.42			
06/12/97	13.51	19.39	27.40			
08/19/97	14.29	18.61	27.40			
12/13/97	13.43	19.47	27.43			

NOTES: 1 = Measurement and reference elevation taken from notch mark on top north side of well casing.  
2 = Elevation referenced to mean sea level.  
Well Depth = Measurement from top of casing to bottom of well.  
--- = Not measured.  
\* = Well paved over.

**TABLE 1**  
**GROUND WATER ELEVATION DATA**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
**(Measurements in feet)**

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>1</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-5	03/30/92	32.70	13.48	19.22	---	
	07/01/92		14.58	18.12	---	
	09/30/92		15.82	16.88	---	
	11/19/92		16.00	16.70	27.56	
	02/03/93		12.40	20.30	27.61	
	05/25/93		13.01	19.69	27.61	
	09/22/93		14.37	18.33	27.64	
	12/21/93		14.58	18.12	27.01	
	03/18/94		13.53	19.17	28.70	
	06/15/94		14.18	18.52	28.74	
	09/14/94		15.07	17.63	28.70	
	12/19/94		13.74	18.96	28.76	
	12/21/95		13.84	18.86	---	
	03/07/95		12.73	19.97	28.88	
	06/08/95		12.99	19.71	28.87	
	09/22/95		13.83	18.87	28.85	
	12/27/95		13.59	19.11	28.85	
	03/26/96		12.20	20.50	28.84	
	06/13/96		12.98	19.72	28.84	
	09/10/96		13.96	18.74	28.87	
12/05/96	13.36	19.34	28.87			
03/10/97	12.74	19.96	28.86			
06/12/97	13.06	19.64	28.83			
08/19/97	14.21	18.49	28.82			
12/13/97	13.51	19.19	28.85			
MW-6	03/30/92	30.40	12.62	17.78	---	
	07/01/92		12.70	17.70	---	
	09/30/92		13.40	17.00	---	
	11/19/92		13.59	16.81	15.10	
	02/03/93		12.43	17.97	15.01	
	05/25/93		---	---	---	
	10/11/93		12.82	17.58	15.10	
	12/21/93		13.06	17.34	15.10	
	03/18/94		12.16	18.24	15.16	
	06/15/94		12.59	17.81	15.17	
	09/14/94		12.86	17.54	14.97	
	12/19/94		12.48	17.92	15.19	
	12/21/95		11.61	18.79	---	
	03/07/95		12.37	18.03	14.98	
	06/08/95		11.14	19.26	15.00	
	09/22/95		12.44	17.96	15.00	
	12/27/95		12.21	18.19	14.98	
	03/26/96		12.26	18.14	14.97	
	06/13/96		12.55	17.85	14.98	
	09/10/96		12.31	18.09	15.01	
12/05/96	12.22	18.18	15.00			
03/10/97	12.19	18.21	15.01			
06/12/97	12.28	18.12	14.97			
08/19/97	12.30	18.10	14.98			
12/13/97	11.93	18.47	14.93			

NOTES: 1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.  
2 = Elevation referenced to mean sea level.  
Well Depth = Measurement from top of casing to bottom of well.  
--- = Not measured.  
\* = Well paved over.

**TABLE 1**  
**GROUND WATER ELEVATION DATA**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>1</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-7	03/30/92	31.20	12.34	18.86	---	
	07/01/92		15.54	15.66	---	
	09/30/92		14.64	16.56	---	
	11/19/92		14.80	16.40	25.10	
	02/03/93		11.36	19.84	25.02	
	05/25/93		---	---	---	
	09/22/93		13.18	18.02	25.01	
	12/21/93		13.42	17.78	25.02	
	03/18/94		12.36	18.84	25.13	
	06/15/94		13.01	18.19	25.21	
	09/14/94		13.88	17.32	25.13	
	12/19/94		12.61	18.59	25.23	
	12/21/95		12.38	18.82	---	
	03/07/95		11.56	19.64	25.22	
	06/08/95		11.82	19.38	25.20	
	09/22/95		12.67	18.53	25.23	
	12/27/95		12.34	18.86	25.23	
	03/26/96		11.03	20.17	25.21	
	06/13/96		11.76	19.44	25.20	
	09/10/96		12.71	18.49	24.56	
12/05/96	12.32	18.88	24.56			
03/10/97	11.38	19.82	24.53			
06/12/97	12.28	18.92	24.52			
08/19/97	12.92	18.28	24.52			
12/13/97	11.69	19.51	24.50			
MW-8	03/30/92	33.80	14.66	19.14	---	
	07/01/92		15.74	18.06	---	
	09/30/92		17.00	16.80	---	
	11/19/92		17.01	16.79	29.75	
	02/03/93		13.83	19.97	29.88	
	05/25/93		13.01	20.79	29.86	
	09/22/93		15.81	17.99	24.52	
	12/21/93		16.05	17.75	29.86	
	03/18/94		14.62	19.18	29.87	
	06/15/94		15.29	18.51	30.07	
	09/14/94		16.22	17.58	29.87	
	12/19/94		14.81	18.99	30.05	
	12/21/95		14.89	18.91	---	
	03/07/95		13.75	20.05	29.94	
	06/08/95		13.98	19.82	29.93	
	09/22/95		14.92	18.88	29.95	
	12/27/95		14.61	19.19	29.92	
	03/26/96		13.09	20.71	29.73	
	06/13/96		13.81	19.99	27.92	
	09/10/96		14.80	19.00	27.95	
12/05/96	14.05	19.75	27.96			
03/10/97	13.40	20.40	27.98			
06/12/97	14.31	19.49	27.95			
08/19/97	13.85	19.95	27.94			
12/13/97	13.92	19.88	27.93			

NOTES: 1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.  
2 = Elevation referenced to mean sea level.  
Well Depth = Measurement from top of casing to bottom of well.  
--- = Not measured.  
\* = Well paved over.

TABLE 1  
GROUND WATER ELEVATION DATA  
BEACON STATION #720  
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA  
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>1</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-9	12/21/95	32.56	13.76	18.80	---	
	03/07/95		12.79	19.77	24.71	
	06/08/95		12.96	19.60	24.70	
	09/22/95		13.73	18.83	24.72	
	12/27/95		13.53	19.03	24.71	
	03/26/96		12.27	20.29	24.70	
	06/13/96		12.84	19.72	24.53	
	09/10/96		13.49	19.07	24.58	
	12/05/96		13.18	19.38	24.60	
	03/10/97		12.25	20.31	24.66	
	06/12/97		12.70	19.86	24.66	
	08/19/97		17.89	14.67	24.68	
	12/13/97		15.79	16.77	24.68	

NOTES:      1      = Measurement and reference elevation taken from notch/mark on top north side of well casing.  
                  2      = Elevation referenced to mean sea level.  
Well Depth   = Measurement from top of casing to bottom of well.  
                  ---     = Not measured.  
                  \*      = Well paved over.

**TABLE 2**  
**GROUND WATER ANALYTICAL RESULTS**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
**(All results in micrograms per Liter)**

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1	03/30/92	27,000		630	550	540	1,900
	07/01/92	55,000		840	1,000	830	3,600
	09/30/92	6,400		150	95	120	470
	11/19/92	1,300		90	11	50	87
	02/03/93	53,000		750	560	950	5,700
	05/25/93	9,400		200	86	470	1,500
	09/22/93	41,000		1,000	510	850	1,100
	12/21/93	41,000		1,000	490	2,700	13,000
	03/18/94	9,500		320	160	830	2,900
	06/15/94	8,000		310	80	990	2,300
	09/14/94	3,600		130	31	390	630
	12/19/94	17,000		350	150	1,500	5,200
	03/07/95	12,000		180	62	1,200	3,200
	06/08/95	6,300		76	8	560	860
	09/22/95	12,000		140	55	1,500	2,500
	12/27/95	3,900		60	13	480	870
	03/26/96	6,400		42	4.9	560	600
	06/13/96	9,600	<50	86	39	1,100	1,700
	09/10/96	16,000	<50	65	35	1,500	2,700
	12/05/96	6,400	<25	25	11	570	930
03/10/97	15,000	<50	42	<5.0	1,400	1,500	
06/12/97	16,000	<100	33	34	1,100	1,700	
08/19/97	17,000	<100	47	14	1,300	2,200	
12/13/97	5,800	<100	20	35	360	470	
MW-2	03/30/92	52,000		2,300	1,700	940	3,300
	07/01/92	130,000		3,500	2,900	1,900	7,900
	09/30/92	24,000		890	350	500	1,700
	11/19/92	32,000		1,900	1,700	870	3,400
	02/03/93	64,000		1,900	2,200	860	4,100
	05/25/93	34,000		3,300	1,500	1,300	5,900
	09/22/93	8,000		640	150	270	2,000
	12/21/93	18,000		1,500	410	1,300	5,000
	03/18/94	14,000		1,600	790	1,100	3,700
	06/15/94	13,000		1,600	580	1,200	4,100
	09/14/94	20,000		1,600	560	1,800	6,400
	12/19/94	19,000		1,700	750	1,600	5,800
	03/07/95	17,000		1,900	980	1,300	5,100
	06/08/95	19,000		2,100	740	1,500	4,900
	09/22/95	12,000		840	170	1,100	3,400
	12/27/95	16,000		1,100	540	1,400	5,100
	03/26/96	11,000		930	520	970	3,000
	06/13/96	11,000	1,200	1,800	1,400	1,500	4,500
	09/10/96	19,000	1,100	1,600	600	1,600	5,000
	12/05/96	12,000	180	650	180	1,000	2,800
03/10/97	6,800	69	430	95	590	1,800	
06/12/97	20,000	100	610	140	1,500	4,300	
08/19/97	3,600	<100	250	10	250	250	
12/13/97	8,300	75	370	150	450	1,600	

NOTES: < = Below indicated detection limit  
 ND = Reported as "nondetect" by previous consultant.  
 NS = Not sampled.

**TABLE 2**  
**GROUND WATER ANALYTICAL RESULTS**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
**(All results in micrograms per Liter)**

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-3	03/30/92	21,000		560	50	630	980
	07/01/92	13,000		150	20	22	300
	09/30/92	4,500		53	2.6	84	96
	11/19/92	4,700		73	6.2	140	120
	02/03/93	23,000		220	40	430	740
	05/25/93	9,900		120	26	370	520
	09/22/93	10,000		370	71	320	640
	12/21/93	7,800		130	8.5	430	380
	03/18/94	3,100		22	1.3	78	41
	06/15/94	1,700		8.6	1.4	22	15
	09/14/94	1,400		3.8	<1.3	13	18
	12/19/94	3,800		70	1.7	140	110
	03/07/95	2,200		9.4	<1.3	30	21
	06/08/95	1,700		5.8	<1.3	2.3	14
	09/22/95	1,200		<1.3	<1.3	1.3	<1.3
	12/27/95	1,300		2.4	<1.3	3.3	3.6
	03/26/96	1,200		4.3	<1.3	4.2	2
	06/13/96	1,300	28	5.1	<0.50	21	6.5
	09/10/96	810	<5.0	1.4	4.8	1.6	2.1
	12/05/96	590	<5.0	<0.50	3.2	0.79	0.52
03/10/97	650	<5.0	0.73	3.8	2.4	1.6	
06/12/97	710	<5.0	<0.50	3.5	2.9	3.6	
08/19/97	1,400	13	2.2	0.58	11	34	
12/13/97	810	<5.0	0.96	<0.50	0.54	1.8	
MW-4	03/30/92	76,000		8,000	4,400	730	2,500
	07/01/92	95,000		6,900	2,200	70	880
	09/30/92	58,000		7,100	1,500	650	2,700
	11/19/92	33,000		5,500	840	400	1,400
	02/03/93	130,000		8,200	6,700	940	4,400
	05/25/93	63,000		16,000	6,600	1,700	8,100
	09/22/93	23,000		6,900	940	150	3,000
	12/21/93	28,000		6,900	1,900	1,100	5,500
	03/18/94	58,000		17,000	6,300	2,500	10,000
	06/15/94	59,000		20,000	4,900	2,500	9,100
	09/14/94	73,000		22,000	6,800	2,700	10,000
	12/19/94	67,000		20,000	8,300	2,300	9,100
	03/07/95	57,000		19,000	7,900	2,200	8,700
	06/08/95	61,000		17,000	6,300	2,700	9,000
	09/22/95	37,000		12,000	2,200	1,400	3,500
	12/27/95	39,000		12,000	6,000	1,800	5,800
	03/26/96	31,000		9,600	3,700	2,300	6,200
	06/13/96	240	89	64	0.93	1.8	2.7
	09/10/96	91,000	2,900	13,000	20,000	3,200	16,000
	12/05/96	16,000	1,200	3,700	3,100	580	2,800
03/10/97	630	530	91	<0.50	<0.50	0.8	
06/12/97	36,000	1,100	4,600	5,300	1,200	5,500	
08/19/97	12,000	390	420	88	61	520	
12/13/97	4,800	360	560	740	130	1,100	

NOTES: < = Below indicated detection limit  
 ND = Reported as "nondetect" by previous consultant.  
 NS = Not sampled.

**TABLE 2**  
**GROUND WATER ANALYTICAL RESULTS**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
**(All results in micrograms per Liter)**

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics					
		Gasoline	MTBE <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes	
MW-5	03/30/92	29,000		2,600	980	390	1,100	
	07/01/92	52,000		2,400	1,000	5,200	2,000	
	09/30/92	32,000		1,800	780	370	1,700	
	11/19/92	7,800		1,000	280	120	370	
	02/03/93	74,000		3,500	3,000	780	3,200	
	05/25/93	57,000		7,900	4,700	1,900	7,800	
	09/22/93	52,000		7,600	2,400	1,200	8,800	
	12/21/93	23,000		3,600	1,200	970	3,600	
	03/18/94	47,000		8,200	5,000	1,400	6,100	
	06/15/94	28,000		7,900	4,000	1,200	5,200	
	09/14/94	32,000		8,000	5,100	1,400	5,600	
	12/19/94	29,000		7,000	3,400	1,200	5,200	
	03/07/95	36,000		9,800	5,800	1,800	7,800	
	06/08/95	33,000		7,700	3,800	1,500	6,200	
	09/22/95	39,000		9,500	3,800	1,900	7,000	
	12/27/95	42,000		9,700	5,000	2,200	8,800	
	03/26/96	37,000		9,800	4,900	2,300	8,800	
	06/13/96	18,000		1,400	5,500	2,200	1,500	5,300
	09/10/96	22,000		860	5,600	1,400	1,100	3,500
	12/05/96	24,000		650	5,100	2,500	1,400	4,700
03/10/97	28,000		760	6,800	2,700	1,300	5,700	
06/12/97	49,000		700	7,500	3,200	2,300	9,200	
08/19/97	24,000		1,600	4,700	990	1,400	4,500	
12/13/97	18,000		360	2,700	760	650	4,200	
MW-6	03/30/92	73		2.1	1.1	ND	0.6	
	07/01/92	ND		ND	ND	ND	ND	
	09/30/92	ND		0.73	ND	ND	0.58	
	11/19/92	96		1.5	<0.5	<0.5	0.9	
	02/03/93	73		0.6	<0.5	<0.5	<0.5	
	05/25/93	NS		NS	NS	NS	NS	
	10/11/93	<50		<0.5	<0.5	<0.5	<0.5	
	12/21/93	<50		<0.5	<0.5	<0.5	<0.5	
	03/18/94	<50		<0.5	<0.5	<0.5	<0.5	
	06/15/94	<50		<0.5	<0.5	<0.5	<0.5	
	09/14/94	<50		<0.5	<0.5	<0.5	<0.5	
	12/19/94	<50		<0.5	<0.5	<0.5	<0.5	
	03/07/95	<50		<0.5	<0.5	<0.5	<0.5	
	06/08/95	<50		<0.5	<0.5	<0.5	<0.5	
	09/22/95	<50		<0.50	<0.50	<0.50	<0.50	
	12/27/95	<50		<0.50	<0.50	<0.50	<0.50	
	03/26/96	<50		<0.50	<0.50	<0.50	<0.50	
	06/13/96	<50		<5.0	<0.50	<0.50	<0.50	
	09/10/96	<50		<5.0	<0.50	<0.50	<0.50	
	12/05/96	<50		<5.0	<0.50	<0.50	<0.50	
03/10/97	<50		<5.0	<0.50	<0.50	<0.50		
06/12/97	<50		<5.0	<0.50	<0.50	<0.50		
08/19/97	<50		<5.0	<0.50	<0.50	<0.50		
12/13/97	<50		<5.0	<0.50	<0.50	<0.50		

NOTES: < = Below indicated detection limit  
ND = Reported as "nondetect" by previous consultant.  
NS = Not sampled.

**TABLE 2**  
**GROUND WATER ANALYTICAL RESULTS**  
**BEACON STATION #720**  
**1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA**  
**(All results in micrograms per Liter)**

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-7	03/30/92	ND		ND	ND	ND	ND
	07/01/92	ND		ND	ND	ND	ND
	09/30/92	ND		ND	ND	ND	ND
	11/19/92	<50		<0.5	<0.5	<0.5	<0.5
	02/03/93	<50		<0.5	<0.5	<0.5	<0.5
	05/25/93	NS		NS	NS	NS	NS
	09/22/93	<50		0.51	0.82	<0.5	0.81
	12/21/93	<50		<0.5	<0.5	<0.5	<0.5
	03/18/94	<50		<0.5	<0.5	<0.5	<0.5
	06/15/94	<50		<0.5	<0.5	<0.5	<0.5
	09/14/94	<50		<0.5	<0.5	<0.5	<0.5
	12/19/94	<50		<0.5	<0.5	<0.5	<0.5
	03/07/95	<50		<0.5	<0.5	<0.5	<0.5
	06/08/95	<50		<0.5	<0.5	<0.5	<0.5
	09/22/95	<50		<0.50	<0.50	<0.50	<0.50
	12/27/95	<50		<0.50	<0.50	<0.50	<0.50
	03/26/96	<50		<0.50	<0.50	<0.50	<0.50
	06/13/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/10/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/05/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
03/07/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
06/12/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
08/19/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
12/13/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
MW-8	03/30/92	3,000		1,700	880	970	1,900
	07/01/92	72,000		1,800	550	520	2,200
	09/30/92	12,000		680	140	140	560
	11/19/92	9,600		530	310	130	560
	02/03/93	44,000		1,500	1,300	490	2,300
	05/25/93	7,400		580	160	170	480
	09/22/93	2,400		490	45	37	140
	12/21/93	1,400		240	7.5	<2.5	82
	03/18/94	8,600		1,600	680	470	1,900
	06/15/94	4,800		980	380	260	1,200
	09/14/94	6,600		1,200	280	330	1,100
	12/19/94	8,400		1,800	390	500	2,000
	03/07/95	7,400		1,400	370	440	2,000
	06/08/95	6,000		790	220	290	1,400
	09/22/95	4,100		750	93	230	860
	12/27/95	5,400		860	140	350	1,400
	03/26/96	1,700		180	27	100	370
	06/13/96	2,400	42	500	67	220	850
	09/10/96	7,000	<50	1,300	100	410	1,600
	12/05/96	6,300	<50	1,100	78	410	1,600
03/07/97	6,500	<150	840	67	330	1,500	
06/12/97	7,500	<50	1,000	79	390	1,400	
08/19/97	1,100	<20	170	14	38	220	
12/13/97	4,100	24	300	29	190	860	

NOTES: < = Below indicated detection limit  
 ND = Reported as "nondetect" by previous consultant.  
 NS = Not sampled.



TABLE 2  
GROUND WATER ANALYTICAL RESULTS  
BEACON STATION #720  
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA  
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-9	12/20/94	16,000		2,500	1,400	690	2,800
	03/07/95	5,200		1,600	250	320	520
	06/08/95	4,900		1,000	98	300	200
	09/22/95	4,000		1,100	82	190	200
	12/27/95	2,800		960	100	200	250
	03/26/96	1,600		380	44	96	110
	06/13/96	1,800	750	540	71	140	180
	09/10/96	2,400	810	860	70	190	210
	12/05/96	5,500	960	2,100	420	380	720
	03/07/97	4,200	720	1,300	170	260	440
	06/12/97	11,000	1,000	2,500	490	560	1,300
	08/19/97	42,000	<1,000	7,700	3,500	2,000	8,300
	12/13/97	13,000	710	1,300	280	960	3,100

NOTES: < = Below indicated detection limit  
ND = Reported as "nondetect" by previous consultant.  
NS = Not sampled.



Report Number : 29299

Date : 10/24/02

Richard Munsch  
RDM Environmental  
1704 Via Riata  
Roseville, CA 95747

Subject : 3 Air Samples  
Project Name : Tesoro Station 67106  
Project Number : 67106  
P.O. Number : 67106

Dear Mr. Munsch,

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,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large initial "J".

Joel Kiff



Report Number : 29299

Date : 10/24/02

Project Name : Tesoro Station 67106

Project Number : 67106

Sample : SVE-Inf

Matrix : Air

Lab Number : 29299-01

Sample Date :10/21/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Toluene	0.46	0.050	ppmv	EPA 8260B	10/23/02
Ethylbenzene	0.068	0.050	ppmv	EPA 8260B	10/23/02
Total Xylenes	0.33	0.050	ppmv	EPA 8260B	10/23/02
Methyl-t-butyl ether	0.93	0.10	ppmv	EPA 8260B	10/23/02
TPH as Gasoline	7.3	5.0	ppmv	EPA 8260B	10/23/02
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	10/23/02
4-Bromofluorobenzene (Surr)	97.0		% Recovery	EPA 8260B	10/23/02

Sample : SVE-MID

Matrix : Air

Lab Number : 29299-02

Sample Date :10/21/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Toluene	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Total Xylenes	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Methyl-t-butyl ether	< 0.10	0.10	ppmv	EPA 8260B	10/23/02
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	10/23/02
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	10/23/02
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	10/23/02

Approved By:   
Joel Kiff



Report Number : 29299

Date : 10/24/02

Project Name : Tesoro Station 67106

Project Number : 67106

Sample : SVE-Eff

Matrix : Air

Lab Number : 29299-03

Sample Date : 10/21/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Toluene	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Total Xylenes	< 0.050	0.050	ppmv	EPA 8260B	10/23/02
Methyl-t-butyl ether	< 0.10	0.10	ppmv	EPA 8260B	10/23/02
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	10/23/02
Toluene - d8 (Surr)	97.0		% Recovery	EPA 8260B	10/23/02
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	10/23/02

Approved By:   
Joel Kiff



720 Olive Drive, Suite D  
 Davis, CA 95616  
 Lab: 530.297.4800  
 Fax: 530.297.4808

Lab No. 29299

Page 1 of 1

Project Contact (Hardcopy or PDF To): Richard Munsch  
 California EDF Report?  Yes  No

Company/Address: RPM Environmental  
 Recommended but not mandatory to complete this section:  
 Sampling Company Log Code: \_\_\_\_\_

Phone No.: (916) 771-7099 FAX No.: (916) 771-4584  
 Global ID: \_\_\_\_\_

Project Number: 67106 P.O. No: 67106  
 EDF Deliverable To (Email Address): \_\_\_\_\_

Project Name: Terow Station 67106  
 Sample Signature: [Signature]

Project Address: 1088 Marina Blvd San Leandro CA

Sample Designation	Sampling		Container				Preservative				Matrix	
	Date	Time	40 ml VOA	SLEEVE	Teckla	HCl	HNO <sub>3</sub>	ICE	NONE	WATER	SOIL	Teckla
SVE-Inf	10/4/02	6:30			X							X
SVE-MID	10/4/02	6:26			X							X
SVE-Elf	10/21/02	6:28			X							X

**Chain-of-Custody Record and Analysis Request**

Analysis Request													TAT
BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/MB015)	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	TPH Gas/BTEX/MTBE (8260B)	5 Oxygenates/TPH Gas/BTEX (8260B)	7 Oxygenates/TPH Gas/BTEX (8260B)	5 Oxygenates (8260B)	7 Oxygenates (8260B)	Lead Scav. (1.2 DCA & 1.2 EDB - 8260B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421/239.2) TOTAL (X) W.E.T. (X)	12 hr/24 hr/48 hr/72 hr/1 wk
				X	X								For Lab Use Only

Relinquished by: <u>[Signature]</u>	Date	Time	Received by: _____
Relinquished by: _____	Date	Time	Received by: _____
Relinquished by: _____	Date	Time	Received by Laboratory: <u>[Signature]</u>

Remarks: STAT  
 Bill to: Terow Petroleum  
Bob Poyouan



Report Number : 29997

Date : 12/3/2002

Richard Munsch  
RDM Environmental  
1704 Via Riata  
Roseville, CA 95747

Subject : 3 Air Samples  
Project Name : 67106  
Project Number : 67106  
P.O. Number : 67106

Dear Mr. Munsch,

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,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large initial "J".

Joel Kiff



Report Number : 29997

Date : 12/3/2002

Project Name : 67106

Project Number : 67106

Sample : SVE-INF

Matrix : Air

Lab Number : 29997-01

Sample Date :11/24/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.064	0.050	ppmv	EPA 8260B	11/26/2002
Toluene	0.80	0.050	ppmv	EPA 8260B	11/26/2002
Ethylbenzene	0.11	0.050	ppmv	EPA 8260B	11/26/2002
Total Xylenes	0.56	0.050	ppmv	EPA 8260B	11/26/2002
Methyl-t-butyl ether	2.3	0.10	ppmv	EPA 8260B	11/26/2002
TPH as Gasoline	12	5.0	ppmv	EPA 8260B	11/26/2002
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	11/26/2002
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	11/26/2002

Sample : SVE-MID

Matrix : Air

Lab Number : 29997-02

Sample Date :11/24/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Toluene	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Total Xylenes	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Methyl-t-butyl ether	< 0.10	0.10	ppmv	EPA 8260B	11/26/2002
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	11/26/2002
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	11/26/2002
4-Bromofluorobenzene (Surr)	97.8		% Recovery	EPA 8260B	11/26/2002

Approved By:  Joel Kiff



Report Number : 29997

Date : 12/3/2002

Project Name : 67106

Project Number : 67106

Sample : SVE-EFF

Matrix : Air

Lab Number : 29997-03

Sample Date : 11/24/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Toluene	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Total Xylenes	< 0.050	0.050	ppmv	EPA 8260B	11/26/2002
Methyl-t-butyl ether	< 0.10	0.10	ppmv	EPA 8260B	11/26/2002
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	11/26/2002
Toluene - d8 (Surr)	110		% Recovery	EPA 8260B	11/26/2002
4-Bromofluorobenzene (Surr)	95.3		% Recovery	EPA 8260B	11/26/2002

Approved By:   
Joel Kiff





2795 2nd Street, Suite 300  
 Davis, CA 95616  
 Lab: 530.297.4800  
 Fax: 530.297.4808

Lab No. 29997 Page 1 of 1

Project Contact (Hardcopy or PDF To): RDM  
 Company/Address: RDM Environmental  
 Phone No.: (916) 771-7098 FAX No.: (916) 771-4584  
 Project Number: 67106 P.O. No.: 67106  
 Project Name: 67106  
 Project Address: 1088 Marinex Blvd San Leandro CA

California EDF Report?  Yes  No  
 Recommended but not mandatory to complete this section:  
 Sampling Company Log Code: \_\_\_\_\_  
 Global ID: \_\_\_\_\_  
 EDF Deliverable To (Email Address): \_\_\_\_\_  
 Sampler Signature: [Signature]

**Chain-of-Custody Record and Analysis Request**

Sample Designation	Sampling		Container				Preservative				Matrix		
	Date	Time	40 ml VOA	SLEEVE	Tech	HCl	HNO <sub>3</sub>	ICE	NONE	WATER	SOIL	Air	
SVE-Inf	11/24/07	1:10											
SVE-MID	11/24/07	1:08											
SVE-Edt	11/24/07	1:04											

Analysis Request												TAT		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12 hr/24 hr/48 hr/72 hr/1 wk	For Lab Use Only
BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/M8015)	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	TPH Gas/BTEX/MTBE (8260B)	5 Oxygenates/TPH Gas/BTEX (8260B)	7 Oxygenates/TPH Gas/BTEX (8260B)	5 Oxygenates (8260B)	7 Oxygenates (8260B)	Lead Scav. (1.2 DCA & 1.2 EDB - 8260B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421239-2) TOTAL (X) W.E.T. (X)		

Relinquished by: [Signature] Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: 11/25/07 Time: 15:18 Received by Laboratory: [Signature]

Remarks: STAT  
 Bill to: Tesoro Petroleum / Rob Ponovan



Report Number : 30547

Date : 12/27/02

Richard Munsch  
RDM Environmental  
1704 Via Riata  
Roseville, CA 95747

Subject : 3 Air Samples  
Project Name : Tesoro 67106  
Project Number : 67106  
P.O. Number : 67106

Dear Mr. Munsch,

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,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large initial "J".

Joel Kiff



Report Number : 30547

Date : 12/27/02

Project Name : Tesoro 67106

Project Number : 67106

Sample : SVE-INF

Matrix : Air

Lab Number : 30547-01

Sample Date :12/20/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.18	0.050	ppmv	EPA 8260B	12/22/02
Toluene	2.6	0.050	ppmv	EPA 8260B	12/22/02
Ethylbenzene	0.34	0.050	ppmv	EPA 8260B	12/22/02
Total Xylenes	1.4	0.050	ppmv	EPA 8260B	12/22/02
Methyl-t-butyl ether	4.7	0.10	ppmv	EPA 8260B	12/22/02
TPH as Gasoline	27	5.0	ppmv	EPA 8260B	12/22/02
Toluene - d8 (Surr)	97.7		% Recovery	EPA 8260B	12/22/02
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	12/22/02

Sample : SVE-MID

Matrix : Air

Lab Number : 30547-02

Sample Date :12/20/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	12/22/02
Toluene	< 0.050	0.050	ppmv	EPA 8260B	12/22/02
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	12/22/02
Total Xylenes	< 0.050	0.050	ppmv	EPA 8260B	12/22/02
Methyl-t-butyl ether	0.63	0.10	ppmv	EPA 8260B	12/22/02
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	12/22/02
Toluene - d8 (Surr)	95.0		% Recovery	EPA 8260B	12/22/02
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	12/22/02

Approved By:  Joel Kiff



Report Number : 30547

Date : 12/27/02

Project Name : Tesoro 67106

Project Number : 67106

Sample : SVE-EFF

Matrix : Air

Lab Number : 30547-03

Sample Date :12/20/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	12/22/02
Toluene	0.13	0.050	ppmv	EPA 8260B	12/22/02
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	12/22/02
Total Xylenes	0.052	0.050	ppmv	EPA 8260B	12/22/02
Methyl-t-butyl ether	0.24	0.10	ppmv	EPA 8260B	12/22/02
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	12/22/02
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	12/22/02
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	12/22/02

Approved By:  Joel Kiff

