EXXON COMPANY, U.S.A.

EXXONMOBIL • REFINING AND SUPPLY
Safety, Health and Environment
Environmental Engineering

P.O. Box 4032 • Concord, CA 94524-4032

DARIN L. ROUSE
Senior Engineer

(925) 246-8768
(925) 246-8798 Facsimile
darin.l.rouse@exxon.com

April 3, 2000

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

RE: Exxon RAS #7-0238/2200 East 12th Street, Oakland, California.

Dear Mr. Chan:

Attached for your review and comment is a letter report entitled ***Quarterly Groundwater Monitoring Report, First Quarter 2000***, dated March 15, 2000, for the above referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details the results of quarterly groundwater monitoring and sampling activities at the subject site.

ExxonMobil also completed and submitted a Sensitive Receptor Survey during first quarter 2000. ExxonMobil is in the process of submitting and obtaining an NPDES permit to perform source removal activities at the subject site. The purpose of the planned work is to reduce MTBE concentrations in groundwater.

If you have any questions or comments, please contact me at (925) 246-8768.

Sincerely,

Darin L. Rouse
Senior Engineer

Attachment: ERI's Quarterly Groundwater Monitoring Report, First Quarter 2000, dated March 15, 2000.

cc: w/attachment
Mr. Stephen Hill - California Regional Water Quality Control Board-San Francisco Bay Region

w/o attachment
Mr. James F. Chappell - Environmental Resolutions, Inc.

ENVIRONMENTAL RESOLUTIONS, INC.

March 15, 2000
ERI 229313.R08

Mr. Darin L. Rouse
Exxon Company, U.S.A.
P.O. Box 4032
Concord, California 94524-4032

Subject: Quarterly Groundwater Monitoring Report, First Quarter 2000, Exxon Service Station 7-0238, 2200 East 12th Street, Oakland, California.

Mr. Rouse:

At the request of Exxon Company, U.S.A. (Exxon), Environmental Resolutions, Inc. (ERI) is reporting the results of 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 and sampling is to evaluate concentrations of dissolved hydrocarbons in groundwater and groundwater flow direction and gradient. Blaine Tech Services, Inc. (Blaine Tech) performed the site field activities at the request of Exxon.

GROUNDWATER MONITORING AND SAMPLING

On February 29, 2000, Blaine Tech measured depth to water (DTW) and collected groundwater samples from select monitoring wells for laboratory analysis. Groundwater monitoring and sampling were performed in accordance with Blaine Tech's groundwater sampling protocol (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 purgeable petroleum hydrocarbons as gasoline (TPPHg), using the methods listed in the notes in Table 1. The laboratory analysis report and Chain of Custody record are attached (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 Exxon Company, U.S.A., 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. Barney Chan
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

Please call Mr. James Chappell, ERI's project manager for this site, at (415) 382-4323, with any questions regarding this project.

Sincerely,
Environmental Resolutions, Inc.

James F. Chappell
Senior Staff Scientist

Mark S. Dockum
R.G. 4412
C.E.G. 1675

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
Exxon Service Station 7-0238
2200 East 12th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<		ug/L			>
MW9A	11/2/95	NLPH	7.16	4.30	<50	<10	<0.5	<0.5	<0.5	<0.5
(11.46)	4/26/96	NLPH	6.33	5.13	---	---	---	---	---	---
	8/22/96	NLPH	7.02	4.44	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	6.14	5.32	<200	40,000	7.9	<2.0	<2.0	<2.0
	4/21/98	NLPH	6.29	5.17	<50	53,000	3.8	<0.5	<0.5	<0.5
(14.53)	7/22/98	NLPH	6.58	7.95	<250	18,000	<2.5	<2.5	<2.5	<2.5
	12/22/98	NLPH	6.47	8.06	<50	5,200	<0.5	<0.5	<0.5	<0.5
	2/26/99	NLPH	6.38	8.15	<100	10,000	<1.0	<1.0	<1.0	<1.0
	5/27/99**	NLPH	6.56	7.97	<5,000	15,300	<50	<50	<50	<50
	8/3/99	NLPH	9.39	5.14	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	12/3/99	NLPH	6.52	8.01	<50	1,400	<0.5	<0.5	<0.5	0.67[A]
	2/29/00	**NLPH**	**5.31**	**9.22**	**<50**	**20,000**	**1.2**	**<0.5**	**<0.5**	**<0.5**
MW9B	11/2/95	NLPH	6.14	3.66	130	<10	3.3	<0.5	<0.5	<0.5
(9.80)	4/26/96	NLPH	5.66	4.14	270	70	130	2.8	6.7	<3
	8/22/96	NLPH	6.16	3.64	210	31	5.7	6.8	1.1	9.2
	2/24/97	NLPH	5.58	4.22	1,400	1,300	76	1.4	4.1	1.2
	3/16/98	NLPH	5.32	4.48	860	1,500	140	2.0	11	<2.0
	4/21/98	NLPH	5.49	4.31	1,800	18,000	300	<5.0	7.9	<5.0
(12.83)	7/22/98	NLPH	5.79	7.04	<500	26,000	13	<5.0	<5.0	<5.0
	12/22/98	NLPH	5.69	7.14	700	21,000	110	3.1	9.1	14
	2/26/99	NLPH	5.10	7.73	8,800	8,000	2,000	<25	52	38
	5/18/99	NLPH	5.65	7.18	<10,000	42,100	158	<100	<100	<100
	8/3/99	NLPH	6.24	6.59	960	24,900	<5.0	<5.0	<5.0	<5.0
	12/3/99	NLPH	5.66	7.17	<50	1,000	<0.5	<0.5	<0.5	<0.5
	2/29/00	**NLPH**	**4.61**	**8.22**	**3,100**	**25,000**	**900**	**7**	**23**	**7.1**

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0238
2200 East 12th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<		ug/L			>
MW9C	11/2/95	---	---	---	---	---	---	---	---	---
(11.14)	4/26/96	---	---	---	---	---	---	---	---	---
	8/22/96	---	---	---	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	5.51	5.63	<500	150,000	24	<5.0	<5.0	<5.0
	4/21/98	NLPH	5.83	5.31	150	130,000/150,000*	<0.5	<0.5	<0.5	<0.5
(14.19)	7/22/98	NLPH	6.43	7.76	<500	95,000	<5.0	<5.0	<5.0	<5.0
	12/22/98	NLPH	6.16	8.03	<500	84,000	<5.0	<5.0	<5.0	<5.0
	2/26/99	NLPH	5.46	8.73	<250	55,000	<2.5	<2.5	<2.5	<2.5
	5/18/99	NLPH	6.27	7.92	<25,000	68,900	<250	<250	<250	<250
	8/3/99	NLPH	7.13	7.06	210	69,200	<1.0	1.3	<1.0	<1.0
	12/3/99	NLPH	6.17	8.02	290	50,000	<2.5	<2.5	<2.5	<2.5
	2/29/00	**NLPH**	**4.49**	**9.70**	**<250**	**40,000**	**<2.5**	**<2.5**	**<2.5**	**<2.5**
MW9D	11/2/95	---	---	---	---	---	---	---	---	---
(12.90)	4/26/96	---	--	--	---	---	---	---	---	---
	8/22/96	---	---	---	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	6.94	5.96	<50	10	<0.5	<0.5	<0.5	<0.5
	4/21/98	NLPH	7.22	5.68	<50	12	<0.5	<0.5	<0.5	<0.5
(15.98)	7/22/98	NLPH	7.85	8.13	<50	13	<0.5	<0.5	<0.5	<0.5
	12/22/98	NLPH	7.58	8.40	<50	12	<0.5	<0.5	<0.5	<0.5
	2/26/99	NLPH	6.42	9.56	<50	310	<0.5	<0.5	<0.5	<0.5
	5/18/99	NLPH	6.55	9.43	<2,500	13,500	<25	<25	<25	<25
	8/3/99	NLPH	8.34	7.64	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	12/3/99	NLPH	7.56	8.42	<50	<2	<0.5	<0.5	<0.5	<0.5
	2/29/00	**NLPH**	**4.82**	**11.16**	**<50**	**2.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0238
2200 East 12th Street
Oakland, California

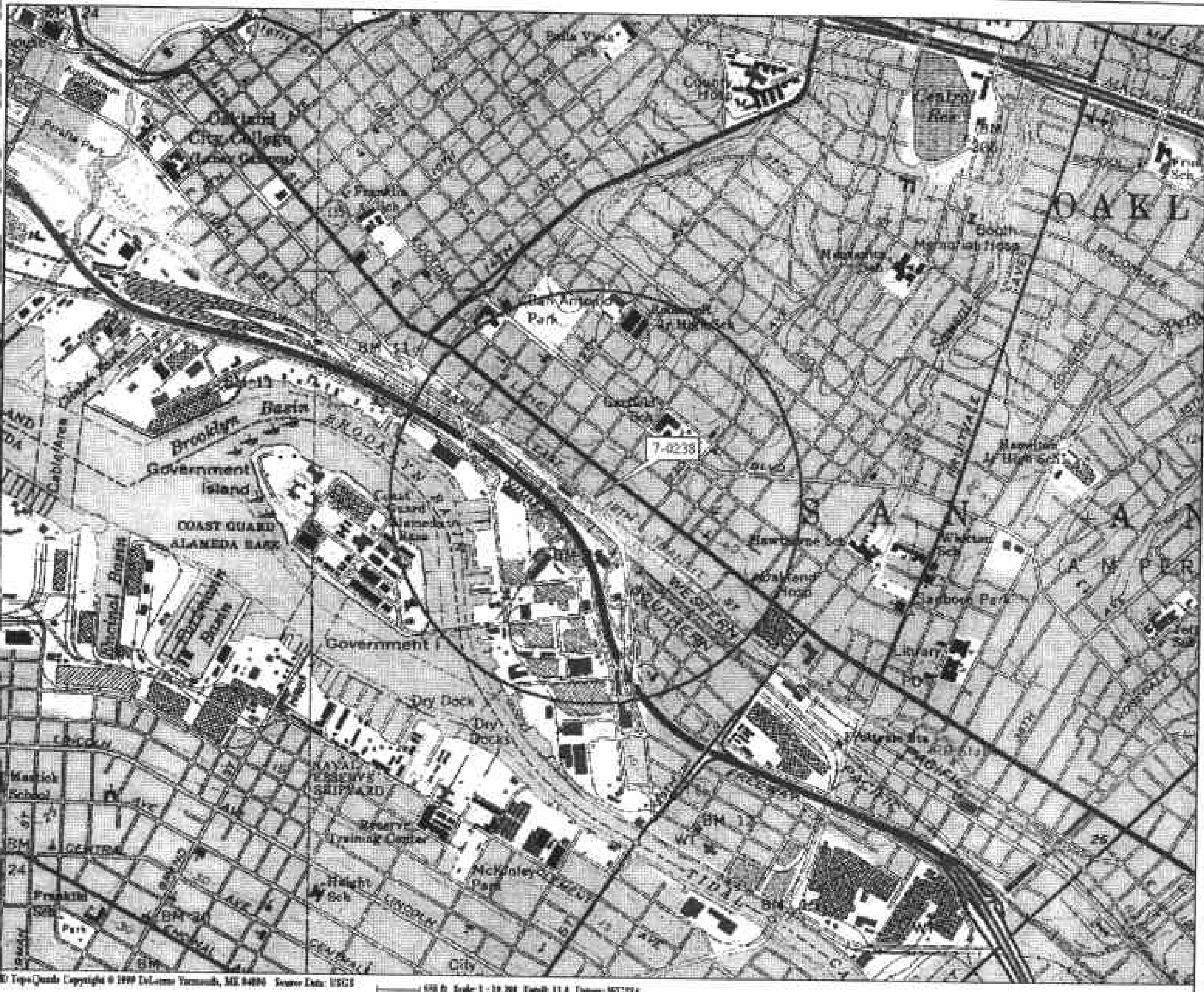
Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<		ug/L			>
MW9F	11/2/95	---	---	---	---	---	---	---	---	---
(8.37)	4/26/96	NLPH	---	---	<50	57	<0.5	<0.5	<0.5	<0.5
	8/22/96	NLPH	---	---	<50	5.8	<0.5	<0.5	<0.5	<0.5
	2/24/97	NLPH	---	---	<50	<30	<0.5	<0.5	<0.5	<0.5
	3/16/98	NLPH	---	---	---	---	---	---	---	---
	4/21/98	---	---	---	---	---	---	---	---	---
(11.38)	7/22/98	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	5.47	5.91	<50	81	<0.5	<0.5	<0.5	<0.5
	2/26/99	NLPH	5.35	6.03	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	5/18/99	NLPH	5.62	5.76	<50	61.6	<0.5	<0.5	<0.5	<0.5
	8/3/99	NLPH	6.32	5.06	<50	3.10	<0.5	<0.5	<0.5	<0.5
	12/3/99	NLPH	5.59	5.79	<50	<2	<0.5	<0.5	0.71	<0.5
	2/29/00	**NLPH**	**4.70**	**6.68**	**<50**	**52**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW9G	11/2/95	NLPH	5.92	4.03	<50	<10	<0.5	<0.5	<0.5	<0.5
(9.95)	4/26/96	NLPH	5.28	4.67	<50	18	<0.5	<0.5	<0.5	<0.5
	8/22/96	NLPH	5.57	4.38	<50	18	<0.5	<0.5	<0.5	<0.5
	2/24/97	NLPH	5.30	4.65	<50	240	<0.5	0.57	<0.5	0.62
	3/16/98	---	---	---	---	---	---	---	---	---
	4/21/98	---	---	---	---	---	---	---	---	---
(12.99)	7/22/98	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	5.28	7.71	<50	1,100	<0.5	<0.5	<0.5	<0.5
	2/26/99	NLPH	5.31	7.68	<50	50	<0.5	<0.5	<0.5	<0.5
	5/18/99	NLPH	5.18	7.81	<1,000	3,990	<10	<10	<10	<10
	8/3/99	NLPH	6.00	6.99	<50	1,340	<0.5	<0.5	<0.5	<0.5
	12/3/99	NLPH	5.27	7.72	<50	<2	<0.5	<0.5	<0.5	0.55[A]
	2/29/00	**NLPH**	**4.60**	**8.39**	**<50**	**7,900**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0238
2200 East 12th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<		ug/L			>
MW9H	11/2/95	NLPH	8.40	0.18	<50	<10	<0.5	<0.5	<0.5	<0.5
(8.58)	4/26/96	NLPH	8.05	0.53	---	---	---	---	---	---
	8/22/96	NLPH	8.17	0.41	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	---	---	---	---	---	---	--	---	---
	4/21/98	---	---	---	---	---	---	---	---	---
(11.61)	7/22/98	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	7.81	3.80	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	2/26/99	NLPH	7.61	4.00	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	5/18/99	NLPH	8.00	3.61	<50	3.98	<0.5	<0.5	<0.5	<0.5
	8/3/99	NLPH	6.05	5.56	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	12/3/99	NLPH	5.32	6.29	<50	<2	<0.5	<0.5	<0.5	0.57[A]
	2/29/00	**NLPH**	**7.10**	**4.51**	**<50**	**<2**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW9I	11/2/95	NLPH	6.04	4.07	<50	<10	<0.5	<0.5	<0.5	<0.5
(10.11)	4/26/96	NLPH	5.27	4.84	<50	99	<0.5	<0.5	<0.5	<0.5
	8/22/96	NLPH	5.66	4.45	<50	170	<0.5	<0.5	<0.5	<0.5
	2/24/97	NLPH	5.24	4.87	120	9,100	<0.5	<0.5	<0.5	<0.5
	3/16/98	NLPH	4.91	5.20	<200	59,000	13	<2.0	<2.0	<2.0
	4/21/98	NLPH	5.08	5.03	<500	59,000	<5.0	<5.0	<5.0	<5.0
(13.14)	7/22/98	NLPH	5.44	7.70	<500	62,000	<5.0	<5.0	<5.0	<5.0
	12/22/98	NLPH	5.32	7.82	200	51,000	1.7	<0.5	<0.5	<0.5
	2/26/99	NLPH	4.71	8.43	<500	9,700	<5.0	<5.0	<5.0	<5.0
	5/18/99	NLPH	5.30	7.84	<1,000	3,730	<10	<10	<10	<10
	8/3/99	NLPH	5.98	7.16	<50	21,900	<0.5	0.650	<0.5	<0.5
	12/3/99	NLPH	5.31	7.83	<250	2,000	3.9	2.9	<2.5	14
	2/29/00	**NLPH**	**4.20**	**8.94**	**50**	**16,000**	**0.74**	**<0.5**	**<0.5**	**<0.5**

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0238
2200 East 12th Street
Oakland, California

Notes:		
SUBJ	=	Results of subjective evaluation.
NLPH	=	No liquid-phase hydrocarbons present in well.
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.
TPPHg	=	Total purgeable 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.
*	=	MTBE confirmed using EPA method 8260.
**	=	Miscalculation in field. Field technician may have inadvertently monitored and sampled the wrong well. Resampled 5/27/99.
A	=	Analyte detected in the associated Trip Blank at 0.52 ug/L.



FN 22930001

EXPLANATION

1/2-mile radius circle

N

APPROXIMATE SCALE

0 .5 1 mile

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

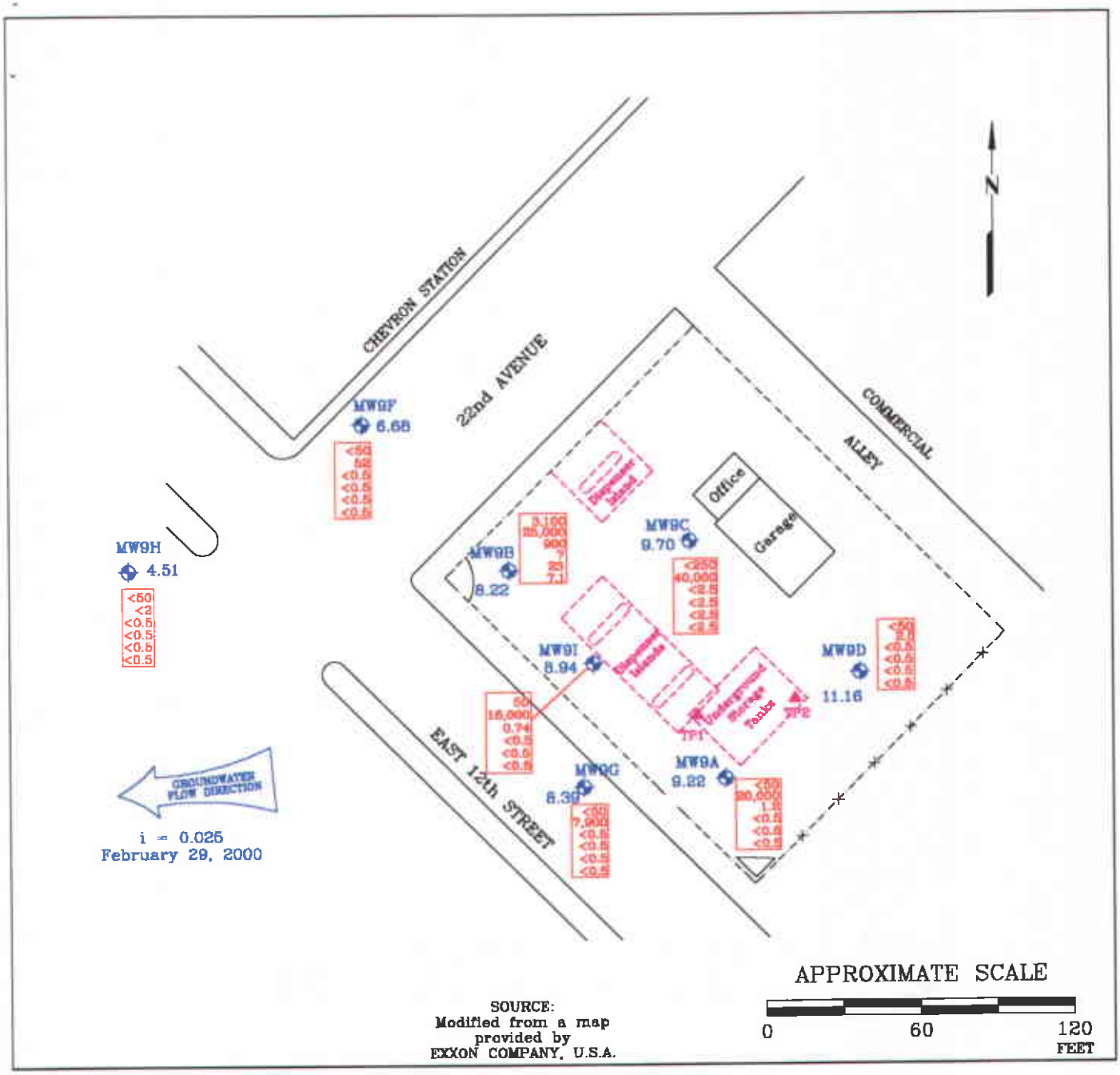
ERI
ENVIRONMENTAL RESOLUTIONS, INC.

SITE VICINITY MAP

EXXON SERVICE STATION 7-0238
2200 East 12th Street
Oakland, California

PROJECT NO.
2293

PLATE
1



FN 22930002

EXPLANATION

MW9I — Groundwater Monitoring Well

8.94 — Groundwater elevation in feet above mean sea level

i = — Interpreted Groundwater Gradient

TP2 — UST Observation Well

Groundwater Concentrations in ug/L
Sampled February 29, 2000

3,100	Total Purgeable Petroleum Hydrocarbons as gasoline
25,000	Methyl Tertiary Butyl Ether
900	Benzene
7	Toluene
23	Ethylbenzene
7.1	Total Xylenes
ug/L	Micrograms per Liter (ug/L)
<	Less Than the Stated Laboratory Detection Level

ERI ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

EXXON SERVICE STATION 7-0238
2200 East 12th Street
Oakland, California

PROJECT NO. 2293

PLATE 2

March 14, 2000

ATTACHMENT A

GROUNDWATER SAMPLING PROTOCOL

BLAINE TECH SERVICES, INC.
METHODS AND PROCEDURES
FOR THE ROUTINE MONITORING OF
GROUNDWATER WELLS AT EXXON STATIONS

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. We specialize in groundwater monitoring assignments and intentionally limit the scope of our services to those centered on the generation of objective information.

To avoid conflicts of interest, Blaine Tech Services, Inc. personnel do not evaluate or interpret the information we collect. As a state licensed contractor (C-57 well drilling –water – 746684) performing strictly technical services, we do not make any professional recommendations and perform no consulting of any kind.

SAMPLING PROCEDURES OVERVIEW

SAFETY

All groundwater monitoring assignments performed for Exxon comply with Exxon's safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians receive the full 40 hour 29CFR 1910.120 OSHA SARA HAZWOPER course, medical clearance and on-the-job training prior to commencing any work on any Exxon site.

INSPECTION AND GAUGING

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist. Each wellcap is removed prior to gauging to allow the water level to equilibrate for at least 15 minutes.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic sounders which are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of Immiscibles or sheen and when free product is suspected, it is confirmed using an electronic interface probe (e.g. MMC). If sheen or product is found in a well, the Project Coordinator notifies the appropriate party (e.g. Exxon employee or consultant).

No samples are collected from a well containing sheen or product.

EVACUATION

Depth to water measurements are collected by our personnel prior to purging and minimum purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well. Small volumes of purgewater are often removed by hand bailing with a disposable bailer.

PARAMETER STABILIZATION

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 of a pH unit.

DEWATERED WELLS

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewaters and does not recharge.

Wells known to dewater are evacuated as early as possible during each site visit in order to allow for the greatest amount of recovering. Any well that does not recharge to 80% of its original volume will be sampled prior to the departure of our personnel from the site in order to eliminate the need of a return visit.

In jurisdictions where a certain percentage of recovery is included in the local completion standard, our personnel follow the regulatory expectation.

PURGEWATER CONTAINMENT

All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non hazardous purgewater is transported under standard Bill of Lading documentation to a

Blaine Tech Services, Inc. facility before being transported to an Exxon approved disposal facility (e.g. Romic Environmental Technologies Corporation in East Palo Alto, California).

SAMPLE COLLECTION DEVICES

All samples are collected using a disposable bailer.

SAMPLE CONTAINERS

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory which will analyze the samples. The transfer of sample material from the bailer to the sample container conforms to specifications contained in the USEPA T.E.G.D. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

TRIP BLANKS

A Trip Blank is carried to each site and is kept inside the cooler for the duration of the sampling event. It is turned over to the laboratory for analysis with the samples from that site.

SAMPLE STORAGE

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the analytical laboratory that will perform the intended analytical procedures. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

DOCUMENTATION CONVENTIONS

Each and every sample container has a label affixed to it. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the store number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time at which the sample was collected and the initials of the person collecting the sample are handwritten onto the label.

Chain of Custody records are created using client specific preprinted forms following USEPA specifications.

Bill of Lading records are contemporaneous records created in the field at the site where the non-hazardous purgewater is generated. Field Technicians use preprinted Bill of Lading forms.

DECONTAMINATION

All equipment is brought to the site in clean and serviceable condition and is cleaned after use in each well and before subsequent use in any other well. Equipment is decontaminated before leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is de-tuned to function as a hot pressure washer which is then operated with high quality deionized water which is produced at our facility and stored onboard our sampling vehicle. Cleaning is facilitated by the use of proprietary fixtures and devices included in the patented workstation (U.S. Patent 5,535,775) that is incorporated in each sampling vehicle. The steam cleaner is used to decon reels, pumps and bailers.

Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, sounder etc.) that cannot be washed using the hot high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

EXAMPLE: The sounder is cleaned between wells using the non-phosphate soap and deionized water solution followed by deionized water rinses. The sounder is then washed with the steam cleaner between sites or as necessitated by use in a particularly contaminated well.

DISSOLVED OXYGEN READINGS

All Dissolved Oxygen readings are taken using YSI meters (e.g. YSI Model 58 or equivalent YSI meter). These meters are equipped with a YSI stirring device that enables them to collect accurate in-situ readings. The probe/stirring devices are modified to allow downhole measurements to be taken from wells as small as two-inch diameter.

The probe and reel is decontaminated between wells as described above. The meter is calibrated between wells as per the instructions in the operating manual. The probe and stirrer is lowered into the water column allowed to stabilize before use.

OXYIDATON REDUCTION POTENTIAL READINGS

All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter GP). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual. In use the probe is placed in a cup of freshly obtained monitoring well water and allowed to stabilize.

ATTACHMENT B

LABORATORY ANALYSIS REPORT AND CHAIN OF CUSTODY RECORD

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

Case Narrative for:

EXXON Company U.S.A.

Certificate of Analysis Number:

00030058

Report To:		Project Name:	2293	
Environmental Resolution, Inc.		Site:	7-0238,19900938	
Jim Chappell		Site Address:	2200 E. 12th Street	
73 Digital Drive Suite 100			Oakland	CA
Novato		PO Number:		
California		State:	California	
94949-		State Cert. No.:		
ph: (415) 382-9105	fax: (415) 382-1856	Date Reported:		

Any data flags or quality control 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

3/14/00
Date

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

EXXON Company U.S.A.

Certificate of Analysis Number:

00030058

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:**	2293
		Site:	7-0238,19900938
		Site Address:	2200 E. 12th Street Oakland CA
		PO Number:	
		State:	California
		State Cert. No.:	
Fax To:	*Environmental Resolution, Inc.* *Jim Chappell* *fax: (415) 382-1856*	**Date Reported:**	

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-9A	00030058-01	Water	2/29/00 12:45:00 PM	3/2/00 10:00:00 AM		☐
MW-9B	00030058-02	Water	2/29/00 1:36:00 PM	3/2/00 10:00:00 AM		☐
MW-9C	00030058-03	Water	2/29/00 1:20:00 PM	3/2/00 10:00:00 AM		☐
MW-9D	00030058-04	Water	2/29/00 12:26:00 PM	3/2/00 10:00:00 AM		☐
MW-9F	00030058-05	Water	2/29/00 11:40:00 AM	3/2/00 10:00:00 AM		☐
MW-9G	00030058-06	Water	2/29/00 12:01:00 PM	3/2/00 10:00:00 AM		☐
MW-9H	00030058-07	Water	2/29/00 11:25:00 AM	3/2/00 10:00:00 AM		☐
MW-9I	00030058-08	Water	2/29/00 1:06:00 PM	3/2/00 10:00:00 AM		☐
Trip Blank	00030058-09	Water	2/29/00	3/2/00 10:00:00 AM		☐

Sonia West

3/14/00

West, Sonia
Senior Project Manager

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-9A **Collected:** 2/29/00 12:45:00 **SPL Sample ID:** 00030058-01

Site: 7-0238,19900938

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		03/07/00 1:11	DL	210734
Surr: 1,4-Difluorobenzene	101	%	62-144		1		03/07/00 1:11	DL	210734
Surr: 4-Bromofluorobenzene	102	%	44-153		1		03/07/00 1:11	DL	210734
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	1.2		0.5		1		03/10/00 3:31	DL	214305
Ethylbenzene	ND		0.5		1		03/10/00 3:31	DL	214305
Methyl tert-butyl ether	20000		100		50		03/09/00 23:42	DL	214303
Toluene	ND		0.5		1		03/10/00 3:31	DL	214305
m,p-Xylene	ND		0.5		1		03/10/00 3:31	DL	214305
o-Xylene	ND		0.5		1		03/10/00 3:31	DL	214305
Xylenes,Total	ND		0.5		1		03/10/00 3:31	DL	214305
Surr: 1,4-Difluorobenzene	95.9	%	72-137		50		03/09/00 23:42	DL	214303
Surr: 1,4-Difluorobenzene	108	%	72-137		1		03/10/00 3:31	DL	214305
Surr: 4-Bromofluorobenzene	96.9	%	48-156		50		03/09/00 23:42	DL	214303
Surr: 4-Bromofluorobenzene	98.8	%	48-156		1		03/10/00 3:31	DL	214305

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

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

Client Sample ID: MW-9B **Collected:** 2/29/00 1:36:00 **SPL Sample ID:** 00030058-02

Site: 7-0238,19900938

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				**MCL**	**CA_GRO**		**Units: ug/L**		
Gasoline Range Organics	3100		500		10		03/09/00 22:01	DL	214281
Surr: 1,4-Difluorobenzene	122	%	62-144		10		03/09/00 22:01	DL	214281
Surr: 4-Bromofluorobenzene	136	%	44-153		10		03/09/00 22:01	DL	214281
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	900		25		50		03/10/00 0:08	DL	214304
Ethylbenzene	23		0.5		1		03/07/00 0:46	DL	210712
Methyl tert-butyl ether	25000		100		50		03/10/00 0:08	DL	214304
Toluene	7		0.5		1		03/07/00 0:46	DL	210712
m,p-Xylene	5.4		0.5		1		03/07/00 0:46	DL	210712
o-Xylene	1.7		0.5		1		03/07/00 0:46	DL	210712
Xylenes,Total	7.1		0.5		1		03/07/00 0:46	DL	210712
Surr: 1,4-Difluorobenzene	99.8	%	72-137		50		03/10/00 0:08	DL	214304
Surr: 1,4-Difluorobenzene	135	%	72-137		1		03/07/00 0:46	DL	210712
Surr: 4-Bromofluorobenzene	101	%	48-156		50		03/10/00 0:08	DL	214304
Surr: 4-Bromofluorobenzene	289	%	48-156		1	*	03/07/00 0:46	DL	210712

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

HOUSTON LABORATORY
6680 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Client Sample ID: MW-9C **Collected:** 2/29/00 1:20:00 **SPL Sample ID:** 00030058-03

Site: 7-0238,19900938

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		250		5		03/07/00 2:02	DL	210735
Surr: 1,4-Difluorobenzene	98.5	%	62-144		5		03/07/00 2:02	DL	210735
Surr: 4-Bromofluorobenzene	321	%	44-153		5	*	03/07/00 2:02	DL	210735
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		2.5		5		03/07/00 2:02	DL	210713
Ethylbenzene	ND		2.5		5		03/07/00 2:02	DL	210713
Methyl tert-butyl ether	40000		500		250		03/10/00 19:47	DL	215929
Toluene	ND		2.5		5		03/07/00 2:02	DL	210713
m,p-Xylene	ND		2.5		5		03/07/00 2:02	DL	210713
o-Xylene	ND		2.5		5		03/07/00 2:02	DL	210713
Xylenes,Total	ND		2.5		5		03/07/00 2:02	DL	210713
Surr: 1,4-Difluorobenzene	95.5	%	72-137		250		03/10/00 19:47	DL	215929
Surr: 1,4-Difluorobenzene	90.8	%	72-137		5		03/07/00 2:02	DL	210713
Surr: 4-Bromofluorobenzene	101	%	48-156		250		03/10/00 19:47	DL	215929
Surr: 4-Bromofluorobenzene	110	%	48-156		5		03/07/00 2:02	DL	210713

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

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

Client Sample ID: MW-9D **Collected:** 2/29/00 12:26:00 **SPL Sample ID:** 00030058-04

Site: 7-0238,19900938

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		03/04/00 3:30	DL	209970
Surr: 1,4-Difluorobenzene	94.5	%	62-144		1		03/04/00 3:30	DL	209970
Surr: 4-Bromofluorobenzene	98.3	%	44-153		1		03/04/00 3:30	DL	209970
PURGEABLE AROMATICS				MCL	SW8021B		Units: ug/L		
Benzene	ND		0.5		1		03/04/00 3:30	DL	209890
Ethylbenzene	ND		0.5		1		03/04/00 3:30	DL	209890
Methyl tert-butyl ether	2.5		2		1		03/04/00 3:30	DL	209890
Toluene	ND		0.5		1		03/04/00 3:30	DL	209890
m,p-Xylene	ND		0.5		1		03/04/00 3:30	DL	209890
o-Xylene	ND		0.5		1		03/04/00 3:30	DL	209890
Xylenes,Total	ND		0.5		1		03/04/00 3:30	DL	209890
Surr: 1,4-Difluorobenzene	87.1	%	72-137		1		03/04/00 3:30	DL	209890
Surr: 4-Bromofluorobenzene	110	%	48-156		1		03/04/00 3:30	DL	209890

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

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

Client Sample ID: MW-9F **Collected:** 2/29/00 11:40:00 **SPL Sample ID:** 00030058-05

Site: 7-0238,19900938

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		03/04/00 3:55	DL	209971
Surr: 1,4-Difluorobenzene	95.9	%	62-144		1		03/04/00 3:55	DL	209971
Surr: 4-Bromofluorobenzene	99.7	%	44-153		1		03/04/00 3:55	DL	209971
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		0.5		1		03/04/00 3:55	DL	209906
Ethylbenzene	ND		0.5		1		03/04/00 3:55	DL	209906
Methyl tert-butyl ether	52		2		1		03/04/00 3:55	DL	209906
Toluene	ND		0.5		1		03/04/00 3:55	DL	209906
m,p-Xylene	ND		0.5		1		03/04/00 3:55	DL	209906
o-Xylene	ND		0.5		1		03/04/00 3:55	DL	209906
Xylenes,Total	ND		0.5		1		03/04/00 3:55	DL	209906
Surr: 1,4-Difluorobenzene	88.3	%	72-137		1		03/04/00 3:55	DL	209906
Surr: 4-Bromofluorobenzene	113	%	48-156		1		03/04/00 3:55	DL	209906

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

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

Client Sample ID: MW-9G **Collected:** 2/29/00 12:01:00 **SPL Sample ID:** 00030058-06

Site: 7-0238,19900938

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		03/06/00 23:04	DL	210730
Surr: 1,4-Difluorobenzene	96.3	%	62-144		1		03/06/00 23:04	DL	210730
Surr: 4-Bromofluorobenzene	98.9	%	44-153		1		03/06/00 23:04	DL	210730
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		0.5		1		03/06/00 23:04	DL	210710
Ethylbenzene	ND		0.5		1		03/06/00 23:04	DL	210710
Methyl tert-butyl ether	7900		100		50		03/07/00 14:29	DL	210860
Toluene	ND		0.5		1		03/06/00 23:04	DL	210710
m,p-Xylene	ND		0.5		1		03/06/00 23:04	DL	210710
o-Xylene	ND		0.5		1		03/06/00 23:04	DL	210710
Xylenes,Total	ND		0.5		1		03/06/00 23:04	DL	210710
Surr: 1,4-Difluorobenzene	84.9	%	72-137		50		03/07/00 14:29	DL	210860
Surr: 1,4-Difluorobenzene	92.1	%	72-137		1		03/06/00 23:04	DL	210710
Surr: 4-Bromofluorobenzene	104	%	48-156		50		03/07/00 14:29	DL	210860
Surr: 4-Bromofluorobenzene	111	%	48-156		1		03/06/00 23:04	DL	210710

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

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

Client Sample ID: MW-9H **Collected:** 2/29/00 11:25:00 **SPL Sample ID:** 00030058-07

Site: 7-0238,19900938

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		03/06/00 23:29	DL	210731
Surr: 1,4-Difluorobenzene	94.1	%	62-144	1		03/06/00 23:29	DL	210731
Surr: 4-Bromofluorobenzene	98.8	%	44-153	1		03/06/00 23:29	DL	210731
PURGEABLE AROMATICS			MCL	SW8021B		Units: ug/L		
Benzene	ND		0.5	1		03/07/00 14:03	DL	210859
Ethylbenzene	ND		0.5	1		03/07/00 14:03	DL	210859
Methyl tert-butyl ether	ND		2	1		03/07/00 14:03	DL	210859
Toluene	ND		0.5	1		03/07/00 14:03	DL	210859
m,p-Xylene	ND		0.5	1		03/07/00 14:03	DL	210859
o-Xylene	ND		0.5	1		03/07/00 14:03	DL	210859
Xylenes,Total	ND		0.5	1		03/07/00 14:03	DL	210859
Surr: 1,4-Difluorobenzene	87.6	%	72-137	1		03/07/00 14:03	DL	210859
Surr: 4-Bromofluorobenzene	105	%	48-156	1		03/07/00 14:03	DL	210859

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

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

Client Sample ID: MW-9I **Collected:** 2/29/00 1:06:00 **SPL Sample ID:** 00030058-08

Site: 7-0238,19900938

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	CA_GRO		Units: ug/L		
Gasoline Range Organics	50		50	1		03/06/00 23:55	DL	210732
Surr: 1,4-Difluorobenzene	101	%	62-144	1		03/06/00 23:55	DL	210732
Surr: 4-Bromofluorobenzene	100	%	44-153	1		03/06/00 23:55	DL	210732
PURGEABLE AROMATICS			MCL	SW8021B		Units: ug/L		
Benzene	0.74		0.5	1		03/06/00 23:55	DL	210711
Ethylbenzene	ND		0.5	1		03/06/00 23:55	DL	210711
Methyl tert-butyl ether	16000		100	50		03/10/00 0:58	DL	214386
Toluene	ND		0.5	1		03/06/00 23:55	DL	210711
m,p-Xylene	ND		0.5	1		03/06/00 23:55	DL	210711
o-Xylene	ND		0.5	1		03/06/00 23:55	DL	210711
Xylenes,Total	ND		0.5	1		03/06/00 23:55	DL	210711
Surr: 1,4-Difluorobenzene	95.9	%	72-137	50		03/10/00 0:58	DL	214386
Surr: 1,4-Difluorobenzene	95.4	%	72-137	1		03/06/00 23:55	DL	210711
Surr: 4-Bromofluorobenzene	100	%	48-156	50		03/10/00 0:58	DL	214386
Surr: 4-Bromofluorobenzene	113	%	48-156	1		03/06/00 23:55	DL	210711

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

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

Client Sample ID: Trip Blank | **Collected:** 2/29/00 | **SPL Sample ID:** 00030058-09

Site: 7-0238,19900938

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		03/07/00 0:20	DL	210733
Surr: 1,4-Difluorobenzene	94.1	%	62-144		1		03/07/00 0:20	DL	210733
Surr: 4-Bromofluorobenzene	98.5	%	44-153		1		03/07/00 0:20	DL	210733
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		0.5		1		03/09/00 23:17	DL	214302
Ethylbenzene	ND		0.5		1		03/09/00 23:17	DL	214302
Methyl tert-butyl ether	ND		2		1		03/09/00 23:17	DL	214302
Toluene	ND		0.5		1		03/09/00 23:17	DL	214302
m,p-Xylene	ND		0.5		1		03/09/00 23:17	DL	214302
o-Xylene	ND		0.5		1		03/09/00 23:17	DL	214302
Xylenes,Total	ND		0.5		1		03/09/00 23:17	DL	214302
Surr: 1,4-Difluorobenzene	95.2	%	72-137		1		03/09/00 23:17	DL	214302
Surr: 4-Bromofluorobenzene	96.8	%	48-156		1		03/09/00 23:17	DL	214302

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

Quality Control Documentation

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

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 00030058
Lab Batch ID: R10166

Method Blank

RunID: HP_W_000303D-209687 Units: ug/L
Analysis Date: 03/04/2000 0:58 Analyst: DL

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
00030058-04A	MW-9D
00030058-05A	MW-9F

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	88.5	72-137
Surr: 4-Bromofluorobenzene	112.5	48-156

Laboratory Control Sample (LCS)

RunID: HP_W_000303D-209886 Units: ug/L
Analysis Date: 03/04/2000 0:07 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	48	96	61	119
Ethylbenzene	50	51	103	70	118
Methyl tert-butyl ether	50	54	107	72	128
Toluene	50	50	100	65	125
m,p-Xylene	100	100	103	72	116
o-Xylene	50	52	105	72	117
Xylenes,Total	150	152	101	72	117

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

Sample Spiked: 00030058-04
RunID: HP_W_000303D-209888 Units: ug/L
Analysis Date: 03/04/2000 1:23 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	21	104	20	21	103	0.150	21	32	164
Ethylbenzene	ND	20	20	102	20	20	102	.0876	19	52	142
Methyl tert-butyl ether	2.5	20	27	124	20	27	123	0.957	20	39	150
Toluene	ND	20	21	103	20	21	103	0.353	20	38	159

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

HOUSTON LABORATORY
6880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 00030058
Lab Batch ID: R10166

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

Sample Spiked: 00030058-04
RunID: HP_W_000303D-209888 Units: ug/L
Analysis Date: 03/04/2000 1:23 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
o-Xylene	ND	40	41	102	40	41	101	0.650	17	53	144
ylene	ND	20	20	101	20	20	101	0.144	18	53	143
Xylenes,Total	ND	60	61	102	60	61	102	0	18	53	144

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

HOUSTON LABORATORY
9880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Gasoline Range Organics
Method: CA_GRO

WorkOrder: 00030058
Lab Batch ID: R10172

Method Blank

RunID: HP_W_000303E-209963 Units: mg/L
Analysis Date: 03/04/2000 0:58 Analyst: DL

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
00030058-04A	MW-9D
00030058-05A	MW-9F

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	94.2	62-144
Surr: 4-Bromofluorobenzene	100.0	44-153

Laboratory Control Sample (LCS)

RunID: HP_W_000303E-209960 Units: mg/L
Analysis Date: 03/03/2000 21:29 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.8	80	64	131

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

Sample Spiked: 00030058-05
RunID: HP_W_000303E-209967 Units: mg/L
Analysis Date: 03/04/2000 2:14 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	0.82	91.4	0.9	0.85	94.1	2.94	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
* - Recovery Outside Advisable QC Limits
D - Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 00030058
Lab Batch ID: R10214

Method Blank

RunID: HP_W_000306A-210707 Units: ug/L
Analysis Date: 03/06/2000 20:32 Analyst: DL

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	88.5	72-137
Surr: 4-Bromofluorobenzene	113.2	48-156

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
00030058-02A	MW-9B
00030058-03A	MW-9C
00030058-06A	MW-9G
00030058-07A	MW-9H
00030058-08A	MW-9I

Laboratory Control Sample (LCS)

RunID: HP_W_000306A-210706 Units: ug/L
Analysis Date: 03/06/2000 19:16 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	52	103	61	119
Ethylbenzene	50	52	104	70	118
Methyl tert-butyl ether	50	58	116	72	128
Toluene	50	51	102	65	125
m,p-Xylene	100	100	104	72	116
o-Xylene	50	52	104	72	117
Xylenes,Total	150	152	101	72	117

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

Sample Spiked: 00030058-06
RunID: HP_W_000306A-210708 Units: ug/L
Analysis Date: 03/06/2000 20:57 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	22	108	20	21	107	0.939	21	32	164
Ethylbenzene	3.2	20	22	91.8	20	21	90.8	1.13	19	52	142
Methyl tert-butyl ether	7900	20	1300	-33200*	20	1300	-33200*	.0432	20	39	150
Toluene	ND	20	22	108	20	21	107	1.37	20	38	159

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

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

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 00030058
Lab Batch ID: R10214

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

Sample Spiked: 00030058-06
RunID: HP_W_000306A-210708 Units: ug/L
Analysis Date: 03/06/2000 20:57 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
[illegible]-Xylene	ND	40	43	108	40	43	108	0.536	17	53	144
[illegible]ylene	ND	20	21	105	20	21	104	0.628	18	53	143
Xylenes, Total	ND	60	64	107	60	64	107	0	18	53	144

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

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

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Gasoline Range Organics
Method: CA_GRO

WorkOrder: 00030058
Lab Batch ID: R10216

Method Blank

RunID: HP_W_000306C-210727 Units: mg/L
Analysis Date: 03/06/2000 20:32 Analyst: DL

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	93.3	62-144
Surr: 4-Bromofluorobenzene	98.5	44-153

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
00030058-01A	MW-9A
00030058-03A	MW-9C
00030058-06A	MW-9G
00030058-07A	MW-9H
00030058-08A	MW-9I
00030058-09A	Trip Blank

Laboratory Control Sample (LCS)

RunID: HP_W_000306C-210726 Units: mg/L
Analysis Date: 03/06/2000 19:41 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.83	83	64	131

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

Sample Spiked: 00030058-07
RunID: HP_W_000306C-210728 Units: mg/L
Analysis Date: 03/06/2000 21:48 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
soline Range Organics	ND	0.9	0.77	85.4	0.9	0.93	103	18.9	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
* - Recovery Outside Advisable QC Limits
D - Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Gasoline Range Organics
Method: CA_GRO
WorkOrder: 00030058
Lab Batch ID: R10372

Method Blank

RunID: HP_W_000309A-213595 Units: mg/L
Analysis Date: 03/09/2000 15:12 Analyst: DL

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
00030058-02A	MW-9B

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	92.5	62-144
Surr: 4-Bromofluorobenzene	95.8	44-153

Laboratory Control Sample (LCS)

RunID: HP_W_000309A-213594 Units: mg/L
Analysis Date: 03/09/2000 13:56 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.8	80	64	131

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

Sample Spiked: 00030237-01
RunID: HP_W_000309A-214268 Units: mg/L
Analysis Date: 03/09/2000 16:31 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	0.87	96.4	0.9	0.85	94.6	1.93	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
* - Recovery Outside Advisable QC Limits
D - Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2293

alysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 00030058
Lab Batch ID: R10373

Method Blank

nID: HP_W_000309B-213596 Units: ug/L
Analysis Date: 03/09/2000 15:12 Analyst: DL

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	95.3	72-137
Surr: 4-Bromofluorobenzene	99.6	48-156

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
00030058-01A	MW-9A
00030058-02A	MW-9B
00030058-08A	MW-9I
00030058-09A	Trip Blank

Laboratory Control Sample (LCS)

RunID: HP_W_000309B-213597 Units: ug/L
Analysis Date: 03/09/2000 14:21 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	50	99	61	119
Ethylbenzene	50	49	98	70	118
Methyl tert-butyl ether	50	54	107	72	128
Toluene	50	50	99	65	125
m,p-Xylene	100	97	97	72	116
o-Xylene	50	47	95	72	117
Xylenes,Total	150	144	96	72	117

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

Sample Spiked: 00030237-04
RunID: HP_W_000309B-214294 Units: ug/L
Analysis Date: 03/09/2000 15:40 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
enzene	15	20	32	84.7	20	33	89.9	6.00	21	32	164
Ethylbenzene	39	20	54	76.3	20	54	76.2	.0695	19	52	142
Methyl tert-butyl ether	ND	20	23	117	20	24	118	0.588	20	39	150
oluene	12	20	30	89.8	20	30	91.5	1.93	20	38	159

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

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

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 00030058
Lab Batch ID: R10373

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

Sample Spiked: 00030237-04
RunID: HP_W_000309B-214294 Units: ug/L
Analysis Date: 03/09/2000 15:40 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
p-Xylene	89	40	120	71.8	40	120	71.6	0.301	17	53	144
Xylene	31	20	47	78.0	20	47	79.2	1.45	18	53	143
Xylenes,Total	120	60	167	78.3	60	167	78.3	0	18	53	144

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

HOUSTON LABORATORY
9990 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Quality Control Report

EXXON Company U.S.A.

2293

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 00030058
Lab Batch ID: R10515

Method Blank

RunID: HP_W_0003108-215925 Units: ug/L
Analysis Date: 03/10/2000 13:26 Analyst: DL

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
00030058-03A	MW-9C

Analyte	Result	Rep Limit
Methyl tert-butyl ether	ND	2.0
Surr: 1,4-Difluorobenzene	95.9	72-137
Surr: 4-Bromofluorobenzene	97.8	48-156

Laboratory Control Sample (LCS)

RunID: HP_W_0003108-215924 Units: ug/L
Analysis Date: 03/10/2000 12:36 Analyst: DL

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Methyl tert-butyl ether	50	51	103	72	128

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

Sample Spiked: 00030288-03
RunID: HP_W_0003108-215926 Units: ug/L
Analysis Date: 03/10/2000 13:51 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
Methyl tert-butyl ether	ND	20	21	102	20	21	103	1.67	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
* - Recovery Outside Advisable QC Limits
D - Recovery Unreportable due to Dilution

Chain of Custody

And

Sample Receipt Checklist

EXXON COMPANY, USA.

CHAIN OF CUSTODY RECORD NO. _____ Page 1 of 1

Exxon Engineer: Darin Rouse Phone: (925) 246-8768

Consultant Co. Name: ERI Contact: Jim Chappell

Address: 73 Digital Dr, Suite 100 Phone: (415) 382-4323

Novato, CA 94949 Fax: (415) 382-1856

RAS #: 7-0238 Facility/State ID # (TN Only): _____

AFE # (Terminal Only): _____ Consultant Project # 2293

Location: 2200 E. 12th St. (City): Oakland (State): CA

☐ EE ☐ C & M ☐ SDT

Consultant Work Release #: 19900938 BTS# 000229-62

Sampled By: Blaine Tech Services, Inc./ Print Name: Morgan Gillies

SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX H_2O	MATRIX SOIL	MATRIX AIR	OTHER	PRESERVATIVE	NO. OF CONTAINERS	CONTAINER SIZE	BTEX 8020 ☐ WITH MTBE ☐ 602 ☐	PURGEABLE HALOCARBON 8010 ☐ 601 ☐	TPH/HR 418.1 ☐	O&G ☐ IR 413.1 ☐ GRAV. 413.2 ☐	TPH / GC 8015 GRO ☐ 8015 DRO ☐	VOL 8240 ☐ 624 ☐	SEMI-VOL 8270 ☐ 625 ☐	PNA/PAH 8100 ☐ 8310 ☐ 8270 ☐	PCB / PEST 8080 ☐ PCB ONLY ☐	TCLP FULL ☐ VOA ☐ SEMI-VOA ☐ PEST ☐ HERB ☐	METALS, TOTAL ☐ METALS, TCLP ☐	LEAD, TOTAL 239.1 ☐ 7421 ☐ LEAD, TCLP ☐	TOX/TOH ☐	REACTIVITY ☐ CORROSIVITY ☐ IGNITABILITY ☐	OTHER: STATE
MW-9A	2/29/00	1245			X				HCL	3	40 mL	X				X										CA
MW-9B		1336										X				X										
MW-9C		1320										X				X										
MW-9D		1226										X				X										
MW-9F		1140										X				X										
MW-9G		1201										X				X										
MW-9H		1125										X				X										
MW-9I		1306										X				X										
TB										2		X				X										

TAT

24 HR. ____ * 72 HR. ____ *

48 HR. ____ * 96 HR. ____ *

Standard X * Contact US Prior to Sending Sample

Other ____

EXXON UST CONTRACT NO. S02317M01

QA/QC Level

Standard ☐ CLP ☐ Other ☐ _____

SPECIAL DETECTION LIMITS (Specify) 40

SPECIAL REPORTING REQUIREMENTS (Specify)

FAX ☐ ☐ FAX C-O-C W / REPORT

REMARKS: 818424034880 1281b 30

LAB USE ONLY LOT # Storage Location

200 MW

WORK ORDER # 0003005B LAB WORK RELEASE #:

CUSTODY RECORD

	Date	Time	
Relinquished By Sampler:	2/29/00	4:20	Received By:
Relinquished By Sampler:			Received By:
Relinquished By Sampler:			Received By Laboratory:

Way Bill #: Donna Stolb Cooler Temp: 3/2 1000

SHIP SAMPLES BACK TO: SPL INCORPORATED, 8880 Interchange Drive, Houston, TX 77054 Ph: (713) 660-0901 Fax: (713) 660-8975 Ph: 1-800-969-6775

HOUSTON LABORATORY
6680 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	00030058	Received by:	Stelly, D'Anna
Date and Time Received:	3/2/00 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 ☐		