EXXON COMPANY, U.S.A.

ENVIRONMENTAL PROTECTION

99 DEC -7 PM 3:20

P.O. BOX 4032 • CONCORD, CA 94524-4032
MARKETING DEPARTMENT • ENVIRONMENTAL ENGINEERING

DARIN L. ROUSE
SENIOR ENGINEER

(925) 246-8768
(925) 246-8798 FAX

December 7, 1999

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

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

Dear Mr. Seery:

Attached for your review and comment is a letter report entitled ***Quarterly Groundwater Monitoring Report, Fourth Quarter 1999,*** dated November 30, 1999, for the above referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details the results of the quarterly groundwater monitoring and sampling activities at the subject site.

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, Fourth Quarter 1999, dated November 30, 1999.

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.
Ms. Kathy Simonelli - Geologic Services Corporation

ENVIRONMENTAL RESOLUTIONS, INC.

November 30, 1999
ERI 222913.R08

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

Subject: Quarterly Groundwater Monitoring Report, Fourth Quarter 1999, Exxon Service Station 7-0235, 2225 Telegraph Avenue, Oakland, California.

Mr. Rouse:

At the request of Exxon Company, U.S.A. (Exxon), Environmental Resolutions, Inc. (ERI) is reporting the results of the fourth quarter 1999 groundwater monitoring and sampling event. The location of the site is shown on the Site Vicinity Map (Plate 1). The purpose of quarterly monitoring is to evaluate concentrations of dissolved hydrocarbons in groundwater and groundwater flow direction and gradient. Blaine Tech Services, Inc. (Blaine Tech) performed the site field activities at the request of Exxon.

GROUNDWATER MONITORING AND SAMPLING

On October 25, 1999, Blaine Tech measured depth to water (DTW) and collected groundwater samples from select wells for laboratory analyses. Work was performed in accordance with Blaine Tech's groundwater sampling protocol provided in Attachment A. Field data sheets are presented in Attachment B.

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 provided in Attachment C. 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. Scott Seery
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

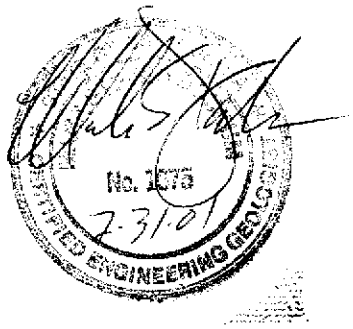
Mr. Stephen Hill
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

If you have any questions or comments regarding this report, please call Mr. James F. Chappell at (415) 382-4323.

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: Field Data Sheets
Attachment C: Laboratory Analysis Report and Chain of Custody Record

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0235
2225 Telegraph Avenue
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<.....feet.....>			<.....ug/L.....>					
MW6B	11/26/96	NLPH	12.26	5.22	<50	<30	<0.5	<0.5	<0.5	<0.5
(17.48)	2/27/97	NLPH	11.73	5.75	<50	<30	<0.5	<0.5	<0.5	0.80
	5/21/97	NLPH	12.70	4.78	<50	<30	<0.5	<0.5	<0.5	<0.5
	8/18/97	NLPH	12.89	4.59	380	<30	4.3	<0.5	1.2	1.5
	3/13/98	NLPH	11.15	6.33	360	<6.2	93	4.9	4.1	12
	4/20/98	NLPH	11.49	5.99	110	5.5	19	1.3	1.5	3.9
(21.37)	7/21/98	NLPH	12.18	9.19	<50	8.7	0.84	0.59	<0.5	<0.5
	10/6/98	NLPH	12.70	8.67	190	6.0	2.4	0.56	0.51	1.2
	1/11/99	NLPH	12.48	8.89	50	3.9	1.2	<0.5	<0.5	0.95
	4/8/99	NLPH	11.52	9.85	85	14.0	4.4	<0.5	<0.5	<0.5
	7/19/99	NLPH	11.39	9.98	<50	<2.50	<0.5	<0.5	<0.5	<0.5
	7/27/99	NLPH	12.71	8.66	---	---	---	---	---	---
	10/25/99	**NLPH**	**12.49**	**8.88**	**260**	**<2**	**2.3**	**<0.5**	**<0.5**	**<0.5**
MW6E	11/26/96	NLPH	12.94	4.69	<50	<30	1.1	<0.5	<0.5	<0.5
(17.63)	2/27/97	NLPH	12.28	5.35	<50	<30	<0.5	<0.5	<0.5	<0.5
	5/21/97	NLPH	13.60	4.03	160	<5	10	1.4	5.5	4.8
	8/18/97	NLPH	13.75	3.88	66	<30	<0.5	<0.5	<0.5	<0.5
	3/13/98	NLPH	11.36	6.27	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	4/20/98	NLPH	11.88	5.75	<50	<2.5	<0.5	<0.5	<0.5	<0.5
(21.58)	7/21/98	NLPH	13.10	8.48	1,200	<10	81	3.1	28	77
	10/6/98	NLPH	13.55	8.03	<50	6.6	1.4	0.51	<0.5	0.97
	1/11/99	NLPH	13.40	8.18	<50	5.1	<0.5	<0.5	<0.5	<0.5
	4/8/99	NLPH	12.04	9.54	<50	4.7	<0.5	<0.5	<0.5	<0.5
	7/19/99	NLPH	11.59	9.99	---	---	---	---	---	---
	7/27/99	NLPH	13.65	7.93	---	---	---	---	---	---
	10/25/99	**NLPH**	**13.52**	**8.06**	**<50**	**2.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW6F	11/26/96	NLPH	13.29	5.29	<50	<30	<0.5	<0.5	<0.5	<0.5
(18.58)	2/27/97	---	---	---	---	---	---	---	---	---
	5/21/97	NLPH	14.18	4.40	---	---	---	---	---	---
	8/18/97	NLPH	14.69	3.89	---	---	---	---	---	---
	3/13/98	NLPH	10.93	7.65	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	4/20/98	NLPH	11.77	6.81	---	---	---	---	---	---
(22.51)	7/21/98	NLPH	13.62	8.89	---	---	---	---	---	---
	10/6/98	NLPH	13.52	8.99	---	---	---	---	---	---

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0235
2225 Telegraph Avenue
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<		ug/L			>
MW6F (cont.)	1/11/99	NLPH	14.06	8.45	---	---	---	---	---	---
(22.51)	4/8/99	NLPH	11.86	10.65	---	---	---	---	---	---
	7/19/99	---	---	---	---	---	---	---	---	---
	7/27/99	Well Inaccessible		---	---	---	---	---	---	---
	10/25/99	**NLPH**	**12.63**	**9.88**	**---**	**---**	**---**	**---**	**---**	**---**
MW6G	11/26/96	NLPH	11.12	5.70	<50	<30	<0.5	<0.5	<0.5	<0.5
(16.82)	2/27/97	---	---	---	---	---	---	---	---	---
	5/21/97	NLPH	11.76	5.06	---	---	---	---	---	---
	8/18/97	NLPH	12.23	4.59	---	---	---	---	---	---
	3/13/98	NLPH	9.13	7.69	<50	4.4	<0.5	<0.5	<0.5	<0.5
	4/20/98	NLPH	9.73	7.09	---	---	---	---	---	---
(20.72)	7/21/98	NLPH	11.15	9.57	---	---	---	---	---	---
	10/6/98	NLPH	11.91	8.81	---	---	---	---	---	---
	1/11/99	NLPH	12.00	8.72	---	---	---	---	---	---
	4/8/99	NLPH	10.04	10.68	---	---	---	---	---	---
	7/19/99	---	---	---	---	---	---	---	---	---
	7/27/99	NLPH	11.75	8.97	---	---	---	---	---	---
	10/25/99	**NLPH**	**11.76**	**8.96**	**---**	**---**	**---**	**---**	**---**	**---**
MW6H	11/26/96	NLPH	11.87	4.71	1,200	<30	320	110	22	85
(16.58)	2/27/97	NLPH	11.58	5.00	1,800	<200	760	31	8.4	44
	5/21/97	NLPH	12.23	4.35	1,100	81	640	18	5.4	45
	8/18/97	NLPH	12.29	4.29	870	26	200	3.6	2.4	7.4
	3/13/98	NLPH	11.44	5.14	5,300	<125	1,900	720	100	470
	4/20/98	NLPH	11.58	5.00	6,000	2,700	1,500	600	91	440
(20.47)	7/21/98	NLPH	11.97	8.5	2,200	1,600	740	44	15	63
	10/6/98	NLPH	12.23	8.24	5,400	3,000	1,900	<25	<25	76
	1/11/99	NLPH	12.17	8.30	2,600	4,300	1,200	<12	<12	20
	4/8/99	NLPH	11.56	8.91	13,000	13,000	3,400	1,300	260	1,200
	7/19/99	NLPH	11.71	8.76	<2,000	6,920/8,520*	732	<20	<20	<20
	7/27/99	NLPH	12.39	8.08	---	---	---	---	---	---
	10/25/99	**NLPH**	**12.16**	**8.31**	**700**	**4,000**	**360**	**1.1**	**0.68**	**2**
MW6I	11/26/96	NLPH	12.45	3.81	<50	<30	<0.5	<0.5	<0.5	<0.5
(16.26)	2/27/97	NLPH	12.24	4.02	<50	<30	<0.5	<0.5	<0.5	<0.5
	5/21/97	NLPH	12.82	3.44	<50	<30	<0.5	<0.5	<0.5	<0.5

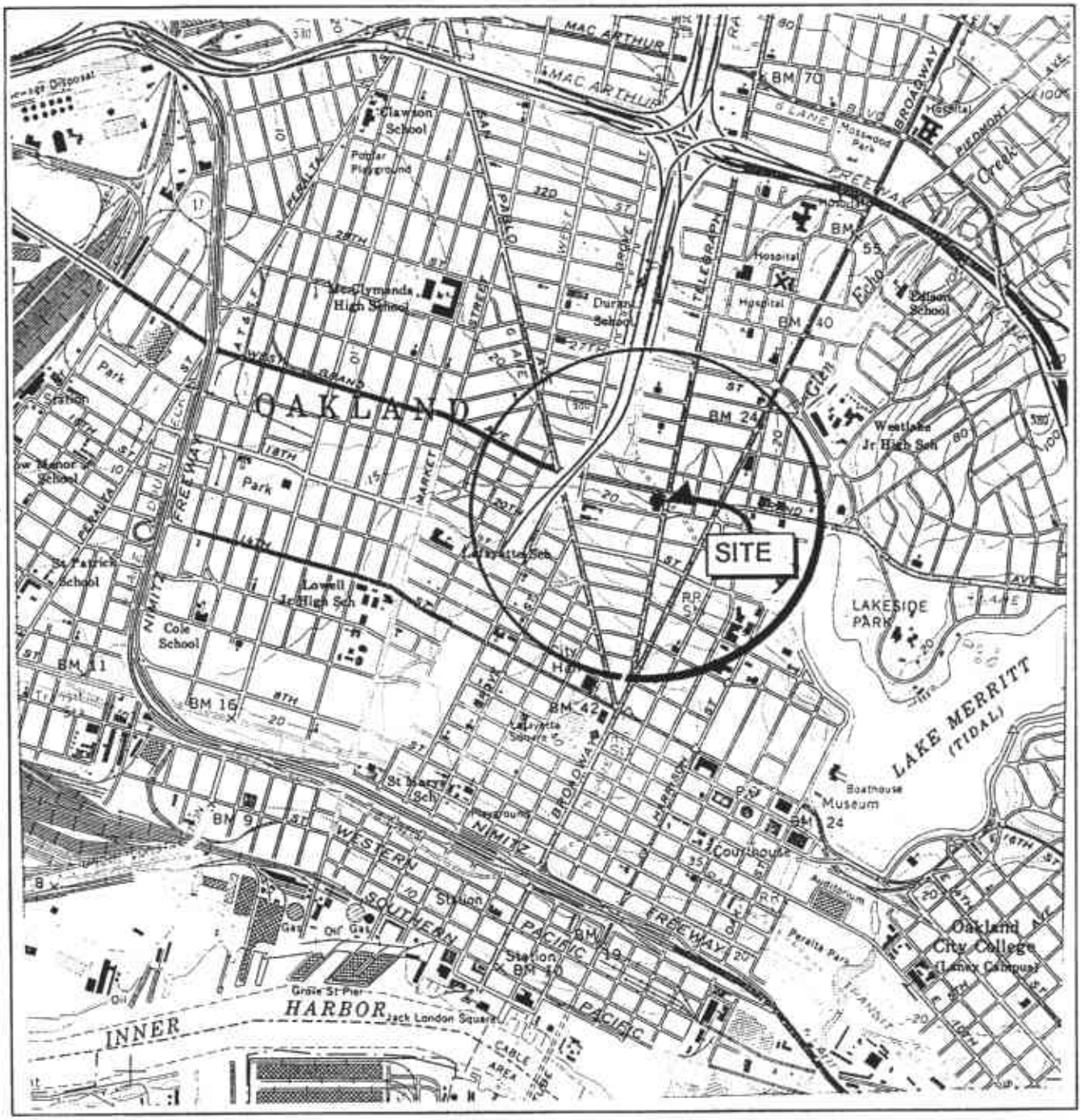
TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0235
2225 Telegraph Avenue
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<.....feet.....>			<.....ug/L.....>					
MW6I (cont.)	8/18/97	NLPH	12.81	3.45	<50	<30	<0.5	<0.5	<0.5	<0.5
(16.26)	3/13/98	---	---	---	---	---	---	---	---	---
	4/20/98	NLPH	12.14	4.12	<50	<2.5	<0.5	<0.5	<0.5	<0.5
(20.24)	7/21/98	NLPH	12.59	7.65	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	10/6/98	NLPH	12.81	7.43	---	---	---	---	---	---
	1/11/99	NLPH	12.74	7.50	<50	<2.5	<0.5	<0.5	<0.5	<0.5
	4/8/99	NLPH	11.93	8.31	---	---	---	---	---	---
	7/19/99	NLPH	11.75	8.49	281	17.6	35.4	9.1	7.4	30.7
	7/27/99	NLPH	12.95	7.29	---	---	---	---	---	---
	10/25/99	**NLPH**	**12.79**	**7.45**	**---**	**---**	**---**	**---**	**---**	**---**
RW1	Not Monitored 6/16/92 through 10/6/98.									
(20.24)	1/11/99	NLPH	12.37	7.87	---	---	---	---	---	---
	4/8/99	NLPH	10.41	9.83	---	---	---	---	---	---
	7/19/99	---	---	---	---	---	---	---	---	---
	7/27/99	NLPH	12.76	7.48	---	---	---	---	---	---
	10/25/99	**NLPH**	**12.50**	**7.74**	**---**	**---**	**---**	**---**	**---**	**---**
RW2	Not Monitored 6/16/92 through 4/20/98.									
(20.44)	7/21/98	NLPH	12.65	7.79	3,500	170	240	100	41	96
	10/6/98	NLPH	13.06	7.38	3,200	200	120	48	56	120
	1/11/99	NLPH	12.88	7.56	3,300	350	150	17	35	40
	4/8/99	sheen	11.76	8.68	---	---	---	---	---	---
	7/19/99	NLPH	11.61	8.83	1,980	160/499*	44	4.16	22.3	11.6
	7/27/99	NLPH	13.26	7.18	---	---	---	---	---	---
	10/25/99	**NLPH**	**12.96**	**7.48**	**1,800**	**440**	**51**	**<0.5**	**4.7**	**9.5**
RW3A	Not Monitored 6/16/92 through 4/20/98.									
(21.75)	7/21/98	NLPH	13.08	8.67	280	16	97	<1.2	<1.2	<1.2
	10/6/98	NLPH	13.72	8.03	78	26	26	0.89	<0.5	<0.5
	1/11/99	NLPH	12.00	9.75	1,000	230	490	5.0	<5.0	7.4
	4/8/99	NLPH	11.90	9.85	130	11	70	<1.0	<1.0	<1.0
	7/19/99	NLPH	11.75	10.00	989	16.4	393	6.40	5.70	15.0
	7/27/99	NLPH	13.68	8.07	---	---	---	---	---	---
	10/25/99	**NLPH**	**13.61**	**8.14**	**150**	**19**	**53**	**<0.5**	**<0.5**	**<0.5**

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0235
2225 Telegraph Avenue
Oakland, California

Notes:		
SUBJ	=	Results of subjective evaluation.
NLPH	=	No liquid-phase hydrocarbons present in well.
sheen	=	Liquid-phase hydrocarbon present as sheen.
TOC	=	Elevation of top of well casing; relative to mean sea level.
DTW	=	Depth to water.
Elev.	=	Elevation of groundwater surface; relative to mean sea level.
TPPHg	=	Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA method 5030/8015 (modified).
MTBE	=	Methyl tertiary butyl ether analyzed using EPA method 5030/8020.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA method 5030/8020.
<	=	Less than the indicated detection limit shown by the laboratory.
---	=	Not measured or sampled.
*	=	Methyl tertiary butyl ether analyzed using EPA method 8260B.
ug/L	=	Micrograms per liter.

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



FN: 22290001

N

APPROXIMATE SCALE

0 1/2 1

MILE

Source: U.S.G.S. 7.5 minute topographic quadrangle map Oakland West, California (Photorevised 1980)

ENVIRONMENTAL RESOURCES, INC.

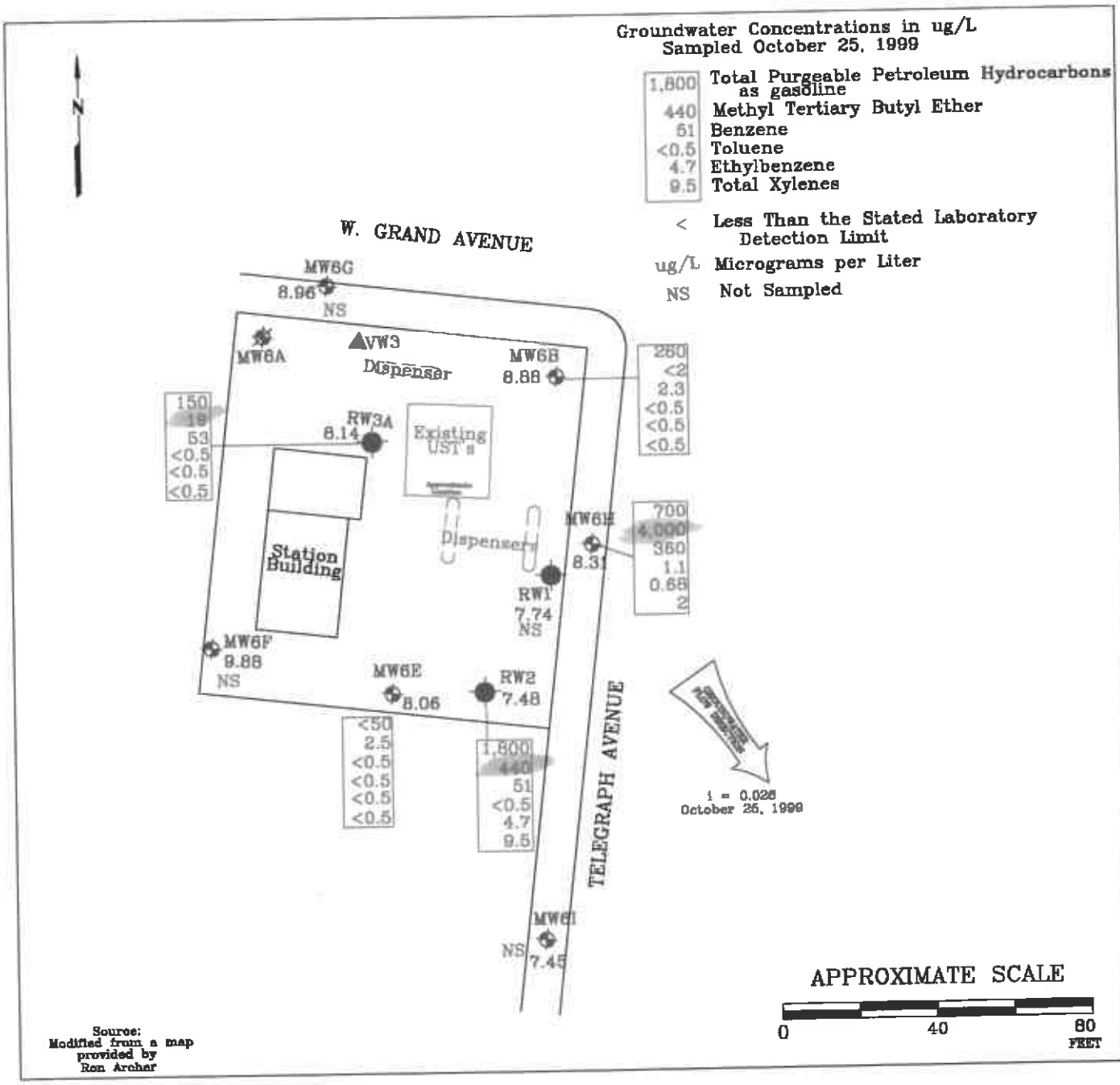
PROJECT ERI 2229

SITE VICINITY MAP

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

PLATE

1



FN 22290002

EXPLANATION

MW6H — Groundwater Monitoring Well

8.31 — Groundwater elevation in feet above mean sea level

i = Interpreted Groundwater Gradient

RW3A — Recovery Well

VW3 — Vapor/Vadose Well

ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

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

PROJECT NO. 2229

PLATE 2

November 17, 1999

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.

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 station 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

FIELD DATA SHEETS

RECEIVED

OCT 28 1999

WELL GAUGING DATA

Project # 99025-K1 Date 10/25/99 Client Exxon

Site 2225 Telegraph Ave Oakland, CA

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
MW-6B	2					12.49	18.32	TOC	
MW-6E	4					13.52	19.51	TOC	
MW-6F	4					12.63	19.66	TOC	
MW-6G	4					11.74	19.57	TOC	
MW-6H	4					12.16	19.66	TOC	
MW-6I	4					12.79	19.71	TOC	
RW-1	4					12.50	23.61	TOC	
RW-2	4					12.96	23.49	TOC	
RW-3A	4					13.61	21.09	TOC	

EXXON WELL MONITORING DATA SHEET

Project #: 991025-K1	Store # 7-0235
Sampler: MATT	Date: 10/25/99
Well I.D.: MW6B	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 15.32	Depth to Water: 12.49
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius^2 * 0.163

Purge Method: Bailer (Disposable Bailer) Middleburg Electric Submersible Extraction Pump Other: ____

Sampling Method: Bailer (Disposable Bailer) Extraction Port Other: ____

1.0 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 3.0 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
903	68.8	6.96	1028	1	odor
906	69.2	7.04	1016	2	odor
908	69.5	7.07	1015	3	

Did well dewater? Yes (No) Gallons actually evacuated: 3.0

Sampling Time: 909 Sampling Date: 10/25/99

Sample I.D.: MW6B Laboratory: ~~Sequoia~~ SPL Other____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

EXXON WELL MONITORING DATA SHEET

Project #: 991025-K1	Store # 7-0235
Sampler: MATT	Date: 10/25/99
Well I.D.: MW6E	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 19.51	Depth to Water: 13.52
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	$radius^2 * 0.163$

Purge Method: Bailer / Disposable Bailer / Middleburg / ~~Electric Submersible~~ / Extraction Pump / Other: ____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ____

4	x	3	=	12 Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
~~9:54~~	~~60.8~~	~~7.19~~	~~1914~~	~~[illegible]~~	
~~9:55~~	~~60.7~~	~~7.24~~	~~866~~	~~[illegible]~~	
9:56	66.0	6.69	803	~~[illegible]~~ 4	
956	64.7	6.59	600	8	6.59
957	64.1	6.58	599	12	

Did well dewater? Yes (No)	Gallons actually evacuated: 12
Sampling Time: ~~[illegible]~~ 1002	Sampling Date: 10/25/99
Sample I.D.: MW6E	Laboratory: ~~Sequoia~~ SPL Other____
Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D	Other:
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV

EXXON WELL MONITORING DATA SHEET

Project #: 991025-K1	Job # 7-0235
Sampler: MATT	Date: 10/25/99
Well I.D.: MW 6H	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 19.66	Depth to Water: 12.16
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius^2 * 0.163

Purge Method: Bailer ~~Disposable Bailer~~ Middleburg (Electric Submersible) Extraction Pump Other: ____

Sampling Method: Bailer (Disposable Bailer) Extraction Port Other: ____

5.0	X	3	=	15	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1039	67.3	6.83	1076		5	
1040	68.8	6.77	1071		10	
1041	69.8	6.77	1090		15	
1044						

Did well dewater? Yes (No)		Gallons actually evacuated: 15	
Sampling Time: 1044		Sampling Date: 10/25/99	
Sample I.D.: MW 6H		Laboratory: ~~Sequoia~~ SPL	Other ____
Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D		Other:	
D.O. (if req'd):	Pre-purge: ____ mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge: ____ mV	Post-purge:	mV

EXXON WELL MONITORING DATA SHEET

Project #: 991025-K1	Store # 7-0235
Sampler: MATT	Date: 10/25/99
Well I.D.: RW-2	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 23.49	Depth to Water: 12.96
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius^2 * 0.163

Purge Method: Bailer / Disposable Bailer / Middleburg / ~~Electric Submersible~~ / Extraction Pump / Other: ____

Sampling Method: Bailer / ~~Disposable Bailer~~ / Extraction Port / Other: ____

1 Case Volume (Gals.)	X Specified Volumes	= Calculated Volume
7	3	21 Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1018	63.5	6.71	838	7	black water/odor
1019	64.2	6.76	840	14	
1020	64.4	6.80	842	21	

Did well dewater? Yes (No) Gallons actually evacuated: 21

Sampling Time: 1023 Sampling Date: 10/25/99

Sample I.D.: RW-2 Laboratory: ~~Sequoia~~ SPL Other ____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

EXXON WELL MONITORING DATA SHEET

Project #: 991025-K1	Store # 70235
Sampler: MATT	Date: 10/25/99
Well I.D.: RW 3A	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 21.09	Depth to Water: 13.61
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius^2 * 0.163

Purge Method: Bailer / Disposable Bailer / Middleburg / ~~Electric Submersible~~ / Extraction Pump / Other: _____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: _____

1 Case Volume (Gals.)		Specified Volumes		Calculated Volume
5	X	3	=	15 Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
926	67.9	6.93	913	5	odor
927	68.4	6.87	885	10	↓
928	68.5	6.84	929	15	↓

Did well dewater? Yes (No)		Gallons actually evacuated: 15	
Sampling Time: 931		Sampling Date: 10/25/99	
Sample I.D.: RW 3A		Laboratory: ~~Sequoia~~ SPL	Other_____
Analyzed for: (TPH-G) ~~BTEX~~ (MTBE) TPH-D		Other:	
D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV

ATTACHMENT C

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:

99100531

Report To:		Project Name:	2229
Environmental Resolution, Inc.		Site:	7-0235,19900939
Jim Chappell		Site Address:	2225 Telegraph Avenue
73 Digital Drive Suite 100			Oakland CA
Novato		PO Number:	
California		State:	California
94949-		State Cert. No.:	1903
ph: (415) 382-5996	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.

Wyatt, Neaundra
Project Manager

11/12/99
Date

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

EXXON Company U.S.A.

Certificate of Analysis Number:

99100531

Report To:			
Environmental Resolution, Inc. Jim Chappell 73 Digital Drive Suite 100 Novato California 94949- ph: (415) 382-5996 fax: (415) 382-1856		Project Name:	2229
		Site:	7-0235,19900939
		Site Address:	2225 Telegraph Avenue Oakland CA
		PO Number:	
		State:	California
		State Cert. No.:	1903
		Date Reported:	

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
[illegible]6B	99100531-01	Water	10/25/99 9:09:00 AM	10/28/99 10:00:00 AM		☐
[illegible]6E	99100531-02	Water	10/25/99 10:02:00 AM	10/28/99 10:00:00 AM		☐
MW6H	99100531-03	Water	10/25/99 10:44:00 AM	10/28/99 10:00:00 AM		☐
RW2	99100531-04	Water	10/25/99 10:23:00 AM	10/28/99 10:00:00 AM		☐
[illegible]3A	99100531-05	Water	10/25/99 9:31:00 AM	10/28/99 10:00:00 AM		☐
Trip Blank	99100531-06	Water	10/25/99	10/28/99 10:00:00 AM		☐

11/12/99

[illegible]yatt, Neaundra
[illegible]oject 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 MW6B **Collected:** 10/25/99 9:09:00 **SPL Sample ID:** 99100531-01

Site: 7-0235,19900939

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			**CA_GRO**		**Units: ug/L**		
Gasoline Range Organics	260	50	1		11/02/99 22:47	CJ	88988
Surr: 1,4-Difluorobenzene	110	62-144	1		11/02/99 22:47	CJ	88988
Surr: 4-Bromofluorobenzene	210	44-153	1	*	11/02/99 22:47	CJ	88988
PURGEABLE AROMATICS			**SW8021B**		**Units: ug/L**		
Benzene	2.3	0.5	1		11/02/99 22:47	CJ	88739
Ethylbenzene	ND	0.5	1		11/02/99 22:47	CJ	88739
Methyl tert-butyl ether	ND	2	1		11/02/99 22:47	CJ	88739
Toluene	ND	0.5	1		11/02/99 22:47	CJ	88739
m,p-Xylene	ND	0.5	1		11/02/99 22:47	CJ	88739
o-Xylene	ND	0.5	1		11/02/99 22:47	CJ	88739
Xylenes,Total	ND	0.5	1		11/02/99 22:47	CJ	88739
Surr: 1,4-Difluorobenzene	89	72-137	1		11/02/99 22:47	CJ	88739
Surr: 4-Bromofluorobenzene	150	48-156	1		11/02/99 22:47	CJ	88739

Wyatt, Neaundra
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 MW6E **Collected:** 10/25/99 10:02:0 **SPL Sample ID:** 99100531-02

Site: 7-0235,19900939

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			CA_GRO		Units: ug/L		
Gasoline Range Organics	ND	50	1		11/04/99 4:35	D_R	90643
Surr: 1,4-Difluorobenzene	93	62-144	1		11/04/99 4:35	D_R	90643
Surr: 4-Bromofluorobenzene	110	44-153	1		11/04/99 4:35	D_R	90643
PURGEABLE AROMATICS			SW8021B		Units: ug/L		
Benzene	ND	0.5	1		11/03/99 4:06	D_R	89952
Ethylbenzene	ND	0.5	1		11/03/99 4:06	D_R	89952
Methyl tert-butyl ether	2.5	2	1		11/03/99 4:06	D_R	89952
Toluene	ND	0.5	1		11/03/99 4:06	D_R	89952
m,p-Xylene	ND	0.5	1		11/03/99 4:06	D_R	89952
o-Xylene	ND	0.5	1		11/03/99 4:06	D_R	89952
Xylenes,Total	ND	0.5	1		11/03/99 4:06	D_R	89952
Surr: 1,4-Difluorobenzene	95	72-137	1		11/03/99 4:06	D_R	89952
Surr: 4-Bromofluorobenzene	120	48-156	1		11/03/99 4:06	D_R	89952

Wyatt, Neaundra
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 MW6H **Collected:** 10/25/99 10:44:0 **SPL Sample ID:** 99100531-03

Site: 7-0235,19900939

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			CA_GRO		Units: ug/L		
Gasoline Range Organics	700	250	5		11/04/99 18:51	D_R	92264
Surr: 1,4-Difluorobenzene	100	62-144	5		11/04/99 18:51	D_R	92264
Surr: 4-Bromofluorobenzene	100	44-153	5		11/04/99 18:51	D_R	92264
PURGEABLE AROMATICS			SW8021B		Units: ug/L		
Benzene	360	0.5	1		11/03/99 5:01	D_R	89956
Ethylbenzene	0.68	0.5	1		11/03/99 5:01	D_R	89956
Methyl tert-butyl ether	4000	25	25		11/04/99 5:02	D_R	90913
Toluene	1.1	0.5	1		11/03/99 5:01	D_R	89956
m,p-Xylene	2	0.5	1		11/03/99 5:01	D_R	89956
o-Xylene	ND	0.5	1		11/03/99 5:01	D_R	89956
Xylenes,Total	2	0.5	1		11/03/99 5:01	D_R	89956
Surr: 1,4-Difluorobenzene	100	72-137	25		11/04/99 5:02	D_R	90913
Surr: 1,4-Difluorobenzene	120	72-137	1		11/03/99 5:01	D_R	89956
Surr: 4-Bromofluorobenzene	99	48-156	25		11/04/99 5:02	D_R	90913
Surr: 4-Bromofluorobenzene	130	48-156	1		11/03/99 5:01	D_R	89956

Wyatt, Neaundra
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 RW2 **Collected:** 10/25/99 10:23:0 **SPL Sample ID:** 99100531-04

Site: 7-0235,19900939

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			**CA_GRO**		**Units: ug/L**		
Gasoline Range Organics	1800	50	1		11/04/99 5:30	D_R	90645
Surr: 1,4-Difluorobenzene	95	62-144	1		11/04/99 5:30	D_R	90645
Surr: 4-Bromofluorobenzene	120	44-153	1		11/04/99 5:30	D_R	90645
PURGEABLE AROMATICS			**SW8021B**		**Units: ug/L**		
Benzene	51	0.5	1		11/04/99 5:30	D_R	90914
Ethylbenzene	4.7	0.5	1		11/04/99 5:30	D_R	90914
Methyl tert-butyl ether	440	2	1		11/04/99 5:30	D_R	90914
Toluene	ND	0.5	1		11/04/99 5:30	D_R	90914
m,p-Xylene	7.2	0.5	1		11/04/99 5:30	D_R	90914
o-Xylene	2.3	0.5	1		11/04/99 5:30	D_R	90914
Xylenes,Total	9.5	0.5	1		11/04/99 5:30	D_R	90914
Surr: 1,4-Difluorobenzene	170	72-137	1	*	11/04/99 5:30	D_R	90914
Surr: 4-Bromofluorobenzene	130	48-156	1		11/04/99 5:30	D_R	90914

Wyatt, Neaundra
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 RW3A **Collected:** 10/25/99 9:31:00 **SPL Sample ID:** 99100531-05

Site: 7-0235,19900939

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			CA_GRO		Units: ug/L		
Gasoline Range Organics	150	50	1		11/04/99 5:57	D_R	90647
Surr: 1,4-Difluorobenzene	110	62-144	1		11/04/99 5:57	D_R	90647
Surr: 4-Bromofluorobenzene	120	44-153	1		11/04/99 5:57	D_R	90647
PURGEABLE AROMATICS			SW8021B		Units: ug/L		
Benzene	53	0.5	1		11/03/99 4:33	D_R	89955
Ethylbenzene	ND	0.5	1		11/03/99 4:33	D_R	89955
Methyl tert-butyl ether	19	2	1		11/03/99 4:33	D_R	89955
Toluene	ND	0.5	1		11/03/99 4:33	D_R	89955
m,p-Xylene	ND	0.5	1		11/03/99 4:33	D_R	89955
o-Xylene	ND	0.5	1		11/03/99 4:33	D_R	89955
Xylenes,Total	ND	0.5	1		11/03/99 4:33	D_R	89955
Surr: 1,4-Difluorobenzene	86	72-137	1		11/03/99 4:33	D_R	89955
Surr: 4-Bromofluorobenzene	100	48-156	1		11/03/99 4:33	D_R	89955

Wyatt, Neaundra
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:** 10/25/99 | **SPL Sample ID:** 99100531-06

Site: 7-0235,19900939

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			CA_GRO		Units: ug/L		
Gasoline Range Organics	ND	50	1		11/04/99 3:13	D_R	90640
Surr: 1,4-Difluorobenzene	96	62-144	1		11/04/99 3:13	D_R	90640
Surr: 4-Bromofluorobenzene	110	44-153	1		11/04/99 3:13	D_R	90640
PURGEABLE AROMATICS			SW8021B		Units: ug/L		
Benzene	ND	0.5	1		11/03/99 3:38	D_R	89951
Ethylbenzene	ND	0.5	1		11/03/99 3:38	D_R	89951
Methyl tert-butyl ether	ND	2	1		11/03/99 3:38	D_R	89951
Toluene	ND	0.5	1		11/03/99 3:38	D_R	89951
m,p-Xylene	ND	0.5	1		11/03/99 3:38	D_R	89951
o-Xylene	ND	0.5	1		11/03/99 3:38	D_R	89951
Xylenes,Total	ND	0.5	1		11/03/99 3:38	D_R	89951
Surr: 1,4-Difluorobenzene	88	72-137	1		11/03/99 3:38	D_R	89951
Surr: 4-Bromofluorobenzene	120	48-156	1		11/03/99 3:38	D_R	89951

Wyatt, Neaundra
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.

2229

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 99100531
Lab Batch ID: R4225

Method Blank

RunID: HP_R_991102A-88733 Units: ug/L
Analysis Date: 11/02/1999 13:51 Analyst: CJ

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
99100531-01A	MW6B

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	86.1	72-137
Surr: 4-Bromofluorobenzene	97.5	48-156

Laboratory Control Sample (LCS)

RunID: HP_R_991102A-88732 Units: ug/L
Analysis Date: 11/02/1999 12:59 Analyst: CJ

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	53	107	61	119
Ethylbenzene	50	55	111	70	118
Methyl tert-butyl ether	50	54	109	72	128
Toluene	50	55	109	65	125
m,p-Xylene	100	110	111	72	116
o-Xylene	50	55	110	72	117
Xylenes,Total	150	165	110	72	116

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

Sample Spiked: 99100524-02
RunID: HP_R_991102A-88735 Units: ug/L
Analysis Date: 11/02/1999 19:48 Analyst: CJ

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	20	97.8	20	19	94.7	3.24	21	32	164

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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 99100531
Lab Batch ID: R4225

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

Sample Spiked: 99100524-02
RunID: HP_R_991102A-88735 Units: ug/L
Analysis Date: 11/02/1999 19:48 Analyst: CJ

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
hylbenzene	ND	20	19	95.9	20	18	91.0	5.19	19	52	142
Methyl tert-butyl ether	ND	20	25	125	20	23	113	9.63	20	39	150
Toluene	ND	20	20	97.9	20	19	94.2	3.85	20	38	159
p-Xylene	ND	40	39	96.4	40	37	91.4	5.31	17	53	144
Xylene	ND	20	20	100	20	19	95.3	4.85	18	53	143
Xylenes,Total	ND	60	59	98.3	60	56	93.3	5.22	17	53	143

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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Gasoline Range Organics
Method: CA_GRO
WorkOrder: 99100531
Lab Batch ID: R4232

Method Blank

RunID: HP_R_991102C-88969 Units: mg/L
Analysis Date: 11/02/1999 13:51 Analyst: CJ

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
99100531-01A	MW6B

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	85.2	62-144
Surr: 4-Bromofluorobenzene	78.9	44-153

Laboratory Control Sample (LCS)

RunID: HP_R_991102C-88968 Units: mg/L
Analysis Date: 11/02/1999 13:25 Analyst: CJ

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.99	99	64	131

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

Sample Spiked: 99100524-03
RunID: HP_R_991102C-88976 Units: mg/L
Analysis Date: 11/02/1999 20:39 Analyst: CJ

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	0.75	83.1	0.9	0.75	82.9	0.174	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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 99100531
Lab Batch ID: R4278

Method Blank

RunID: VARE_991102E-89948 Units: ug/L
Analysis Date: 11/03/1999 0:53 Analyst: D_R

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	96.4	72-137
Surr: 4-Bromofluorobenzene	126.1	48-156

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
99100531-02A	MW6E
99100531-03A	MW6H
99100531-05A	RW3A
99100531-06A	Trip Blank

Laboratory Control Sample (LCS)

RunID: VARE_991102E-89947 Units: ug/L
Analysis Date: 11/02/1999 23:58 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	57	115	61	119
Ethylbenzene	50	58	116	70	118
Methyl tert-butyl ether	50	55	110	72	128
Toluene	50	60	120	65	125
m,p-Xylene	100	120	116	72	116
o-Xylene	50	52	103	72	117
Xylenes,Total	150	172	115	72	116

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

Sample Spiked: 99100531-02
RunID: VARE_991102E-89949 Units: ug/L
Analysis Date: 11/03/1999 1:20 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
Benzene	ND	20	24	122	20	23	117	4.06	21	32	164

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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 99100531
Lab Batch ID: R4278

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

Sample Spiked: 99100531-02
RunID: VARE_991102E-89949 Units: ug/L
Analysis Date: 11/03/1999 1:20 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
hylbenzene	ND	20	21	106	20	20	102	3.66	19	52	142
ethyl tert-butyl ether	2.5	20	27	123	20	28	130	5.24	20	39	150
Toluene	ND	20	24	122	20	23	116	4.66	20	38	159
p-Xylene	ND	40	43	107	40	41	103	4.12	17	53	144
Xylene	ND	20	20	99.9	20	19	95.3	4.78	18	53	143
Xylenes,Total	ND	60	63	105	60	60	100	4.88	17	53	143

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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Gasoline Range Organics
Method: CA_GRO
WorkOrder: 99100531
Lab Batch ID: R4303

Method Blank

RunID: VARE_991103B-90633 Units: mg/L
Analysis Date: 11/04/1999 0:28 Analyst: D_R

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	97.6	62-144
Surr: 4-Bromofluorobenzene	124.0	44-153

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
99100531-02A	MW6E
99100531-04A	RW2
99100531-05A	RW3A
99100531-06A	Trip Blank

Laboratory Control Sample (LCS)

RunID: VARE_991103B-90628 Units: mg/L
Analysis Date: 11/04/1999 0:01 Analyst: D_R

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: 9910731-05A
RunID: VARE_991103B-90635 Units: mg/L
Analysis Date: 11/04/1999 1:51 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
Gasoline Range Organics	ND	0.9	0.54	60.2	0.9	0.61	67.5	11.4	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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 99100531
Lab Batch ID: R4304

Method Blank

RunID: VARE_991103C-90909 Units: ug/L
Analysis Date: 11/04/1999 0:28 Analyst: D_R

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
99100531-03A	MW6H
99100531-04A	RW2

Analyte	Result	Rep Limit
Benzene	ND	0.50
Ethylbenzene	ND	0.50
Methyl tert-butyl ether	ND	1.0
Toluene	ND	0.50
m,p-Xylene	ND	0.50
o-Xylene	ND	0.50
Xylenes,Total	ND	0.50
Surr: 1,4-Difluorobenzene	95.6	72-137
Surr: 4-Bromofluorobenzene	96.5	48-156

Laboratory Control Sample (LCS)

RunID: VARE_991103C-90908 Units: ug/L
Analysis Date: 11/03/1999 23:33 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	55	110	61	119
Ethylbenzene	50	54	107	70	118
Methyl tert-butyl ether	50	42	84	72	128
Toluene	50	55	110	65	125
m,p-Xylene	100	100	103	72	116
o-Xylene	50	47	93	72	117
Xylenes,Total	150	147	98	72	116

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

Sample Spiked: 9910731-02A
RunID: VARE_991103C-90910 Units: ug/L
Analysis Date: 11/04/1999 0:56 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
Benzene	ND	20	22	108	20	16	79.4	30.1*	21	32	164

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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 99100531
Lab Batch ID: R4304

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

Sample Spiked: 9910731-02A
RunID: VARE_991103C-90910 Units: ug/L
Analysis Date: 11/04/1999 0:56 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
Ethylbenzene	ND	20	19	94.4	20	13	65.0	36.8*	19	52	142
Methyl tert-butyl ether	ND	20	21	104	20	16	82.1	23.5*	20	39	150
Toluene	ND	20	22	109	20	14	72.2	40.2*	20	38	159
m,p-Xylene	ND	40	39	98.3	40	27	67.7	36.9*	17	53	144
o-Xylene	ND	20	19	96.0	20	13	63.5	40.8*	18	53	143
Xylenes,Total	ND	60	58	96.7	60	40	66.7	36.7*	17	53	143

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 - Surrogate Recovery Unreportable due to Dilution

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

Quality Control Report

EXXON Company U.S.A.

2229

Analysis: Gasoline Range Organics
Method: CA_GRO

WorkOrder: 99100531
Lab Batch ID: R4360

Method Blank

RunID: VARE_991104B-92727 Units: mg/L
Analysis Date: 11/05/1999 12:53 Analyst: D_R

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
99100531-03A	MW6H

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	98.3	62-144
Surr: 4-Bromofluorobenzene	128.4	44-153

Laboratory Control Sample (LCS)

RunID: VARE_991104B-92728 Units: mg/L
Analysis Date: 11/05/1999 13:48 Analyst: D_R

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.81	81	64	131

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

Sample Spiked: 9910051-02A
RunID: VARE_991104B-94753 Units: mg/L
Analysis Date: 11/05/1999 11:57 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	2	222*	0.9	2	218*	1.53	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 - Surrogate Recovery Unreportable due to Dilution

Chain of Custody

And

Sample Receipt Checklist

EXXON COMPANY, USA. 99100531

CHAIN OF CUSTODY RECORD NO. _____ Page 1 of 1

Exxon Engineer: Gene Ortega Phone: (925) 246-8747

Consultant Co. Name: ERI Contact: Jim Chappel

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

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

RAS #: 7-0235 Facility/State ID # (TN Only): _____

AFE # (Terminal Only): _____ Consultant Project #: 2229

Location: 2225 Telegraph Ave. (City): Oakland (State): CA

☐ EE ☐ C & M ☐ SDT

Consultant Work Release #: 19900939 BTS# 991025-kl

Sampled By: Blaine Tech Services, Inc./ Print Name: MATTHEW SMITH

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/IR 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
MW6B	10/25/99	909	X		X				40ml HCl VOAs	3	40ml	X				X										CA
MW6E		1002	X		X					3		X				X										
MW6H		1049	X		X					3		X				X										
RW2		1023	X		X					3		X				X										
RW3A		931	X		X					3		X				X										
TB										2		X				X										

TAT
24 HR. ____ * 72 HR. ____ *
48 HR. ____ * 96 HR. ____ *
Standard X * Contact US Prior
Other ____ to Sending Sample

EXXON UST CONTRACT NO. S02317M01

QA/QC Level
Standard ☐ CLP ☐ Other ☐ _____

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

FAX ☐ ☐ FAX C-O-C W / REPORT

REMARKS: 814372885533

LAB USE ONLY LOT # Storage Location
110 N.A.

WORK ORDER #: 99100531 LAB WORK RELEASE #:

CUSTODY RECORD

	Date	Time	
Relinquished By Sampler: matthew smith	10/26/99	9:30am	Received By:
Relinquished By Sampler:	Date	Time	Received By:
Relinquished By Sampler:	Date 10-28-99	Time 1000	Received By Laboratory: Way Bill #: Cooler Temp: 3°

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

Sample Receipt Checklist

Workorder:	99100531	Received by:	Turnell, Randy
Date and Time Received:	10/28/99 10:00:00 AM	Carrier name:	FedEx
Temperature:	3 c		

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 ☐	