

**ExxonMobil**  
**Refining and Supply Company**  
Downstream - Safety, Health & Environment  
Environmental Remediation

**Gene N. Ortega**  
Senior Engineer  
Environmental Remediation

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**ExxonMobil**  
*Refining & Supply*

May 3, 2001

Mr. Don Hwang  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room 250  
Alameda, California 94502-6577

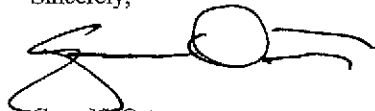
**RE: Former Exxon RAS #7-0235/2225 Telegraph Avenue, Oakland, California.**

Dear Mr. Hwang:

Attached for your review and comment is a letter report entitled *Quarterly Groundwater Monitoring Report, First Quarter 2001*, dated April 20, 2001, for the above referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and presents the results of groundwater monitoring and sampling activities at the subject site.

If you have any questions or comments, please contact me at (925) 246-8747.

Sincerely,

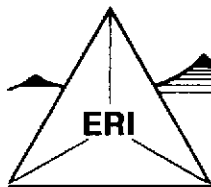


Gene N. Ortega  
Senior Engineer

Attachment: ERI's Quarterly Groundwater Monitoring Report, First Quarter 2001, dated April 20, 2001.

cc: w/ attachment  
Mr. Stephen Hill, California Regional Water Quality Control Board, San Francisco Bay Region  
Mr. Winson B. Low, Valero Refining Company, Environmental and Safety Affairs Department

w/o attachment  
Mr. Scott D. Thompson, Environmental Resolutions, Inc.



## ENVIRONMENTAL RESOLUTIONS, INC.

April 20, 2001  
ERI 222913.R13

Mr. Gene N. Ortega  
ExxonMobil Refining and Supply  
P.O. Box 4032  
Concord, California 94524-4032

Subject: Quarterly Groundwater Monitoring Report, First Quarter 2001, Former Exxon Service Station 7-0235, 2225 Telegraph Avenue, Oakland, California.

Mr. Ortega:

At the request of ExxonMobil Refining and Supply (formerly Exxon Company, U.S.A.) (ExxonMobil), Environmental Resolutions, Inc. (ERI) performed the first quarter 2000 groundwater monitoring and sampling event. The location of the site is shown on the Site Vicinity Map (Plate 1). The purpose of quarterly monitoring is to evaluate concentrations of dissolved hydrocarbons in groundwater and groundwater flow direction and gradient.

### GROUNDWATER MONITORING AND SAMPLING

On January 4, 2001, ERI measured depth to water (DTW) and collected groundwater samples from select wells for laboratory analyses. Work was performed in accordance with ERI's groundwater sampling protocol provided in Attachment A.

Calculated groundwater gradient and flow direction are presented on Plate 2. Historical and recent monitoring data are summarized in Table 1.

### LABORATORY ANALYSES AND RESULTS

Groundwater samples were submitted to Southern Petroleum Laboratories, Inc. (SPL), a California state-certified laboratory, under Chain of Custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and total petroleum hydrocarbons as gasoline (TPHg) using the methods listed in the notes in Table 1. The laboratory analysis report and Chain of Custody record are provided in Attachment B. Cumulative results of laboratory analyses of groundwater samples are summarized in Table 1. The results of analyses of groundwater samples collected during the recent sampling event are shown on Plate 2.

### LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This report has been prepared for ExxonMobil, and any reliance on this report by third parties shall be at such party's sole risk.

ERI recommends forwarding copies of this report to:

Mr. Don Hwang  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room 250  
Alameda, California 94502-6577

Mr. Stephen Hill  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

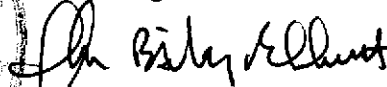
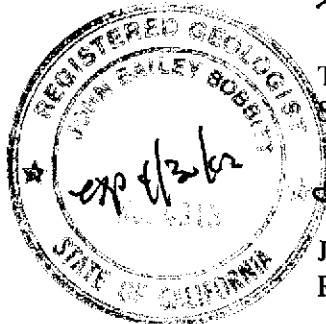
Mr. Winson B. Low  
Environmental and Safety Affairs Department  
One Valero Place, MS-06E  
San Antonio, Texas 78212

If you have any questions or comments regarding this report, please call Mr. Scott D. Thompson at (415) 382-5987.

Sincerely,  
Environmental Resolutions, Inc.



Thomas D. Culig  
Staff Geologist



John B. Bobbitt  
R.G. 4313

Attachments: Table 1: Cumulative Groundwater Monitoring and Sampling Data

Plate 1: Site Vicinity Map

Plate 2: Generalized Site Plan

Attachment A: Groundwater Sampling Protocol

Attachment B: Laboratory Analysis Report and Chain of Custody Record

**TABLE 1**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 7-0235  
2225 Telegraph Avenue  
Oakland, California  
(Page 1 of 5)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >.....<	TPHg <.....>	MTBE	B ug/L	T	E	X >.....<	TPHmo <...ng/L...>
MW6B (17.48)	11/26/96	NLPH	12.26	5.22	<50	<30	<0.5	<0.5	<0.5	<0.5	---
	02/27/97	NLPH	11.73	5.75	<50	<30	<0.5	<0.5	<0.5	0.80	---
(21.37)	05/21/97	NLPH	12.70	4.78	<50	<30	<0.5	<0.5	<0.5	<0.5	---
	08/18/97	NLPH	12.89	4.59	380	<30	4.3	<0.5	1.2	1.5	---
	03/13/98	NLPH	11.15	6.33	360	<6.2	93	4.9	4.1	12	---
	04/20/98	NLPH	11.49	5.99	110	5.5	19	1.3	1.5	3.9	---
	07/21/98	NLPH	12.18	9.19	<50	8.7	0.84	0.59	<0.5	<0.5	---
	10/06/98	NLPH	12.70	8.67	190	6.0	2.4	0.56	0.51	1.2	---
	01/11/99	NLPH	12.48	8.89	50	3.9	1.2	<0.5	<0.5	0.95	---
	04/08/99	NLPH	11.52	9.85	85	14.0	4.4	<0.5	<0.5	<0.5	---
	07/19/99	NLPH	11.39	9.98	<50	<2.50	<0.5	<0.5	<0.5	<0.5	---
	07/27/99	NLPH	12.71	8.66	---	---	---	---	---	---	---
	10/25/99	NLPH	12.49	8.88	260	<2	2.3	<0.5	<0.5	<0.5	---
	01/27/00	NLPH	11.80	9.57	770	13	210	4.8	4.9	13	---
	04/03/00	NLPH	11.61	9.76	670	3.4	110	6.6	3.8	9.45	---
	07/05/00	NLPH	12.27	9.10	<50	2.1	0.89	<0.5	<0.5	<0.5	---
	10/04/00	NLPH	12.67	8.70	<50	54	<0.5	<0.5	<0.5	2	---
10/05/00	---	---	---	---	---	---	---	---	---	<1	
01/04/01	NLPH	12.47	8.90	<50	35	<0.5	<0.5	<0.5	<0.5	---	
MW6E (17.63)	11/26/96	NLPH	12.94	4.69	<50	<30	1.1	<0.5	<0.5	<0.5	---
	02/27/97	NLPH	12.28	5.35	<50	<30	<0.5	<0.5	<0.5	<0.5	---
(21.58)	05/21/97	NLPH	13.60	4.03	160	<5	10	1.4	5.5	4.8	---
	08/18/97	NLPH	13.75	3.88	66	<30	<0.5	<0.5	<0.5	<0.5	---
	03/13/98	NLPH	11.36	6.27	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---
	04/20/98	NLPH	11.88	5.75	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---
	07/21/98	NLPH	13.10	8.48	1,200	<10	81	3.1	28	77	---
	10/06/98	NLPH	13.55	8.03	<50	6.6	1.4	0.51	<0.5	0.97	---
	01/11/99	NLPH	13.40	8.18	<50	5.1	<0.5	<0.5	<0.5	<0.5	---
	04/08/99	NLPH	12.04	9.54	<50	4.7	<0.5	<0.5	<0.5	<0.5	---
	07/19/99	NLPH	11.59	9.99	---	---	---	---	---	---	---
	07/27/99	NLPH	13.65	7.93	---	---	---	---	---	---	---
	10/25/99	NLPH	13.52	8.06	<50	2.5	<0.5	<0.5	<0.5	<0.5	---
	01/27/00	NLPH	11.71	9.87	<50	2.3	<0.5	<0.5	<0.5	<0.5	---
	04/03/00	NLPH	12.11	9.47	<50	<2	0.51	<0.5	<0.5	<0.5	---
	07/05/00	NLPH	12.91	8.67	<50	<2	3.7	<0.5	<0.5	<0.5	---
	10/04/00	NLPH	13.35	8.23	<50	<2	4.1	<0.5	<0.5	<0.5	---
10/05/00	---	---	---	---	---	---	---	---	---	<1	
01/04/01	NLPH	13.09	8.49	61	<2	11	<0.5	<0.5	<0.5	---	

TABLE 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Former Exxon Service Station 7-0235  
 2225 Telegraph Avenue  
 Oakland, California  
 (Page 2 of 5)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW ..feet..>	Elev.	TPHg <.....>	MTBE <.....>	B ug/L.....>	T <.....>	E <.....>	X <.....>	TPHmo <...mg/L...>	
MW6F (18.58)	11/26/96	NLPH	13.29	5.29	<50	<30	<0.5	<0.5	<0.5	<0.5	---	
	02/27/97	---	---	---	---	---	---	---	---	---	---	
	05/21/97	NLPH	14.18	4.40	---	---	---	---	---	---	---	
	08/18/97	NLPH	14.69	3.89	---	---	---	---	---	---	---	
	03/13/98	NLPH	10.93	7.65	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	
	04/20/98	NLPH	11.77	6.81	---	---	---	---	---	---	---	
	(22.51)	07/21/98	NLPH	13.62	8.89	---	---	---	---	---	---	---
		10/06/98	NLPH	13.52	8.99	---	---	---	---	---	---	---
		01/11/99	NLPH	14.06	8.45	---	---	---	---	---	---	---
		04/08/99	NLPH	11.86	10.65	---	---	---	---	---	---	---
		07/19/99	---	---	---	---	---	---	---	---	---	---
		07/27/99	Well Inaccessible	---	---	---	---	---	---	---	---	---
		10/25/99	NLPH	12.63	9.88	---	---	---	---	---	---	---
		01/27/00	NLPH	12.23	10.28	---	---	---	---	---	---	---
		04/03/00	NLPH	12.11	10.40	---	---	---	---	---	---	---
		07/05/00	NLPH	13.38	9.13	<50	<2	<0.5	<0.5	<0.5	<0.5	---
	10/04/00	NLPH	14.02	8.49	<50	<2	<0.5	<0.5	<0.5	0.7	---	
	10/05/00	---	---	---	---	---	---	---	---	---	<1	
	01/04/01	NLPH	13.69	8.82	<50	<2	<0.5	<0.5	<0.5	<0.5	---	
MW6G (16.82)	11/26/96	NLPH	11.12	5.70	<50	<30	<0.5	<0.5	<0.5	<0.5	---	
	02/27/97	---	---	---	---	---	---	---	---	---	---	
	05/21/97	NLPH	11.76	5.06	---	---	---	---	---	---	---	
	08/18/97	NLPH	12.23	4.59	---	---	---	---	---	---	---	
	03/13/98	NLPH	9.13	7.69	<50	4.4	<0.5	<0.5	<0.5	<0.5	---	
	04/20/98	NLPH	9.73	7.09	---	---	---	---	---	---	---	
	(20.72)	07/21/98	NLPH	11.15	9.57	---	---	---	---	---	---	---
		10/06/98	NLPH	11.91	8.81	---	---	---	---	---	---	---
		01/11/99	NLPH	12.00	8.72	---	---	---	---	---	---	---
		04/08/99	NLPH	10.04	10.68	---	---	---	---	---	---	---
		07/19/99	---	---	---	---	---	---	---	---	---	---
		07/27/99	NLPH	11.75	8.97	---	---	---	---	---	---	---
		10/25/99	NLPH	11.76	8.96	---	---	---	---	---	---	---
		01/27/00	NLPH	11.46	9.26	---	---	---	---	---	---	---
		04/03/00	NLPH	10.00	10.72	---	---	---	---	---	---	---
		07/05/00	NLPH	11.24	9.48	<50	<2	<0.5	<0.5	<0.5	<0.5	---
	10/04/00	NLPH	11.88	8.84	<50	<2	<0.5	<0.5	<0.5	<0.5	---	
	10/05/00	---	---	---	---	---	---	---	---	---	<1	
	01/04/01	NLPH	11.56	9.16	<50	<2	<0.5	<0.5	<0.5	<0.5	---	

**TABLE 1**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 7-0235  
2225 Telegraph Avenue  
Oakland, California  
(Page 3 of 5)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet.....>	Elev.	TPHg <.....>	MTBE	B ug/L	T	E	X	TPHmo <...mg/L...>	
MW6H (16.58)	11/26/96	NLPH	11.87	4.71	1,200	<30	320	110	22	85	---	
	02/27/97	NLPH	11.58	5.00	1,800	<200	760	31	8.4	44	---	
	05/21/97	NLPH	12.23	4.35	1,100	81	640	18	5.4	45	---	
	08/18/97	NLPH	12.29	4.29	870	26	200	3.6	2.4	7.4	---	
	03/13/98	NLPH	11.44	5.14	5,300	<125	1,900	720	100	470	---	
	04/20/98	NLPH	11.58	5.00	6,000	2,700	1,500	600	91	440	---	
	(20.47)	07/21/98	NLPH	11.97	8.5	2,200	1,600	740	44	15	63	---
	10/06/98	NLPH	12.23	8.24	5,400	3,000	1,900	<25	<25	76	---	
	01/11/99	NLPH	12.17	8.30	2,600	4,300	1,200	<12	<12	20	---	
	04/08/99	NLPH	11.56	8.91	13,000	13,000	3,400	1,300	260	1,200	---	
	07/19/99	NLPH	11.71	8.76	<2,000	6,920/8,520a	732	<20	<20	<20	---	
	07/27/99	NLPH	12.39	8.08	---	---	---	---	---	---	---	
	10/25/99	NLPH	12.16	8.31	700	4,000	360	1.1	0.68	2	---	
	01/27/00	NLPH	11.60	8.87	9,100	7,600	2,400	840	150	670	---	
	04/03/00	NLPH	11.62	8.85	12,000	8,800	2,800	1,100	230	1,020	---	
	07/05/00	NLPH	11.93	8.54	12,000	8,000	1,200	56	13	92	---	
	10/04/00	NLPH	12.16	8.31	4,400	8,400	1,500	23	12	80.6	---	
	10/05/00	---	---	---	---	---	---	---	---	---	<1	
	01/04/01	NLPH	12.03	8.44	2,300	3,800	880	15	6.4	33.9	---	
MW6I (16.26)	11/26/96	NLPH	12.45	3.81	<50	<30	<0.5	<0.5	<0.5	<0.5	---	
	02/27/97	NLPH	12.24	4.02	<50	<30	<0.5	<0.5	<0.5	<0.5	---	
	05/21/97	NLPH	12.82	3.44	<50	<30	<0.5	<0.5	<0.5	<0.5	---	
	08/18/97	NLPH	12.81	3.45	<50	<30	<0.5	<0.5	<0.5	<0.5	---	
	03/13/98	---	---	---	---	---	---	---	---	---	---	
	04/20/98	NLPH	12.14	4.12	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	
	(20.24)	07/21/98	NLPH	12.59	7.65	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---
	10/06/98	NLPH	12.81	7.43	---	---	---	---	---	---	---	
	01/11/99	NLPH	12.74	7.50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	
	04/08/99	NLPH	11.93	8.31	---	---	---	---	---	---	---	
	07/19/99	NLPH	11.75	8.49	281	17.6	35.4	9.1	7.4	30.7	---	
	07/27/99	NLPH	12.95	7.29	---	---	---	---	---	---	---	
	10/25/99	NLPH	12.79	7.45	---	---	---	---	---	---	---	
	01/27/00	NLPH	12.06	8.18	<50	<2	<0.5	<0.5	<0.5	<0.5	---	
	04/03/00	NLPH	12.24	8.00	---	---	---	---	---	---	---	
	07/05/00	NLPH	12.48	7.76	<50	<2	<0.5	<0.5	<0.5	<0.5	---	
	10/04/00	---	---	---	---	---	---	---	---	---	---	
	10/05/00	---	---	---	---	---	---	---	---	---	<1	
	01/04/01	NLPH	12.54	7.70	<50	<2	<0.5	<0.5	<0.5	<0.5	---	

TABLE 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Former Exxon Service Station 7-0235  
 2225 Telegraph Avenue  
 Oakland, California  
 (Page 4 of 5)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >	TPHg <.....>	MTBE	B ug/L	T	E	X	TPHmo <...mg/L...>
RW1 (20.24)	Not Monitored 6/16/92 through 10/6/98.										
	01/11/99	NLPH	12.37	7.87	---	---	---	---	---	---	---
	04/08/99	NLPH	10.41	9.83	---	---	---	---	---	---	---
	07/19/99	---	---	---	---	---	---	---	---	---	---
	07/27/99	NLPH	12.76	7.48	---	---	---	---	---	---	---
	10/25/99	NLPH	12.50	7.74	---	---	---	---	---	---	---
	01/27/00	NLPH	12.11	8.13	---	---	---	---	---	---	---
	04/03/00	NLPH	12.07	8.17	---	---	---	---	---	---	---
	07/05/00	---	---	---	---	---	---	---	---	---	---
	10/04/00	---	---	---	---	---	---	---	---	---	---
	10/05/00	---	---	---	---	---	---	---	---	---	---
	01/04/01	NLPH	13.90	6.34	8,000	2,500	1,200	65	250	258	---
RW2 (20.44)	Not Monitored 6/16/92 through 4/20/98.										
	07/21/98	NLPH	12.65	7.79	3,500	170	240	100	41	96	---
	10/06/98	NLPH	13.06	7.38	3,200	200	120	48	56	120	---
	01/11/99	NLPH	12.88	7.56	3,300	350	150	17	35	40	---
	04/08/99	sheen	11.76	8.68	---	---	---	---	---	---	---
	07/19/99	NLPH	11.61	8.83	1,980	160/499a	44	4.16	22.3	11.6	---
	07/27/99	NLPH	13.26	7.18	---	---	---	---	---	---	---
	10/25/99	NLPH	12.96	7.48	1,800	440	51	<0.5	4.7	9.5	---
	01/27/00	NLPH	12.70	7.74	1,900	750	38	<2.5	4.8	10.4	---
	04/03/00	NLPH	11.97	8.47	2,100	300	28	2.4	1.4	0.73	---
	07/05/00	NLPH	12.50	7.94	2,300	230	20	<2.5	5.3	8	---
	10/04/00	NLPH	12.97	7.47	1,300	570	42	<2.5	15	17.7	---
	10/05/00	---	---	---	---	---	---	---	---	---	<1
	01/04/01	NLPH	13.71	6.73	1,000	380	33	<2.5	13	17.7	---
RW3A (21.75)	Not Monitored 6/16/92 through 4/20/98.										
	07/21/98	NLPH	13.08	8.67	280	16	97	<1.2	<1.2	<1.2	---
	10/06/98	NLPH	13.72	8.03	78	26	26	0.89	<0.5	<0.5	---
	01/11/99	NLPH	12.00	9.75	1,000	230	490	5.0	<5.0	7.4	---
	04/08/99	NLPH	11.90	9.85	130	11	70	<1.0	<1.0	<1.0	---
	07/19/99	NLPH	11.75	10.00	989	16.4	393	6.40	5.70	15.0	---
	07/27/99	NLPH	13.68	8.07	---	---	---	---	---	---	---
	10/25/99	NLPH	13.61	8.14	150	19	53	<0.5	<0.5	<0.5	---
	01/27/00	NLPH	12.22	9.53	500	12	210	0.59	1.40	2.29	---
	04/03/00	NLPH	12.00	9.75	1,100	16	420	1.6	1.8	1.4	---
	07/05/00	NLPH	13.01	8.74	1,200	16	440	1.4	2.5	1.9	---
	10/04/00	NLPH	13.60	8.15	390	8.3	160	1.1	1.5	2.6	---
	10/05/00	---	---	---	---	---	---	---	---	---	<1
	01/04/01	NLPH	13.65	8.10	500	12	230	0.97	1.1	1.4	---

TABLE 1  
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
Former Exxon Service Station 7-0235  
2225 Telegraph Avenue  
Oakland, California  
(Page 5 of 5)

---

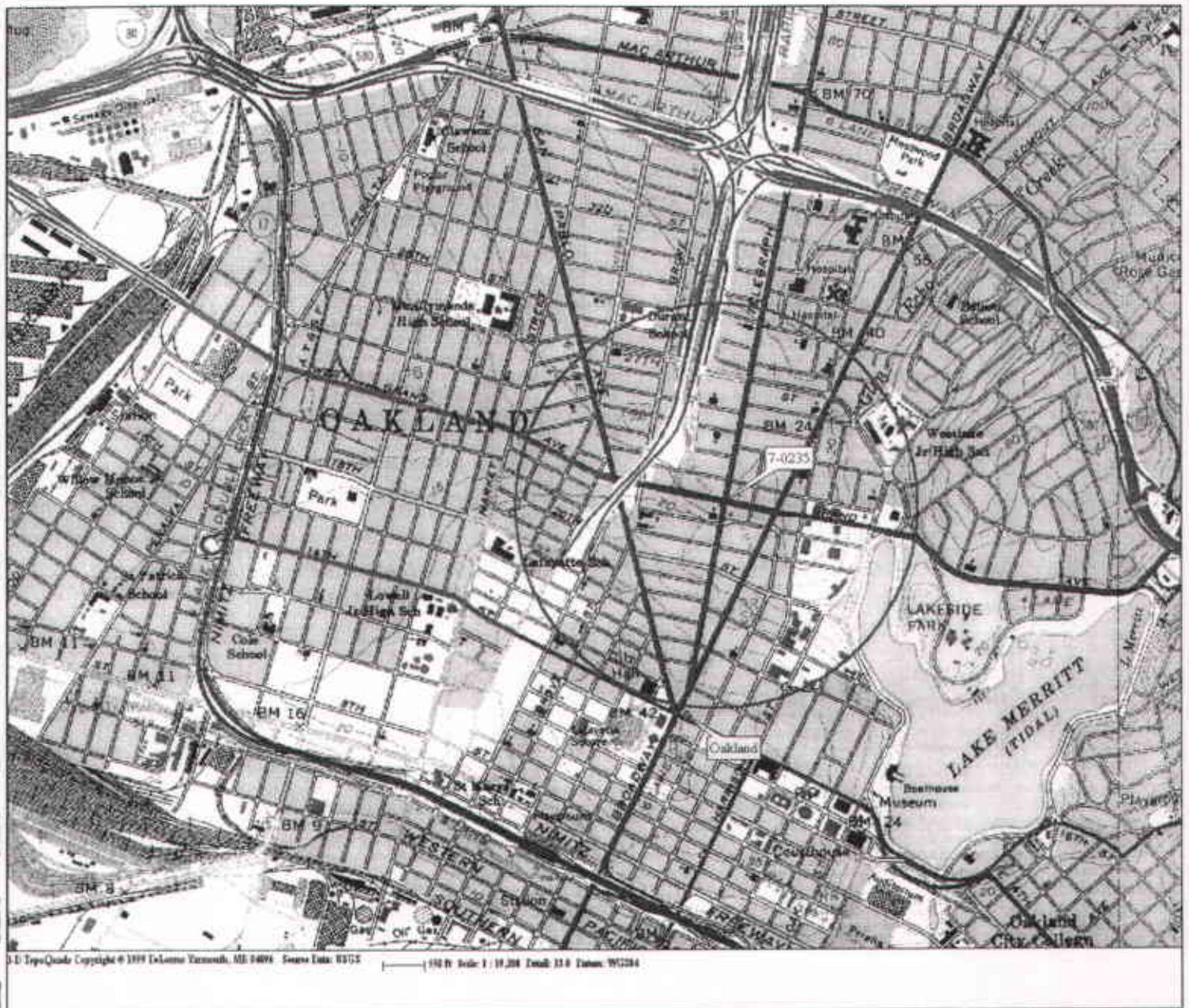
Notes:	
SUBJ	= Results of subjective evaluation.
NLPH	= No liquid-phase hydrocarbons present in well.
sheen	= Liquid-phase hydrocarbon present as sheen.
TOC	= Elevation of top of well casing; relative to mean sea level.
DTW	= Depth to water.
Elev.	= Elevation of groundwater surface; relative to mean sea level.
TPHg	= Total petroleum hydrocarbons as gasoline analyzed using EPA Method 5030/8015 (modified).
MTBE	= Methyl tertiary butyl ether analyzed using EPA Method 8021B.
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
<	= Less than the indicated detection limit shown by the laboratory.
---	= Not measured or sampled.
a	= Methyl tertiary butyl ether analyzed using EPA Method 8260B.
mg/L	= Milligrams per liter.
ug/L	= Micrograms per liter.

---

Sampling discontinued for wells MW6F, MW6G, and RW1 per Alameda County Health Services Agency letter dated June 1, 1998.

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U.S. TopoQuads Copyright © 1999 DeLorme Vermont, ME 04099 Source Data: 1975 1:50,000 Scale: 1:10,000 Detail: 33.0 Datum: NAD83

FN 2229Topo

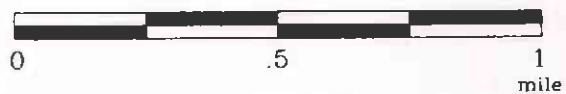
**EXPLANATION**



1/2-mile radius circle



**APPROXIMATE SCALE**



SOURCE:  
Modified from a map  
provided by  
DeLorme 3-D TopoQuads



**SITE VICINITY MAP**

FORMER EXXON SERVICE STATION 7-0235  
2225 Telegraph Avenue  
Oakland, California

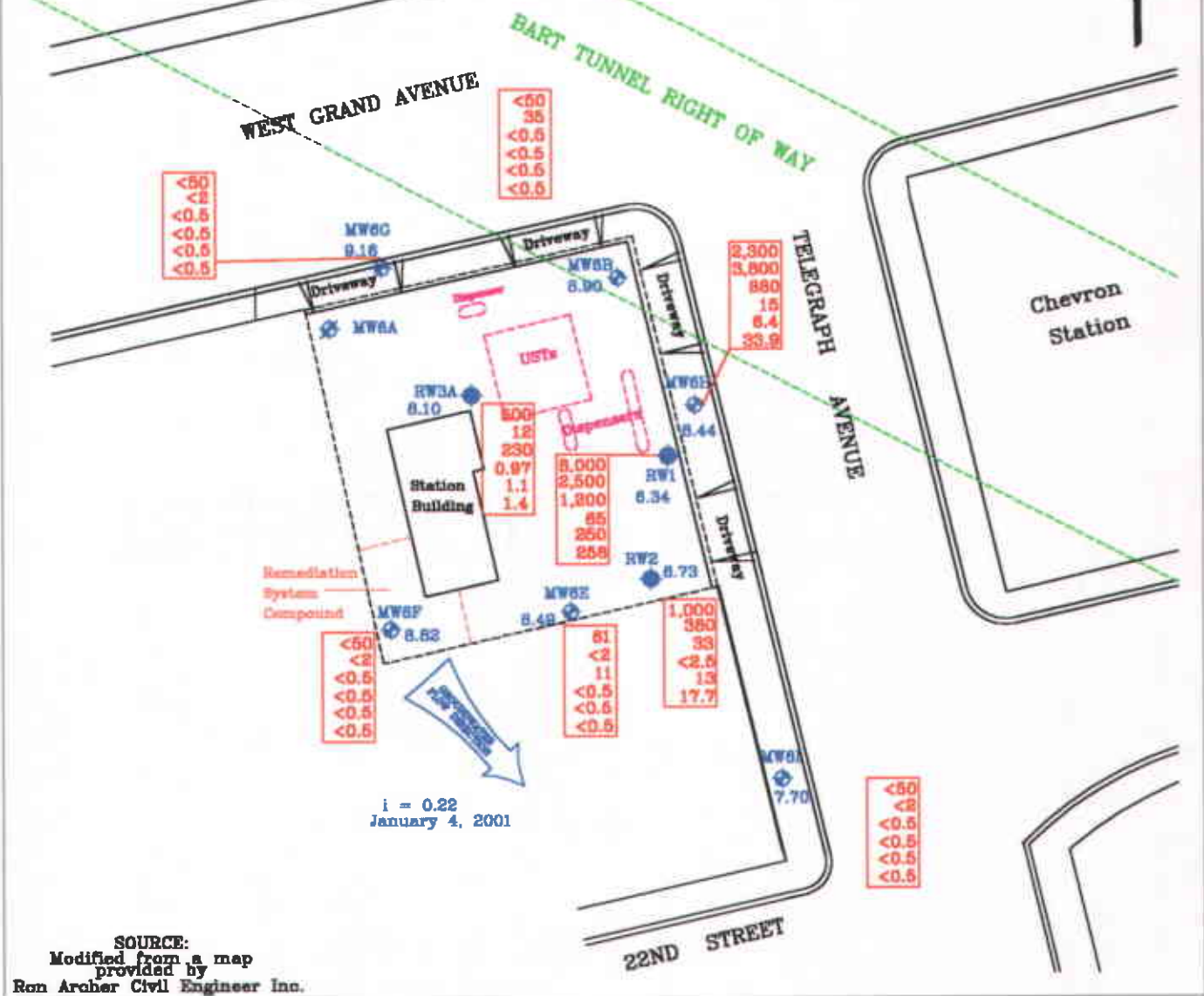
**PROJECT NO.**

2229

**PLATE**

1

APPROXIMATE SCALE



SOURCE:  
Modified from a map  
provided by  
Ron Archer Civil Engineer Inc.

FN 22290003

EXPLANATION

- MW81 Groundwater Monitoring Well
- 7.70 Groundwater elevation in feet above mean sea level
- MW8A Destroyed Groundwater Monitoring Well
- RW3A Groundwater Recovery Well
- $i =$  Interpreted Groundwater Gradient

Groundwater Concentrations in ug/L  
Sampled January 4, 2001

8,000	Total Petroleum Hydrocarbons as gasoline
2,500	Methyl Tertiary Butyl Ether
1,800	Benzene
65	Toluene
250	Ethylbenzene
258	Total Xylenes

< Less Than the Stated Laboratory Detection Limit

ug/L Micrograms per Liter



**GENERALIZED SITE PLAN**

FORMER EXXON SERVICE STATION 7-0235  
2225 Telegraph Avenue  
Oakland, California

PROJECT NO.

2229

PLATE

2

**ATTACHMENT A**  
**GROUNDWATER SAMPLING PROTOCOL**

## GROUNDWATER SAMPLING PROTOCOL

The static water level and separate-phase product level, if present, in each well that contained water and/or separate-phase product are measured with a ORS Interface Probe, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from top of casing elevations.

Groundwater samples collected for subjective evaluation are collected by gently lowering approximately half the length of a clean Teflon® or polypropylene bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples are checked for measurable free-phase hydrocarbons or sheen. If appropriate, free-phase hydrocarbons are removed from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until a minimum of three well casing volumes is purged and stabilization of the temperature, pH, and conductivity is obtained. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples". The quantity of water purged from each well is calculated as follows:

1 well casing volume =  $\pi r^2 h (7.48)$  where:

r	=	radius of the well casing in feet.
h	=	column of water in the well in feet (depth to bottom - depth to water)
7.48	=	conversion constant from cubic feet to gallons
$\pi$	=	ratio of the circumference of a circle to its diameter

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples". Water samples are collected with a new, disposable Teflon® or polypropylene bailer. The groundwater is carefully poured into selected sample containers (40-milliliter (ml) glass vials, 1,000 ml glass amber bottles, etc.), which are filled so as to produce a positive meniscus.

Depending on the required analysis, each sample container is preserved with hydrochloric acid, nitric acid, etc., or it is preservative free. The type of preservative used for each sample is specified on the chain of custody form.

Each vial and glass amber bottle is sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace, which would allow volatilization to occur. The samples are promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain of Custody Record, to a California-certified laboratory.

**ATTACHMENT B**

**LABORATORY ANALYSIS REPORT  
AND CHAIN OF CUSTODY RECORD**



FEB 20 2001  
LABORATORY

HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
(713) 660-0901

~~Case Narrative for~~  
EXXON Company U.S.A.

Certificate of Analysis Number:  
**01010169**

<b>Report To:</b> Environmental Resolution, Inc. Jim Chappell 73 Digital Drive Suite 100  Novato California 94949- ph: (415) 382-9105      fax: (415) 382-1856	<b>Project Name:</b> 2225 Telegraph Ave. Oakland, Ca 2229 <b>Site:</b> 7-0235,19802887 <b>Site Address:</b> 2225 Telegraph Ave. Oakland CA <b>PO Number:</b> LWR#21010411 <b>State:</b> California <b>State Cert. No.:</b> 1903 <b>Date Reported:</b> 1/18/01
--	--

As per your request on January 19, 2001, this report has been revised to change your sample ID "W-11-MW66" (SPL ID: 01010169-05) to read "W-11-MW6G". Please insert the chain of custody from your original report.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

*Sonia West*  
West, Sonia  
Senior Project Manager



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

EXXON Company U.S.A.

Certificate of Analysis Number:  
01010169

**Report To:** Environmental Resolution, Inc.  
 Jim Chappell  
 73 Digital Drive Suite 100

Novato  
 California  
 94949-

ph: (415) 382-9105 fax: (415) 382-1856

**Project Name:** 2225 Telegraph Ave. Oakland, Ca 2229

**Site:** 7-0235,19802887

**Site Address:** 2225 Telegraph Ave.

Oakland CA

**PO Number:** LWR#21010411

**State:** California

**State Cert. No.:** 1903

**Date Reported:** 1/18/01

**Fax To:** Environmental Resolution, Inc.  
 Jim Chappell fax : (415) 382-1856

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
TB 11/8/00	01010169-01	Water	1/4/01	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-BB-MW6I	01010169-02	Water	1/4/01 03:00:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-12-MW6I	01010169-03	Water	1/4/01 03:10:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-13-MW6F	01010169-04	Water	1/4/01 03:20:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-11-MW6G	01010169-05	Water	1/4/01 03:35:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-13-MW6E	01010169-06	Water	1/4/01 03:50:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-12-MW6B	01010169-07	Water	1/4/01 04:00:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-15-RW-3A	01010169-08	Water	1/4/01 04:10:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-12-RW2	01010169-09	Water	1/4/01 04:25:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-12-MW6H	01010169-10	Water	1/4/01 04:35:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>
W-13-RW1	01010169-11	Water	1/4/01 04:50:00 PM	1/9/01 10:00:00 AM		<input type="checkbox"/>

*Sonia West*

West, Sonia  
 Senior Project Manager

2/13/01

Date

Joel Grice  
 Laboratory Director

Ted Yen  
 Quality Assurance Officer



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
(713) 680-0901

Client Sample ID TB 11/8/00

Collected: 1/4/01

SPL Sample ID: 01010169-01

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	ND	50	1		01/10/01 15:23	DL	528427
Surr: 1,4-Difluorobenzene	103 %	62-144	1		01/10/01 15:23	DL	528427
Surr: 4-Bromofluorobenzene	96.0 %	44-153	1		01/10/01 15:23	DL	528427
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		01/10/01 15:23	DL	528344
Ethylbenzene	ND	0.5	1		01/10/01 15:23	DL	528344
Methyl tert-butyl ether	ND	2	1		01/10/01 15:23	DL	528344
Toluene	ND	0.5	1		01/10/01 15:23	DL	528344
m,p-Xylene	ND	0.5	1		01/10/01 15:23	DL	528344
o-Xylene	ND	0.5	1		01/10/01 15:23	DL	528344
Xylenes, Total	ND	0.5	1		01/10/01 15:23	DL	528344
Surr: 1,4-Difluorobenzene	98.6 %	72-137	1		01/10/01 15:23	DL	528344
Surr: 4-Bromofluorobenzene	98.4 %	48-156	1		01/10/01 15:23	DL	528344

*Sonia West*

West, Sonia

Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit  
B - Analyte detected in the associated Method Blank  
\* - Surrogate Recovery Outside Advisable QC Limits  
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)  
D - Surrogate Recovery Unreportable due to Dilution  
MI - Matrix Interference





HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-BB-MW6I

Collected: 1/4/01 03:00:00

SPL Sample ID: 01010169-02

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	ND	50	1		01/10/01 15:48	DL	528428
Surr: 1,4-Difluorobenzene	103	% 62-144	1		01/10/01 15:48	DL	528428
Surr: 4-Bromofluorobenzene	99.0	% 44-153	1		01/10/01 15:48	DL	528428
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		01/10/01 15:48	DL	528346
Ethylbenzene	ND	0.5	1		01/10/01 15:48	DL	528346
Methyl tert-butyl ether	ND	2	1		01/10/01 15:48	DL	528346
Toluene	ND	0.5	1		01/10/01 15:48	DL	528346
m,p-Xylene	ND	0.5	1		01/10/01 15:48	DL	528346
o-Xylene	ND	0.5	1		01/10/01 15:48	DL	528346
Xylenes, Total	ND	0.5	1		01/10/01 15:48	DL	528346
Surr: 1,4-Difluorobenzene	97.6	% 72-137	1		01/10/01 15:48	DL	528346
Surr: 4-Bromofluorobenzene	90.8	% 48-156	1		01/10/01 15:48	DL	528346

*Sonia West*

West, Sonia  
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit  
 B - Analyte detected in the associated Method Blank  
 \* - Surrogate Recovery Outside Advisable QC Limits  
 J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)  
 D - Surrogate Recovery Unreportable due to Dilution  
 MI - Matrix Interference



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-12-MW6I

Collected: 1/4/01 03:10:00

SPL Sample ID: 01010169-03

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	ND	50	1		01/10/01 16:14	DL	528429
Surr: 1,4-Difluorobenzene	104 %	62-144	1		01/10/01 16:14	DL	528429
Surr: 4-Bromofluorobenzene	96.3 %	44-153	1		01/10/01 16:14	DL	528429
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		01/10/01 16:14	DL	528348
Ethylbenzene	ND	0.5	1		01/10/01 16:14	DL	528348
Methyl tert-butyl ether	ND	2	1		01/10/01 16:14	DL	528348
Toluene	ND	0.5	1		01/10/01 16:14	DL	528348
m,p-Xylene	ND	0.5	1		01/10/01 16:14	DL	528348
o-Xylene	ND	0.5	1		01/10/01 16:14	DL	528348
Xylenes, Total	ND	0.5	1		01/10/01 16:14	DL	528348
Surr: 1,4-Difluorobenzene	99.2 %	72-137	1		01/10/01 16:14	DL	528348
Surr: 4-Bromofluorobenzene	97.0 %	48-156	1		01/10/01 16:14	DL	528348

*Sonia West*

West, Sonia  
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit  
 B - Analyte detected in the associated Method Blank  
 \* - Surrogate Recovery Outside Advisable QC Limits  
 J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)  
 D - Surrogate Recovery Unreportable due to Dilution  
 MI - Matrix Interference



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-13-MW6F

Collected: 1/4/01 03:20:00

SPL Sample ID: 01010169-04

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	ND	50	1		01/10/01 16:39	DL	528430
Surr: 1,4-Difluorobenzene	103	% 62-144	1		01/10/01 16:39	DL	528430
Surr: 4-Bromofluorobenzene	98.0	% 44-153	1		01/10/01 16:39	DL	528430
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		01/10/01 16:39	DL	528350
Ethylbenzene	ND	0.5	1		01/10/01 16:39	DL	528350
Methyl tert-butyl ether	ND	2	1		01/10/01 16:39	DL	528350
Toluene	ND	0.5	1		01/10/01 16:39	DL	528350
m,p-Xylene	ND	0.5	1		01/10/01 16:39	DL	528350
o-Xylene	ND	0.5	1		01/10/01 16:39	DL	528350
Xylenes, Total	ND	0.5	1		01/10/01 16:39	DL	528350
Surr: 1,4-Difluorobenzene	98.0	% 72-137	1		01/10/01 16:39	DL	528350
Surr: 4-Bromofluorobenzene	95.9	% 48-156	1		01/10/01 16:39	DL	528350

*Sonia West*

West, Sonia  
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-11-MW6G Collected: 1/4/01 03:35:00 SPL Sample ID: 01010169-05

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	ND	50	1		01/16/01 18:11	DL	533363
Surr: 1,4-Difluorobenzene	83.3 %	62-144	1		01/16/01 18:11	DL	533363
Surr: 4-Bromofluorobenzene	95.3 %	44-153	1		01/16/01 18:11	DL	533363
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		01/16/01 18:11	DL	533348
Ethylbenzene	ND	0.5	1		01/16/01 18:11	DL	533348
Methyl tert-butyl ether	ND	2	1		01/16/01 18:11	DL	533348
Toluene	ND	0.5	1		01/16/01 18:11	DL	533348
m,p-Xylene	ND	0.5	1		01/16/01 18:11	DL	533348
o-Xylene	ND	0.5	1		01/16/01 18:11	DL	533348
Xylenes, Total	ND	0.5	1		01/16/01 18:11	DL	533348
Surr: 1,4-Difluorobenzene	83.2 %	72-137	1		01/16/01 18:11	DL	533348
Surr: 4-Bromofluorobenzene	99.7 %	48-156	1		01/16/01 18:11	DL	533348

*Sonia West*

West, Sonia  
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit  
 B - Analyte detected in the associated Method Blank  
 \* - Surrogate Recovery Outside Advisable QC Limits  
 J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)  
 D - Surrogate Recovery Unreportable due to Dilution  
 MI - Matrix Interference



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-13-MW6E

Collected: 1/4/01 03:50:00

SPL Sample ID: 01010169-06

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	61	50	1		01/10/01 21:18	DL	528434
Surr: 1,4-Difluorobenzene	110	% 62-144	1		01/10/01 21:18	DL	528434
Surr: 4-Bromofluorobenzene	97.0	% 44-153	1		01/10/01 21:18	DL	528434
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	11	0.5	1		01/10/01 21:18	DL	528356
Ethylbenzene	ND	0.5	1		01/10/01 21:18	DL	528356
Methyl tert-butyl ether	ND	2	1		01/10/01 21:18	DL	528356
Toluene	ND	0.5	1		01/10/01 21:18	DL	528356
m,p-Xylene	ND	0.5	1		01/10/01 21:18	DL	528356
o-Xylene	ND	0.5	1		01/10/01 21:18	DL	528356
Xylenes, Total	ND	0.5	1		01/10/01 21:18	DL	528356
Surr: 1,4-Difluorobenzene	105	% 72-137	1		01/10/01 21:18	DL	528356
Surr: 4-Bromofluorobenzene	95.8	% 48-156	1		01/10/01 21:18	DL	528356

*Sonia West*

West, Sonia

Project Manager

**Qualifiers:**  
 ND/U - Not Detected at the Reporting Limit  
 B - Analyte detected in the associated Method Blank  
 \* - Surrogate Recovery Outside Advisable QC Limits  
 J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)  
 D - Surrogate Recovery Unreportable due to Dilution  
 MI - Matrix Interference



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-12-MW6B

Collected: 1/4/01 04:00:00

SPL Sample ID: 01010169-07

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	ND	50	1		01/10/01 21:43	DL	528435
Surr: 1,4-Difluorobenzene	105	% 62-144	1		01/10/01 21:43	DL	528435
Surr: 4-Bromofluorobenzene	97.7	% 44-153	1		01/10/01 21:43	DL	528435
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		01/10/01 21:43	DL	528357
Ethylbenzene	ND	0.5	1		01/10/01 21:43	DL	528357
Methyl tert-butyl ether	35	2	1		01/10/01 21:43	DL	528357
Toluene	ND	0.5	1		01/10/01 21:43	DL	528357
m,p-Xylene	ND	0.5	1		01/10/01 21:43	DL	528357
o-Xylene	ND	0.5	1		01/10/01 21:43	DL	528357
Xylenes, Total	ND	0.5	1		01/10/01 21:43	DL	528357
Surr: 1,4-Difluorobenzene	99.5	% 72-137	1		01/10/01 21:43	DL	528357
Surr: 4-Bromofluorobenzene	99.6	% 48-156	1		01/10/01 21:43	DL	528357

*Sonia West*

West, Sonia

Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL



Client Sample ID W-15-RW-3A

Collected: 1/4/01 04:10:00 SPL Sample ID: 01010169-08

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	500	50	1		01/10/01 22:09	DL	528436
Surr: 1,4-Difluorobenzene	127	% 62-144	1		01/10/01 22:09	DL	528436
Surr: 4-Bromofluorobenzene	97.0	% 44-153	1		01/10/01 22:09	DL	528436
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	230	0.5	1		01/10/01 22:09	DL	528358
Ethylbenzene	1.1	0.5	1		01/10/01 22:09	DL	528358
Methyl tert-butyl ether	12	2	1		01/10/01 22:09	DL	528358
Toluene	0.97	0.5	1		01/10/01 22:09	DL	528358
m,p-Xylene	1.4	0.5	1		01/10/01 22:09	DL	528358
o-Xylene	ND	0.5	1		01/10/01 22:09	DL	528358
Xylenes, Total	1.4	0.5	1		01/10/01 22:09	DL	528358
Surr: 1,4-Difluorobenzene	116	% 72-137	1		01/10/01 22:09	DL	528358
Surr: 4-Bromofluorobenzene	95.1	% 48-156	1		01/10/01 22:09	DL	528358

*Sonia West*

West, Sonia  
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
(713) 660-0901

Client Sample ID W-12-RW2

Collected: 1/4/01 04:25:00

SPL Sample ID: 01010169-09

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	1000	250	5		01/10/01 23:50	DL	528439
Surr: 1,4-Difluorobenzene	164	% 62-144	5	*	01/10/01 23:50	DL	528439
Surr: 4-Bromofluorobenzene	116	% 44-153	5		01/10/01 23:50	DL	528439
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	33	2.5	5		01/10/01 23:50	DL	528361
Ethylbenzene	13	2.5	5		01/10/01 23:50	DL	528361
Methyl tert-butyl ether	380	10	5		01/10/01 23:50	DL	528361
Toluene	ND	2.5	5		01/10/01 23:50	DL	528361
m,p-Xylene	14	2.5	5		01/10/01 23:50	DL	528361
o-Xylene	3.7	2.5	5		01/10/01 23:50	DL	528361
Xylenes, Total	17.7	2.5	5		01/10/01 23:50	DL	528361
Surr: 1,4-Difluorobenzene	109	% 72-137	5		01/10/01 23:50	DL	528361
Surr: 4-Bromofluorobenzene	97.0	% 48-156	5		01/10/01 23:50	DL	528361

*Sonia West*

West, Sonia

Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit  
B - Analyte detected in the associated Method Blank  
\* - Surrogate Recovery Outside Advisable QC Limits  
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)  
D - Surrogate Recovery Unreportable due to Dilution  
MI - Matrix Interference





HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-12-MW6H

Collected: 1/4/01 04:35:00

SPL Sample ID: 01010169-10

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	2300	250	5		01/11/01 00:16	DL	528440
Surr: 1,4-Difluorobenzene	132	% 62-144	5		01/11/01 00:16	DL	528440
Surr: 4-Bromofluorobenzene	102	% 44-153	5		01/11/01 00:16	DL	528440
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	880	2.5	5		01/11/01 00:16	DL	528362
Ethylbenzene	6.4	2.5	5		01/11/01 00:16	DL	528362
Methyl tert-butyl ether	3800	50	25		01/11/01 08:49	DL	528367
Toluene	15	2.5	5		01/11/01 00:16	DL	528362
m,p-Xylene	30	2.5	5		01/11/01 00:16	DL	528362
o-Xylene	3.9	2.5	5		01/11/01 00:16	DL	528362
Xylenes, Total	33.9	2.5	5		01/11/01 00:16	DL	528362
Surr: 1,4-Difluorobenzene	118	% 72-137	5		01/11/01 00:16	DL	528362
Surr: 1,4-Difluorobenzene	102	% 72-137	25		01/11/01 08:49	DL	528367
Surr: 4-Bromofluorobenzene	96.9	% 48-156	5		01/11/01 00:16	DL	528362
Surr: 4-Bromofluorobenzene	90.5	% 48-156	25		01/11/01 08:49	DL	528367

*Sonia West*

West, Sonia  
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit  
 B - Analyte detected in the associated Method Blank  
 \* - Surrogate Recovery Outside Advisable QC Limits  
 J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)  
 D - Surrogate Recovery Unreportable due to Dilution  
 MI - Matrix Interference



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Client Sample ID W-13-RW1

Collected: 1/4/01 04:50:00

SPL Sample ID: 01010169-11

Site: 7-0235,19802887

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>GASOLINE RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_GRO</b>	<b>Units: ug/L</b>		
Gasoline Range Organics	8000	1200	25		01/11/01 00:41	DL	528442
Surr: 1,4-Difluorobenzene	124	% 62-144	25		01/11/01 00:41	DL	528442
Surr: 4-Bromofluorobenzene	116	% 44-153	25		01/11/01 00:41	DL	528442
<b>PURGEABLE AROMATICS</b>			<b>MCL</b>	<b>SW8021B</b>	<b>Units: ug/L</b>		
Benzene	1200	12	25		01/11/01 08:24	DL	528366
Ethylbenzene	250	12	25		01/11/01 08:24	DL	528366
Methyl tert-butyl ether	2500	50	25		01/11/01 08:24	DL	528366
Toluene	65	12	25		01/11/01 08:24	DL	528366
m,p-Xylene	230	12	25		01/11/01 08:24	DL	528366
o-Xylene	28	12	25		01/11/01 08:24	DL	528366
Xylenes, Total	258	12	25		01/11/01 08:24	DL	528366
Surr: 1,4-Difluorobenzene	115	% 72-137	25		01/11/01 08:24	DL	528366
Surr: 4-Bromofluorobenzene	95.4	% 48-156	25		01/11/01 08:24	DL	528366

*Sonia West*

West, Sonia

Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL

*Quality Control Documentation*



Quality Control Report

EXXON Company U.S.A.  
2225 Telegraph Ave. Oakland, Ca 2229-13X

Analysis: Purgeable Aromatics  
Method: SW8021B

WorkOrder: 01010169  
Lab Batch ID: R27512

Method Blank

Samples in Analytical Batch:

RunID: HP\_U\_010110A-528332 Units: ug/L  
Analysis Date: 01/10/2001 12:00 Analyst: DL

Lab Sample ID	Client Sample ID
01010169-01A	TB 11/8/00
01010169-02A	W-BB-MW6I
01010169-03A	W-12-MW6I
01010169-04A	W-13-MW6F
01010169-06A	W-13-MW6E
01010169-07A	W-12-MW6B
01010169-08A	W-15-RW-3A
01010169-09A	W-12-RW2
01010169-10A	W-12-MW6H
01010169-11A	W-13-RW1

Analyte	Result	Rep Limit
Benzene	ND	0.50
Ethylbenzene	ND	0.50
Methyl tert-butyl ether	ND	2.0
Toluene	ND	0.50
m,p-Xylene	ND	0.50
o-Xylene	ND	0.50
Xylenes, Total	ND	0.50
Surr: 1,4-Difluorobenzene	98.7	72-137
Surr: 4-Bromofluorobenzene	97.1	48-156

Laboratory Control Sample (LCS)

RunID: HP\_U\_010110A-528331 Units: ug/L  
Analysis Date: 01/10/2001 11:09 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	50	99	70	130
Ethylbenzene	50	48	97	70	130
Methyl tert-butyl ether	50	49	98	70	130
Toluene	50	50	99	70	130
m,p-Xylene	100	98	98	70	130
o-Xylene	50	48	96	70	130
Xylenes, Total	150	146	97	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01010169-03  
RunID: HP\_U\_010110A-528353 Units: ug/L  
Analysis Date: 01/10/2001 17:55 Analyst: DL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	17	84.1	20	16	80.7	4.14	21	32	164
Ethylbenzene	ND	20	15	74.6	20	14	70.5	5.54	19	52	142
Methyl tert-butyl ether	0.50	20	18	89.1	20	18	87.7	1.62	20	39	150

Qualifiers: ND/U - Not Detected at the Reporting Limit Mi - Matrix Interference  
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TEXAS 77054  
 (713) 660-0901

Quality Control Report

EXXON Company U.S.A.  
 2225 Telegraph Ave. Oakland, Ca 2229-13X

Analysis: Purgeable Aromatics  
 Method: SW8021B

WorkOrder: 01010169  
 Lab Batch ID: R27512

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01010169-03  
 RunID: HP\_U\_010110A-528353 Units: ug/L  
 Analysis Date: 01/10/2001 17:55 Analyst: DL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	ND	20	16	78.7	20	15	76.7	2.59	20	38	159
m,p-Xylene	ND	40	31	77.9	40	30	74.0	5.11	17	53	144
o-Xylene	ND	20	16	79.5	20	15	76.0	4.58	18	53	143
Xylenes, Total	ND	60	47	78.3	60	45	75.0	4.35	18	53	144

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
 J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

EXXON Company U.S.A.

2225 Telegraph Ave. Oakland, Ca 2229-13X

Analysis: Gasoline Range Organics  
 Method: CA\_GRO

WorkOrder: 01010169  
 Lab Batch ID: R27518

Method Blank

Samples in Analytical Batch:

RunID: HP\_U\_010110B-528421 Units: mg/L  
 Analysis Date: 01/10/2001 12:00 Analyst: DL

Lab Sample ID	Client Sample ID
01010169-01A	TB 11/8/00
01010169-02A	W-BB-MW6I
01010169-03A	W-12-MW6I
01010169-04A	W-13-MW6F
01010169-06A	W-13-MW6E
01010169-07A	W-12-MW6B
01010169-08A	W-15-RW-3A
01010169-09A	W-12-RW2
01010169-10A	W-12-MW6H
01010169-11A	W-13-RW1

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	102.7	62-144
Surr: 4-Bromofluorobenzene	97.0	44-153

Laboratory Control Sample (LCS)

RunID: HP\_U\_010110B-528420 Units: mg/L  
 Analysis Date: 01/10/2001 10:44 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.74	74	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01010169-04  
 RunID: HP\_U\_010110B-528431 Units: mg/L  
 Analysis Date: 01/10/2001 18:46 Analyst: DL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	0.9	0.63	70.5	0.9	0.63	70.4	0.189	36	36	160

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
 J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

EXXON Company U.S.A.

2225 Telegraph Ave. Oakland, Ca 2229-13X

Analysis: Purgeable Aromatics  
Method: SW8021B

WorkOrder: 01010169  
Lab Batch ID: R27796

Method Blank

Samples in Analytical Batch:

RunID: HP\_N\_010116A-533345 Units: ug/L  
Analysis Date: 01/16/2001 15:10 Analyst: DL

Lab Sample ID: 01010169-05A  
Client Sample ID: W-11-MW6G

Analyte	Result	Rep Limit
Benzene	ND	0.50
Ethylbenzene	ND	0.50
Methyl tert-butyl ether	ND	2.0
Toluene	ND	0.50
m,p-Xylene	ND	0.50
o-Xylene	ND	0.50
Xylenes, Total	ND	0.50
Surr: 1,4-Difluorobenzene	82.2	72-137
Surr: 4-Bromofluorobenzene	103.2	48-156

Laboratory Control Sample (LCS)

RunID: HP\_N\_010116A-533344 Units: ug/L  
Analysis Date: 01/16/2001 13:04 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	53	106	70	130
Ethylbenzene	50	56	112	70	130
Methyl tert-butyl ether	50	51	102	70	130
Toluene	50	56	113	70	130
m,p-Xylene	100	110	113	70	130
o-Xylene	50	56	112	70	130
Xylenes, Total	150	166	111	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01010169-05  
RunID: HP\_N\_010116A-533346 Units: ug/L  
Analysis Date: 01/16/2001 16:02 Analyst: DL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	19	96.5	20	19	95.4	1.18	21	32	164
Ethylbenzene	ND	20	20	102	20	20	100	1.64	19	52	142
Methyl tert-butyl ether	0.65	20	19	92.5	20	20	96.6	4.38	20	39	150

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix interference  
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

EXXON Company U.S.A.  
 2225 Telegraph Ave. Oakland, Ca 2229-13X

Analysis: Purgeable Aromatics  
 Method: SW8021B

WorkOrder: 01010169  
 Lab Batch ID: R27796

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01010169-05  
 RunID: HP\_N\_010116A-533346 Units: ug/L  
 Analysis Date: 01/16/2001 16:02 Analyst: DL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Toluene	ND	20	21	103	20	20	101	1.47	20	38	159
m,p-Xylene	ND	40	42	105	40	42	104	0.941	17	53	144
o-Xylene	ND	20	20	101	20	20	101	0.426	18	53	143
Xylenes, Total	ND	60	62	103	60	62	103	0	18	53	144

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
 J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.





Quality Control Report

EXXON Company U.S.A.  
2225 Telegraph Ave. Oakland, Ca 2229-13X

Analysis: Gasoline Range Organics  
Method: CA\_GRO

WorkOrder: 01010169  
Lab Batch ID: R27798

Method Blank

Samples in Analytical Batch:

RunID: HP\_N\_010116B-533360 Units: mg/L Lab Sample ID Client Sample ID  
Analysis Date: 01/16/2001 15:10 Analyst: DL 01010169-05A W-11-MW6G

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	86.7	62-144
Surr: 4-Bromofluorobenzene	107.3	44-153

Laboratory Control Sample (LCS)

RunID: HP\_N\_010116B-533359 Units: mg/L  
Analysis Date: 01/16/2001 14:44 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.84	84	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 01010378-02  
RunID: HP\_N\_010116B-533361 Units: mg/L  
Analysis Date: 01/16/2001 16:53 Analyst: DL

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	0.9	0.95	105	0.9	1	114	7.96	36	36	160

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist  
And  
Chain of Custody*



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
(713) 660-0901

Sample Receipt Checklist

Workorder: 01010169  
Date and Time Received: 1/9/01 10:00:00 AM  
Temperature: 4

Received by: Stelly, D'Anna  
Carrier name: FedEx

- 
- |   |   |                             |   |
|---|---|-----------------------------|---|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/>            |
| Custody seals intact on shipping container/cooler?      | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Container/Temp Blank temperature in compliance?         | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Water - VOA vials have zero headspace?                  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present                                     |
| Water - pH acceptable upon receipt?                     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
-