ExxonMobil
Refining and Supply Company
2300 Clayton Road, Suite 1250
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Gene N. Ortega
Senior Engineer
Environmental Remediation

ExxonMobil
Refining & Supply

March 29, 2001

APR 04 2001

Ms. Eva Chu
Alameda County Health Agency
Division of Environmental Protection
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Subject: Former Exxon RAS #7-0210, 7840 Amador Valley Boulevard, Dublin, California

Dear Ms. Chu:

Attached for your review and comment is a copy of the *Report of Groundwater Monitoring, First Quarter* 2001 for the above-referenced site. The report, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, details the results of the February 2001 sampling event.

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

Sincerely,

Gene N. Ortega
Senior Engineer

Attachment: ETIC Groundwater Monitoring Report dated March 2001

c: w/attachment:
Mr. Winson B. Low - Valero Energy Corporation

c: w/o attachment:
Ms. Christa Marting - ETIC Engineering, Inc.

ETIC
Engineering, Inc.

Report of Groundwater Monitoring
First Quarter 2001

Former Exxon Retail Site 7-0210
7840 Amador Valley Boulevard
Dublin, California

Prepared for

ExxonMobil Refining and Supply Company
P.O. Box 4032
2300 Clayton Road, Suite 1250
Concord, California 94524-4032

Prepared by

ETIC Engineering, Inc.
2285 Morello Avenue
Pleasant Hill, California 94523
(925) 602-4710

Ted Moise
Project Manager

March 28, 2001
Date

Heidi Dieffenbach-Carle
Heidi Dieffenbach-Carle, R.G. #6793
Senior Geologist

REGISTERED GEOLOGIST
HEIDI L. DIEFFENBACH-CARLE
No. 6793
exp 03/31/02
STATE OF CALIFORNIA

March 27, 2001
Date

March 2001

SITE CONTACTS

Station Number:	Former Exxon Retail Site 7-0210
Station Address:	7840 Amador Valley Boulevard Dublin, California
ExxonMobil Project Manager:	Gene N. Ortega ExxonMobil Refining and Supply Company P.O. Box 4032 2300 Clayton Road, Suite 1250 Concord, California 94524-4032 (925) 246-8747
Consultant to ExxonMobil:	ETIC Engineering, Inc. 2285 Morello Avenue Pleasant Hill, California 94523 (925) 602-4710
ETIC Project Manager:	Ted Moise
Regulatory Oversight:	Eva Chu Alameda County Health Agency Division of Environmental Protection Department of Environmental Health 1131 Harbor Bay Parkway, 2nd Floor Alameda, California 94502 (510) 567-6700

1. INTRODUCTION

Former Exxon Retail Site (RS) 7-0210 is an active Valero service station located at 7840 Amador Valley Boulevard in Dublin, California. Land use in the area is a mixture of residential and commercial. The immediate vicinity of the site is commercial, consisting of shopping malls and parking lots. A Unocal service station with underground storage tanks is located on the southwestern corner of the intersection. The site is located on essentially flat terrain with topography in the area sloping gently to the southeast.

Former Exxon RS 7-0210 was owned and operated by Texaco until 1988, when it was purchased by Exxon. In February 1990, Exxon replaced product dispensers and installed a vapor recovery system. In October 1991, Exxon replaced three 8,000-gallon single-walled steel underground storage tanks with the existing three 12,000-gallon double-walled fiberglass-reinforced plastic tanks. The product piping was also upgraded to double-walled fiberglass-reinforced plastic. The locations of the present and former tanks are indicated in Figure 1.

Groundwater monitoring wells MW1-MW4 were installed in May 1992 and monitored for petroleum hydrocarbons and benzene, toluene, ethylbenzene, and total xylenes (BTEX) until June 1995. These monitoring wells were destroyed in April 1996 as authorized by the Alameda County Health Agency Department of Environmental Health and the Regional Water Quality Control Board in a March 1996 site closure letter to Exxon. The locations of these former wells are presented in Figure 1. Three onsite groundwater monitoring wells (MW5-MW7, Figure 1) were installed on 14 and 15 November 2000.

2. GROUNDWATER MONITORING

On 2 February 2001 groundwater in wells MW5-MW7 (Figure 1) was gauged. Groundwater samples were collected from the wells and the samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-g), BTEX, and methyl t-butyl ether (MTBE).

Current groundwater monitoring data are presented in boldface type in Table 1, along with previous data, and current groundwater elevations are shown in Figure 1. The groundwater flow direction on 2 February was to the southeast, with a gradient of approximately 0.003. Groundwater elevations for 2 February are presented in Figure 1. Liquid-phase hydrocarbons were not observed in any of the wells.

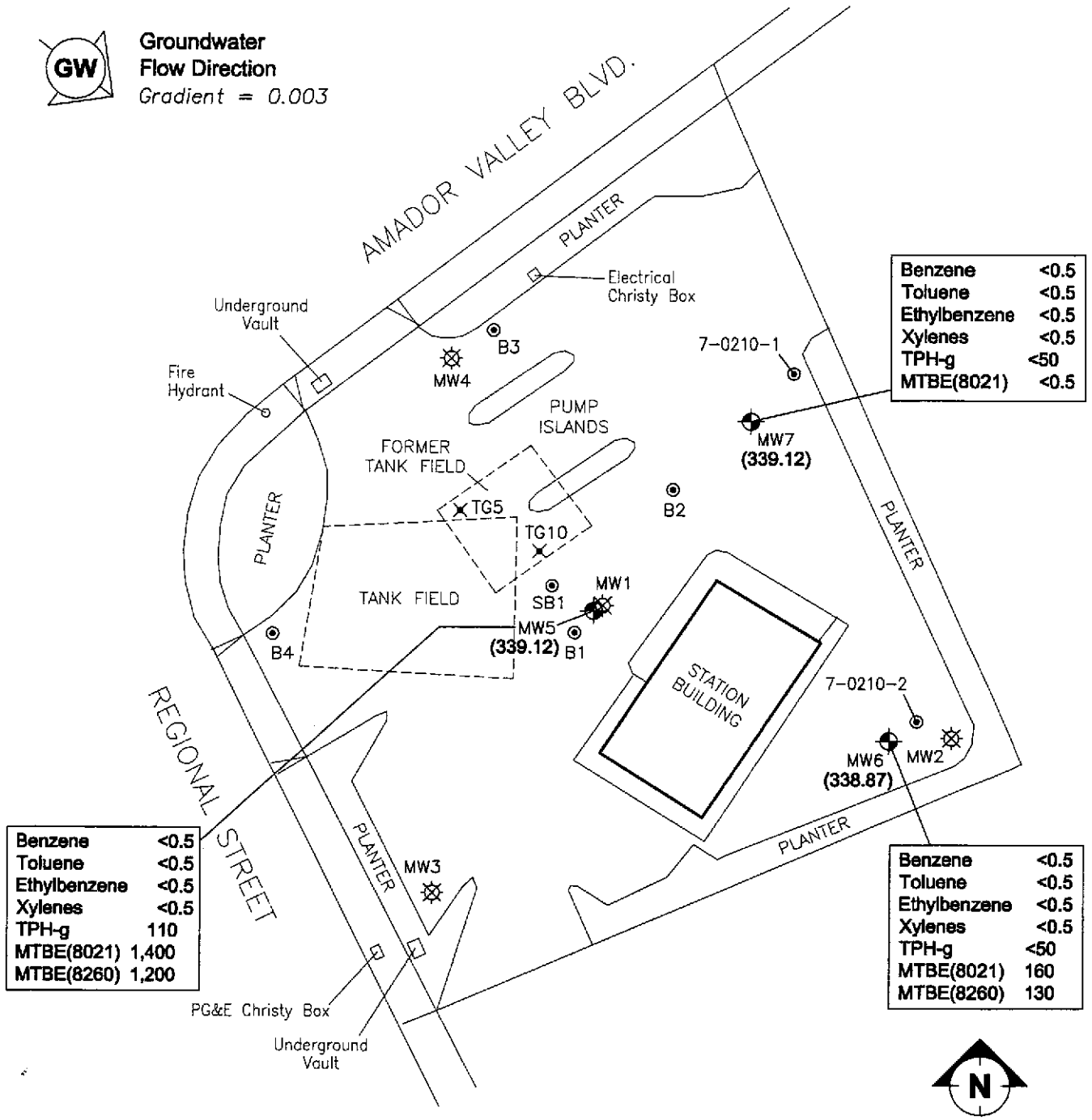
After the depths to water were measured, the wells were purged. Field parameters of pH, temperature, and electrical conductance of the purged water were measured for approximately every well casing volume removed during purging. Copies of the field documents are included as Appendix A. When the field parameters were stable (less than a 10 percent change from the previous reading for temperature and electrical conductance and not more than 0.1 pH units) and approximately 3 casing volumes were removed from each well, purging was stopped and samples were collected using factory-cleaned disposable bailers. The samples were poured into 40-ml glass VOA vials and stored in an ice-filled cooler. All samples were handled and transported under chain of custody.

The samples were submitted to SPL, Inc. in Houston, Texas, and analyzed for TPH-g by Cal EPA-modified EPA Method 8015 and for BTEX and MTBE by EPA Method 8021B. Samples in which

MTBE was detected were also analyzed by EPA Method 8260B for confirmation. The results for these analyses are presented in boldface type, along with previous analytical data, in Table 1, and are shown in Figure 1. The laboratory analytical report and chain-of-custody documentation are included in Appendix B.

3. WORK PROPOSED FOR NEXT QUARTER

Groundwater in wells MW5-MW7 will be gauged and sampled in May 2001. The groundwater samples will be analyzed for TPH-g, BTEX, and MTBE.



LEGEND

- GROUNDWATER MONITORING WELL LOCATION
- SOIL BORING / GROUNDWATER SAMPLING LOCATION
- CONFIRMATION SOIL SAMPLE
- DESTROYED GROUNDWATER MONITORING WELL

NOTE:
B1-B4 SAMPLED 12/98.
7-0210-1 AND 7-0210-2 SAMPLED 4/20/00

(339.12) GROUNDWATER ELEVATION (FEET MSL)
TPH-g TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE METHYL T-BUTYL ETHER
CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L).

MAP ADAPTED FROM EA ENGINEERING, SCIENCE, AND TECHNOLOGY DRAWING, AND SITE SURVEY PERFORMED BY MILANI & ASSOCIATES, DECEMBER 2000.

ETIC Engineering, Inc.

SITE PLAN SHOWING GROUNDWATER ELEVATIONS
AND ANALYTICAL RESULTS
FORMER EXXON RS 7-0210, 7840 AMADOR VALLEY BLVD., DUBLIN, CA.
2 FEBRUARY 2001

FIGURE: 1

FILENAME: 1Q2001.DWG 03/14/01

TABLE 1 GROUNDWATER MONITORING DATA, FORMER EXXON RS 7-0210, 7840 AMADOR VALLEY BOULEVARD, DUBLIN, CA

Well No.	Date	Casing Elevation (feet msl)	Depth to Water (feet)	Groundwater Elevation (feet msl)	LPH Thickness (feet)	Concentration (µg/L)					
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	MTBE
MW1	05/21/92	96.32	14.45	81.87	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	02/10/93		12.22	84.10	0.00	3.1	<0.5	1.8	0.6	2,600	NA
	05/20/93		10.74	85.58	0.00	1.9	<0.5	1.8	<1.0	1,000	NA
	06/23/93		11.74	84.58	0.00	1.0	<0.5	1.2	<0.5	1,300	NA
	08/23/93		12.72	83.60	0.00	<0.5	<0.5	<0.5	0.8	80	NA
	10/25/93		13.99	82.33	0.00	<0.5	<0.5	0.8	1.3	140	NA
	02/16/94		14.90	81.42	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	04/16/94		14.49	81.83	0.00	<0.5*	<0.5	<0.5	<0.5	190	NA
	07/26/94		15.11	81.21	0.00	<0.5*	<0.5	<0.5	<0.5	130	NA
	10/05/94		15.69	80.63	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	01/04/95		14.66	81.66	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	06/12/95		10.08	86.24	0.00	<0.5	<0.5	<0.5	<0.5	<50	230
			Well destroyed April 1996.								
MW2	05/21/92	95.91	14.30	81.61	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	02/10/93		12.34	83.57	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	05/20/93		10.73	85.18	0.00	<0.5	<0.5	<0.5	<1.0	320	NA
	06/23/93		11.74	84.17	0.00	<0.5	<0.5	<0.5	<0.5	130	NA
	08/23/93		12.60	83.31	0.00	<0.5	<0.5	<0.5	1.1	140	NA
	10/25/93		13.86	82.05	0.00	<0.5	<0.5	0.5	2.4	75	NA
	02/16/94		14.73	81.18	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	04/16/94		14.33	81.58	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	07/26/94		14.96	80.95	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	10/05/94		15.49	80.42	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	01/04/95		14.44	81.47	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	06/12/95		10.10	85.81	0.00	<0.5	<0.5	<0.5	<0.5	<50	59
			Well destroyed April 1996.								

TABLE 1 GROUNDWATER MONITORING DATA, FORMER EXXON RS 7-0210, 7840 AMADOR VALLEY BOULEVARD, DUBLIN, CA

Well No.	Date	Casing Elevation (feet msl)	Depth to Water (feet)	Groundwater Elevation (feet msl)	LPH Thickness (feet)	Concentration (µg/L)					
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	MTBE
MW3	05/21/92	97.95	16.05	81.90	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	02/10/93		13.77	84.18	0.00	<0.5	<0.5	<0.5	0.7	<50	NA
	05/20/93		12.32	85.63	0.00	<0.5	<0.5	<0.5	<1.0	<50	NA
	06/23/93		13.34	84.61	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	08/23/93		14.30	83.65	0.00	2.3	1.2	1.4	4.1	<50	NA
	10/25/93		15.62	82.33	0.00	NS	NS	NS	NS	NS	NS
	02/16/94		16.48	81.47	0.00	NS	NS	NS	NS	NS	NS
	04/16/94		16.61	81.34	0.00	NS	NS	NS	NS	NS	NS
	07/26/94		16.72	81.23	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	10/05/94		17.33	80.62	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	01/04/95		16.29	81.66	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	06/12/95		11.67	86.28	0.00	<0.5	<0.5	<0.5	<0.5	<50	<2.5
			Well destroyed April 1996.								
MW4	05/21/92	96.69	14.59	82.10	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	02/10/93		12.30	84.39	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	05/20/93		10.75	85.94	0.00	1.4	1.0	<0.5	1.8	<50	NA
	06/23/93		11.78	84.91	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	08/23/93		12.82	83.87	0.00	<0.5	<0.5	<0.5	0.8	<50	NA
	10/25/93		14.10	82.59	0.00	NS	NS	NS	NS	NS	NS
	02/16/94		15.02	81.67	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	04/16/94		14.61	82.08	0.00	NS	NS	NS	NS	NS	NS
	07/26/94		15.23	81.46	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	10/05/94		15.85	80.84	0.00	<0.5	12	<0.5	<0.5	<50	NA
	01/04/95		14.84	81.85	0.00	<0.5	<0.5	<0.5	<0.5	<50	NA
	06/12/95		10.07	86.62	0.00	<0.5	<0.5	<0.5	<0.5	<50	<2.5

TABLE 1 GROUNDWATER MONITORING DATA, FORMER EXXON RS 7-0210, 7840 AMADOR VALLEY BOULEVARD, DUBLIN, CA

Well No.	Date	Casing Elevation (feet msl)	Depth to Water (feet)	Groundwater Elevation (feet msl)	LPH Thickness (feet)	Concentration (µg/L) Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	MTBE
MW4			Well destroyed April 1996.								
MW5	11/17/00	352.93	13.51	339.42	0.00	<0.5	<0.5	<0.5	2.46	240	1,500
	11/17/00										1,600[a]
	02/02/01		**13.81**	**339.12**	**0.00**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**110**	**1,400**
											1,200[a]
MW6	11/17/00	352.66	13.47	339.19	0.00	<0.5	<0.5	<0.5	<0.5	<50	270
	11/17/00										260[a]
	02/02/01		**13.79**	**338.87**	**0.00**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<50**	**160**
											130[a]
MW7	11/17/00	351.86	12.44	339.42	0.00	<0.5	<0.5	<0.5	<0.5	<50	<0.5
	02/02/01		**12.74**	**339.12**	**0.00**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<50**	**<0.5**

a Analysis by EPA Method 8260.

LPH Liquid-phase hydrocarbons.
TPH-g Total Petroleum Hydrocarbons as gasoline.
MTBE Methyl tertiary butyl ether.
NA Not analyzed for this constituent.
NS Not sampled.

* A peak eluting earlier than benzene, suspected to be MTBE.

feet msl Feet relative to mean sea level.
µg/L Micrograms per liter.

Appendix A

Field Documents

ETIC
Engineering, Inc.

FIELD SUMMARY REPORT

Client: Exxon **Station No.:** 7-0210

Project No.: UP0210.1 **Task No.:** B

Sample Team: Douglas Fitzgerald

Date: 2-2-01

No. of Drums on Site: ____ **Water** ____ **Soil** ____ **Empty** 6 (six) waste

- **Summary:**

- On site 0950
- open wells mw-5, mw-6, mw-7
- Gauge Wells DTW ; DTB : mw5, mw6, mw7
- purge Wells mw5, mw6, mw7 by Hand bailers
- Sample wells mw-5, mw-6, mw-7
- close all wells & secure
- six (6) waste Drums on site ; station owner Asked how long they will be stored on side of building.
- off site 1225.

ETIC Engineering, Inc.

MONITORING WELL DATA FORM

Client: *ExxonMobil*

Date: 2/2/2001

Project Number: *UP0210.1*

Station Number: *7-0210*

Site Location: *7840 AMADOR VALLY BLVD., DUBLIN, CA*

Samplers: DOUG F.

MONITORING WELL NUMBER	DEPTH TO WATER (TOC)	DEPTH TO PRODUCT (TOC)	APPARENT PRODUCT THICKNESS	AMOUNT OF PRODUCT REMOVED	MONITORING WELL INTEGRITY	DEPTH TO BOTTOM (TOC)	WELL CASING DIAMETER
MM-5	13.81					24.35	2"
MM-6	13.79					24.72	2"
MM-7	12.74					23.78	2"

F:\Projects\70210\Public\sampling\[MonitoringWellData.xls]Sheet1

Note: Depth to bottom measured during first quarter unless noted.

ETIC Engineering, Inc.

GROUNDWATER PURGE AND SAMPLE

Project Name: *Exxon 7-0210* Well No: *MW-5* Date: 2/2/2001

Project No: *UP0210.1* Personnel: DOUG F.

GAUGING DATA

Water Level Measuring Method: Measuring Point Description: *TOC*

WELL PURGE VOLUME CALCULATION	Total Depth (feet)		Depth to Water (feet)		Water Column (feet)		Multiplier for Casing Diameter				Casing Volume (gal)		Total Purge Volume (gal)
	24.35	−	13.81	=	10.54	X	1	2	4	6	1.7	=	5.0
							0.04	0.16	0.64	1.44			

PURGING DATA

Purge Method: ~~Submersible Pump~~ Hand bail Purge Depth: *Screen* Purge Rate: *(gpm)*

Time	1039	1045	1050			
Volume Purge (gal)	2.0	4.0	6.0			
Temperature (C)	20.3	21.4	21.8			
pH	6.82	6.90	6.85			
Spec.Cond.(umhos)	1.53	1.62	1.64			
Turbidity/Color						
Odor (Y/N)	N	N	N			
Casing Volumes	silty	silty	silty			
Dewatered (Y/N)	N	N	N			

Comments/Observbations:

SAMPLING DATA

Time Sampled: 1055 Approximate Depth to Water During Sampling: 13.80 *(feet)*

Comments:

Sample Number	Number of Containers	Container Type	Perservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW-5	6	Voa	HCL	40 ml		TPH-g, BTEX, MTBE

Total Purge Volume: 6.0 *(gallons)* Disposal: Onsite

Weather Conditions: Good

Condition of Well Box and Casing at Time of Sampling: Good

Well Head Conditions Requiring Correction: none

Problems Encountered During Purging and Sampling: none

Comments:

ETIC Engineering, Inc.

GROUNDWATER PURGE AND SAMPLE

Project Name: Exxon 7-0210 | Well No: MW-6 | Date: 2/2/2001

Project No: UP0210.1 | Personnel: DOUG F.

GAUGING DATA

Water Level Measuring Method: | Measuring Point Description: TOC

WELL PURGE VOLUME CALCULATION	Total Depth (feet)		Depth to Water (feet)		Water Column (feet)		Multiplier for Casing Diameter				Casing Volume (gal)		Total Purge Volume (gal)
							1	2	4	6			
	24.72	−	13.79	=	10.93	X	0.04	0.16	0.64	1.44	1.7	=	5.2

PURGING DATA

Purge Method: ~~Submersible Pump~~ Hand Bail | Purge Depth: Screen | Purge Rate: (gpm)

Time	1114	1118	1123			
Volume Purge (gal)	2.0	4.0	6.0			
Temperature (C)	21.9	21.8	21.8			
pH	6.86	6.96	6.99			
Spec.Cond.(umhos)	1.58	1.59	1.59			
Turbidity/Color						
Odor (Y/N)	N	N	N			
Casing Volumes	Silty	Silty	Silty			
Dewatered (Y/N)	N	N	N			

Comments/Observbations:

SAMPLING DATA

Time Sampled: 1130 | Approximate Depth to Water During Sampling: 13.75 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Perservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW-6	6	Voa	HCL	40 ml		TPH-g, BTEX, MTBE

Total Purge Volume: 6.0 (gallons) | Disposal: Rom. C.

Weather Conditions: Good

Condition of Well Box and Casing at Time of Sampling: Good

Well Head Conditions Requiring Correction: none

Problems Encountered During Purging and Sampling: none

Comments:

ETIC Engineering, Inc.

GROUNDWATER PURGE AND SAMPLE

Project Name: Exxon 7-0210 | Well No: MW-7 | Date: 2/2/2001

Project No: UP0210.1 | Personnel: DOUG F.

GAUGING DATA

Water Level Measuring Method: | Measuring Point Description: TOC

WELL PURGE VOLUME CALCULATION	Total Depth (feet)		Depth to Water (feet)		Water Column (feet)		Multiplier for Casing Diameter				Casing Volume (gal)		Total Purge Volume (gal)
	23.78	−	12.74	=	11.04	X	1	2	4	6	1.7	=	5.3
							0.04	0.16	0.64	1.44			

PURGING DATA

Purge Method: ~~Submersible Pump~~ Hand bail | Purge Depth: Screen | Purge Rate: (gpm)

Time	1145	1150	1155			
Volume Purge (gal)	2.0	4.0	6.0			
Temperature (C)	21.5	21.5	21.4			
pH	6.85	6.88	6.95			
Spec.Cond.(umhos)	1.61	1.61	1.62			
Turbidity/Color						
Odor (Y/N)	N	N	N			
Casing Volumes	Silty	Silty	Silty			
Dewatered (Y/N)	N	N	N			

Comments/Observbations:

SAMPLING DATA

Time Sampled: 1200 | Approximate Depth to Water During Sampling: 12.70 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Perservative	Volume Filled (mL or L)	Turbidity/ Color	Analysis Method
MW-7	6	Voa	HCL	40 ml		TPH-g, BTEX, MTBE

Total Purge Volume: 6.0 (gallons) | Disposal: Pom-C

Weather Conditions: Cool

Condition of Well Box and Casing at Time of Sampling: Good

Well Head Conditions Requiring Correction: none

Problems Encountered During Purging and Sampling: none

Comments:

Appendix B

Laboratory Analytical Reports

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

EXXON Company U.S.A.

Certificate of Analysis Number:

01020146

Report To:		Project Name:	UP0210.1
ETIC Engineering, Inc.		Site:	7-0210,21011028
John Ortega		Site Address:	
2285 Morello Avenue			
Pleasant Hill		PO Number:	LWR#21011298
California		State:	California
94523-		State Cert. No.:	1903
ph: (925) 602-4710	fax: (925) 602-4720	Date Reported:	2/19/01

This Report Contains A Total Of 13 Pages

Excluding This Page

And

Chain Of Custody

2/19/01

Date

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

Case Narrative for:

EXXON Company U.S.A.

Certificate of Analysis Number:

01020146

Report To:		Project Name:	UP0210.1
ETIC Engineering, Inc.		Site:	7-0210,21011028
John Ortega		Site Address:	
2285 Morello Avenue			
Pleasant Hill		PO Number:	LWR#21011298
California		State:	California
94523-		State Cert. No.:	1903
ph: (925) 602-4710	fax: (925) 602-4720	Date Reported:	2/19/01

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.

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

2/19/01
Date

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

EXXON Company U.S.A.

Certificate of Analysis Number:

01020146

Report To: ETIC Engineering, Inc.
John Ortega
2285 Morello Avenue

Pleasant Hill
California
94523-
ph: (925) 602-4710 fax: (925) 602-4720

Fax To: ETIC Engineering, Inc.
John Ortega fax : (925) 602-4720

Project Name: UP0210.1
Site: 7-0210,21011028
Site Address:

PO Number: LWR#21011298
State: California
State Cert. No.: 1903
Date Reported: 2/19/01

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-5	01020146-01	Water	2/2/01 10:55:00 AM	2/6/01 10:00:00 AM		☐
MW-6	01020146-02	Water	2/2/01 11:30:00 AM	2/6/01 10:00:00 AM		☐
MW-7	01020146-03	Water	2/2/01 12:00:00 PM	2/6/01 10:00:00 AM		☐
MW-7	01020146-03	Water	2/2/01 12:00:00 PM	2/6/01 10:00:00 AM		☑

Sonia West

West, Sonia
Senior Project Manager

2/19/01
Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

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

Client Sample ID MW-5 **Collected:** 2/2/01 10:55:00 **SPL Sample ID:** 01020146-01

Site: 7-0210,21011028

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			**MCL**	**CA_GRO**		**Units: ug/L**		
Gasoline Range Organics	110		50	1		02/07/01 17:51	D_R	560292
Surr: 1,4-Difluorobenzene	87.7	%	62-144	1		02/07/01 17:51	D_R	560292
Surr: 4-Bromofluorobenzene	93.7	%	44-153	1		02/07/01 17:51	D_R	560292
PURGEABLE AROMATICS			**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		0.5	1		02/07/01 17:51	D_R	559912
Ethylbenzene	ND		0.5	1		02/07/01 17:51	D_R	559912
Methyl tert-butyl ether	1400		5	10		02/08/01 12:16	D_R	560857
Toluene	ND		0.5	1		02/07/01 17:51	D_R	559912
m,p-Xylene	ND		0.5	1		02/07/01 17:51	D_R	559912
o-Xylene	ND		0.5	1		02/07/01 17:51	D_R	559912
Xylenes,Total	ND		0.5	1		02/07/01 17:51	D_R	559912
Surr: 1,4-Difluorobenzene	102	%	72-137	1		02/07/01 17:51	D_R	559912
Surr: 1,4-Difluorobenzene	111	%	72-137	10		02/08/01 12:16	D_R	560857
Surr: 4-Bromofluorobenzene	103	%	48-156	1		02/07/01 17:51	D_R	559912
Surr: 4-Bromofluorobenzene	98.9	%	48-156	10		02/08/01 12:16	D_R	560857
VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**		**Units: ug/L**		
Methyl tert-butyl ether	1200		50	10		02/14/01 23:51	LT	568594
Surr: 1,2-Dichloroethane-d4	86.0	%	62-119	10		02/14/01 23:51	LT	568594
Surr: 4-Bromofluorobenzene	94.0	%	78-123	10		02/14/01 23:51	LT	568594
Surr: Toluene-d8	94.0	%	74-122	10		02/14/01 23:51	LT	568594

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 MW-6 **Collected:** 2/2/01 11:30:00 **SPL Sample ID:** 01020146-02

Site: 7-0210,21011028

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				**MCL**	**CA_GRO**		**Units: ug/L**		
Gasoline Range Organics	ND		50		1		02/07/01 22:58	D_R	560246
Surr: 1,4-Difluorobenzene	86.7	%	62-144		1		02/07/01 22:58	D_R	560246
Surr: 4-Bromofluorobenzene	90.3	%	44-153		1		02/07/01 22:58	D_R	560246
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		0.5		1		02/07/01 22:58	D_R	559924
Ethylbenzene	ND		0.5		1		02/07/01 22:58	D_R	559924
Methyl tert-butyl ether	160		0.5		1		02/07/01 22:58	D_R	559924
Toluene	ND		0.5		1		02/07/01 22:58	D_R	559924
m,p-Xylene	ND		0.5		1		02/07/01 22:58	D_R	559924
o-Xylene	ND		0.5		1		02/07/01 22:58	D_R	559924
Xylenes,Total	ND		0.5		1		02/07/01 22:58	D_R	559924
Surr: 1,4-Difluorobenzene	100	%	72-137		1		02/07/01 22:58	D_R	559924
Surr: 4-Bromofluorobenzene	98.4	%	48-156		1		02/07/01 22:58	D_R	559924
VOLATILE ORGANICS BY METHOD 8260B				**MCL**	**SW8260B**		**Units: ug/L**		
Methyl tert-butyl ether	130		5		1		02/14/01 23:23	LT	568593
Surr: 1,2-Dichloroethane-d4	92.0	%	62-119		1		02/14/01 23:23	LT	568593
Surr: 4-Bromofluorobenzene	96.0	%	78-123		1		02/14/01 23:23	LT	568593
Surr: Toluene-d8	92.0	%	74-122		1		02/14/01 23:23	LT	568593

Sonia West

West, Sonia
Project Manager

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>MCL - Result Over Maximum Contamination Limit(MCL)
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MI - Matrix Interference

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

Client Sample ID MW-7 **Collected:** 2/2/01 12:00:00 **SPL Sample ID:** 01020146-03

Site: 7-0210,21011028

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			**MCL**	**CA_GRO**		**Units: ug/L**		
Gasoline Range Organics	ND		50	1		02/07/01 23:24	D_R	560251
Surr: 1,4-Difluorobenzene	88.0	%	62-144	1		02/07/01 23:24	D_R	560251
Surr: 4-Bromofluorobenzene	89.3	%	44-153	1		02/07/01 23:24	D_R	560251
PURGEABLE AROMATICS			**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		0.5	1		02/07/01 23:24	D_R	559926
Ethylbenzene	ND		0.5	1		02/07/01 23:24	D_R	559926
Methyl tert-butyl ether	ND		0.5	1		02/07/01 23:24	D_R	559926
Toluene	ND		0.5	1		02/07/01 23:24	D_R	559926
m,p-Xylene	ND		0.5	1		02/07/01 23:24	D_R	559926
o-Xylene	ND		0.5	1		02/07/01 23:24	D_R	559926
Xylenes,Total	ND		0.5	1		02/07/01 23:24	D_R	559926
Surr: 1,4-Difluorobenzene	100	%	72-137	1		02/07/01 23:24	D_R	559926
Surr: 4-Bromofluorobenzene	97.9	%	48-156	1		02/07/01 23:24	D_R	559926

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Project Manager

Qualifiers:

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J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

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

Quality Control Report

EXXON Company U.S.A.

UP0210.1

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 01020146
Lab Batch ID: R29223

Method Blank

RunID: HP_R_010207A-559892 Units: ug/L
Analysis Date: 02/07/2001 12:27 Analyst: D_R

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01020146-01A	MW-5
01020146-02A	MW-6
01020146-03A	MW-7

Analyte	Result	Rep Limit
Benzene	ND	0.50
Ethylbenzene	ND	0.50
Methyl tert-butyl ether	ND	0.50
Toluene	ND	0.50
m,p-Xylene	ND	0.50
o-Xylene	ND	0.50
Xylenes,Total	ND	0.50
Surr: 1,4-Difluorobenzene	100.2	72-137
Surr: 4-Bromofluorobenzene	98.2	48-156

Laboratory Control Sample (LCS)

RunID: HP_R_010207A-559888 Units: ug/L
Analysis Date: 02/07/2001 11:36 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	45	89	70	130
Ethylbenzene	50	46	92	70	130
Methyl tert-butyl ether	50	51	102	70	130
Toluene	50	45	91	70	130
m,p-Xylene	100	91	91	70	130
o-Xylene	50	47	93	70	130
Xylenes,Total	150	138	92	70	130

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

Sample Spiked: 01020146-02
RunID: HP_R_010207A-559920 Units: ug/L
Analysis Date: 02/07/2001 20:51 Analyst: D_R

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
enzene	ND	20	24	121	20	23	116	3.52	21	32	164
Ethylbenzene	ND	20	23	116	20	23	114	1.58	19	52	142
ethyl tert-butyl ether	160	20	180	99.1	20	170	84.2	16.3	20	39	150

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

UP0210.1

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 01020146
Lab Batch ID: R29223

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

Sample Spiked: 01020146-02
RunID: HP_R_010207A-559920 Units: ug/L
Analysis Date: 02/07/2001 20:51 Analyst: D_R

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	24	118	20	23	117	0.509	20	38	159
m,p-Xylene	ND	40	42	105	40	41	103	2.07	17	53	144
o-Xylene	ND	20	22	112	20	22	110	1.92	18	53	143
Xylenes,Total	ND	60	64	107	60	63	105	1.57	18	53	144

Qualifiers:
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B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
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* - Recovery Outside Advisable QC Limits

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Quality Control Report

EXXON Company U.S.A.

UP0210.1

Analysis: Gasoline Range Organics
Method: CA_GRO
WorkOrder: 01020146
Lab Batch ID: R29239

Method Blank

RunID: HP_R_010207C-560227 Units: mg/L
Analysis Date: 02/07/2001 12:27 Analyst: D_R

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01020146-01A	MW-5
01020146-02A	MW-6
01020146-03A	MW-7

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	88.7	62-144
Surr: 4-Bromofluorobenzene	86.7	44-153

Laboratory Control Sample (LCS)

RunID: HP_R_010207C-560226 Units: mg/L
Analysis Date: 02/07/2001 12:02 Analyst: D_R

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: 01020146-03
RunID: HP_R_010207C-560240 Units: mg/L
Analysis Date: 02/07/2001 21:42 Analyst: D_R

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	0.93	103	0.9	0.92	102	1.44	36	36	160

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

UP0210.1

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 01020146
Lab Batch ID: R29267

Method Blank

RunID: HP_R_010208A-560839 Units: ug/L
Analysis Date: 02/08/2001 5:22 Analyst: D_R

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01020146-01A	MW-5

Analyte	Result	Rep Limit
Methyl tert-butyl ether	ND	0.50
Surr: 1,4-Difluorobenzene	101.0	72-137
Surr: 4-Bromofluorobenzene	100.2	48-156

Laboratory Control Sample (LCS)

RunID: HP_R_010208A-560837 Units: ug/L
Analysis Date: 02/08/2001 4:31 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Methyl tert-butyl ether	50	52	105	70	130

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

Sample Spiked: 01020020-03
RunID: HP_R_010208A-564455 Units: ug/L
Analysis Date: 02/12/2001 17:20 Analyst: D_R

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Methyl tert-butyl ether	0.71	20	30	148	20	29	140	4.98	20	39	150

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

UP0210.1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 01020146
Lab Batch ID: R29671

Method Blank

RunID: L_010214A-568700 Units: ug/L
Analysis Date: 02/14/2001 20:32 Analyst: LT

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
01020146-01B	MW-5
01020146-02B	MW-6

Analyte	Result	Rep Limit
Methyl tert-butyl ether	ND	5.0
Surr: 1,2-Dichloroethane-d4	82.0	62-119
Surr: 4-Bromofluorobenzene	92.0	78-123
Surr: Toluene-d8	92.0	74-122

Laboratory Control Sample (LCS)

RunID: L_010214A-568586 Units: ug/L
Analysis Date: 02/14/2001 20:03 Analyst: LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	50	57	114	61	145
Benzene	50	51	102	76	127
Chlorobenzene	50	48	96	75	130
Toluene	50	49	98	76	125
Trichloroethene	50	52	104	71	120

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

Sample Spiked: 01020146-01
RunID: L_010214A-568595 Units: ug/L
Analysis Date: 02/15/2001 0:19 Analyst: LT

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1-Dichloroethene	ND	500	540	108	500	550	110	2	14	38	172
Benzene	ND	500	510	102	500	510	102	0	11	66	134
Chlorobenzene	ND	500	450	90	500	450	90	0	13	67	115
Toluene	ND	500	460	92	500	470	94	2	13	59	125
Trichloroethene	ND	500	500	100	500	500	100	0	14	61	134

Qualifiers:
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B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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Sample Receipt Checklist

And

Chain of Custody

EXXON COMPANY, USA. (West Coast)

CHAIN OF CUSTODY RECORD NO. _____ Page 1 of 1

Exxon Engineer: Darin Rouse Phone: 925-602-4710

Consultant Co. Name ETIC Contact: John Ortega

Address: 2285 Morello Ave Fax: 925-602-4720

Pleasant Hill, CA. 94523

RAS #: 7-0210 Facility/State ID # (TN Only): _____

AFE # (Terminal Only): _____ Consultant Project #: UP0210.1

Location: 7840 Amador Valley Rd. (City) Dublin (State) CA

☒ EE ☐ C&M ☐ SDT

Consultant Work Release #: 20003669

Sampled By: Douglas Fitzgerald

SAMPLE I.D.	DATE	TIME	COMP	GRAB	MATRIX H_2O	MATRIX SOIL	MATRIX AIR	OTHER	PRESERVATIVE	NO. OF CONTAINERS	CONTAINER SIZE	TPH/GC 8015 DRO ☐	BTEX 8020 ☐	MTBE 8020 ☐ 8260 ☐ (Confirm All Hits)	OXYGENATES (7) 8260 ☐	O&G IR 413.1 ☐ GRAV. 413.2 ☐	VOL. 8260 ☐ 624 ☐	SEMI-VOL 8270 ☐ 625 ☐	PNA/PAH 8100 ☐ 8310 ☐ 8270 ☐	PCB/PEST 8081/8082 ☐ PCB ONLY ☐	TCLP FULL ☐ VOA ☐ SEMIVOA ☐ PEST ☐ HERB ☐	METALS, TOTAL ☐ METALS, TCLP ☐	LEAD, TOTAL 239.1 ☐ 7421 ☐ LEAD, TCLP ☐	LEAD, DISSOLVED ☐ LEAD TOTAL ☐	REACTIVITY ☐ CORROSIVITY ☐ FLASH POINT ☐	PURGEABLE HYDROCARBON 8010 ☐ 601 ☐	TPH/IR 418.1 ☐	TOX/TOH ☐
MW-5	2/2/01	1055			X				HCL	6	X	X	X	X													
MW-6	↓	1130			X				↓	6	X	X	X	X													
MW-7	↓	1200			X				↓	6	X	X	X	X													

RUSH

TAT

24 HR. ____* 72 HR. ____*

48 HR. ____* 96 HR. ____*

8 Business X *Contact US Prior to Sending Sample

Other ____

EXXON UST CONTRACT NO. C41483

SPECIAL DETECTION LIMITS (Specify)

REMARKS: (Confirm all MTBE Hits by 8260)

QA/QC Level: Standard ☒ CLP ☐ Other ☐ _____

SPECIAL REPORTING REQUIREMENTS (Specify)

PDF ☐ ☐ EDD

FAX ☐ ☒ FAX C-O-C W/REPORT

LAB USE ONLY Lot # _____ Storage Location

WORK ORDER #: 01020146 LAB WORK RELEASE #:

CUSTODY RECORD

	Relinquished By Sampler:	Date	Time	Received By:
	Douglas Fitzgerald	2-2-01		
	Relinquished:	Date	Time	Received By:
	Relinquished:	Date	Time	Received By:
				Way Bill # _____ Cooler Temp: 10000 4c

2/6/01

Triplicate: Original • White Lab's Copy • Green Client Copy • Yellow

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

Sample Receipt Checklist

Workorder:	01020146	Received by:	Barrera, Nancy
Date and Time Received:	2/6/01 10:00:00 AM	Carrier name:	FedEx
Temperature:	4		

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