

PO-216



TESORO

Tesoro Petroleum Companies, Inc.
Corporate Environmental Affairs
3450 South 344th Way, Suite 100
Auburn, WA 98001-5931
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253 896 8887 Fax

Alameda County
SEP 03 2003
Environmental Health

September 5, 2003

Mr. Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, room 250
Alameda, California 94502

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

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

**RE: Tesoro Station No. 67106 1088 Marina Blvd. San Leandro, California
Groundwater Monitoring Report Second Quarter 2003**

Dear Mr. Seery, Mr. Zolfarelli, et al:

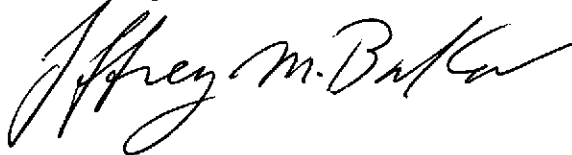
Tesoro Petroleum Companies, Inc., on behalf of Tesoro Refining and Marketing Company (Tesoro), submits the referenced Quarterly Monitoring Report for your review. Groundwater monitoring data collected on May 15, 2003 continue to indicate BTEX and MTBE concentrations within the historical monitoring range for this site. The on-site remediation system composed of soil vapor and groundwater extraction (the groundwater extraction system was inoperative in the second quarter) and treatment, coupled with air sparging continues to be effective in mitigating historical groundwater impacts.

MTBE and benzene concentrations continue to be confined on-site. Elevated concentrations of BTEX, TPH-G and MTBE observed in monitoring wells MW-1 through MW-5 indicate that operation of the SVE and air sparging systems should continue, along with quarterly monitoring. The elevated concentrations in these wells appear to warrant additional efforts to maintain control of this site. Therefore, Tesoro recommends:

Implementation of a limited feasibility study and pilot testing to determine whether other remediation measures can be effectively implemented at this site to mitigate groundwater impacts. Viable alternatives appear to include restarting the groundwater extraction and treatment system, ozone injection and/or enhanced bioremediation.

Please review the report and recommendations above and provide project direction. Please contact me with any questions or concerns regarding this project at (253) 896-8708. Thank you for your continued cooperation concerning this project.

Sincerely,

A handwritten signature in black ink that reads "Jeffrey M. Baker". The signature is written in a cursive style with a large, stylized initial 'J'.

Jeffrey M. Baker, P.E.
Supervisor, Environmental
Compliance & Remediation
Tesoro Petroleum Companies, Inc.

Attachment

CC: RDM – Richard Munsch (w/o attachment)
Brian Kelleher – Kelleher & Associates
File – Remediation, San Leandro

Hirbod Enterprises – Owner
Sam Hirbod
111 Deerwood Road, Suite 110
San Ramon, CA 94583



Environmental

1704 Via Riata, Roseville, CA 95747

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

August 18, 2003

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

Subject: *Quarterly Ground Water Monitoring and
Remediation System Status Report, Second Quarter 2003*
Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California
RDM Project No. 00-67106

Alameda County
SEP 03 2003
Environmental Health

Dear Mr. Donovan:

On Behalf of Tesoro Refining and Marketing Company, RDM Environmental (RDM) has prepared 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 **Second Quarter 2003**.

Work Performed During the Second Quarter 2003:

- Doulos Environmental Inc. performed ground water sampling on **May 15, 2003**.
- 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.

Cost Effective Solutions

Operation & Maintenance Site Visits:

- Operation and maintenance site visits were conducted for the **Second Quarter 2003** on:
 - **April 1 and 22, 2003**
 - **May 15 and 29, 2003**
 - **June 12 and 24, 2003**

Ground Water Extraction System Performance:

- The ground water treatment system did not operate during the **Second Quarter 2003**.
- During the **Second Quarter 2003**, 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.
- Monitoring wells MW-4, MW-5 and MW-9 were used as recovery wells.

Soil Vapor Extraction System Performance:

- The SVE system operated continuously during the **Second Quarter 2003**.
- During the **Second Quarter 2003**, the SVE system removed approximately **11** pounds of vapor equivalent gasoline.
- As of **June 10, 2003**, the SVE system has removed approximately **2,598** pounds (**426** 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 **Second Quarter 2003**.
- The Air sparging system is connected to sparge points SP-1 through SP-6.

CONCLUSIONS/RECOMMENDATIONS

RDM recommends continued operation of the SVE and air sparge systems and quarterly ground water monitoring. In view of the elevated levels of dissolved BTEX, TPHg and MTBE concentrations in MW-1 thru MW-5, RDM recommends conducting additional feasibility studies and pilot testing to develop an optimal strategy for remediation of the ground water. The alternatives that will be evaluated include re-commissioning the existing ground water system, ozone sparging, and enhanced bioremediation.

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
August 18, 2003
Page 3

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

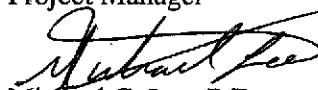
Case Worker
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

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 1Q GWM 2-20-03)

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

Monitoring Well	Date	Reference Elevation (ft) ^a	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	No sheen
	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
02/20/03	12.80		22.67	<1.5	<1.5	130	89	7,300	9.3	ND	No sheen	
05/15/03	12.90	22.57	<2.5	<2.5	270	120	14,000	4.7	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	13.75	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	No sheen
	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
02/20/03	11.80		23.31	67	130	1,100	2,800	23,000	71	ND	No sheen	
05/15/03	12.27	22.84	57	110	840	2,300	19,000	43	ND	No sheen		

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Former Beacon Station No. 3720
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San Leandro, California

Monitoring Well	Date	Reference Elevation (ft) ^a	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-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 ^b , 19 ^c	No sheen	
	02/20/03	12.92	21.92	2.5	<0.5	<0.5	<0.5	2,400	340	13 ^c	No sheen		
05/15/03	12.83	22.01	2.0	<0.5	1.2	<0.5	2,100	200	0.85 ^b , 15 ^c	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	
	02/20/03	13.33	22.00	57	240	650	3,700	18,000	98	ND	No sheen		
05/15/03	13.29	22.04	44	100	200	1,200	8,500	120	21 ^c	No sheen			

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Former Beacon Station No. 3720
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San Leandro, California

Monitoring Well	Date	Reference Elevation (ft) ^a	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-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	480	99	160	730	4,700	<250	NA	No sheen	
	08/31/98		12.79	19.91	200	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	8.5	<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 ^c	No sheen		
	02/20/03	13.35	21.74	22	<1.0	81	77	2,900	270	170 ^c	No sheen		
05/15/03	13.11	21.98	55	1.8	94	85	3,700	220	0.64 ^b , 170 ^c	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			
02/20/03	11.26	21.48	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	No sheen			
05/15/03	11.85	20.89	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	No sheen			

TABLE 1

GROUND WATER MONITORING DATA

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

Monitoring Well	Date	Reference Elevation (ft) ^a	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-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	
	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	
	02/20/03	12.75	20.89	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	No sheen		
05/15/03	12.45	21.19	<0.5	<0.5	<0.5	<0.5	<50	0.69	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 ^c	No sheen	
	02/20/03	13.81	22.27	17	<1.0	19	42	760	520	16 ^c	No sheen		
05/15/03	13.68	22.40	14	<0.5	16	23	690	370	0.79 ^b , 10 ^c	No sheen			

TABLE 1

GROUND WATER MONITORING DATA

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

Monitoring Well	Date	Reference Elevation (ft) ^a	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Bthyl-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	34.63	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
	02/20/03		12.46	22.17	<0.5	<0.5	<0.5	<0.5	<50	28	ND	No sheen
05/15/03		12.26	22.37	<0.5	<0.5	<0.5	<0.5	<50	8.9	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
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

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	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
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

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	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
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

TABLE 2

SVE SYSTEM ANALYTICAL RESULTS

Tesoro Station No. 67106
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 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	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
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

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	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	10/17/2000	<0.05	0.075	<0.05	0.14	<5.0	NA
Mid-Carbon	10/17/2000	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	10/17/2000	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	11/29/2000	<0.05	0.24	0.08	0.29	<5.0	NA
Mid-Carbon	11/29/2000	<0.05	0.07	<0.05	0.18	<5.0	NA
Effluent	11/29/2000	<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
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

TABLE 2

SVE SYSTEM ANALYTICAL RESULTS

Tescoro 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	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
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

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	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
Influent	01/29/03	<0.05	0.11	<0.05	0.071	<5.0	NA
Mid-Carbon	01/29/03	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Effluent	01/29/03	<0.05	<0.05	<0.05	<0.05	<5.0	NA
Influent	02/20/03	<0.05	0.19	<0.05	0.17	<5.0	0.61
Mid-Carbon	02/20/03	<0.05	<0.05	<0.05	<0.05	<5.0	<0.10
Effluent	02/20/03	<0.05	<0.05	<0.05	<0.05	<5.0	<0.10
Influent	03/20/03	<0.05	0.12	<0.05	0.11	<5.0	0.59
Mid-Carbon	03/20/03	<0.05	<0.05	<0.05	<0.05	<5.0	<0.10
Effluent	03/20/03	<0.05	<0.05	<0.05	<0.05	<5.0	<0.10
Influent	04/22/03	<0.05	0.15	0.067	0.44	5.6	1.1
Mid-Carbon	04/22/03	<0.05	<0.05	<0.05	<0.05	<5.0	1.6
Effluent	04/22/03	<0.05	<0.05	<0.05	<0.05	<5.0	0.91
Influent	05/29/03	<0.05	0.094	<0.05	0.084	<5.0	0.96
Mid-Carbon	05/29/03	<0.05	<0.05	<0.05	<0.05	<5.0	3.3
Effluent	05/29/03	<0.05	<0.05	<0.05	<0.05	<5.0	0.85
Influent	06/10/03	<0.05	<0.05	<0.05	<0.05	<5.0	2.2
Mid-Carbon	06/10/03	<0.05	<0.05	<0.05	<0.05	<5.0	0.55
Effluent	06/10/03	<0.05	<0.05	<0.05	<0.05	<5.0	0.50

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 Influent (ppmv)	TPH Effluent (ppmv)	Benzene Influent (ppmv)	Benzene Effluent (ppmv)	TPH Removal (%)	Benzene Removal (%)	TPH	TPH	Benzene	Benzene	FID or LAB	Cumulative	Cumulative	Total Hours	Change in hours of operation
	Flow Rate (ft ³ /min)	Flow Rate (ft ³ /min)							Extraction Rate (lbs/day)	Mass Emission (lbs/day)	Extraction Rate (lbs/day)	Emission Rate (lbs/day)		TPH Extraction (lbs)	TPH Extraction (gallons)		
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	Effluent	TPH		Benzene		TPH	Benzene	TPH	TPH	Benzene	Benzene	FID or LAB	Cumulative	Cumulative	Total Hours	Change in hours of operation
	Flow Rate (ft ³ /min)	Flow Rate (ft ³ /min)	TPH Influent (ppmv)	TPH Effluent (ppmv)	Influent (ppmv)	Effluent (ppmv)	Removal (%)	Removal (%)	Extraction Rate (lbs/day)	Mass Emission (lbs/day)	Extraction Rate (lbs/day)	Emission Rate (lbs/day)		TPH Extraction (lbs)	TPH Extraction (gallons)		
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
01/29/03	65	65	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,584	424	32,613	959
02/20/03	68	68	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.11	<0.11	<0.001	<0.001	LAB	2,586	424	33,138	525
03/20/03	62	62	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,587	424	33,426	288
04/22/03	65	65	5.6	<5.0	<0.05	<0.05	NC	NC	<0.12	<0.10	<0.001	<0.001	LAB	2,593	425	34,600	1,175

**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 Influent (ppmv)	TPH Effluent (ppmv)	Benzene Influent (ppmv)	Benzene Effluent (ppmv)	TPH Removal (%)	Benzene Removal (%)	TPH	TPH	Benzene	Benzene	FID or LAB	Cumulative	Cumulative	Total Hours	Change in hours of operation
	Flow Rate (ft ³ /min)	Flow Rate (ft ³ /min)							Extraction Rate (lbs/day)	Mass Emission (lbs/day)	Extraction Rate (lbs/day)	Emission Rate (lbs/day)		TPH Extraction (lbs)	TPH Extraction (gallons)		
05/29/03	65	65	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,597	426	35,480	880
06/10/03	64	64	<5.0	<5.0	<0.05	<0.05	NC	NC	<0.10	<0.10	<0.001	<0.001	LAB	2,598	426	35,776	296

* 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.

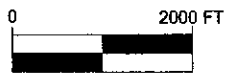
NC = Not Calculated



T.3 S.

R.3 W.

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



SCALE 1:24,000



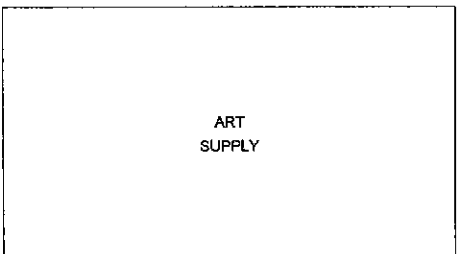
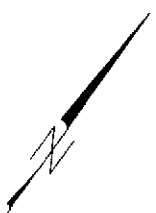
QUADRANGLE LOCATION

FIGURE 1
SITE LOCATION MAP
 TESORO STATION NO. 67106
 (FORMER BEACON STATION NO. 3720)
 1088 MARINA BOULEVARD
 SAN LEANDRO, CA.

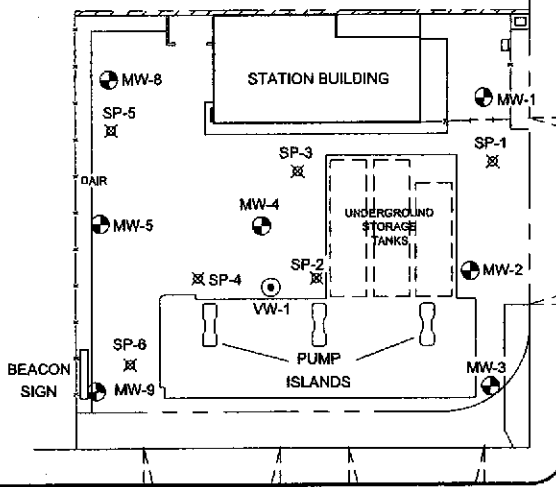
PROJECT NO. 00-3720	DRAWN BY M.L. 12/18/01
FILE NO. 00-3720-1A	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY



WAYNE AVENUE



MW-7

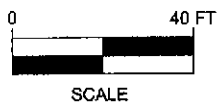


MARINA BOULEVARD

MW-6

LEGEND:

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



NOTES:

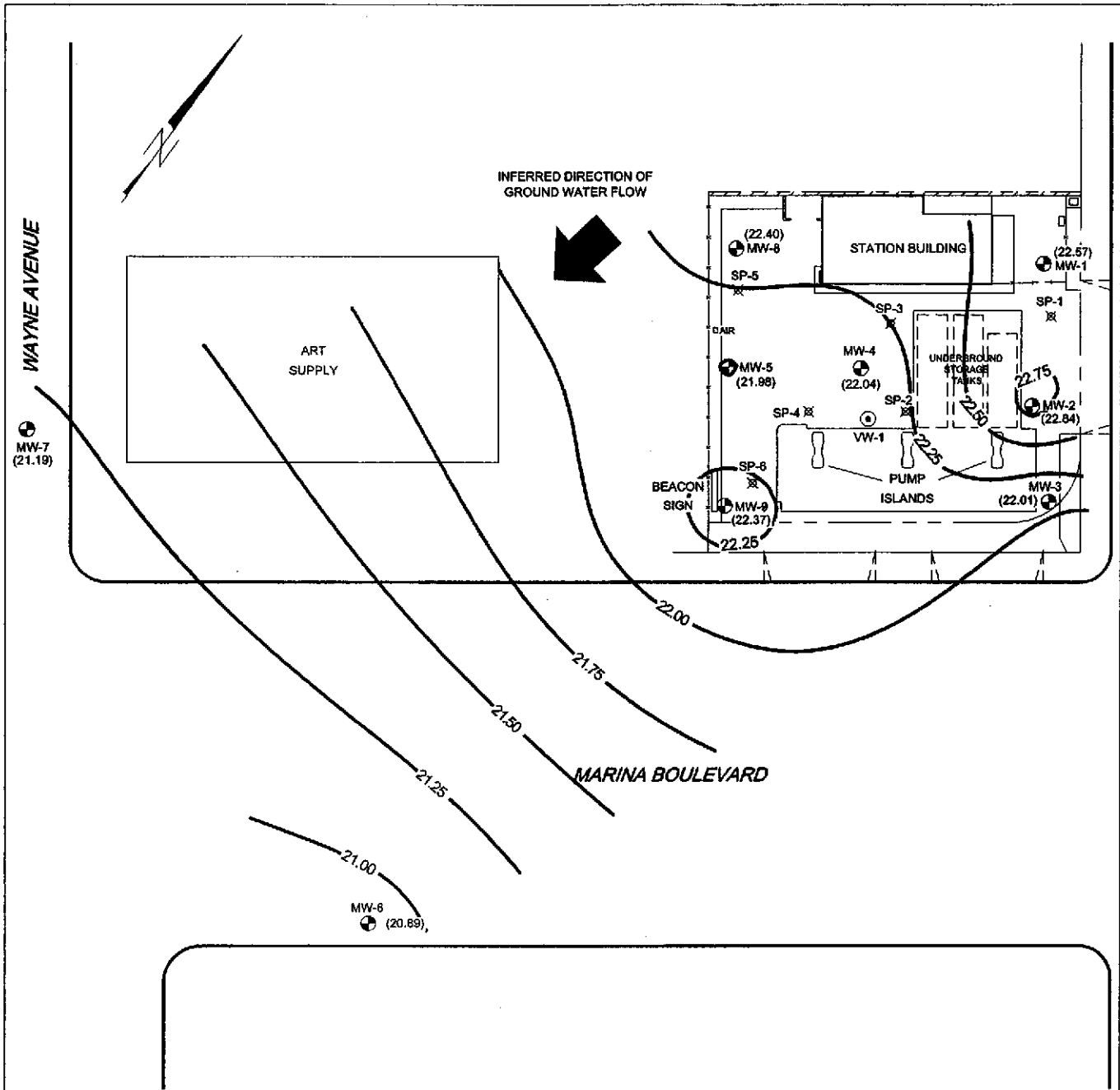
1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

**FIGURE 2
SITE 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. 00-3720-6	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY

**RDM
Environmental**



LEGEND:

- PROPERTY LINE
- x-x-x- FENCE
- MW-1 MONITORING WELL LOCATION
- ⊙ VW-1 VAPOR EXTRACTION WELL LOCATION
- ⊗ SP-1 AIR SPARGING WELL LOCATION
- (22.57) GROUND WATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- 21.60— WATER ELEVATION CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL



NOTES:

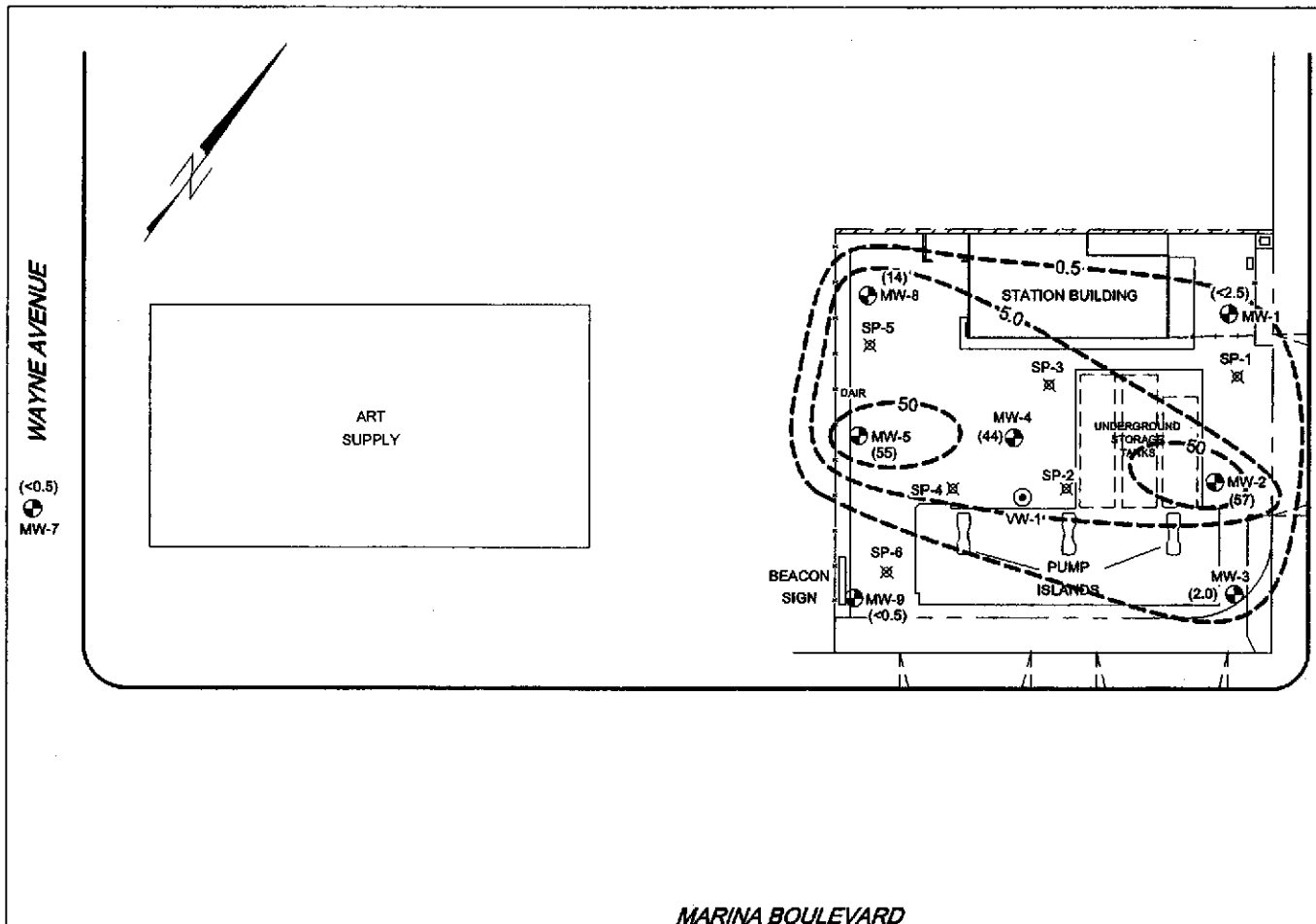
1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

FIGURE 3
GROUND WATER ELEVATION CONTOUR MAP
5/15/03

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

PROJECT NO. 00-3720	DRAWN BY M.L. 7/18/03
FILE NO. 00-3720-6	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY





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
- (57) BENZENE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- 5.0— BENZENE ISOCONCENTRATION CONTOUR

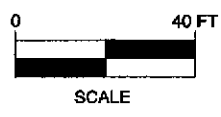


FIGURE 4
BENZENE ISOCONCENTRATION MAP
 5/15/03

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

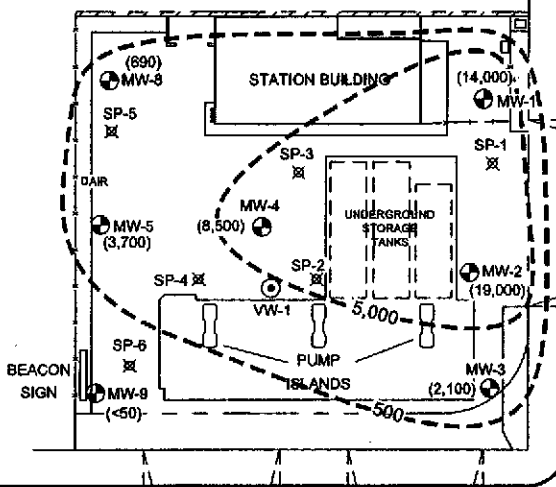
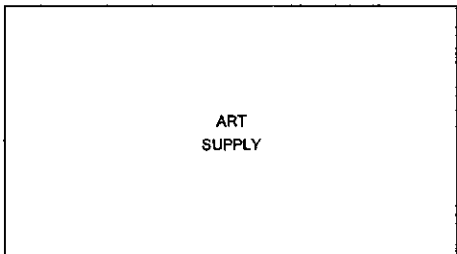
PROJECT NO. 00-3720	DRAWN BY M.L. 7/18/03	
FILE NO. 00-3720-6	PREPARED BY RDM	
REVISION NO. 1	REVIEWED BY	

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.

WAYNE AVENUE

MW-7
(50)



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
- (19,000) 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.

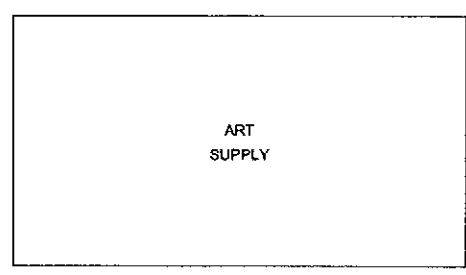
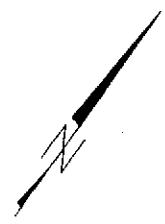
FIGURE 5
TPHg ISOCONCENTRATION MAP
5/15/03

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

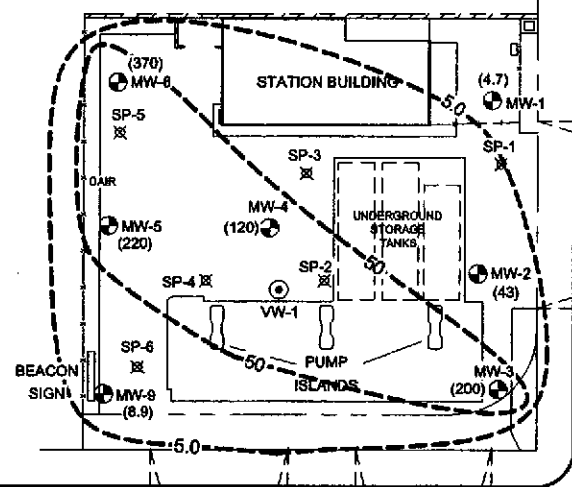
PROJECT NO. 00-3720	DRAWN BY M.L. 7/18/03
FILE NO. 00-3720-6	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY

RDM
Environmental

WAYNE AVENUE



(0.69)
MW-7

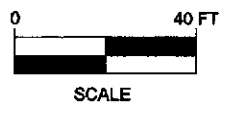


MARINA BOULEVARD

MW-6
(370)

LEGEND:

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



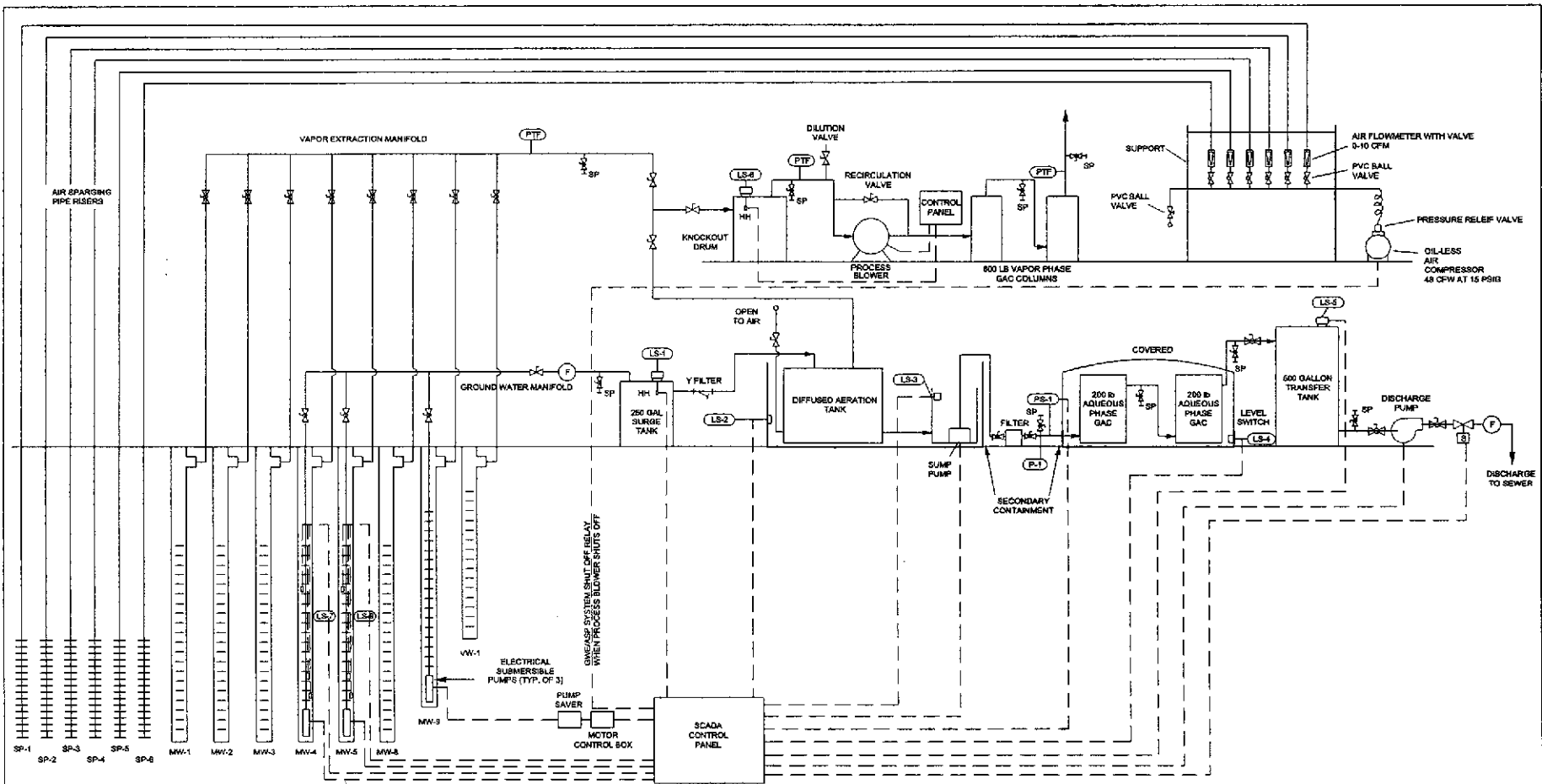
NOTES:

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
 5/15/03
 TESORO STATION NO. 67106
 (FORMER BEACON STATION NO. 3720)
 1088 MARINA BOULEVARD
 SAN LEANDRO, CA.

PROJECT NO. 00-3720	DRAWN BY M.L. 7/18/03
FILE NO. 00-3720-6	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY





- LEGEND:**
- (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) DISCHARGE HOLDING 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-7) 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-8) 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

- BALL VALVE
- GATE VALVE
- SOLENOID VALVE
- SAMPLE PORT
- PRESSURE, TEMPERATURE, FLOW MONITORING POINT
- FLOW TOTALIZER
- PRESSURE GAUGE
- 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



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.

ENCLOSURE B

Ground Water Sampling Information

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

Project Address: 1088 Marina Blvd.
San Leandro

Date: 5-15-03

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	8:22		12.90	17.74				U.V.
MW-2	8:17		12.27	22.71				U.V.
MW-3	8:13		12.83	28.40				
MW-4	8:26		13.29	27.45				
MW-5	8:33		13.11	28.80				
MW-6	8:09		11.85	14.86				
MW-7	8:05		12.45	25.45				
MW-8	8:30		13.68	28.05				U.V.
MW-9	8:38		12.26	24.60				

Notes:

Client: Tesoro 67106

Sampling Date: 5-15-03

Site: 1088 Marina Blvd.

Project No.: _____

San Leandro, Ca.

Well Designation: MW-1

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: 8:22

Time: 10:12

Calculated purge: 3.1

Depth of well: 17.74

Depth to water: 12.96

Actual purge: 3.1

Depth to water: 12.90

Start purge: 10:00

Sampling time: 10:13

Time	Temperature	E.C.	pH	Turbidity	Volume
10:01	68.3	506	7.30		1
10:02	69.0	430	7.21		2
10:03	70.1	410	7.16		3
10:04	72.3	405	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: 5-15-03

Site: 1088 Marina Blvd.

Project No.:

San Leandro, Ca.

Well Designation: MW-2

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): 4
 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: 8:17 Time: 9:44 Calculated purge: 6.7
 Depth of well: 22.71 Depth to water: 13.88 Actual purge: 6.7
 Depth to water: 12.27

Start purge: 9:37 Sampling time: 9:45

Time	Temperature	E.C.	pH	Turbidity	Volume
9:38	69.5	690	7.56		1
9:39	70.6	605	7.40		2
9:40	71.2	560	7.03		3
9:41	71.8	534	6.98		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: 5-15-03

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): 4
 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: 8:13 _____ Time: 9:31 _____ Calculated purge: 9.9
 Depth of well: 28.40 _____ Depth to water: 14.13 _____ Actual purge: 10.0
 Depth to water: 12.83 _____

Start purge: 9:19 Sampling time: 9:32

Time	Temperatures	E.C.	pH	Turbidity	Volume
9:20	72.0	609	7.15		1
9:21	73.1	545	7.12		2
9:22	73.4	510	7.06		3
9:23	73.5	502	7.05		4

Sample appearance: Clean Lock: Delphman

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: 5-15-03

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): 2
 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 24 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: 8:26 Time: 10:30 Calculated purge: 9.0
 Depth of well: 27.45 Depth to water: 14.16 Actual purge: 9.0
 Depth to water: 13.29

Start purge: 10:18 Sampling time: 10:32

Time	Temperature	E.C.	pH	Turbidity	Volume
10:19	72.0	546	7.30		1
10:20	71.3	510	7.16		2
10:21	71.9	491	7.11		3
10:22	71.6	480	7.09		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: 5-15-03

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): 5
 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 24 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 Time: 8:33 Recharge Measurement Time: 11:12 Calculated purge: 10.0
 Depth of well: 98.80 Depth to water: 74.51 Actual purge: 10.0
 Depth to water: 13.11

Start purge: 11:00 Sampling time: 11:13

Time	Temperature	E.C.	pH	Turbidity	Volume
11:01	70.8	603	7.40		1
11:02	71.0	540	7.12		2
11:03	71.3	512	7.11		3
11:04	71.6	509	7.08		4

Sample appearance: Clean 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: 5-15-03

Site: 1088 Marina Blvd.

Project No.: _____

San Leandro, Ca.

Well Designation: MW-6

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): 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: 8:09 Time: 9:13 Calculated purge: 1.9
 Depth of well: 14.86 Depth to water: 71.93 Actual purge: 1.9
 Depth to water: 11.85

Start purge: 9:03 Sampling time: 9:14

Time	Temperature	E.C.	pH	Turbidity	Volume
9:04	70.5	705	7.16		1
9:05	71.0	603	7.10		2
9:06	71.8	593	7.05		3
9:07	71.9	560	7.01		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: 5-15-03

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: 8:05 Time: 8:51 Calculated purge: 8.3

Depth of well: 25.45 Depth to water: 13.80 Actual purge: 2.3

Depth to water: 12.45

Start purge: 8:44

Sampling time: 8:52

Time	Temperature	E.C.	pH	Turbidity	Volume
8:45	70.8	530	7.14		1
8:46	71.3	491	7.06		2
8:47	71.6	420	6.99		3
8:48	71.9	413	6.96		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: 5-15-03

Site: 1088 Marina Blvd.

Project No.: _____

San Leandro, Ca.

Well Designation: MW-8

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

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 X

12" CNI _____

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

Recharge Measurement

Time: 8:30

Time: 10:50

Calculated purge: 9.2

Depth of well: 28.05

Depth to water: 14.30

Actual purge: 9.2

Depth to water: 13.68

Start purge: 10:40

Sampling time: 10:53

Time	Temperature	E.C.	pH	Turbidity	Volume
10:41	71.5	591	7.09		1
10:42	71.8	517	7.03		2
10:43	72.2	501	6.99		3
10:44	72.9	490	6.95		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: 5-15-03

Site: 1088 Marina Blvd.

Project No.: _____

San Leandro, Ca.

Well Designation: MW-9

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): 5
 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 24 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: 8:38 Time: 11:36 Calculated purge: 32.0
 Depth of well: 24.60 Depth to water: 13.96 Actual purge: 32.0
 Depth to water: 12.26

Start purge: 11:22 Sampling time: 11:37

Time	Temperature	E.C.	pH	Turbidity	Volume
11:24	70.5	609	7.14		1
11:26	71.0	550	7.08		2
11:29	71.3	513	7.00		3
11:31	71.6	509	6.93		4

Sample appearance: clear Lock: NA

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 : 33176

Date : 5/21/2003

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,

A handwritten signature in black ink that reads "Joel Kiff".

Joel Kiff




Report Number : 33176

Date : 5/21/2003

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 sample MW-5 for the analyte Methyl-t-butyl ether were affected by the analyte concentration already present in the un-spiked sample. Tert-Butanol results for sample MW-8 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

Approved By:  _____
Joel Kiff

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



Report Number : 33176

Date : 5/21/2003

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-1

Matrix : Water

Lab Number : 33176-01

Sample Date :5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 2.5	2.5	ug/L	EPA 8260B	5/18/2003
Toluene	< 2.5	2.5	ug/L	EPA 8260B	5/18/2003
Ethylbenzene	270	2.5	ug/L	EPA 8260B	5/18/2003
Total Xylenes	120	2.5	ug/L	EPA 8260B	5/18/2003
Methyl-t-butyl ether (MTBE)	4.7	2.5	ug/L	EPA 8260B	5/18/2003
Diisopropyl ether (DIPE)	< 2.5	2.5	ug/L	EPA 8260B	5/18/2003
Ethyl-t-butyl ether (ETBE)	< 2.5	2.5	ug/L	EPA 8260B	5/18/2003
Tert-amyl methyl ether (TAME)	< 2.5	2.5	ug/L	EPA 8260B	5/18/2003
Tert-Butanol	< 25	25	ug/L	EPA 8260B	5/18/2003
TPH as Gasoline	14000	250	ug/L	EPA 8260B	5/18/2003
1,2-Dichloroethane	< 2.5	2.5	ug/L	EPA 8260B	5/18/2003
1,2-Dibromoethane	< 2.5	2.5	ug/L	EPA 8260B	5/18/2003
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	5/18/2003
4-Bromofluorobenzene (Surr)	93.1		% Recovery	EPA 8260B	5/18/2003
Dibromofluoromethane (Surr)	97.8		% Recovery	EPA 8260B	5/18/2003
1,2-Dichloroethane-d4 (Surr)	99.0		% Recovery	EPA 8260B	5/18/2003

Approved By:  Joel Kiff

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



Report Number : 33176

Date : 5/21/2003

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-2

Matrix : Water

Lab Number : 33176-02

Sample Date :5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	57	5.0	ug/L	EPA 8260B	5/18/2003
Toluene	110	5.0	ug/L	EPA 8260B	5/18/2003
Ethylbenzene	840	5.0	ug/L	EPA 8260B	5/18/2003
Total Xylenes	2300	5.0	ug/L	EPA 8260B	5/18/2003
Methyl-t-butyl ether (MTBE)	43	5.0	ug/L	EPA 8260B	5/18/2003
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
Tert-amyl methyl ether (TAME)	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
Tert-Butanol	< 50	50	ug/L	EPA 8260B	5/18/2003
TPH as Gasoline	19000	500	ug/L	EPA 8260B	5/18/2003
1,2-Dichloroethane	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
1,2-Dibromoethane	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
Toluene - d8 (Surr)	97.0		% Recovery	EPA 8260B	5/18/2003
4-Bromofluorobenzene (Surr)	95.0		% Recovery	EPA 8260B	5/18/2003
Dibromofluoromethane (Surr)	98.1		% Recovery	EPA 8260B	5/18/2003
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	5/18/2003

Approved By:  Joel Kiff

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



Report Number : 33176

Date : 5/21/2003

Project Name : **Tesoro**

Project Number : **67106 San Leandro**

Sample : **MW-3**

Matrix : Water

Lab Number : 33176-03

Sample Date : 5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2.0	0.50	ug/L	EPA 8260B	5/17/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethylbenzene	1.2	0.50	ug/L	EPA 8260B	5/17/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Methyl-t-butyl ether (MTBE)	200	0.50	ug/L	EPA 8260B	5/17/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-amyl methyl ether (TAME)	0.85	0.50	ug/L	EPA 8260B	5/17/2003
Tert-Butanol	15	5.0	ug/L	EPA 8260B	5/17/2003
TPH as Gasoline	2100	50	ug/L	EPA 8260B	5/17/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	5/17/2003
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	5/17/2003
Dibromofluoromethane (Surr)	98.9		% Recovery	EPA 8260B	5/17/2003
1,2-Dichloroethane-d4 (Surr)	95.0		% Recovery	EPA 8260B	5/17/2003

Approved By:  Joel Kiff

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



Report Number : 33176

Date : 5/21/2003

Project Name : **Tesoro**

Project Number : **67106 San Leandro**

Sample : **MW-4**

Matrix : **Water**

Lab Number : **33176-04**

Sample Date : **5/15/2003**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	44	2.0	ug/L	EPA 8260B	5/20/2003
Toluene	100	2.0	ug/L	EPA 8260B	5/20/2003
Ethylbenzene	200	2.0	ug/L	EPA 8260B	5/20/2003
Total Xylenes	1200	2.0	ug/L	EPA 8260B	5/20/2003
Methyl-t-butyl ether (MTBE)	120	2.0	ug/L	EPA 8260B	5/20/2003
Diisopropyl ether (DIPE)	< 2.0	2.0	ug/L	EPA 8260B	5/20/2003
Ethyl-t-butyl ether (ETBE)	< 2.0	2.0	ug/L	EPA 8260B	5/20/2003
Tert-amyl methyl ether (TAME)	< 2.0	2.0	ug/L	EPA 8260B	5/20/2003
Tert-Butanol	21	20	ug/L	EPA 8260B	5/20/2003
TPH as Gasoline	8500	200	ug/L	EPA 8260B	5/20/2003
1,2-Dichloroethane	< 2.0	2.0	ug/L	EPA 8260B	5/20/2003
1,2-Dibromoethane	< 2.0	2.0	ug/L	EPA 8260B	5/20/2003
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	5/20/2003
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	5/20/2003
Dibromofluoromethane (Surr)	97.2		% Recovery	EPA 8260B	5/20/2003
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	5/20/2003

Approved By:  Joel Kiff



Report Number : 33176

Date : 5/21/2003

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-5

Matrix : Water

Lab Number : 33176-05

Sample Date :5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	55	0.50	ug/L	EPA 8260B	5/18/2003
Toluene	1.8	0.50	ug/L	EPA 8260B	5/18/2003
Ethylbenzene	94	0.50	ug/L	EPA 8260B	5/18/2003
Total Xylenes	85	0.50	ug/L	EPA 8260B	5/18/2003
Methyl-t-butyl ether (MTBE)	220	0.50	ug/L	EPA 8260B	5/18/2003
Dilsopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Tert-amyl methyl ether (TAME)	0.64	0.50	ug/L	EPA 8260B	5/18/2003
Tert-Butanol	170	5.0	ug/L	EPA 8260B	5/18/2003
TPH as Gasoline	3700	50	ug/L	EPA 8260B	5/18/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Toluene - d8 (Surr)	93.8		% Recovery	EPA 8260B	5/18/2003
4-Bromofluorobenzene (Surr)	99.9		% Recovery	EPA 8260B	5/18/2003
Dibromofluoromethane (Surr)	92.4		% Recovery	EPA 8260B	5/18/2003
1,2-Dichloroethane-d4 (Surr)	93.4		% Recovery	EPA 8260B	5/18/2003

Approved By:  Joel Kiff



Report Number : 33176

Date : 5/21/2003

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-6

Matrix : Water

Lab Number : 33176-06

Sample Date :5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/17/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/17/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	5/17/2003
4-Bromofluorobenzene (Surr)	99.3		% Recovery	EPA 8260B	5/17/2003
Dibromofluoromethane (Surr)	101		% Recovery	EPA 8260B	5/17/2003
1,2-Dichloroethane-d4 (Surr)	99.7		% Recovery	EPA 8260B	5/17/2003

Approved By:  Joel Kiff



Report Number : 33176

Date : 5/21/2003

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-7

Matrix : Water

Lab Number : 33176-07

Sample Date :5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Methyl-t-butyl ether (MTBE)	0.69	0.50	ug/L	EPA 8260B	5/18/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/18/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	5/18/2003
4-Bromofluorobenzene (Surr)	98.7		% Recovery	EPA 8260B	5/18/2003
Dibromofluoromethane (Surr)	107		% Recovery	EPA 8260B	5/18/2003
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	5/18/2003

Approved By:  Joel Kiff

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



Report Number : 33176

Date : 5/21/2003

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-8

Matrix : Water

Lab Number : 33176-08

Sample Date :5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	14	0.50	ug/L	EPA 8260B	5/19/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Ethylbenzene	16	0.50	ug/L	EPA 8260B	5/19/2003
Total Xylenes	23	0.50	ug/L	EPA 8260B	5/19/2003
Methyl-t-butyl ether (MTBE)	370	0.50	ug/L	EPA 8260B	5/19/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Tert-amyl methyl ether (TAME)	0.79	0.50	ug/L	EPA 8260B	5/19/2003
Tert-Butanol	10 J	5.0	ug/L	EPA 8260B	5/19/2003
TPH as Gasoline	690	50	ug/L	EPA 8260B	5/19/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	5/19/2003
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	5/19/2003
Dibromofluoromethane (Surr)	102		% Recovery	EPA 8260B	5/19/2003
1,2-Dichloroethane-d4 (Surr)	98.1		% Recovery	EPA 8260B	5/19/2003

Approved By:  Joel Kiff

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



Report Number : 33176

Date : 5/21/2003

Project Name : Tesoro

Project Number : 67106 San Leandro

Sample : MW-9

Matrix : Water

Lab Number : 33176-09

Sample Date :5/15/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Methyl-t-butyl ether (MTBE)	8.9	0.50	ug/L	EPA 8260B	5/17/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/17/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/17/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	5/17/2003
4-Bromofluorobenzene (Surr)	98.2		% Recovery	EPA 8260B	5/17/2003
Dibromofluoromethane (Surr)	99.4		% Recovery	EPA 8260B	5/17/2003
1,2-Dichloroethane-d4 (Surr)	99.2		% Recovery	EPA 8260B	5/17/2003

Approved By:  Joel Kiff

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

Report Number : 33176

Date : 5/21/2003

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	5/17/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/17/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/17/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene - d8 (Surr)	98.7	%	%	EPA 8260B	5/17/2003
4-Bromofluorobenzene (Surr)	99.1	%	%	EPA 8260B	5/17/2003
Dibromofluoromethane (Surr)	94.3	%	%	EPA 8260B	5/17/2003
1,2-Dichloroethane-d4 (Surr)	105	%	%	EPA 8260B	5/17/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/17/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/17/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/17/2003
Toluene - d8 (Surr)	98.2	%	%	EPA 8260B	5/17/2003
4-Bromofluorobenzene (Surr)	98.5	%	%	EPA 8260B	5/17/2003
Dibromofluoromethane (Surr)	101	%	%	EPA 8260B	5/17/2003
1,2-Dichloroethane-d4 (Surr)	99.1	%	%	EPA 8260B	5/17/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/18/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Toluene - d8 (Surr)	98.5	%	%	EPA 8260B	5/18/2003
4-Bromofluorobenzene (Surr)	98.9	%	%	EPA 8260B	5/18/2003
Dibromofluoromethane (Surr)	99.7	%	%	EPA 8260B	5/18/2003
1,2-Dichloroethane-d4 (Surr)	99.7	%	%	EPA 8260B	5/18/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/20/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/20/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/20/2003
Toluene - d8 (Surr)	101	%	%	EPA 8260B	5/20/2003
4-Bromofluorobenzene (Surr)	98.0	%	%	EPA 8260B	5/20/2003
Dibromofluoromethane (Surr)	98.2	%	%	EPA 8260B	5/20/2003
1,2-Dichloroethane-d4 (Surr)	103	%	%	EPA 8260B	5/20/2003

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 33176

Date : 5/21/2003

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	5/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/18/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/18/2003
Toluene - d8 (Surr)	102		%	EPA 8260B	5/18/2003
4-Bromofluorobenzene (Surr)	97.9		%	EPA 8260B	5/18/2003
Dibromofluoromethane (Surr)	106		%	EPA 8260B	5/18/2003
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	5/18/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/19/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/19/2003
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	5/19/2003
Toluene - d8 (Surr)	100		%	EPA 8260B	5/19/2003
4-Bromofluorobenzene (Surr)	97.3		%	EPA 8260B	5/19/2003
Dibromofluoromethane (Surr)	106		%	EPA 8260B	5/19/2003
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	5/19/2003

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

KIFF ANALYTICAL, LLC

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

Report Number : 33176

Date : 5/21/2003

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	33174-04	<0.50	39.9	40.0	39.6	39.8	ug/L	EPA 8260B	5/17/03	99.2	99.5	0.378	70-130	25
Toluene	33174-04	<0.50	39.9	40.0	37.9	38.4	ug/L	EPA 8260B	5/17/03	94.9	96.0	1.23	70-130	25
Tert-Butanol	33174-04	<5.0	200	200	178	182	ug/L	EPA 8260B	5/17/03	89.0	91.1	2.32	70-130	25
Methyl-t-Butyl Ether	33174-04	73	39.9	40.0	113	111	ug/L	EPA 8260B	5/17/03	99.9	94.4	5.70	70-130	25
Benzene	33172-07	<0.50	40.0	40.0	41.3	40.5	ug/L	EPA 8260B	5/17/03	103	101	1.93	70-130	25
Toluene	33172-07	<0.50	40.0	40.0	40.0	39.6	ug/L	EPA 8260B	5/17/03	99.9	98.9	1.01	70-130	25
Tert-Butanol	33172-07	<5.0	200	200	208	210	ug/L	EPA 8260B	5/17/03	104	105	1.00	70-130	25
Methyl-t-Butyl Ether	33172-07	<0.50	40.0	40.0	40.8	39.7	ug/L	EPA 8260B	5/17/03	102	99.3	2.63	70-130	25
Benzene	33176-03	2.1	40.0	40.0	41.6	40.6	ug/L	EPA 8260B	5/18/03	98.7	96.4	2.43	70-130	25
Toluene	33176-03	<0.50	40.0	40.0	38.8	38.0	ug/L	EPA 8260B	5/18/03	96.9	95.1	1.82	70-130	25
Tert-Butanol	33176-03	16	200	200	216	213	ug/L	EPA 8260B	5/18/03	100	98.5	1.94	70-130	25
Methyl-t-Butyl Ether	33176-03	190	40.0	40.0	270	272	ug/L	EPA 8260B	5/18/03	187	193	2.92	70-130	25
Benzene	33196-03	<0.50	40.0	40.0	39.3	39.0	ug/L	EPA 8260B	5/20/03	98.3	97.4	0.869	70-130	25
Toluene	33196-03	<0.50	40.0	40.0	38.8	37.4	ug/L	EPA 8260B	5/20/03	97.0	93.5	3.62	70-130	25
Tert-Butanol	33196-03	98	200	200	304	296	ug/L	EPA 8260B	5/20/03	103	98.7	4.32	70-130	25
Methyl-t-Butyl Ether	33196-03	<0.50	40.0	40.0	37.1	31.7	ug/L	EPA 8260B	5/20/03	92.7	79.3	15.6	70-130	25
Benzene	33176-07	<0.50	40.0	40.0	33.0	38.5	ug/L	EPA 8260B	5/18/03	82.4	96.3	15.6	70-130	25
Toluene	33176-07	<0.50	40.0	40.0	33.0	39.3	ug/L	EPA 8260B	5/18/03	82.5	98.2	17.4	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff

Report Number : 33176

Date : 5/21/2003

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	33176-07	<5.0	200	200	163	193	ug/L	EPA 8260B	5/18/03	81.6	96.6	16.7	70-130	25
Methyl-t-Butyl Ether	33176-07	0.69	40.0	40.0	36.2	45.7	ug/L	EPA 8260B	5/18/03	88.6	112	23.7	70-130	25
Benzene	33128-01	42	40.0	40.0	82.3	79.5	ug/L	EPA 8260B	5/19/03	99.9	92.9	7.26	70-130	25
Toluene	33128-01	54	40.0	40.0	100	93.5	ug/L	EPA 8260B	5/19/03	117	99.8	15.8	70-130	25
Tert-Butanol	33128-01	<5.0	200	200	199	195	ug/L	EPA 8260B	5/19/03	99.4	97.5	1.93	70-130	25
Methyl-t-Butyl Ether	33128-01	8.5	40.0	40.0	47.6	48.0	ug/L	EPA 8260B	5/19/03	97.8	98.8	1.07	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 33176

Date : 5/21/2003

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	5/17/03	96.6	70-130
Toluene	40.0	ug/L	EPA 8260B	5/17/03	93.1	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/17/03	88.7	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/17/03	103	70-130
Benzene	40.0	ug/L	EPA 8260B	5/17/03	103	70-130
Toluene	40.0	ug/L	EPA 8260B	5/17/03	103	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/17/03	101	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/17/03	91.3	70-130
Benzene	40.0	ug/L	EPA 8260B	5/18/03	100	70-130
Toluene	40.0	ug/L	EPA 8260B	5/18/03	102	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/18/03	99.8	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/18/03	98.4	70-130
Benzene	40.0	ug/L	EPA 8260B	5/20/03	102	70-130
Toluene	40.0	ug/L	EPA 8260B	5/20/03	102	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/20/03	97.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/20/03	85.5	70-130
Benzene	40.0	ug/L	EPA 8260B	5/18/03	103	70-130

KIFF ANALYTICAL, LLC

Approved By:  Jeel Kiff

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

Report Number : 33176

Date : 5/21/2003

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	5/18/03	105	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/18/03	103	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/18/03	115	70-130
Benzene	40.0	ug/L	EPA 8260B	5/19/03	99.3	70-130
Toluene	40.0	ug/L	EPA 8260B	5/19/03	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/19/03	98.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/19/03	97.1	70-130

KIFF ANALYTICAL, LLC

Approved By:  Joel Kiff

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



2795 2nd Street, Suite 300
 Davis, CA 95816
 Lab: 530.297.4800
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Lab No. **33176** Page **1** of **1**

Project Contact (Hardcopy or PDF to): Richard Munsch		EDF Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Company/Address: RDM 771-7098 771-4584		Recommended but not mandatory to complete this section: Sampling Company Log Code: DEIO
Project Number: 67106 San Leandro P.O. No.: AFE 23139622		Global ID: T0600101409
Project Name: Tesoro		EDF Deliverable to (Email Address): rmunsch@rcsls.com
Sampler Signature (below): <i>Edgar Chonista</i>		Project Address: San Leandro

Chain-of-Custody Record and Analysis Request

Analysis Request												TAT		
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 (7421/239.2) TOTAL (X) W.E.T. (X)	12 hr/24 hr/48 hr/72 hr/1 wk	For Lab Use Only
MW-1					X	X			X					01
MW-2														02
MW-3														03
MW-4														04
MW-5														05
MW-6														06
MW-7														07
MW-8														08
MW-9														09

Sample Designation	Sampling		40 ml VOA SLEEVE	Container				Preservative				Matrix		
	Date	Time						HCl	HNO ₃	ICE	NONE	WATER	SOIL	
MW-1	5-15-03	10:13	3					X	X			X		
MW-2		9:45												
MW-3		9:32												
MW-4		10:32												
MW-5		11:13												
MW-6		9:14												
MW-7		8:52												
MW-8		10:53												
MW-9		11:37	1											

Relinquished by: <i>[Signature]</i>	Date	Time	Received by:	Remarks:
Relinquished by: <i>[Signature]</i>	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	
Date: 05/16/03 Time: 10:58 <i>[Signature]</i> Kiff Analytical				Bill to: ROB DONOVAN

ENCLOSURE D

Historical Ground Water Monitoring Data

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) ¹	Depth to Ground Water ¹	Ground Water Elevation ²	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 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) ¹	Depth to Ground Water ¹	Ground Water Elevation ²	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) ¹	Depth to Ground Water ¹	Ground Water Elevation ²	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) ¹	Depth to Ground Water ¹	Ground Water Elevation ²	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) ¹	Depth to Ground Water ¹	Ground Water Elevation ²	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 ¹	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		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	4,500	
	09/10/96	19,000		1,100	1,600	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 ¹	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 ¹	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	630	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	<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
03/10/97	<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	

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 ¹	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		<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	<130	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 ¹	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.

ENCLOSURE E

Remediation System Analytical Results



Report Number : 32839

Date : 4/28/2003

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,



Joel Kiff



Report Number : 32839

Date : 4/28/2003

Project Name : Tesoro Station 67106

Project Number : 67106

Sample : SVE-Inf

Matrix : Air

Lab Number : 32839-01

Sample Date :4/22/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Toluene	0.15	0.050	ppmv	EPA 8260B	4/24/2003
Ethylbenzene	0.067	0.050	ppmv	EPA 8260B	4/24/2003
Total Xylenes	0.44	0.050	ppmv	EPA 8260B	4/24/2003
Methyl-t-butyl ether	1.1	0.10	ppmv	EPA 8260B	4/24/2003
TPH as Gasoline	5.6	5.0	ppmv	EPA 8260B	4/24/2003
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	4/24/2003
4-Bromofluorobenzene (Surr)	96.0		% Recovery	EPA 8260B	4/24/2003

Sample : SVE-MID

Matrix : Air

Lab Number : 32839-02

Sample Date :4/22/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Toluene	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Total Xylenes	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Methyl-t-butyl ether	1.6	0.10	ppmv	EPA 8260B	4/24/2003
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	4/24/2003
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	4/24/2003
4-Bromofluorobenzene (Surr)	96.2		% Recovery	EPA 8260B	4/24/2003

Approved By:  Joel Kiff



Report Number : 32839

Date : 4/28/2003

Project Name : Tesoro Station 67106

Project Number : 67106

Sample : SVE-Eff

Matrix : Air

Lab Number : 32839-03

Sample Date : 4/22/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Toluene	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Ethylbenzene	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Total Xylenes	< 0.050	0.050	ppmv	EPA 8260B	4/24/2003
Methyl-t-butyl ether	0.91	0.10	ppmv	EPA 8260B	4/24/2003
TPH as Gasoline	< 5.0	5.0	ppmv	EPA 8260B	4/24/2003
Toluene - d8 (Surr)	98.7		% Recovery	EPA 8260B	4/24/2003
4-Bromofluorobenzene (Surr)	95.3		% Recovery	EPA 8260B	4/24/2003

Approved By:  Joel Kiff

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



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

Lab No. 32839 Page 1 of 1

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

Chain-of-Custody Record and Analysis Request

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

Analysis Request

Phone No.: (916) 771-2098 FAX No.: (916) 771-9584
 Global ID:
 Project Number: 67106 P.O. No.: 67106
 EDF Deliverable To (Email Address):
 Project Name: Tesoro Station 67106
 Sampler Signature: [Signature]

Project Address: San Leandro, CA

Sample Designation	Sampling		Container		Preservative				Matrix	
	Date	Time	40 ml VOA	SLEEVE	HCl	HNO ₃	ICE	NONE	WATER	SOIL
SVE-Inf	4/2/07	5:30		X				X		X
SVE-MID	4/2/07	5:28		X				X		X
SVE-Eff	4/2/07	5:28		X				X		X

BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/88015)	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)	TAT
				X										12 hr/24 hr/48 hr/72 hr/1 wk

Sample Designation	Date	Time	40 ml VOA	SLEEVE	Teal	HCl	HNO ₃	ICE	NONE	WATER	SOIL	FLV	BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/88015)	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)	TAT		
SVE-Inf	4/2/07	5:30		X					X		X						X												01
SVE-MID	4/2/07	5:28		X					X		X						X												02
SVE-Eff	4/2/07	5:28		X					X		X						X												03

Relinquished by:	Date	Time	Received by:	Remarks:
<u>[Signature]</u>				<u>STAT</u>
<u>[Signature]</u>				
<u>[Signature]</u>				

Bill to: Tesoro Petroleum
Rob Fishburn



Report Number : 33376

Date : 6/6/2003

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,



Joel Kiff



Report Number : 33376

Date : 6/6/2003

Project Name : Tesoro Station 67106

Project Number : 67106

Sample : SVE-Inf

Matrix : Air

Lab Number : 33376-01

Sample Date :5/29/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Toluene	0.094	0.050	Molar ppm	EPA 8260B	5/30/2003
Ethylbenzene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Total Xylenes	0.084	0.050	Molar ppm	EPA 8260B	5/30/2003
Methyl-t-butyl ether	0.96	0.10	Molar ppm	EPA 8260B	5/30/2003
TPH as Gasoline	< 5.0	5.0	Molar ppm	EPA 8260B	5/30/2003
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	5/30/2003
4-Bromofluorobenzene (Surr)	85.8		% Recovery	EPA 8260B	5/30/2003

Sample : SVE-MID

Matrix : Air

Lab Number : 33376-02

Sample Date :5/29/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Toluene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Ethylbenzene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Total Xylenes	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Methyl-t-butyl ether	3.3	0.10	Molar ppm	EPA 8260B	5/30/2003
TPH as Gasoline	< 5.0	5.0	Molar ppm	EPA 8260B	5/30/2003
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	5/30/2003
4-Bromofluorobenzene (Surr)	85.3		% Recovery	EPA 8260B	5/30/2003

Approved By:  Joel Kiff

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



Report Number : 33376

Date : 6/6/2003

Project Name : Tesoro Station 67106

Project Number : 67106

Sample : SVE-Eff

Matrix : Air

Lab Number : 33376-03

Sample Date :5/29/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Toluene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Ethylbenzene	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Total Xylenes	< 0.050	0.050	Molar ppm	EPA 8260B	5/30/2003
Methyl-t-butyl ether	0.85	0.10	Molar ppm	EPA 8260B	5/30/2003
TPH as Gasoline	< 5.0	5.0	Molar ppm	EPA 8260B	5/30/2003
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	5/30/2003
4-Bromofluorobenzene (Surr)	83.7		% Recovery	EPA 8260B	5/30/2003

Approved By:  Joel Kiff

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

Project Contact (Hardcopy or PDF to):
Richard Munsch

California EDF Report? Yes No

Chain-of-Custody Record and Analysis Request

Company/Address:
RPM Environment

Recommended but not mandatory to complete this section:
 Sampling Company Log Code:

Phone No.: (916) 771-7018 FAX No.: (916) 771-9584

Global ID:

Project Number: 6766 P.O. No.: 6766

EDF Deliverable To (Email Address):

Project Name:
Tesoro Station 6766

Sampler Signature:



Project Address:
San Leandro, CA

Sampling		Container				Preservative				Matrix	
Date	Time	40 ml VOA	SLEEVE	Label	HCl	HNO ₃	ICE	NONE	WATER	SOIL	Air

Analysis Request														TAT
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 (7421/239.2)	TOTAL (X) W.E.T. (X)	12 hr/24 hr/48 hr/72 hr/1 wk
				XXX										
				XXX										01
				XXX										02
														03

Sample Designation

- ✓ SVE - Inf
- ✓ SVE - MID
- ✓ SVE - Eff

Relinquished by:


Date: _____ Time: _____ Received by: _____

Remarks: STAT

Relinquished by: _____

Date: _____ Time: _____ Received by: _____

Relinquished by: _____

Date: 05/30/03 Time: 1136 Received by Laboratory: John Curtis

Bill to: Tesoro Petroleum
Rob Danoum



Report Number : 33596

Date : 6/13/2003

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, appearing to read "Jeff Dahl", is written over the typed name.

Jeff Dahl



Report Number : 33596

Date : 6/13/2003

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, appearing to read "Jeff Dahl", is written over a printed name.

Jeff Dahl



Report Number : 33596

Date : 6/13/2003

Project Name : **Tesoro Station 67106**

Project Number : **67106**

Sample : **SVE-Inf**

Matrix : Air

Lab Number : 33596-01

Sample Date :6/10/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Toluene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Ethylbenzene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Total Xylenes	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Methyl-t-butyl ether	2.2	0.10	Molar ppm	EPA 8260B	6/12/2003
TPH as Gasoline	< 5.0	5.0	Molar ppm	EPA 8260B	6/12/2003
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	6/12/2003
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8260B	6/12/2003

Sample : **SVE-MID**

Matrix : Air

Lab Number : 33596-02

Sample Date :6/10/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Toluene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Ethylbenzene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Total Xylenes	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Methyl-t-butyl ether	0.55	0.10	Molar ppm	EPA 8260B	6/12/2003
TPH as Gasoline	< 5.0	5.0	Molar ppm	EPA 8260B	6/12/2003
Toluene - d8 (Surr)	97.5		% Recovery	EPA 8260B	6/12/2003
4-Bromofluorobenzene (Surr)	109		% Recovery	EPA 8260B	6/12/2003

Approved By:  _____



Report Number : 33596

Date : 6/13/2003

Project Name : Tesoro Station 67106

Project Number : 67106

Sample : SVE-Eff

Matrix : Air

Lab Number : 33596-03

Sample Date :6/10/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Toluene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Ethylbenzene	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Total Xylenes	< 0.050	0.050	Molar ppm	EPA 8260B	6/12/2003
Methyl-t-butyl ether	0.50	0.10	Molar ppm	EPA 8260B	6/12/2003
TPH as Gasoline	< 5.0	5.0	Molar ppm	EPA 8260B	6/12/2003
Toluene - d8 (Surr)	98.0		% Recovery	EPA 8260B	6/12/2003
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	6/12/2003

Approved By:  Jeff Dahl