EXXON COMPANY, U.S.A.

POST OFFICE BOX 4032 . CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER
SENIOR ENVIRONMENTAL ENGINEER
(510) 246-8776

September 11, 1992

Mr. Barney Chan
Alameda County Environmental Health Department
Hazardous Materials Division
80 Swan Way, Suite 200
Oakland, California 94621

8/20/92

RE: Exxon RAS 7-0236
6630 East 14th Street
Oakland, California

Dear Mr. Chan:

Attached for your review and comment is a report titled **Quarterly Fluid-Level Monitoring and Ground Water Sampling Report** for the above referenced site. The report, prepared by Alton Geoscience, Pleasanton, California, details results of the third quarter monitoring event which occurred in July, 1992.

Monitoring well MW-5 was not sampled during this event due to the well being obstructed. On September 10, 1992, the well was cleared of the obstruction, which was found to be newspapers placed by an unknown third party. This well will again be sampled in the next event.

Should you have any questions or comments, or require additional information, please do not hesitate to contact me at the above listed phone number.

Sincerely,

Marla D. Guensler

Attachment

c - w/attachment:
Mr. Richard Hiett - San Francisco RWQCB

w/o attachment:
Mr. J. De George - Alton Geoscience, Pleasanton, CA

MDG/pdp
2453E/70236LTR

QUARTERLY FLUID-LEVEL MONITORING
AND
GROUND WATER SAMPLING REPORT

Exxon RAS #7-0236
6630 East 14th Street
Oakland, California

Project No. 30-0491-02

Prepared for:

Exxon Company, U.S.A.
2300 Clayton Road, Suite 1250
Concord, California 94525

Prepared by:

Alton Geoscience
5870 Stoneridge Drive, Suite 6
Pleasanton, California 94588

August 20, 1992

QUARTERLY FLUID-LEVEL MONITORING AND GROUND WATER SAMPLING REPORT

Exxon RAS #7-0236
6630 East 14th Street
Oakland, California

August 20, 1992

INTRODUCTION

This report presents findings and conclusions of quarterly fluid-level monitoring and ground water sampling at Exxon RAS #7-0236, 6630 East 14th Street, Oakland, California. Field work was performed by Alton Geoscience July 8, 1992. A site vicinity map and site plan are shown in Figures 1 and 2.

PROJECT BACKGROUND

Alton Geoscience issued a Preliminary Site Investigation Report dated April 25, 1991, for Exxon RAS #7-0236. Three exploratory soil borings were converted to 4-inch-diameter ground water monitoring wells, MW-1, MW-2, and MW-3, completed to 25 feet below grade (fbg). Ground water stabilized at approximately 8 feet below grade (fbg), with a gradient approximately 0.03 foot per foot towards the west-southwest.

Soil analysis detected up to 98 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G) in MW-2 at 11 fbg. Maximum petroleum hydrocarbon concentration in ground water were detected in MW-2, downgradient from the underground storage tanks (USTs), and MW-3, cross gradient from the USTs. Ground water analysis detected 1,700 and 3,100 parts per billion (ppb) TPH-G in MW-2 and MW-3.

Alton Geoscience issued a Supplemental Site Investigation Report dated June 17, 1992. Four exploratory soil borings were converted to one 4-inch-diameter monitoring well, MW-6, and three 2-inch-diameter monitoring wells, MW-4, MW-5, and MW-7. The lateral extent of hydrocarbon-impacted ground water was assessed northwest, southwest, and southeast of the USTs, in the vicinities of MW-4, MW-5, and MW-7.

FIELD PROCEDURES

On July 8, 1992, Alton Geoscience performed fluid-level monitoring and ground water sampling of Monitoring Wells MW-1 through MW-7. Ground water samples were analyzed for TPH-G; and benzene, toluene, ethylbenzene, and total xylenes (BTEX), and selected samples were

additionally analyzed for total petroleum hydrocarbons as diesel (TPH-D), halogenated volatile organic compounds (HVOCs), and total oil and grease (TOG). Fluid-level monitoring and ground water sampling procedures are presented in Appendix A. The official laboratory report and chain of custody record are presented in Appendix B.

Fluid-level measurements and ground water analytical results for this and previous events are summarized in Table 1. A ground water elevation contour map based on measurements collected July 8, 1992, is shown in Figure 3. Dissolved-phase hydrocarbon concentrations are presented in Figure 4.

FINDINGS

Following are the findings of fluid-level monitoring and ground water sampling:

- Ground water was encountered at depths from 8.63 to 10.30 feet below grade (fbg), with a gradient (0.02 foot/foot) towards the southwest, consistent with previous gradient measurements. Ground water elevations decreased approximately 1.5 feet since the previous sampling event, April 1992.

- Analysis of ground water samples collected from MW-2 detected 7,000, 2,100, and 250 parts per billion (ppb) TPH-G, TPH-D, and benzene. TPH-G concentrations have remained relatively the same since the previous sampling event, April 1992. TPH-D and benzene concentrations have decreased since the same event from 3,000 ppb TPH-D and 740 ppb benzene. Total BTEX to TPH-G ratios in MW-2 have averaged 16 percent since ground water sampling began, March 1991.

- Analysis of ground water samples collected from MW-3 detected 2,900 and 960 ppb TPH-G and TPH-D. These concentrations have increased since the previous sampling event from 640 and 440 ppb TPH-G and TPH-D. Benzene was not detected at or above reported detection limits in MW-3. Total BTEX to TPH-G ratios in MW-3 have averaged 0.04 percent since ground water sampling began.

- TPH-G, TPH-D, and BTEX were not detected at or above reported detection limits in ground water samples collected from MW-1, and MW-4 through MW-7.

- TOG and HVOCs were not detected at or above reported detection limits in ground water samples collected from onsite wells MW-1, MW-2, MW-3, and MW-6. TOG has not been detected at or above reported detection limits since ground water sampling began, and with the exception of methylene chloride detected during the first sampling event, March 1991, HVOCs have not been detected at or above reported detection limits in ground water samples.

- An obstruction in MW-5 made it impossible to access ground water in this well.

CONCLUSIONS

Following are the conclusions based on fluid-level monitoring and ground water sampling:

- A trend describing or predicting concentrations of TPH-G, TPH-D, and BTEX in MW-2 and MW-3 during this and previous sampling events is not evident.
- Comparison of the average total BTEX to TPH-G ratios in MW-2 and MW-3, suggests that TPH-G in MW-2 is derived from less degraded gasoline than TPH-G detected in MW-3.
- Petroleum hydrocarbons in ground water do not appear to be migrating northwest, west, southeast, or east beyond peripheral Wells MW-1, MW-4, MW-6, and MW-7.
- The continued absence of TOG and HVOCs since March 1991 in the onsite Wells MW-1, MW-2, MW-3, and MW-6, suggest these hydrocarbons are not present in ground water above reported detection limits.

CURRENT ACTIVITY

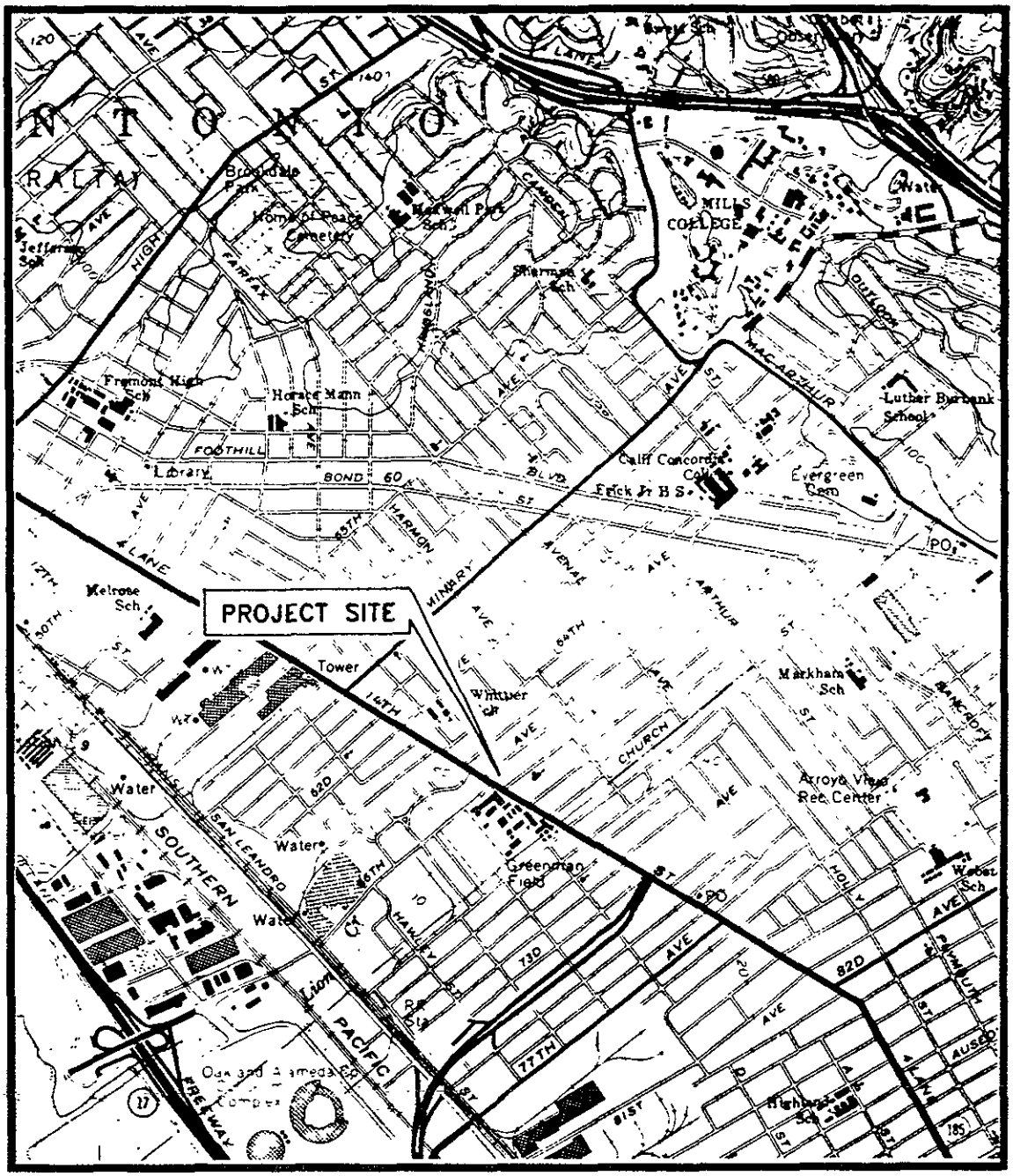
During the third quarter 1992, the obstruction in MW-5 will be determined and removed if possible. Quarterly ground water monitoring and sampling will continue.

ALTON GEOSCIENCE

John De George
Project Manager

Robert E. Logan, R.G. 5088
Manager, Northern California Operations

FIGURES



Source: U.S.G.S. Map
Oakland East Quadrangle
California
7.5 Minute Series (Topographic)

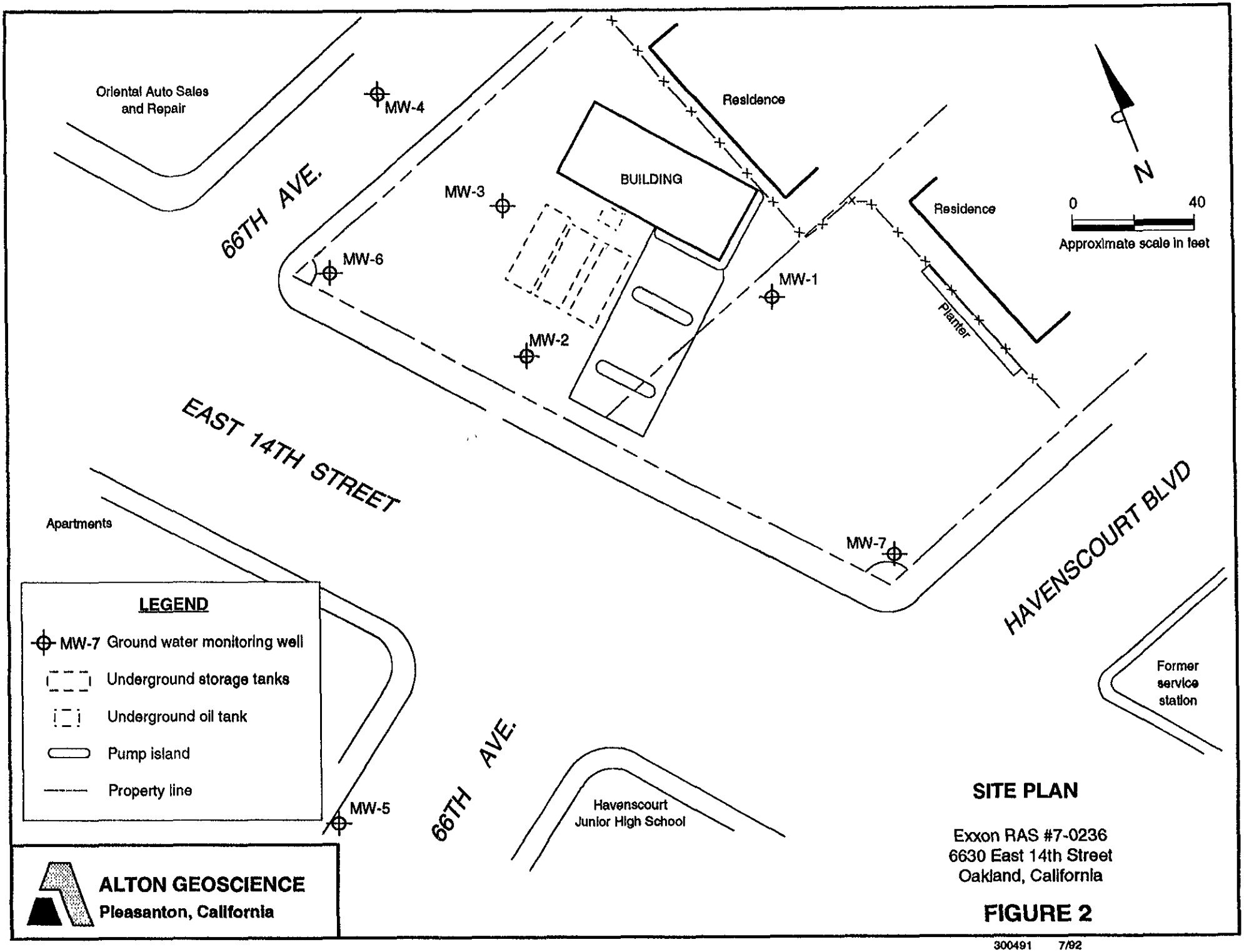
SITE VICINITY MAP

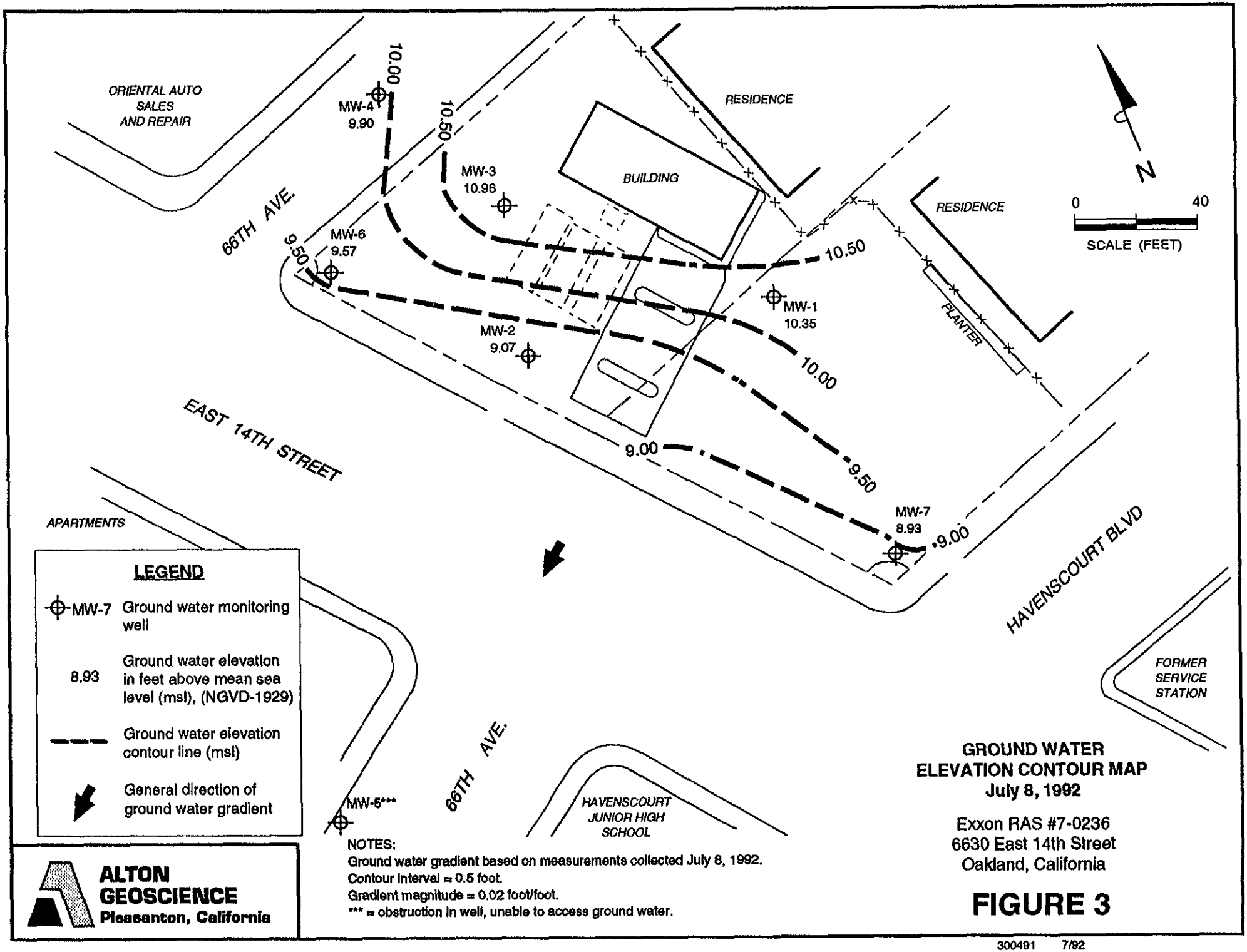
Exxon RAS #7-0236
6630 East 14th Street
Oakland, California

FIGURE 1

ALTON GEOSCIENCE
Pleasanton, California

Project No. 30-0491


Oriental Auto Sales and Repair
MW-4
66TH AVE.
MW-3
BUILDING
Residence
Residence
MW-6
MW-1
MW-2
Planter
N
0
40
Approximate scale in feet
EAST 14TH STREET
Apartments
MW-7
HAVENSCOURT BLVD
Former service station
LEGEND
MW-7 Ground water monitoring well
Underground storage tanks
Underground oil tank
Pump island
Property line
MW-5
66TH AVE.
Havenscourt Junior High School
ALTON GEOSCIENCE
Pleasanton, California
SITE PLAN
Exxon RAS #7-0236
6630 East 14th Street
Oakland, California
FIGURE 2
300491 7/92



LEGEND

- MW-7 — Ground water monitoring well
- 8.93 — Ground water elevation in feet above mean sea level (msl), (NGVD-1929)
- Ground water elevation contour line (msl)
- General direction of ground water gradient

ALTON GEOSCIENCE
Pleasanton, California

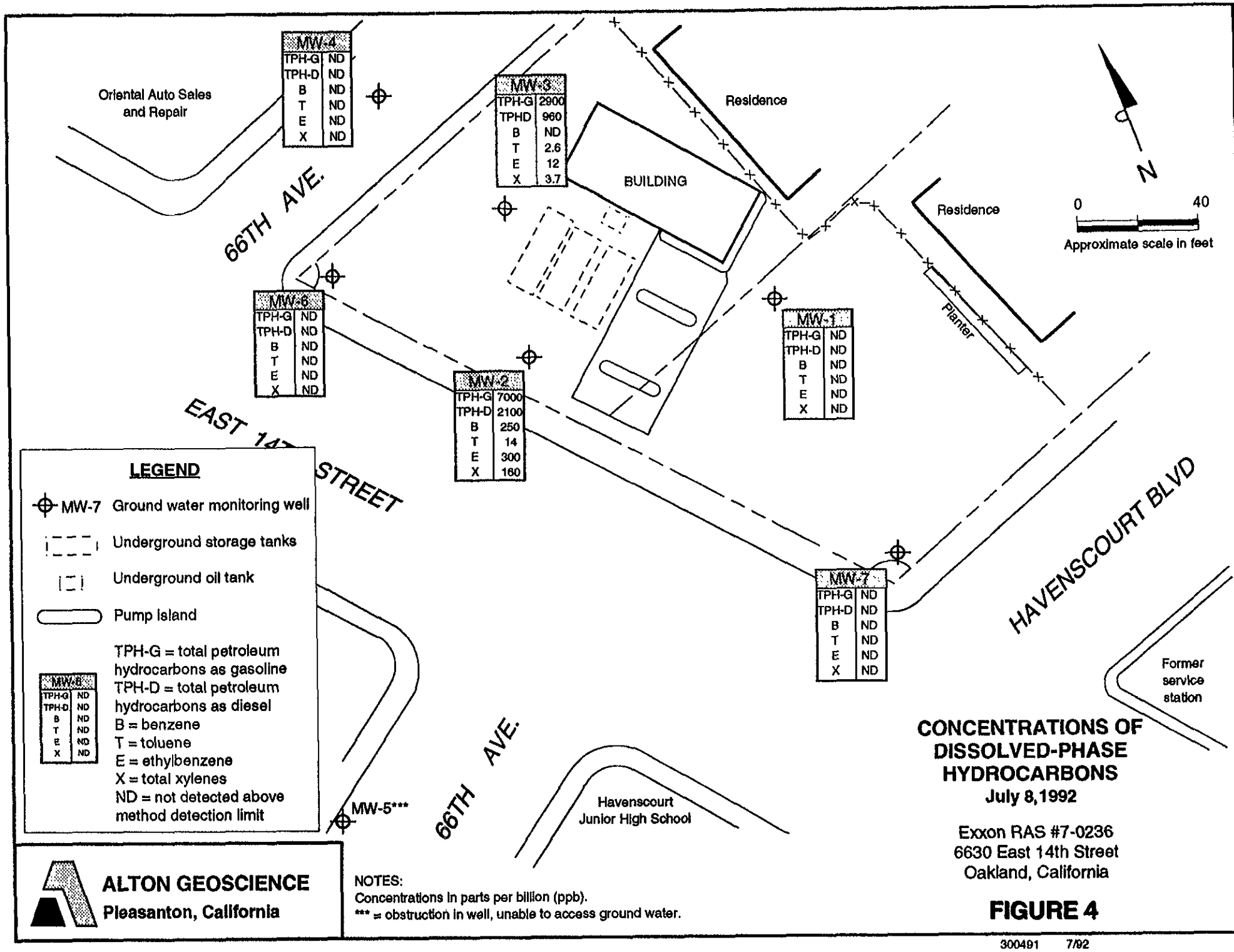
NOTES:
Ground water gradient based on measurements collected July 8, 1992.
Contour interval = 0.5 foot.
Gradient magnitude = 0.02 foot/foot.
*** = obstruction in well, unable to access ground water.

GROUND WATER ELEVATION CONTOUR MAP
July 8, 1992

Exxon RAS #7-0236
6630 East 14th Street
Oakland, California

FIGURE 3

300491 7/92



CONCENTRATIONS OF DISSOLVED-PHASE HYDROCARBONS

July 8,1992

Exxon RAS #7-0236
6630 East 14th Street
Oakland, California

ALTON GEOSCIENCE
Pleasanton, California

NOTES:
Concentrations in parts per billion (ppb).
*** = obstruction in well, unable to access ground water.

FIGURE 4

300491 7/92

TABLE

TABLE 1

Summary of Results of Ground Water Monitoring/Sampling
Exxon RAS #7–0236
6630 East 14th Street, Oakland, California

CONCENTRATIONS IN PARTS PER BILLION (PPB)

WELL ID	DATE OF SAMPLING/ MONITORING	TOP OF CASING ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	TPH–G	TPH–D	B	T	E	X	TOG	HVOC	LAB
MW–1	03/15/91	20.20	7.44	12.76	ND<50	---	ND<0.3	0.5	0.3	1.3	---	---	PACE
MW–1	01/15/92	20.20	10.60	9.60	ND<50	ND<300	ND<0.5	0.7	ND<0.5	0.9	ND<5000	ND *	PACE
MW–1	03/23/92	20.20	6.38	13.82	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ND	PACE
MW–1	04/06/92	20.20	7.55	12.65	---	---	---	---	---	---	---	---	NA
MW–1	07/08/92	20.20	9.85	10.35	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ND	PACE
MW–2	03/15/91	19.15	9.05	10.10	1700	120	190	2.6	12	64	ND<5000	1 **	PACE
MW–2	01/15/92	19.15	11.60	7.55	6800	1000	81	ND<10	320	170	ND<5000	ND	PACE
MW–2	03/23/92	19.15	9.42	9.73	7100	3000	740	30	810	490	ND<5000	ND	PACE
MW–2	04/06/92	19.15	9.09	10.06	---	---	---	---	---	---	---	---	NA
MW–2	07/08/92	19.15	10.08	9.07	7000	2100	250	14	300	160	ND<5000	ND	PACE
MW–3	03/15/91	19.59	7.84	11.75	3100	160	2.2	1.9	100	84	ND<5000	21 **	PACE
MW–3	01/15/92	19.59	10.30	9.29	250	ND<300	0.7	6.8	1.5	1.5	ND<5000	ND	PACE
MW–3	03/23/92	19.59	6.84	12.75	640	440	ND<0.5	12	25	6.5	ND<5000	ND	PACE
MW–3	04/06/92	19.59	7.84	11.75	---	---	---	---	---	---	---	---	NA
MW–3	07/08/92	19.59	8.63	10.96	2900	960	ND<0.5	2.6	12	3.7	ND<5000	ND	PACE
MW–4	04/06/92	19.46	7.76	11.70	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW–4	07/08/92	19.46	9.56	9.90	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW–5	04/06/92	16.95	10.66	6.29	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW–5 ***	07/08/92	16.95	---	---	---	---	---	---	---	---	---	---	NA
MW–6	04/06/92	18.79	8.29	10.50	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND	PACE
MW–6	07/08/92	18.79	9.22	9.57	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ND	PACE
MW–7	04/06/92	19.23	8.34	10.89	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW–7	07/08/92	19.23	10.30	8.93	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE

APPENDIX A

ALTON GEOSCIENCE FIELD PROCEDURES FOR FLUID-LEVEL MONITORING AND GROUND WATER SAMPLING

ALTON GEOSCIENCE FIELD PROCEDURES
FOR
FLUID-LEVEL MONITORING AND GROUND WATER SAMPLING

Fluid-level monitoring and ground water sampling was performed in accordance with requirements and procedures of the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB). Prior to purging and sampling each well, total well depth and depth to ground water were measured from a reference mark at the top of each well casing using an electronic sounder.

Prior to sample collection, each well was purged of 3 well casing volumes of water. Ground water was collected using a disposable bailer, observed for the presence of free product, and transferred to the appropriate clean sample containers for delivery to a California-certified laboratory. Purged ground water was stored onsite in 55-gallon drums approved by the Department of Transportation for disposal by Exxon Company, U.S.A.

APPENDIX B

OFFICIAL LABORATORY REPORT
AND
CHAIN OF CUSTODY RECORD

pace INCORPORATED
THE ASSURANCE OF QUALITY

JUL 20 1992

REPORT OF LABORATORY ANALYSIS

Alton Geoscience
5870 Stoneridge Drive, Suite 6
Pleasanton, CA 94588

July 16, 1992
PACE Project Number: 420709505

Attn: Mr. John DeGeorge

Client Reference: Exxon 7-0236 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0178932	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-6	
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	07/13/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	07/13/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	07/13/92
Benzene	ug/L	0.5	ND	07/13/92
Toluene	ug/L	0.5	ND	07/13/92
Ethylbenzene	ug/L	0.5	ND	07/13/92
Xylenes, Total	ug/L	0.5	ND	07/13/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	07/14/92
Date Extracted			07/13/92	
TOTAL OIL AND GREASE (SM 5520)				
Total Oil & Grease SM 5520	mg/L	5.0	ND	07/15/92
Date Extracted			07/14/92	
PURGEABLE HALOCARBONS, EPA METHOD 601				
Dichlorodifluoromethane	ug/L	2.0	ND	07/15/92
Chloromethane	ug/L	2.0	ND	07/15/92
Vinyl Chloride	ug/L	2.0	ND	07/15/92
Bromomethane	ug/L	2.0	ND	07/15/92
Chloroethane	ug/L	2.0	ND	07/15/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	07/15/92
1,1-Dichloroethene	ug/L	0.5	ND	07/15/92
Methylene Chloride	ug/L	2.0	ND	07/15/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. John DeGeorge
Page 2

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

PACE Sample Number:			70 0178932	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-6	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS, EPA METHOD 601				
1,1-Dichloroethane	ug/L	0.5	ND	07/15/92
Chloroform	ug/L	0.5	ND	07/15/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	07/15/92
Carbon Tetrachloride	ug/L	0.5	ND	07/15/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	07/15/92
Trichloroethene (TCE)	ug/L	0.5	ND	07/15/92
1,2-Dichloropropane	ug/L	0.5	ND	07/15/92
Bromodichloromethane	ug/L	0.5	ND	07/15/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	07/15/92
cis-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
1,1,2-Trichloroethane	ug/L	0.5	ND	07/15/92
Tetrachloroethene	ug/L	0.5	ND	07/15/92
Dibromochloromethane	ug/L	0.5	ND	07/15/92
Chlorobenzene	ug/L	0.5	ND	07/15/92
Bromoform	ug/L	0.5	ND	07/15/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	07/15/92
1,3-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,4-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,2-Dichlorobenzene	ug/L	0.5	ND	07/15/92
Bromochloromethane (Surrogate Recovery)			107%	07/15/92
1,4-Dichlorobutane (Surrogate Recovery)			124%	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
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REPORT OF LABORATORY ANALYSIS

Mr. John DeGeorge
Page 3

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0178940	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-4	
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	07/14/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	07/14/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	07/14/92
Benzene	ug/L	0.5	ND	07/14/92
Toluene	ug/L	0.5	ND	07/14/92
Ethylbenzene	ug/L	0.5	ND	07/14/92
Xylenes, Total	ug/L	0.5	ND	07/14/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	07/14/92
Date Extracted			07/13/92	

MDL Method Detection Limit
ND Not detected at or above the MDL.

11 Digital Drive
Novato, CA 94949
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Mr. John DeGeorge
Page 4

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

PACE Sample Number:			70 0178959	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-7	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	07/13/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	07/13/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	07/13/92
Benzene	ug/L	0.5	ND	07/13/92
Toluene	ug/L	0.5	ND	07/13/92
Ethylbenzene	ug/L	0.5	ND	07/13/92
Xylenes, Total	ug/L	0.5	ND	07/13/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	07/14/92
Date Extracted			07/13/92	

MDL Method Detection Limit
ND Not detected at or above the MDL.

11 Digital Drive
Novato, CA 94949
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FAX: 415-883-2673

Mr. John DeGeorge
Page 5

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0178967	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-1	
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	07/13/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	07/13/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	07/13/92
Benzene	ug/L	0.5	ND	07/13/92
Toluene	ug/L	0.5	ND	07/13/92
Ethylbenzene	ug/L	0.5	ND	07/13/92
Xylenes, Total	ug/L	0.5	ND	07/13/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	07/14/92
Date Extracted			07/13/92	
TOTAL OIL AND GREASE (SM 5520)				
Total Oil & Grease SM 5520	mg/L	5.0	ND	07/15/92
Date Extracted			07/14/92	
PURGEABLE HALOCARBONS, EPA METHOD 601				
Dichlorodifluoromethane	ug/L	2.0	ND	07/15/92
Chloromethane	ug/L	2.0	ND	07/15/92
Vinyl Chloride	ug/L	2.0	ND	07/15/92
Bromomethane	ug/L	2.0	ND	07/15/92
Chloroethane	ug/L	2.0	ND	07/15/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	07/15/92
1,1-Dichloroethene	ug/L	0.5	ND	07/15/92
Methylene Chloride	ug/L	2.0	ND	07/15/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92
1,1-Dichloroethane	ug/L	0.5	ND	07/15/92
Chloroform	ug/L	0.5	ND	07/15/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

Mr. John DeGeorge
Page 6

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0178967	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-1	
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS, EPA METHOD 601				
Carbon Tetrachloride	ug/L	0.5	ND	07/15/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	07/15/92
Trichloroethene (TCE)	ug/L	0.5	ND	07/15/92
1,2-Dichloropropane	ug/L	0.5	ND	07/15/92
Bromodichloromethane	ug/L	0.5	ND	07/15/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	07/15/92
cis-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
1,1,2-Trichloroethane	ug/L	0.5	ND	07/15/92
Tetrachloroethene	ug/L	0.5	ND	07/15/92
Dibromochloromethane	ug/L	0.5	ND	07/15/92
Chlorobenzene	ug/L	0.5	ND	07/15/92
Bromoform	ug/L	0.5	ND	07/15/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	07/15/92
1,3-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,4-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,2-Dichlorobenzene	ug/L	0.5	ND	07/15/92
Bromochloromethane (Surrogate Recovery)			108%	07/15/92
1,4-Dichlorobutane (Surrogate Recovery)			120%	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0178975	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-3	
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	07/14/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	2900	07/14/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	07/14/92
Benzene	ug/L	0.5	ND	07/14/92
Toluene	ug/L	0.5	2.6	07/14/92
Ethylbenzene	ug/L	0.5	12	07/14/92
Xylenes, Total	ug/L	0.5	3.7	07/14/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	0.96	07/14/92
Date Extracted			07/13/92	
TOTAL OIL AND GREASE (SM 5520)				
Total Oil & Grease SM 5520	mg/L	5.0	ND	07/15/92
Date Extracted			07/14/92	
PURGEABLE HALOCARBONS, EPA METHOD 601				
Dichlorodifluoromethane	ug/L	2.0	ND	07/15/92
Chloromethane	ug/L	2.0	ND	07/15/92
Vinyl Chloride	ug/L	2.0	ND	07/15/92
Bromomethane	ug/L	2.0	ND	07/15/92
Chloroethane	ug/L	2.0	ND	07/15/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	07/15/92
1,1-Dichloroethene	ug/L	0.5	ND	07/15/92
Methylene Chloride	ug/L	2.0	ND	07/15/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92
1,1-Dichloroethane	ug/L	0.5	ND	07/15/92
Chloroform	ug/L	0.5	ND	07/15/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

PACE Sample Number:			70 0178975	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-3	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS, EPA METHOD 601				
Carbon Tetrachloride	ug/L	0.5	ND	07/15/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	07/15/92
Trichloroethene (TCE)	ug/L	0.5	ND	07/15/92
1,2-Dichloropropane	ug/L	0.5	ND	07/15/92
Bromodichloromethane	ug/L	0.5	ND	07/15/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	07/15/92
cis-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
1,1,2-Trichloroethane	ug/L	0.5	ND	07/15/92
Tetrachloroethene	ug/L	0.5	ND	07/15/92
Dibromochloromethane	ug/L	0.5	ND	07/15/92
Chlorobenzene	ug/L	0.5	ND	07/15/92
Bromoform	ug/L	0.5	ND	07/15/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	07/15/92
1,3-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,4-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,2-Dichlorobenzene	ug/L	0.5	ND	07/15/92
Bromochloromethane (Surrogate Recovery)			106%	07/15/92
1,4-Dichlorobutane (Surrogate Recovery)			110%	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. John DeGeorge
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July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

PACE Sample Number:			70 0178983	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	07/13/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	125	7000	07/13/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	07/13/92
Benzene	ug/L	1.2	250	07/13/92
Toluene	ug/L	1.2	14	07/13/92
Ethylbenzene	ug/L	1.2	300	07/13/92
Xylenes, Total	ug/L	1.2	160	07/13/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	2.1	07/14/92
Date Extracted			07/13/92	
TOTAL OIL AND GREASE (SM 5520)				
Total Oil & Grease SM 5520	mg/L	5.0	ND	07/15/92
Date Extracted			07/14/92	
PURGEABLE HALOCARBONS, EPA METHOD 601				
Dichlorodifluoromethane	ug/L	2.0	ND	07/15/92
Chloromethane	ug/L	2.0	ND	07/15/92
Vinyl Chloride	ug/L	2.0	ND	07/15/92
Bromomethane	ug/L	2.0	ND	07/15/92
Chloroethane	ug/L	2.0	ND	07/15/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	07/15/92
1,1-Dichloroethene	ug/L	0.5	ND	07/15/92
Methylene Chloride	ug/L	2.0	ND	07/15/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	07/15/92
1,1-Dichloroethane	ug/L	0.5	ND	07/15/92
Chloroform	ug/L	0.5	ND	07/15/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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Mr. John DeGeorge
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July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

PACE Sample Number:			70 0178983	
Date Collected:			07/08/92	
Date Received:			07/09/92	
Client Sample ID:			MW-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS, EPA METHOD 601				
Carbon Tetrachloride	ug/L	0.5	ND	07/15/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	07/15/92
Trichloroethene (TCE)	ug/L	0.5	ND	07/15/92
1,2-Dichloropropane	ug/L	0.5	ND	07/15/92
Bromodichloromethane	ug/L	0.5	ND	07/15/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	07/15/92
cis-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	07/15/92
1,1,2-Trichloroethane	ug/L	0.5	ND	07/15/92
Tetrachloroethene	ug/L	0.5	ND	07/15/92
Dibromochloromethane	ug/L	0.5	ND	07/15/92
Chlorobenzene	ug/L	0.5	ND	07/15/92
Bromoform	ug/L	0.5	ND	07/15/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	07/15/92
1,3-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,4-Dichlorobenzene	ug/L	0.5	ND	07/15/92
1,2-Dichlorobenzene	ug/L	0.5	ND	07/15/92
Bromochloromethane (Surrogate Recovery)			109%	07/15/92
1,4-Dichlorobutane (Surrogate Recovery)			116%	07/15/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

These data have been reviewed and are approved for release.

Darrell Cain for
Mark A. Valentini, Ph.D.
Regional Director

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Mr. John DeGeorge
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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

PURGEABLE HALOCARBONS, EPA METHOD 601
Batch: 70 14047
Samples: 70 0178932, 70 0178967, 70 0178975, 70 0178983

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Dichlorodifluoromethane	ug/L	2.0	ND
Chloromethane	ug/L	2.0	ND
Vinyl Chloride	ug/L	2.0	ND
Bromomethane	ug/L	2.0	ND
Chloroethane	ug/L	2.0	ND
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND
1,1-Dichloroethene	ug/L	0.5	ND
Methylene Chloride	ug/L	2.0	3.5
trans-1,2-Dichloroethene	ug/L	0.5	ND
cis-1,2-Dichloroethene	ug/L	0.5	ND
1,1-Dichloroethane	ug/L	0.5	ND
Chloroform	ug/L	0.5	ND
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND
Carbon Tetrachloride	ug/L	0.5	ND
1,2-Dichloroethane (EDC)	ug/L	0.5	ND
Trichloroethene (TCE)	ug/L	0.5	ND
1,2-Dichloropropane	ug/L	0.5	ND
Bromodichloromethane	ug/L	0.5	ND
2-Chloroethylvinyl ether	ug/L	0.5	ND
cis-1,3-Dichloropropene	ug/L	0.5	ND
trans-1,3-Dichloropropene	ug/L	0.5	ND
1,1,2-Trichloroethane	ug/L	0.5	ND
Tetrachloroethene	ug/L	0.5	ND
Dibromochloromethane	ug/L	0.5	ND
Chlorobenzene	ug/L	0.5	ND
Bromoform	ug/L	0.5	ND
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND
1,3-Dichlorobenzene	ug/L	0.5	ND
1,4-Dichlorobenzene	ug/L	0.5	ND
1,2-Dichlorobenzene	ug/L	0.5	ND
Bromochloromethane (Surrogate Recovery)			108%

MDL Method Detection Limit

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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

PURGEABLE HALOCARBONS, EPA METHOD 601
Batch: 70 14047
Samples: 70 0178932, 70 0178967, 70 0178975, 70 0178983

METHOD BLANK:

Parameter	Units	MDL	Method Blank
1,4-Dichlorobutane (Surrogate Recovery)			122%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
1,1-Dichloroethane	ug/L	0.5	10.00	102%	99%	2%
Trichloroethene (TCE)	ug/L	0.5	10.00	104%	102%	1%
trans-1,3-Dichloropropene	ug/L	0.5	3.8	103%	103%	0%
Tetrachloroethene	ug/L	0.5	10.00	115%	113%	1%

MDL Method Detection Limit
RPD Relative Percent Difference

Mr. John DeGeorge
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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

TOTAL OIL AND GREASE (SM 5520)
Batch: 70 14023
Samples: 70 0178932, 70 0178967, 70 0178975, 70 0178983

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Total Oil & Grease SM 5520	mg/L	5.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Total Oil & Grease SM 5520	mg/L	5.0	20	85%	85%	0%

MDL Method Detection Limit
RPD Relative Percent Difference

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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

TPH DIESEL, BY EPA METHOD 8015
Batch: 70 14043
Samples: 70 0178932, 70 0178940, 70 0178959, 70 0178967, 70 0178975
70 0178983

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Extractable Fuels, as Diesel	mg/L	0.050	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Extractable Fuels, as Diesel	mg/L	0.050	1.00	53%	73%	31%

MDL Method Detection Limit
RPD Relative Percent Difference

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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

TPH GASOLINE/BTEX
Batch: 70 13996
Samples: 70 0178932

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	286	108%	111%	2%
Benzene	ug/L	0.5	40.0	105%	104%	0%
Toluene	ug/L	0.5	40.0	106%	107%	0%
Ethylbenzene	ug/L	0.5	40.0	103%	103%	0%
Xylenes, Total	ug/L	0.5	80.0	108%	107%	0%

MDL Method Detection Limit
RPD Relative Percent Difference

Mr. John DeGeorge
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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

TPH GASOLINE/BTEX
Batch: 70 13998
Samples: 70 0178975

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	361	96%	101%	5%
Benzene	ug/L	0.5	40.0	100%	103%	2%
Toluene	ug/L	0.5	40.0	101%	97%	4%
Ethylbenzene	ug/L	0.5	40.0	99%	97%	2%
Xylenes, Total	ug/L	0.5	80.0	105%	103%	1%

MDL Method Detection Limit
RPD Relative Percent Difference

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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

TPH GASOLINE/BTEX
Batch: 70 14013
Samples: 70 0178959, 70 0178967, 70 0178983

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	361	100%	94%	6%
Benzene	ug/L	0.5	40.0	101%	99%	2%
Toluene	ug/L	0.5	40.0	103%	99%	3%
Ethylbenzene	ug/L	0.5	40.0	103%	99%	3%
Xylenes, Total	ug/L	0.5	80.0	106%	101%	4%

MDL Method Detection Limit
RPD Relative Percent Difference

Mr. John DeGeorge
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QUALITY CONTROL DATA

July 16, 1992
PACE Project Number: 420709505

Client Reference: Exxon 7-0236 (EE)

TPH GASOLINE/BTEX
Batch: 70 14054
Samples: 70 0178940

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	428	102%	100%	1%
Benzene	ug/L	0.5	40.0	98%	99%	1%
Toluene	ug/L	0.5	40.0	102%	102%	0%
Ethylbenzene	ug/L	0.5	40.0	104%	102%	1%
Xylenes, Total	ug/L	0.5	80.0	106%	103%	2%

MDL Method Detection Limit
RPD Relative Percent Difference

JUL 20 1992

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EXXON COMPANY, U.S.A.
P.O. Box 4415, Houston, TX 77210-4415
CHAIN OF CUSTODY

Consultant Name: ALTON GEOSCIENCE
Address: 5870 Stoneridge Dr. Ste. 6 Pleasanton, CA
Project Contact: John De George Project #: 30-0491-02
Phone #: 510-734-8134 Fax #: 510-734-8420
Consultant Work Release #: 91100468

Exxon Contact: Marla Guensler Phone #: 510-246-8776
Site RAS #: 7-0236
Site Location: 6630 East 14th St. Oakland, CA
Laboratory Work Release #:

Sampled by (please print): ANDREW BLOCK 7-8-92
Sampler Signature: Date Sampled

Sample Description	Collection Date/Time	Matrix	Prsv.	# of Cont.	SOIL: TPH/GAS/BTEX EPA 8015/8020	SOIL: TPH/Diesel EPA 8015	SOIL: Organic Lead OHS Method	WATER: TPH/GAS/BTEX EPA 8015/602	WATER: TPH/Diesel EPA 8015	WATER: Organic Lead OHS Method	TRPH EPA 418.1	Total Oil & Grease SM 5520	HVOC (8010)				Remarks
MW-6	7-8-92/1500	W	HCL	9	1769.2			X	X			X	X				Liters are unpreserved
MW-4	7-8-92/1530	W	HCL	5	94.0			X	X								
MW-7	7-8-92/1545	W	HCL	5	95.9			X	X								
MW-1	7-8-92/1605	W	HCL	9	96.7			X	X			X	X				
MW-3	7-8-92/1630	W	HCL	9	97.5			X	X			X	X				
MW-2	7-8-92/1640	W	HCL	9	98.3			X	X			X	X				

Cooler No.	Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
Cooler Seal Intact ☐ Yes ☐ No N/A	Andrew R Block	Donald Jakubski Pace	7/9/92	1228
	Donald Jakubski Pace	Helen D PACE	7/9/92	1645

Turnaround Time (circle choice): 24 hr. 48 hr. 72 hr. 96 hr. (5 workday) (standard)

Shipment Method:

Shipment Date:

Additional Comments:
- No Temp. Surrogate received
- Samples received packed in newspaper

Distribution: White - Original Yellow - Exxon Pink - Lab Goldenrod - Consultant Field Staff

10/4 . 5/5