

EXXON COMPANY, U.S.A.

P.O. BOX 4032 . CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER

(510) 246-8776

(510) 246-8798 FAX

May 19, 1993

Mr. Barney Chan
Alameda County Health Agency, Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Room 350
Oakland, CA 94621

RE: Former Exxon RAS #7-3006; 720 High St., Oakland, CA

Dear Mr. Chan:

Attached for your review and comment is a letter report entitled **Quarterly Groundwater Monitoring First Quarter 1993** for the above referenced site. This report, prepared by RESNA Industries, Inc., of San Jose, California, details the results of the groundwater monitoring events which occurred January through March 1993.

Please note that the groundwater sample from monitoring well MW14 was run for stoddard solvent, however, the request was made after the sample had been batched and extracted for diesel. Exxon will request that the next sample generated from this well be analyzed for stoddard solvent, not diesel, to obtain data to assist with offsite contribution questions.

Exxon will continue interim remediation using liquid phase skimmers, removal of recovered product on a monthly basis and quarterly groundwater monitoring and sampling. Also, samples from monitoring well MW-7 will be analyzed for total oil and grease using Standard Method 5520 B/F until concentrations of TOG are below detection limits for four quarters.

Exxon recently submitted reports detailing a records search and file review and recent investigative work completed at the site. To date, permits for the offsite monitoring wells which were applied for, and proposed to be installed and developed in the first quarter 1993, have not been issued by CALTRANS.

Exxon is anxious to begin design and permitting of an appropriate remediation system for this site, however would like to meet with your agency to discuss alternatives for the site prior to issuing a Remedial Action Plan. Please confirm if June 1, 1993 at 9:30 a.m. would be an available time for you to discuss this site. If you require additional information, or have any questions or comments, please contact me at the above listed phone number.

Sincerely,

Marla D. Guensler

Marla D. Guensler
Senior Environmental Engineer

MDG/mdg

attachment: RESNA Letter Report Dated 05/05/93

cc: w/attachment:

Mr. Richard Hiett - San Francisco Bay Region CRWQCB

w/o attachment:

Mr. Marc Briggs - RESNA San Jose



LETTER REPORT
QUARTERLY GROUNDWATER MONITORING
First Quarter 1993
at
Exxon Station 7-3006
720 High Street
Oakland, California

130006.01

3315 Almaden Expressway, Suite 34
San Jose, CA 95118
Phone: (408) 264-7723
FAX: (408) 264-2435

May 5, 1993
0316MGUE
130006.01

Ms. Marla D. Guensler
Exxon Company U.S.A.
2300 Clayton Road, Suite 1250
P.O. Box 4032
Concord, California 94520

Subject: Letter Report on First Quarter 1993 Groundwater Monitoring at Exxon
Station 7-3006, 720 High Street, Oakland, California.

Ms. Guensler:

As requested by Exxon Company U.S.A., this letter report summarizes the methods and results of the first quarter 1993 groundwater monitoring performed by RESNA Industries Inc. (RESNA) at the subject site. The site is located at 720 High Street, in a predominantly industrial area of Oakland, California (Plate 1, Site Vicinity Map). The site is bound on the northwest by High Street, on the southwest by Coliseum Way, on the northeast by a former dry-cleaning facility, on the south by Alameda Avenue, and on the southeast by a vacant lot, as shown on Plate 2, Generalized Site Plan. The objectives of quarterly monitoring are to evaluate trends in the groundwater gradient and flow direction, and trends in concentrations of gasoline and diesel hydrocarbons in the local groundwater associated with a former used-oil and three former gasoline underground storage tanks (USTs) at the site.

Prior to the present monitoring, RESNA (formerly Applied GeoSystems [AGS]) performed an environmental investigation related to the removal of four USTs in April 1987 (AGS, May 13, 1987, July 10, 1987, and October 16, 1989), and an environmental investigation between September 1987 and May 1988 that included drilling nine boreholes (B-1 through B-9) around the former UST locations and installing groundwater monitoring wells MW-1 through MW-9 in the boreholes (AGS, August 5, 1988). AGS performed a Supplemental Subsurface Investigation that included drilling eleven boreholes (B-10 through B-20) and installing groundwater monitoring wells MW-10 through MW-13 in boreholes B-10 through B-13 in November 1989 (AGS, January 30, 1990), and drilling boreholes B-21 through B-32 and installing groundwater monitoring wells MW-14 and MW-15 in boreholes B-31 and B-32 in November 1990 (AGS, May 21, 1991). Quarterly monitoring was initiated by AGS in the second quarter of 1989 (AGS, October 16, 1989). A limited records search was completed

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Exxon 7-3006, Oakland, California

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for the site and surrounding area (RESNA, March 24, 1993). The locations of the borings, wells, and pertinent site facilities are shown on Plate 2. The results of these investigations are presented in the reports listed in the references section.

RESNA is currently conducting an Additional Subsurface Investigation that includes the installation of three vapor wells and conducting a vapor-extraction test and a pumping test. The results of this investigation will be presented in a report under separate cover. In addition, installation of two offsite groundwater monitoring wells will begin when the encroachment permit from the Department of Transportation is received. On February 18, 1993, petrotraps were installed in wells MW-2, MW-4, and MW-6.

Groundwater Sampling and Gradient Evaluation

RESNA personnel measured depth-to-water (DTW) levels on January 27 and February 18, 1993, and performed quarterly sampling and DTW measurements on March 10 and 11, 1993 on the one offsite monitoring well (MW-1) and thirteen onsite monitoring wells (MW-2 through MW-4, and MW-6 through MW-15). Monitoring well MW-5 was destroyed in July 1989. Field work during this quarter consisted of measuring DTW levels, subjectively analyzing water from the wells for the presence of free-phase hydrocarbons, removal of any free-phase hydrocarbons encountered, and purging and sampling the groundwater from monitoring wells MW-1, MW-7, MW-9, MW-10, MW-11, and MW-14 for laboratory analysis. Monitoring well MW-15 was not sampled because it was not accessible during sampling, monitoring wells MW-2, MW-3, MW-8, MW-12, MW-13, and MW-15 were not sampled due to the presence of product sheen, and wells MW-4 and MW-6 were not sampled due to presence of free-phase hydrocarbons. Approximately 1/8 of a cup of free-phase hydrocarbons were recovered from the petrotrap in well MW-4, and approximately 1/2 of a cup was recovered from the petrotrap in well MW-6. The petrotrap in well MW-2 was in the open position when it was pulled out of the well, so only a sheen was recorded. Results of subjective analyses are summarized in Table 1, Cumulative Groundwater Monitoring Data. Field methods used by RESNA personnel are described in Appendix A, Groundwater Sampling Protocol.

vap
4/19/93
*What's
the deal*

RESNA calculated groundwater elevations for each well by subtracting the measured DTW, including corrections for product thickness when necessary, from the elevation of the wellhead. The measured DTW levels, product thickness, wellhead elevations, and groundwater elevations for this and previous monitorings at the site are summarized in Table 1. Based on the January 27, February 18, and March 10, 1993, groundwater elevation data, the interpreted local groundwater gradients were interpreted to be 0.016, 0.019, and 0.018, respectively, with flow directions toward the southwest. RESNA's interpretation of the local groundwater gradients for this quarter are shown on Plates 3 through 5,

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Groundwater Gradient Map. These groundwater gradients and flow direction are generally consistent with those previously interpreted.

The one offsite monitoring well and five onsite monitoring wells were purged and sampled in accordance with the enclosed groundwater sampling protocol (Appendix A). Well purge data sheets for the monitored parameters temperature, turbidity, pH, and conductivity for the six monitoring wells are included in Appendix A.

Results of Laboratory Analysis

Groundwater samples collected from monitoring wells MW-1, MW-7, MW-9, MW-10, MW-11, and MW-14 were analyzed for gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) and total petroleum hydrocarbons as gasoline (TPHg) using modified Environmental Protection Agency (EPA) Methods 5030/8015/8020, and for total petroleum hydrocarbons as diesel (TPHd) using modified EPA Methods 3510/8015. In addition, groundwater from well MW-14 was analyzed for Stoddard Solvent using EPA method 3510/8015 to verify an upgradient source, and groundwater from well MW-7 was analyzed for alkalinity, metals, inorganics, organics, total dissolved solids (TDS), and total oil and grease (TOG) using EPA methods 6010/200.7, 7060, 7470, 7740, 375.4, 624, 625, 160.1, standard method 407A, standard method 5520 for TOG, and Department of Health Services (DHS) method 338 for organic lead. Groundwater samples were analyzed by PACE Incorporated Laboratories (California Hazardous Waste Testing Laboratory Certification No. 1282) in Novato, California. The Chain of Custody Record and Laboratory Analysis Reports for the monitoring wells are included in Appendix B.

The chemical analytical results of this, and previous, quarterly monitoring are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples. Graphic distributions of TPHg, TPHd, and benzene concentrations in the local groundwater for this quarterly monitoring are shown on Plate 6, TPHg/TPHd/Benzene Concentrations in Groundwater.

Results of this quarter's laboratory analyses of groundwater samples from wells MW-1, MW-7, MW-9, MW-10, MW-11, and MW-14 indicate:

- o TPHg and BTEX concentrations were not detected in wells MW-1, MW-9, MW-10, and MW-11;
- o TPHg was detected at concentrations of 3.5 parts per million (ppm) in well MW-7 and 0.41 ppm in well MW-14;

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- o TPHd was detected at concentrations of 0.14 ppm in well MW-1, 0.24 ppm in well MW-11, 0.64 ppm in well MW-7, and was not detected in wells MW-9, MW-10, and MW-14;
- o benzene was detected at a concentrations of 0.160 ppm in well MW-7, which is greater than the DHS Maximum Contaminant Level (MCL) of 0.001 ppm benzene in drinking water;
- o toluene, ethylbenzene, and total xylenes were detected in well MW-7 (according to modified EPA method 5030/8020) at concentrations of 0.0062 ppm, 0.022 ppm, and 0.019 ppm, respectively, which are less than the DHS Drinking Water Action Level of 0.100 ppm toluene, and MCLs of 0.680 ppm ethylbenzene and 1.750 ppm total xylenes in drinking water;

Additional laboratory analyses for metals, inorganics, and organics in groundwater from well MW-7 indicate:

- o volatile organic compounds were not detected except BTEX and 0.27 ppm naphthalene;
- o iron, manganese, and arsenic concentrations were detected at 1.6 ppm, 1.4 ppm, and 0.016 ppm, respectively. The reported concentrations of iron and manganese are greater than the MCLs of 0.3 ppm iron and 0.05 ppm manganese;
- o pH was 7.0 which is within acceptable limits;
- o total dissolved solids were detected at a concentration of 400 ppm which is less than the MCL of 500 ppm;
- o the hardness value is 260 ppm as CaCO₃, which is considered to be hard water. In general, water with this hardness would not be used as a drinking water source (Clark, 1977).

Copies of this report should be forwarded to:

Mr. Lester Feldman
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500

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Exxon 7-3006, Oakland, California

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Oakland, California 94612

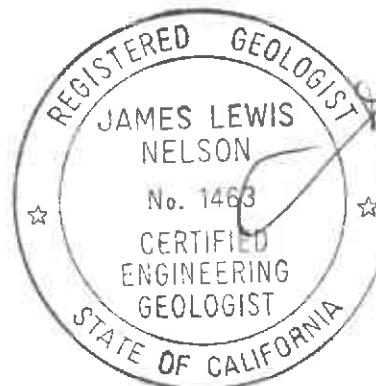
Mr. Barney M. Chan
Hazardous Materials Specialist
Alameda County Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

This report was prepared in accordance with generally accepted standards of environmental geological 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.

If you have any questions or comments, please call us at (408) 264-7723.

Sincerely,
RESNA Industries Inc.

Jeanne Buckthal
Jeanne Buckthal
Geologic Technician



James L. Nelson
James L. Nelson
C.E.G. No. 1463

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Exxon 7-3006, Oakland, California

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Enclosures: References

Plate 1, Site Vicinity Map
Plate 2, Generalized Site Plan
Plate 3, Groundwater Gradient Map (January 27, 1993)
Plate 4, Groundwater Gradient Map (February 18, 1993)
Plate 5, Groundwater Gradient Map (March 10, 1993)
Plate 6, TPHg/TPHd/Benzene Concentrations in Groundwater

Table 1: Cumulative Groundwater Monitoring Data
Table 2: Cumulative Results of Laboratory Analyses of Groundwater Samples
Table 3: Results of Additional Laboratory Analyses of Groundwater Samples from Well MW-7 on March 11, 1993

Appendix A: Groundwater Sampling Protocol and Well Purge Data Sheets
Appendix B: Laboratory Analysis Reports and Chain of Custody Records

Quarterly Groundwater Monitoring
Exxon 7-3006, Oakland, California

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REFERENCES

- Applied GeoSystems. May 13, 1987. Letter Report for First Phase Soil Contamination Investigation, Exxon Station No. 7-3006, Oakland, California. Job No. 87042-1.
- Applied GeoSystems. July 10, 1987. Report of Excavation, Aeration, and Removal of Contaminated Soil Including Soil Sampling and Analyses, Exxon Station No. 7-3006, Oakland, California. Job No. 87042-2.
- Applied GeoSystems. August 5, 1988. Report of Subsurface Environmental Investigation, Exxon Station No. 7-3006, Oakland, California. Job No. 87042-5.
- Applied GeoSystems. July 8, 1989. Site Safety Plan, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-6S.
- Applied GeoSystems. October 16, 1989. Report on Subsurface Environmental Investigation, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-6.
- Applied GeoSystems. January 30, 1990. Report on Limited Environmental Investigation, Exxon Station 7-3006, 720 High Street, Oakland, California. Job No. 87042-6R.
- Applied GeoSystems. January 30, 1991. Letter Report on Ground-Water Monitoring for Fourth Quarter 1990, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-9.
- Applied GeoSystems. May 21, 1991. Report on Supplemental Subsurface Environmental Investigation, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-9R.
- Applied GeoSystems. October 10, 1991. Interim Groundwater Remediation Work Plan, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-9RAP.
- Clark, John W., et al., 1977. Water Supply and Pollution Control. Harper & Row.
- RESNA Industries, Inc. June 15, 1992. Letter Report on Groundwater Monitoring for First Quarter 1992, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-11.
- RESNA Industries, Inc. October 21, 1992. Letter Report on Groundwater Monitoring for Second Quarter 1992, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-11.

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Exxon 7-3006, Oakland, California

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REFERENCES
(continued)

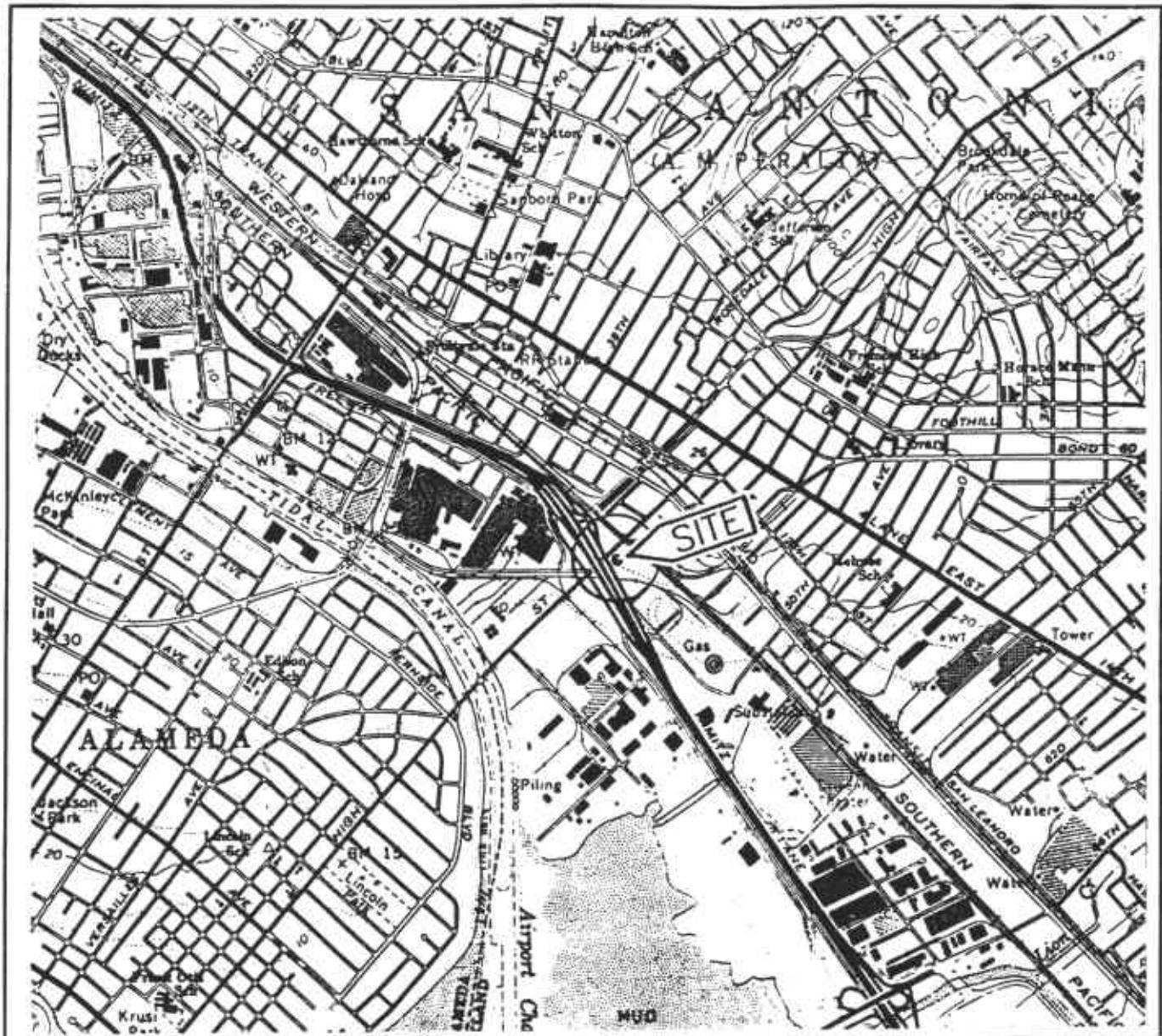
RESNA Industries, Inc. November 9, 1992. Letter Report on Groundwater Monitoring for Third Quarter 1992, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-11.

RESNA Industries, Inc. December 2, 1992. Addendum One to the Interim Ground Water Remediation Work Plan, Former Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 62034.01.

RESNA Industries, Inc. January 18, 1993. Addendum One to the Interim Groundwater Remediation Work Plan to Perform an Interim Remediation Environmental Investigation at the Former Exxon Station 7-3006, 720 High Street, Oakland, California. Job No. 62034.01A.

RESNA Industries, Inc. February 1, 1993. Letter Report on Groundwater Monitoring for Fourth Quarter 1992, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-11.

RESNA Industries, Inc. March 24, 1993. Findings of the Limited Record Search for the Former Exxon Station 7-3006 Located at 720 High Street, Oakland, California. Job No. 62034.02.



Base: U.S. Geological Survey
7.5-Minute Quadrangles
Oakland/San Leandro, California.
Photorevised 1980

LEGEND

 = Site Location

Approximate Scale

feet

RESNA
Working to Restore Nature

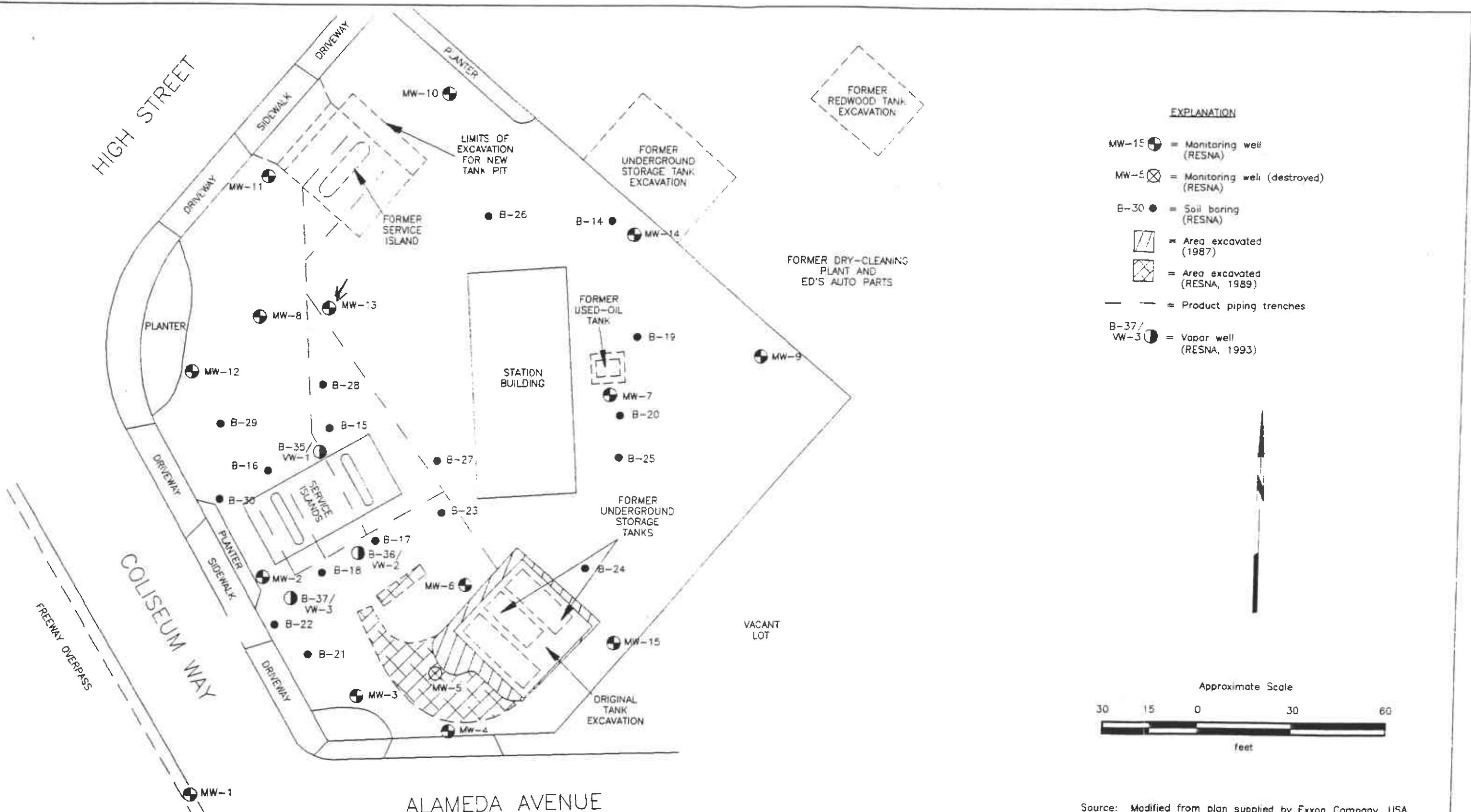
**SITE VICINITY MAP
Former Exxon Station 7-3006
720 High Street
Oakland, California**

PLATE

1

PROJECT

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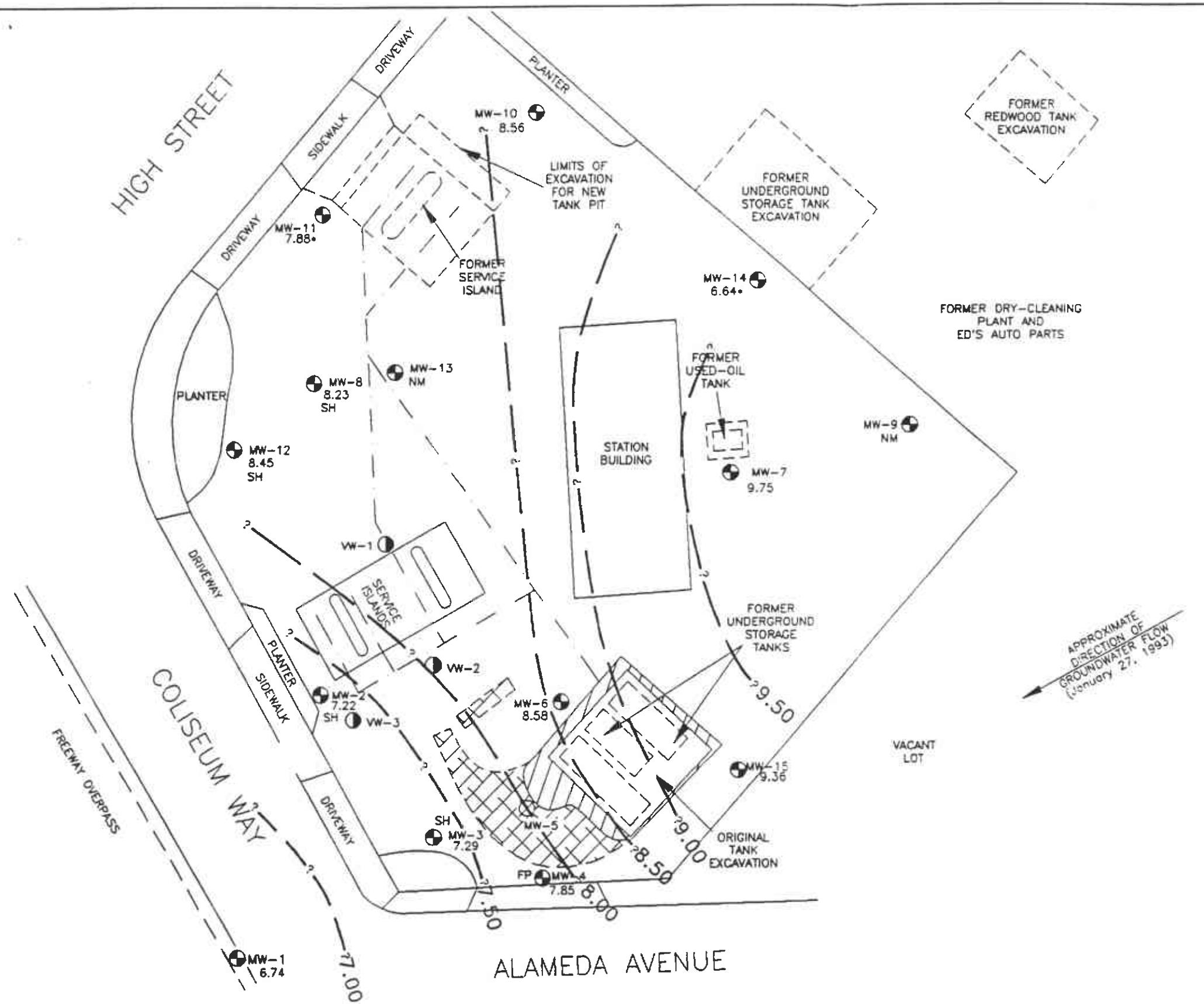
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GENERALIZED SITE PLAN
Exxon Station 7-3006
720 High Street
Oakland, California

PLATE

2

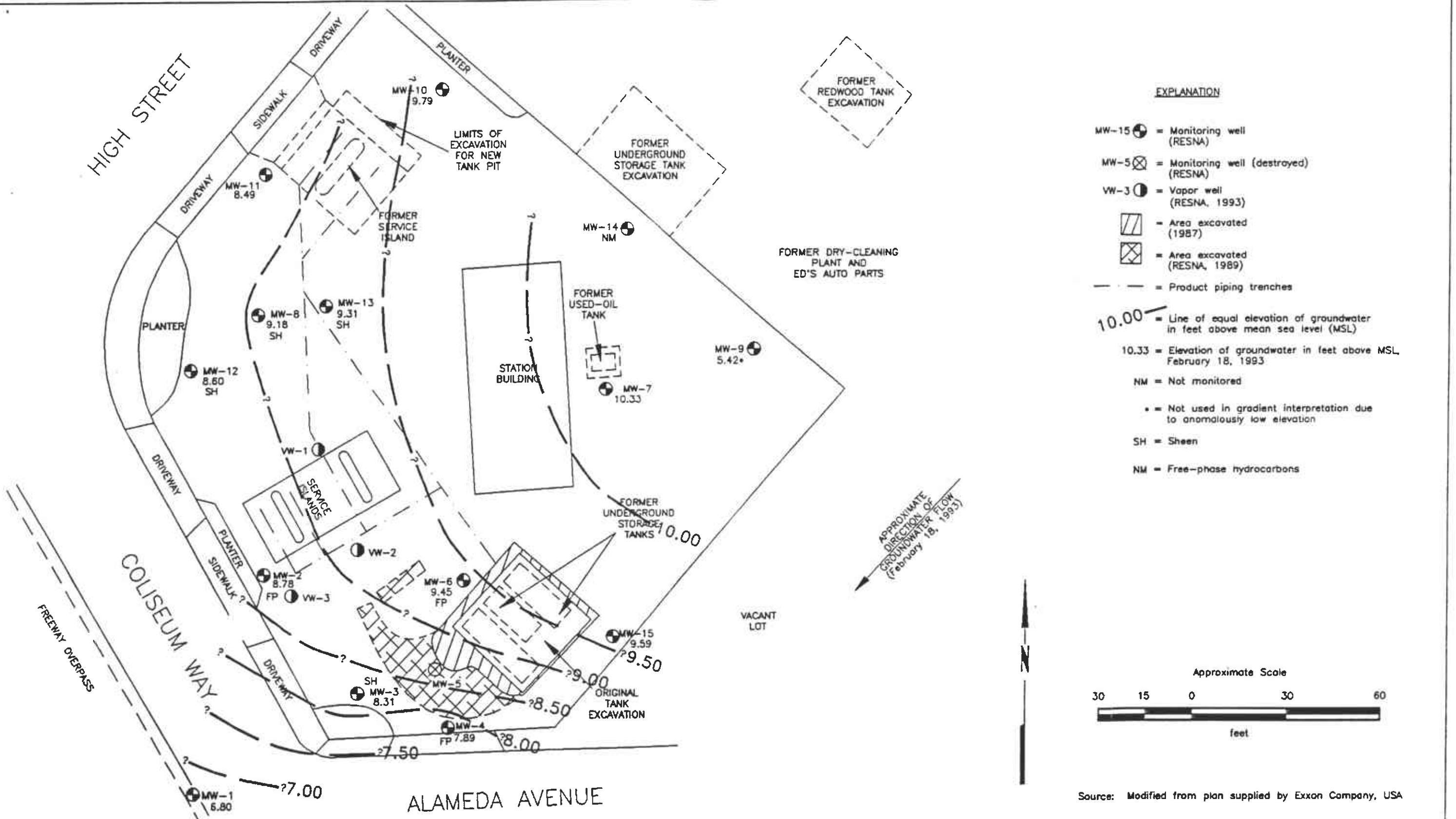


EXPLANATION

- MW-15 (●) = Monitoring well (RESNA)
- MW-5 (✗) = Monitoring well (destroyed) (RESNA)
- VW-3 (●) = Vapor well (RESNA, 1993)
- (//) = Area excavated (1987)
- (☒) = Area excavated (RESNA, 1989)
- = Product piping trenches
- 9.50 = Line of equal elevation of groundwater in feet above mean sea level (MSL)
- 9.75 = Elevation of groundwater in feet above MSL, January 27, 1993
- NM = Not monitored
- * = Not used in gradient interpretation due to anomalously low elevation
- SH = Sheen
- FP = Free-phase hydrocarbons

Approximate Scale
30 15 0 30 60
feet

Source: Modified from plan supplied by Exxon Company, USA



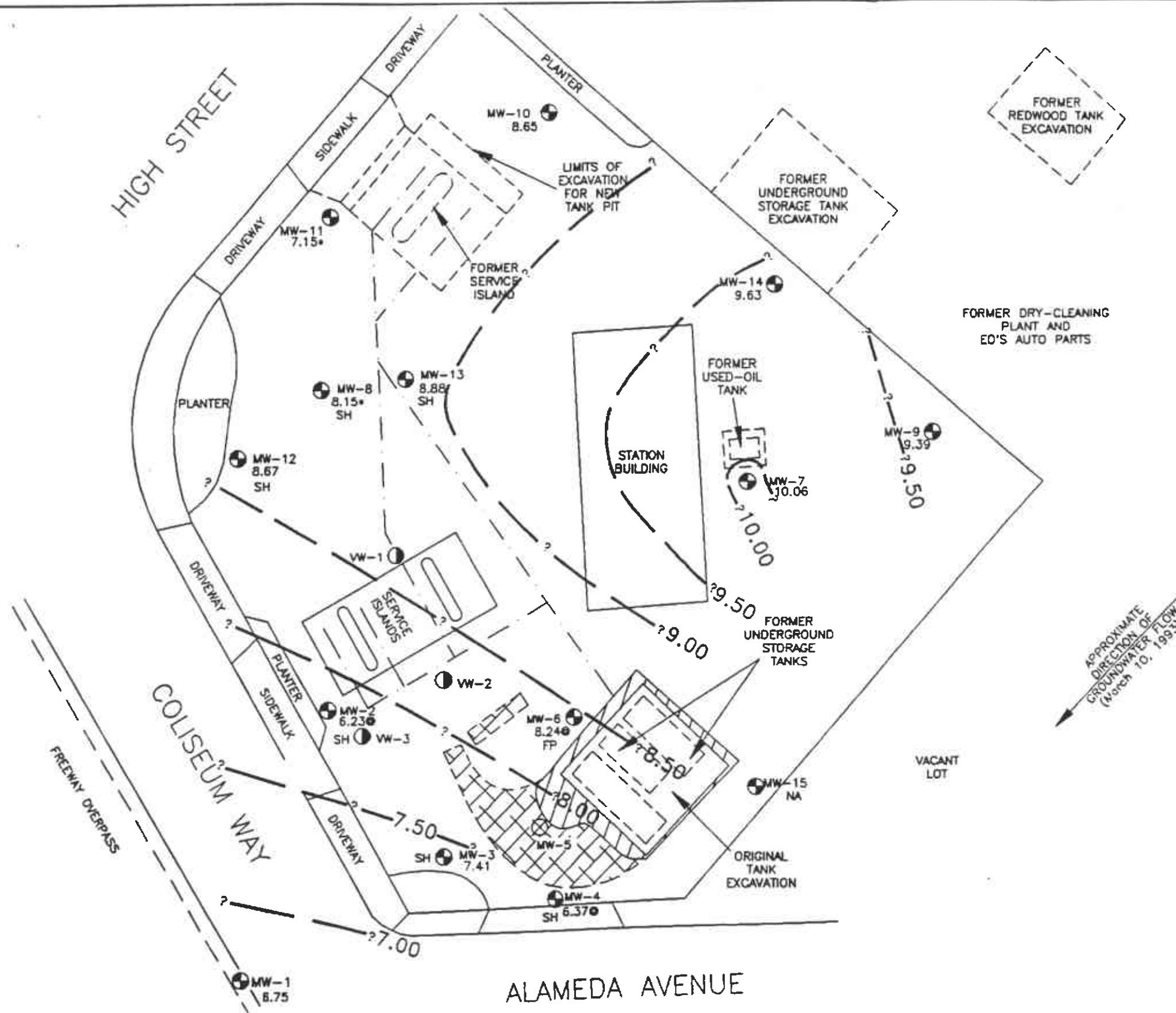
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GROUNDWATER GRADIENT MAP
February 18, 1993
Exxon Station 7-3006
720 High Street
Oakland, California

PLATE
4



EXPLANATION

- MW-15 (●) = Monitoring well (RESNA)
- MW-5 (X) = Monitoring well (destroyed) (RESNA)
- VW-3 (●) = Vapor well (RESNA, 1993)
- (//) = Area excavated (1987)
- (X) = Area excavated (RESNA, 1989)
- = Product piping trenches
- 10.00 = Line of equal elevation of groundwater in feet above mean sea level (MSL)
- 10.06 = Elevation of groundwater in feet above MSL, March 10, 1993
- NA = Not accessible
- * = Not used in gradient interpretation due to anomalously low elevation
- = Not used in gradient interpretation due to petrotrap
- FP = Free-phase hydrocarbons
- SH = Sheen

Approximate Scale
30 15 0 30 60
feet

Source: Modified from plan supplied by Exxon Company, USA

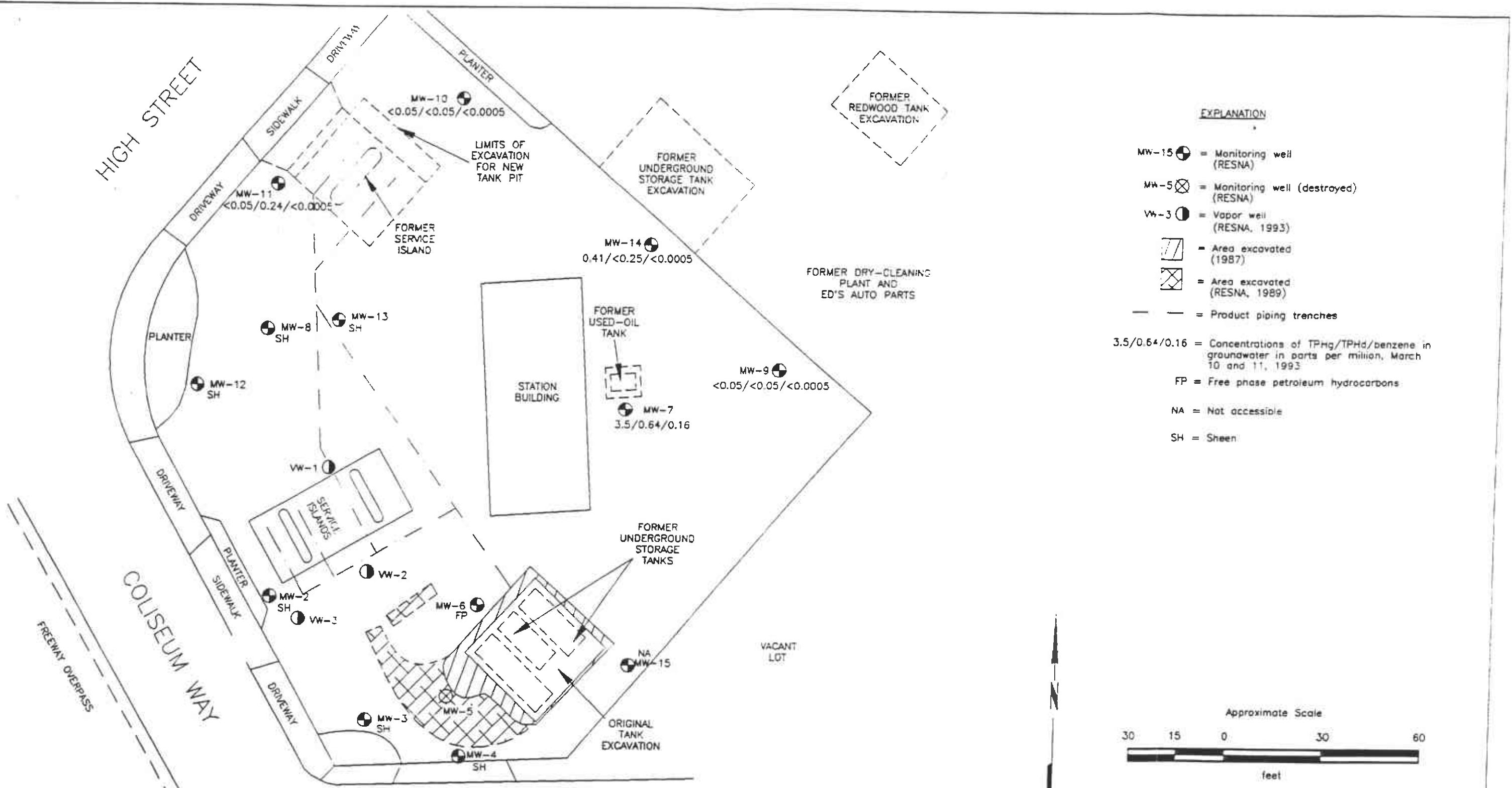
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GROUNDWATER GRADIENT MAP
March 10, 1993
Exxon Station 7-3006
720 High Street
Oakland, California

PLATE
5



Source: Modified from plan supplied by Exxon Company, USA

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**TPHg/TPHd/BENZENE CONCENTRATIONS
IN GROUNDWATER**
Exxon Station 7-3006
720 High Street
Oakland, California

Sampling date?

PLATE

6

Quarterly Groundwater Sampling
Exxon Station 7-3006, Oakland, California

May 5, 1993
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TABLE 3
RESULTS OF ADDITIONAL LABORATORY ANALYSES OF
WATER SAMPLES FROM WELL MW-7 on March 11, 1993
Former Exxon Station 7-3006
Oakland, California
Page 1 of 2
(See notes on page 2)

adjacent to waste
oil tank

PARAMETER	CONCENTRATION	MCL	EPA METHOD
<u>INORGANIC ANALYSES</u>			
Total Alkalinity, as CaCO ₃	360	---	
Bicarbonate Alkalinity, as CaCO ₃	360	---	
Carbonate Alkalinity, as CaCO ₃	<10	---	
Hydroxide Alkalinity, as CaCO ₃	<10	---	
Antimony	<0.06	---	6010/200.7, ICP
Arsenic	0.016	0.05	7060, Furnace AAS
Beryllium	<0.01	---	6010/200.7, ICP
Cadmium	<0.005	0.01	6010/200.7, ICP
Calcium	28	---	6010/200.7, ICP
Chloride	11	250	SM 407A
Chromium	<0.01	0.05	6010/200.7, ICP
Copper	<0.01	1.0	6010/200.7, ICP
Cyanides	<0.005	---	
Iron	1.6	0.3	6010/200.7, ICP
Lead	<0.1	0.05	6010/200.7, ICP
Magnesium	47	---	6010/200.7, ICP
Manganese	1.4	0.05	6010/200.7, ICP
Mercury	0.0004	0.002	7470, Cold Vapor AA
Nickel	<0.02	---	6010/200.7, ICP
Selenium	<0.005	0.01	7740, Furnace AAS
Silver	<0.01	0.05	6010/200.7, ICP
Sodium	63	---	6010, ICP
Sulfate	<1.0	250	375.4
Thallium	<0.2	---	6010/200.7, ICP
Zinc	0.02	5.0	6010/200.7, ICP
pH, at 25°C	7.0	---	---

Quarterly Groundwater Sampling
Exxon Station 7-3006, Oakland, California

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TABLE 3
RESULTS OF ADDITIONAL LABORATORY ANALYSES OF
WATER SAMPLES FROM WELL MW-7 on March 11, 1993
Former Exxon Station 7-3006
Oakland, California
Page 2 of 2
(See notes on page 2)

PARAMETER	CONCENTRATION	MCL	EPA METHOD
Specific Conductance, umhos/cm at 25°C	600	900	---
Total Dissolved Solids	400	500	160.1
Total Hardness, as CaCO ₃	260	---	---
<u>ORGANIC ANALYSES*</u>			
Organic Lead, as Pb	<0.1	---	DHS Method 338
Benzene	0.18	0.001	624
Toluene	0.006	0.100	624
Ethylbenzene	0.016	0.680	624
Total Xylenes	0.010	1.75	624
Naphthalene	0.027	---	625

Results in parts per million (ppm) unless otherwise noted.

MCL : Maximum Contaminant Level for drinking water standards recommended by the California State Department of Health Services (October 1990).

--- : Not Applicable

* : All other compounds were nondetectable.

DHS : Department of Health Services

Quarterly Groundwater Sampling
Exxon Station 7-3006, Oakland, California

May 5, 1993
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TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
Former Exxon Station 7-3006
Oakland, California
Page 1 of 15
See notes on page 15

<u>WELL DATE</u>	<u>WELL ELEVATION</u>	<u>DEPTH TO WATER</u>	<u>PRODUCT THICKNESS</u>	<u>GROUNDWATER ELEVATION</u>	<u>PRODUCT REMOVED</u>
<u>MW-1</u>					
04/25/89	12.87	7.55	NP	5.32	None
04/27/89		10.16	Sheen	2.71	None
09/06/89		10.88	Sheen	1.99	None
09/22/89		11.06	NP	1.81	None
11/01/89		10.82	NP	2.05	None
11/15/89		11.07	NP	1.80	None
12/06/89		10.33	NP	2.54	None
02/20/90		8.81	NP	4.06	None
04/19/90		9.33	NP	3.54	None
07/03/90		8.44	NP	4.43	None
07/26/90		8.99	NP	3.88	None
08/20/90		9.50	NP	3.37	None
09/19/90		9.99	NP	2.88	None
11/27/90		10.62	NP	2.25	None
01/17/91		10.31	NP	2.56	None
03/26/91		7.79	NP	5.08	None
05/02/91		8.88	NP	3.99	None
06/20/91		9.62	NP	3.25	None
08/07/91		10.20	NP	2.67	None
09/17/91		10.40	NP	2.47	None
11/13/91		10.20	NP	2.67	None
12/10/91		10.23	NP	2.64	None
01/21/92		9.32	NP	3.55	None
03/25/92		9.30	NP	3.57	None
06/22/92		8.46	NP	4.41	None
09/24/92		9.61	NP	3.26	None
10/14/92		9.85	NP	3.02	None
11/16/92		9.65	NP	3.22	None
12/08/92		9.30	NP	3.57	None

Quarterly Groundwater Sampling
Exxon Station 7-3006, Oakland, California

May 5, 1993
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TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
Former Exxon Station 7-3006
Oakland, California
Page 2 of 15
See notes on page 15

<u>WELL DATE</u>	<u>WELL ELEVATION</u>	<u>DEPTH TO WATER</u>	<u>PRODUCT THICKNESS</u>	<u>GROUNDWATER ELEVATION</u>	<u>PRODUCT REMOVED</u>
01/27/93		6.13	NP	6.74	None
02/18/93		6.07	NP	6.80	None
03/10/93		6.12	NP	6.75	None
<u>MW-2</u>					
04/25/89	12.98	9.27	2.16	5.44*	NR
07/19/89		10.81	1.56	3.42*	NR
07/27/89		10.18	0.13	2.90*	NR
09/06/89		10.89	0.09	2.16*	NR
09/22/89		11.56	0.56	1.87*	NR
11/01/89		10.85	0.09	2.20*	NR
11/15/89		11.05	0.07	1.99*	NR
12/06/89		10.23	0.13	2.85*	NR
02/20/90		8.86	0.29	4.35*	NR
04/19/90		9.09	0.10	3.97*	NR
07/03/90		8.75	0.05	4.27*	NR
07/26/90		8.71	0.10	4.35*	NR
08/20/90		9.25	0.02	3.75*	NR
09/19/90		9.79	0.02	3.21*	NR
11/27/90		10.40	0.07	2.64*	NR
01/17/91		10.03	0.05	2.99*	NR
03/26/91		8.98	0.08	4.06*	NR
05/02/91		8.73	0.02	4.27*	NR
06/20/91		9.11	0.02	3.89*	NR
08/07/91		10.00	0.04	3.01*	NR
09/17/91		10.11	0.02	2.89*	NR
11/13/91		9.88	0.02	3.12*	NR
12/10/91		9.02	0.03	3.98*	NR
01/21/92		9.08	0.03	3.92*	NR
03/25/92		6.00	0.03	7.00*	NR
06/22/92		8.46	0.01	4.53*	1/2 cup

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09/24/92		9.08	Sheen	3.90	NR
10/14/92		9.34	0.02	3.66*	1/2 cup
11/16/92		9.16	0.02	3.84*	1/2 cup
12/08/92		8.93	0.02	4.07*	1/2 cup
01/27/93		5.76	Sheen	7.22	None
02/18/93		4.21	0.01	8.78*	None
		Petrotrap Installed			
03/10/93		6.75	Sheen	6.23	None
<u>MW-3</u>					
04/25/89	12.94	7.57	0.08	5.43*	NR
07/19/89		10.33	0.66	3.14*	NR
07/27/89			Not Accessible		
09/06/89		11.22	0.07	1.78*	NR
09/22/89		11.38	0.28	1.78*	NR
11/01/89		10.90	0.01	2.05*	NR
11/15/89		11.18	0.11	1.85*	NR
12/06/89		10.29	Sheen	2.65	None
02/20/90		8.73	0.04	4.24*	NR
04/19/90		9.20	0.09	3.81*	NR
07/03/90		8.50	0.03	4.46*	NR
07/26/90		8.58	0.04	4.39*	NR
08/20/90		9.21	0.01	3.74*	NR
09/19/90		10.02	0.35	3.20*	NR
11/27/90		10.72	0.42	2.56*	NR
01/17/91		10.05	0.10	2.97*	NR
03/26/91		7.65	0.10	5.37*	NR
05/02/91		8.54	0.03	4.42*	NR
06/20/91		8.89	0.03	4.07*	NR
08/07/91		9.99	0.03	2.97*	NR
09/17/91		10.32	0.22	2.80*	NR

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11/13/91		10.14	0.24	2.99*	NR
12/10/91		10.10	0.11	2.93*	NR
01/21/92		9.07	0.06	3.92*	NR
03/25/92		5.96	0.04	7.01*	NR
06/22/92		8.07	0.02	4.89*	1/2 cup
09/24/92		9.29	Sheen	3.65	None
10/14/92		9.49	0.02	3.47*	1/2 cup
11/16/92		9.29	0.02	3.67*	1/2 cup
12/08/92		9.08	0.02	3.88*	1/2 cup
01/27/93		5.65	Sheen	7.29	None
02/18/93		4.63	Sheen	8.31	None
03/10/93		5.53	Sheen	7.41	None
<u>MW-4</u>					
04/25/89	12.77	7.26	0.16	5.64*	NR
07/19/89		10.32	0.72	3.03*	NR
07/27/89				Not Accessible	
09/06/89		11.40	0.07	1.43*	NR
09/22/89		11.64	0.19	1.28*	NR
11/01/89		11.00	Sheen	1.77	None
11/15/89		11.18	0.10	1.67*	NR
12/06/89		10.25	Sheen	2.52	None
02/20/90		8.40	NP	4.37	None
04/19/90		9.04	0.03	3.75*	NR
07/03/90		8.00	Sheen	4.77	None
07/26/90		8.57	0.04	4.23*	NR
08/20/90		9.08	0.01	3.70*	NR
09/19/90		9.76	0.03	3.03*	NR
11/27/90		10.83	0.09	2.01*	NR
01/17/91		9.96	0.20	2.97*	NR
03/26/91		6.20	0.09	6.64*	NR

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05/02/91		7.50	0.04	5.30*	NR
06/20/91		7.79	0.04	5.01*	NR
08/07/91		9.81	0.05	3.00*	NR
09/17/91		10.02	0.10	2.83*	NR
11/13/91		9.90	0.12	2.97*	NR
12/10/91		9.92	0.10	2.93*	NR
01/21/92		9.50	0.08	3.33*	NR
03/25/92		5.01	0.03	7.78*	NR
06/22/92		7.34	0.02	5.45*	1/2 cup
09/24/92		9.03	Sheen	3.74	None
10/14/92		9.27	0.02	3.52*	1/2 cup
11/16/92		9.09	0.02	3.70*	1/2 cup
12/08/92		10.24	0.02	2.55*	1/2 cup
01/27/93		4.95	0.04	7.85*	None
02/18/93		4.89	0.01	7.89*	None
Petrotrap Installed					
03/10/93		6.40	Sheen	6.37	1/8 cup
<u>MW-5</u>					
04/25/89	8.38	8.06	NP	0.32	None
07/18/89					
Well Destroyed					
<u>MW-6</u>					
04/25/89	14.27	8.02	NP	6.25	None
09/06/89		13.64	0.08	0.69*	NR
09/22/89		13.79	0.07	0.54*	NR
11/01/89		12.78	Sheen	1.49	None
11/15/89		12.91	Sheen	1.36	None
12/06/89		11.84	NP	2.43	None
02/20/90		9.08	NP	5.19	None
04/19/90		9.72	NP	4.55	None
07/03/90		8.00	NP	6.27	None

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07/26/90		8.70	NP	5.57	None
08/20/90		9.62	NP	4.65	None
09/19/90		10.25	Sheen	4.02	None
11/27/90		10.82	Sheen	3.45	None
01/17/91		9.93	NP	4.34	None
03/26/91		8.45	NP	5.82	None
05/02/91		8.90	NP	5.37	None
06/20/91		9.47	Sheen	4.80	None
08/07/91		10.10	Sheen	4.17	None
09/17/91		10.21	Sheen	4.06	None
11/13/91		9.62	Sheen	4.65	None
12/10/91		9.59	Sheen	4.68	None
01/21/92		9.25	Sheen	5.02	None
03/25/92		6.88	NP	7.39	None
06/22/92		7.38	NP	6.89	None
09/24/92		8.70	NP	5.57	None
10/14/92		8.91	Sheen	5.36	None
11/16/92		8.75	NP	5.52	None
12/08/92		8.51	Sheen	5.76	None
01/27/93		5.69	NP	8.58	None
02/18/93		4.90	0.10	9.45*	1/8 cup
Petrotrap Installed					
03/10/93		6.07	0.05	8.24*	1/4 cup
<u>MW-7</u>					
04/25/89	14.84	8.66	NP	6.18	None
09/06/89		11.72	Sheen	3.12	None
09/22/89		11.89	NP	2.95	None
12/06/89		10.46	NP	4.38	None
02/20/90		8.44	NP	6.40	None
04/19/90		9.54	NP	5.30	None

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07/03/90		7.45	NP	7.39	None
07/26/90		8.08	NP	6.76	None
08/20/90		8.82	NP	6.02	None
09/19/90		9.01	NP	5.83	None
11/27/90		9.54	NP	5.30	None
01/17/91		8.50	NP	6.34	None
03/26/91		5.92	NP	8.92	None
05/02/91		7.72	NP	7.12	None
06/20/91		8.19	NP	6.65	None
08/07/91		8.70	NP	6.14	None
09/17/91		8.77	NP	6.07	None
11/13/91		8.51	NP	6.33	None
12/10/91		8.58	NP	6.26	None
01/21/92		8.32	NP	6.52	None
03/25/92		9.27	NP	5.57	None
06/22/92		6.97	NP	7.87	None
09/24/92		8.00	NP	6.84	None
10/14/92		8.15	NP	6.69	None
11/16/92		7.92	NP	6.92	None
12/08/92		7.75	NP	7.09	None
01/27/93		5.09	NP	9.75	None
02/18/93		4.51	NP	10.33	None
03/10/93		4.78	NP	10.06	None
<u>MW-8</u>					
04/25/89	13.45	8.31	0.66	5.67*	NR
07/19/89		10.97	1.25	3.48*	NR
07/27/89		10.34	0.08	3.17*	NR
09/06/89		11.09	0.17	2.50*	NR
09/22/89		11.58	0.36	2.16*	NR
11/01/89		11.03	NP	2.42	None

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11/15/89		11.25	0.01	2.21*	NR
12/06/89		10.30	Sheen	3.15	None
02/20/90		8.00	0.01	5.46*	NR
04/19/90		8.50	NP	4.95	None
07/03/90		7.55	NP	5.90	None
07/26/90		7.86	NP	5.59	None
08/20/90		8.92	NP	4.53	None
09/19/90		9.55	NP	3.90	None
11/27/90		10.29	0.01	3.17*	NR
01/17/91		9.97	Sheen	3.48	None
03/26/91		8.45	Sheen	5.00	None
05/02/91		8.85	Sheen	4.60	None
06/20/91		9.45	Sheen	4.00	None
08/07/91		10.00	Sheen	3.45	None
09/17/91		10.11	Sheen	3.34	None
11/13/91		9.63	Sheen	3.82	None
12/10/91		9.66	Sheen	3.79	None
01/21/92		9.35	Sheen	4.10	None
03/25/92		8.02	Sheen	5.43	None
06/22/92		7.01	Sheen	6.44	None
09/24/92		8.33	Sheen	5.12	None
10/14/92		8.65	Sheen	4.80	None
11/16/92		8.27	Sheen	5.18	None
12/08/92		8.25	Sheen	5.20	None
01/27/93		5.22	Sheen	8.23	None
02/18/93		4.27	Sheen	9.18	None
03/10/93		5.30	Sheen	8.15	None
<u>MW-9</u>					
04/25/89	14.64	8.25	NP	6.39	None
09/06/89				Not Accessible	

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09/22/89			Not Accessible				
12/06/89		10.12	NP	4.52	None		
02/20/90		9.38	NP	5.26	None		
04/19/90		9.40	NP	5.24	None		
07/03/90		8.79	NP	5.85	None		
07/26/90		8.70	NP	5.94	None		
08/20/90		9.09	NP	5.55	None		
09/19/90		9.52	NP	5.12	None		
11/27/90		9.89	NP	4.75	None		
01/17/91			Not Accessible				
03/26/91			Not Accessible				
05/02/91		9.10	NP	5.54	None		
06/20/91		8.76	NP	5.88	None		
08/07/91		9.37	NP	5.27	None		
09/17/91		9.57	NP	5.07	None		
11/13/91		9.46	NP	5.18	None		
12/10/91		9.30	NP	5.34	None		
01/21/92		9.68	NP	4.96	None		
03/25/92		8.93	NP	5.71	None		
06/22/92		7.45	NP	7.19	None		
09/24/92		8.69	NP	5.95	None		
10/14/92		8.83	NP	5.81	None		
11/16/92		8.80	NP	5.84	None		
12/08/92		8.70	NP	5.94	None		
01/27/93			Not Monitored				
02/18/93		9.22	NP	5.42	None		
03/10/93		5.25	NP	9.39	None		
<u>MW-10</u>					None		
12/06/89	14.05	10.46	NP	3.59	None		
02/20/90		8.12	NP	5.93	None		

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04/19/90		8.54	NP	5.51	None
07/03/90		7.88	NP	6.17	None
07/26/90		8.19	NP	5.86	None
08/20/90		10.33	NP	3.72	None
09/19/90		9.49	NP	4.56	None
11/27/90		9.89	NP	4.16	None
01/17/91		9.19	NP	4.86	None
03/26/91		7.48	NP	6.57	None
05/02/91		8.16	NP	5.89	None
06/20/91		8.75	NP	5.30	None
08/07/91		9.53	NP	4.52	None
09/17/91		9.72	NP	4.33	None
11/13/91		10.02	NP	4.03	None
12/10/91		9.12	NP	4.93	None
01/21/92		8.31	NP	5.74	None
03/25/92		5.70	NP	8.35	None
06/22/92		7.50	NP	6.55	None
09/24/92		8.68	NP	5.37	None
10/14/92		8.88	NP	5.17	None
11/16/92		8.70	NP	5.35	None
12/08/92		8.31	NP	5.74	None
01/27/93		5.49	NP	8.56	None
02/18/93		4.26	NP	9.79	None
03/10/93		5.40	NP	8.65	None
<u>MW-11</u>					
12/06/89	13.55	10.62	NP	2.93	None
02/20/90		9.20	NP	4.35	None
04/19/90		9.80	NP	3.75	None
07/03/90		8.90	NP	4.65	None
07/26/90		9.36	NP	4.19	None

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08/20/90		9.90	NP	3.65	None
09/19/90		10.39	NP	3.16	None
11/27/90		10.97	NP	2.58	None
01/17/91		10.76	NP	2.79	None
03/26/91		8.80	NP	4.75	None
05/02/91		9.38	NP	4.17	None
06/20/91		10.16	NP	3.39	None
08/07/91		10.69	NP	2.86	None
09/17/91		10.80	NP	2.75	None
11/13/91		10.44	NP	3.11	None
12/10/91		10.48	NP	3.07	None
01/21/92		10.10	NP	3.45	None
03/25/92		7.30	NP	6.25	None
06/22/92		9.02	NP	4.53	None
09/24/92		9.91	NP	3.64	None
10/14/92		10.11	NP	3.44	None
11/16/92		9.79	NP	3.76	None
12/08/92		9.77	NP	3.78	None
01/27/93		5.67	NP	7.88	None
02/18/93		5.06	NP	8.49	None
03/10/93		6.40	NP	7.15	None
<u>MW-12</u>					
12/06/89	12.61	8.00	NP	4.61	None
02/20/90		6.33	NP	6.28	None
04/19/90		7.18	NP	5.43	None
07/03/90		7.41	NP	5.20	None
07/26/90		6.54	NP	6.07	None
08/20/90		7.23	NP	5.38	None
09/19/90		7.77	NP	4.84	None
11/27/90		8.15	NP	4.46	None

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01/17/91		8.06	NP	4.55	None
03/26/91		7.21	NP	5.40	None
05/02/91		7.60	Sheen	5.01	None
06/20/91		8.02	Sheen	4.59	None
08/07/91		8.25	Sheen	4.36	None
09/17/91		8.20	Sheen	4.41	None
11/13/91		7.77	Sheen	4.84	None
12/10/91		7.75	Sheen	4.86	None
01/21/92		7.08	Sheen	5.53	None
03/25/92		4.93	Sheen	7.68	None
06/22/92		6.04	Sheen	6.57	None
09/24/92		6.94	NP	5.67	None
10/14/92		7.21	Sheen	5.40	None
11/16/92		7.00	Sheen	5.61	None
12/08/92		6.70	Sheen	5.91	None
01/27/93		4.16	Sheen	8.45	None
02/18/93		4.01	Sheen	8.60	None
03/10/93		3.94	Sheen	8.67	None
<u>MW-13</u>					
12/06/89	14.20	9.35	NP	4.85	None
02/20/90		7.73	NP	6.47	None
04/19/90		8.68	NP	5.52	None
07/03/90		8.00	NP	6.20	None
07/26/90		7.95	NP	6.25	None
08/20/90		8.66	NP	5.54	None
09/19/90		9.13	NP	5.07	None
11/27/90		9.49	NP	4.71	None
01/17/91		9.61	NP	4.59	None
03/26/91		9.25	NP	4.95	None
05/02/91		9.31	NP	4.89	None

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06/20/91		9.73	NP	4.47	None
08/07/91				Not Accessible	
09/17/91		9.72	NP	4.48	None
11/13/91		9.06	NP	5.14	None
12/10/91		9.04	NP	5.16	None
01/21/92		8.41	NP	5.79	None
03/25/92		5.72	Sheen	8.48	None
06/22/92		7.31	Sheen	6.89	None
09/24/92		8.30	NP	5.90	None
10/14/92		8.56	Sheen	5.64	None
11/16/92		8.36	Sheen	5.84	None
12/08/92		8.10	Sheen	6.10	None
01/27/93				Not Monitored	
02/18/93		4.89	Sheen	9.31	None
03/10/93		5.32	Sheen	8.88	None
<u>MW-14</u>					
11/27/90	15.18	9.88	NP	5.30	None
01/17/91		9.13	NP	6.05	None
03/26/91		8.51	NP	6.67	None
05/02/91		8.45	NP	6.73	None
06/20/91		8.38	NP	6.80	None
08/07/91		9.04	NP	6.14	None
09/17/91		9.14	NP	6.04	None
11/13/91		8.83	NP	6.35	None
12/10/91		8.90	NP	6.28	None
01/21/92		8.58	NP	6.60	None
03/25/92		6.15	NP	9.03	None
06/22/92		7.70	NP	7.48	None
09/24/92		9.34	NP	5.84	None
10/14/92		9.40	NP	5.78	None

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<u>WELL DATE</u>	<u>WELL ELEVATION</u>	<u>DEPTH TO WATER</u>	<u>PRODUCT THICKNESS</u>	<u>GROUNDWATER ELEVATION</u>	<u>PRODUCT REMOVED</u>
11/16/92		9.17	NP	6.01	None
12/08/92		8.89	NP	6.29	None
01/27/93		8.54	NP	6.64	None
02/18/93				Not Monitored	
03/10/93		5.55	NP	9.63	None
<u>MW-15</u>					
11/27/90	13.73	8.67	NP	5.06	None
01/17/91		8.03	NP	5.70	None
03/26/91				Not Accessible	
05/02/91		7.09	NP	6.64	None
06/20/91		7.06	NP	6.67	None
08/07/91		7.59	NP	6.14	None
09/17/91		7.89	NP	5.84	None
11/13/91		9.07	NP	4.66	None
12/10/91		8.60	NP	5.13	None
01/21/92		9.15	NP	4.58	None
03/25/92		8.10	NP	5.63	None
06/22/92		5.80	NP	7.93	None
09/24/92		7.21	NP	6.52	None
10/14/92		7.40	NP	6.33	None
11/16/92		7.55	NP	6.18	None
12/08/92		7.42	NP	6.31	None
01/27/93		4.37	NP	9.36	None
02/18/93		4.14	Sheen	9.59	None
03/10/93				Not Accessible	
<u>VW-1</u>					
02/18/93		4.52	NP		None
03/10/93		5.25	NP		None

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<u>WELL DATE</u>	WELL ELEVATION	DEPTH TO WATER	PRODUCT THICKNESS	GROUNDWATER ELEVATION	PRODUCT REMOVED
<u>VW-2</u>					
02/18/93	NM	4.41	NP	NA	None
03/10/93		5.17	NP	NA	None
<u>VW-3</u>					
02/18/93	NM	4.62	NP	NA	None
03/10/93		4.74	NP	NA	None

Well elevations relative to Mean Sea Level (MSL).

Measurements in feet.

- * : Groundwater elevation corrected for presence of free-phase petroleum hydrocarbons. See appendix A.
- NR : Not Recorded
- NM : Not Measured
- NA : Not Applicable
- NP : No Free-phase petroleum hydrocarbons

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
<u>MW-1</u>								
05/88	0.24	0.090	0.005	0.015	0.025	NA	NA	ND
12/89	0.63	0.012	0.0056	0.0037	0.025	0.24	NA	NA
04/90	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
07/90	0.13	0.006	<0.0005	<0.0005	<0.0005	0.16	NA	NA
11/90	<0.05	0.0007	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
03/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA	NA
12/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
03/92	<0.05	0.0015	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
06/92	0.11	0.0049	0.0079	0.0037	0.021	0.075	NA	NA
09/92	<0.05	<0.0005	0.0006	<0.0005	<0.0005	<0.05	NA	NA
12/92	0.17	0.010	<0.0005	<0.0005	0.0006	0.051	NA	NA
03/93	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.14	NA	NA
<u>MW-2</u>								
09/87	1.445	0.233	0.81	0.056	0.209	NA	NA	NA

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	TPHd	TOG	VOCs
05/88					Free-phase petroleum hydrocarbons			
12/89					Free-phase petroleum hydrocarbons			
04/90					Free-phase petroleum hydrocarbons			
07/90					Free-phase petroleum hydrocarbons			
11/90					Free-phase petroleum hydrocarbons			
03/91					Free-phase petroleum hydrocarbons			
06/91					Free-phase petroleum hydrocarbons			
09/91					Free-phase petroleum hydrocarbons			
12/91					Free-phase petroleum hydrocarbons			
03/92					Free-phase petroleum hydrocarbons			
06/92					Free-phase petroleum hydrocarbons			
09/92					Sheen			
12/92					Free-phase petroleum hydrocarbons			
03/93					Sheen			
MW-3								
09/87	2.101	0.360	1.062	0.068	0.298	0.66	NA	NA
05/88	8.70	3.98	0.28	0.24	0.60	NA	NA	NA

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
12/89					Free-phase petroleum hydrocarbons			
04/90					Free-phase petroleum hydrocarbons			
07/90					Free-phase petroleum hydrocarbons			
11/90					Free-phase petroleum hydrocarbons			
03/91					Free-phase petroleum hydrocarbons			
06/91					Free-phase petroleum hydrocarbons			
09/91					Free-phase petroleum hydrocarbons			
12/91					Free-phase petroleum hydrocarbons			
03/92					Free-phase petroleum hydrocarbons			
06/92					Free-phase petroleum hydrocarbons			
09/92					Sheen			
12/92					Free-phase petroleum hydrocarbons			
03/93					Sheen			
MW-4	0.925	0.070	0.007	0.010	0.016	0.74	NA	NA
09/87					Free-phase petroleum hydrocarbons			
05/88					Free-phase petroleum hydrocarbons			
12/89								

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<u>WELL</u> <u>DATE</u>	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
04/90					Free-phase petroleum hydrocarbons			
07/90					Emulsion			
11/90					Free-phase petroleum hydrocarbons			
03/91					Free-phase petroleum hydrocarbons			
06/91					Free-phase petroleum hydrocarbons			
09/91					Free-phase petroleum hydrocarbons			
12/91					Free-phase petroleum hydrocarbons			
03/92					Free-phase petroleum hydrocarbons			
06/92					Free-phase petroleum hydrocarbons			
09/92					Sheen			
12/92					Free-phase petroleum hydrocarbons			
03/93					Free-phase petroleum hydrocarbons			
<u>MW-5</u>								
09/87	26.66	0.56	1.71	1.58	7.15	37.22	NA	NA
05/88					Free-phase petroleum hydrocarbons			
07/89					Well Destroyed			

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
<u>MW-6</u>								
05/88	29.3	12.82	0.55	1.44	5.50	NA	NA	NA
12/89	9.0	0.37	0.013	0.0026	0.43	4.8	NA	NA
04/90	27	3.0	0.12	0.49	2.1	26	NA	NA
07/90	30	5.5	1.4	1.2	3.1	13	NA	NA
11/90	15	4.4	0.12	0.8	2.3	7.6	NA	NA
03/91	55	10	0.38	1.6	6.9	<0.10	NA	NA
06/91				Sheen				
09/91	17	4.5	0.16	0.89	3.1	NA	NA	NA
12/91	32	6.0	0.29	1.4	4.7	1.2	NA	NA
03/92	21	8.0	0.25	1.7	5.0	2.7	NA	NA
06/92	43	11	0.15	2.1	5.0	1.7	NA	NA
09/92	45	9.8	0.27	1.7	3.6	2.0	NA	NA
12/92				Sheen				
03/93				Free-phase petroleum hydrocarbons				
<u>MW-7</u>								
09/87	1.531	0.258	0.002	<0.002	0.042	2.79	NA	ND

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<u>WELL</u> <u>DATE</u>	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TPHd	TOG	VOCs
05/88	NA	0.30*	<0.01*	<0.01*	<0.01*	0.019	NA	ND
12/89	1.7	0.22	0.0053	0.005	0.0086	2.5	<5	ND
04/90	2.7	0.22	0.0086	0.007	0.020	3.5	NA	ND
07/90	2.5	0.38	0.013	0.016	0.035	0.91	NA	ND
11/90	2.3	0.63	0.016	0.032	0.029	1.3	NA	0.0024 ¹
03/91	3.5	0.42	0.018	0.017	0.027	<0.10	NA	ND
06/91	3.1	0.27	0.0088	0.033	0.019	<0.10	NA	NA
09/91	2.4	0.39	0.01	0.015	0.018	NA	NA	NA
12/91	1.7	0.29	0.0053	0.0071	<0.0005	0.53	NA	NA
03/92	1.5	0.32	0.0072	0.016	0.019	0.76	NA	NA
06/92	3.1	0.26	0.0058	0.021	0.027	0.83	NA	NA
09/92	3.9	0.16	0.0046	0.0037	0.013	0.66	NA	NA
12/92	17	1.1	0.035	0.077	0.046	0.54	NA	NA
03/93	3.5	0.16	0.0062	0.022	0.019	0.64	<5.0	**
MW-8								
09/87	1.325	0.081	0.074	0.042	0.182	NA	NA	NA
05/88								

Free-phase petroleum hydrocarbons

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
12/89	42	2.6	0.63	0.21	3.7	34	NA	NA
04/90	49	2.1	0.82	1.1	4.8	53	NA	NA
07/90	44	4.0	1.5	2.0	6.3	32	NA	NA
11/90 Free-phase petroleum hydrocarbons								
03/91				Sheen				
06/91				Sheen				
09/91	57	14	7.8	3.1	12	NA	NA	NA
12/91	66	9.5	5.0	3.1	12	1.4	NA	NA
03/92				Sheen				
06/92				Sheen				
09/92				Sheen				
12/92				Sheen				
03/93				Sheen				
MW-9								
05/88	<0.05	<0.0005	0.001	<0.001	<0.001	NA	NA	ND
12/89	0.1	0.0018	0.0037	0.0014	0.0088	0.11	<5	ND
04/90	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	ND

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
07/90	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	ND
11/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	ND
03/91					Not Accessible			
06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA	NA
12/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.052	NA	NA
03/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
06/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
09/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
12/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
03/93	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
<u>MW-10</u>								
12/89	0.32	0.0037	0.014	0.0056	0.032	<0.10	NA	NA
04/90	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	ND
07/90	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
11/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
03/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA

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<u>WELL</u> <u>DATE</u>	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
12/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
03/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
06/92	<0.05	<0.0005	0.0006	<0.0005	0.0008	<0.05	NA	NA
09/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
12/92	<0.05	<0.0005	<0.0005	<0.0005	0.0009	<0.05	NA	NA
03/93	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
<u>MW-11</u>								
12/89	0.078	0.0059	0.0063	<0.0005	48	<0.10	NA	NA
04/90	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
07/90	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
11/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
03/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
09/91	<0.05	<0.0005	0.0007	<0.0005	<0.0005	NA	NA	NA
12/91	<0.05	0.0007	<0.0005	<0.0005	<0.0005	<0.05	NA	NA

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
03/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
06/92	0.084	0.0015	0.0031	0.0014	0.0096	0.057	NA	NA
09/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
12/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.31	NA	NA
03/93	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.24	NA	NA
<u>MW-12</u>								
12/89	85	6.7	6.3	1.8	7.8	40	NA	NA
04/90	110	6.6	7.4	1.8	11	97	NA	NA
07/90	92	11	11	3.1	13	50	NA	NA
11/90	69	11	10	3.1	12	31	NA	NA
03/91	100	15	16	2.4	11	<0.10	NA	NA
06/91				Sheen				
09/91	82	22	18	3.9	16	NA	NA	NA
12/91	99	18	16	3	11	1.7	NA	NA
03/92				Sheen				
06/92				Sheen				
09/92	570	62	46	15	57	3.1	NA	NA

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
12/92					Sheen			
03/93					Sheen			
<u>MW-13</u>								
12/89	52	2.1	2.0	1.4	6.1	31	NA	NA
04/90	59	1.8	1.5	1.4	7.2	54	NA	NA
07/90	53	4.5	3.1	2.2	7.8	26	NA	NA
11/90	20	4.5	1.1	0.88	3.3	1.6	NA	NA
03/91	72	10	8.3	1.7	6.9	<0.10	NA	NA
06/91	44	5.6	3.1	0.75	2.6	<0.10	NA	NA
09/91	40	11	6.5	2.4	8.1	NA	NA	NA
12/91	72	11	7.4	2.5	9.4	3.7	NA	NA
03/92				Sheen				
06/92				Sheen				
09/92	86	9.5	6.1	2.4	10	2.9	NA	NA
12/92				Sheen				
03/93				Sheen				

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WELL DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	TPHd	TOG	VOCs
<u>MW-14</u>								
11/90	0.39	<0.0005	<0.0005	0.0036	0.0037	0.12	NA	NA
03/91	0.20	<0.0005	0.0015	0.0008	0.0036	<0.10	NA	NA
06/91	0.11	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	NA	NA
09/91	0.45	<0.0005	<0.0005	0.0032	0.0023	NA	NA	NA
12/91	0.071	0.0005	<0.0005	<0.0005	<0.0005	0.28	NA	NA
03/92	0.061	<0.0005	<0.0005	0.0011	<0.0005	0.64	NA	NA
06/92	0.140	<0.0005	<0.0005	0.0006	0.0020	0.35	NA	NA
09/92	0.075	<0.0005	<0.0005	<0.0005	<0.0005	0.30	NA	NA
12/92	0.35	0.0025	0.0010	0.0015	0.0081	0.22	NA	NA
03/93	0.41	<0.0005	<0.0005	0.0009	0.0016	<0.25 ²	NA	NA
<u>MW-15</u>								
11/90	2.7	0.21	0.0055	0.6	0.25	0.34	NA	NA
03/91				Not Accessible				
06/91	0.38	<0.0005	<0.0005	<0.0005	0.0013	<0.10	NA	NA
09/91	0.49	0.0029	0.0017	0.033	0.0013	NA	NA	NA
12/91	1.6	0.014	0.0011	0.066	0.0098	0.30	NA	NA

Quarterly Groundwater Sampling
Exxon Station 7-3006, Oakland, California

May 5, 1993
130006.01

TABLE 2
CUMULATIVE RESULTS OF LABORATORY ANALYSES
OF GROUNDWATER SAMPLES
Former Exxon Station 7-3006
Oakland, California
Page 13 of 14
See notes on page 14

<u>WELL</u> <u>DATE</u>	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLEMES	TPHd	TOG	VOCs
<u>MW-15</u>								
03/92	3.4	0.15	0.013	0.690	0.250	1.4	NA	NA
06/92	6.6	0.099	<0.0005	0.670	0.180	0.86	NA	NA
09/92	3.6	0.120	0.007	0.480	0.047	0.74	NA	NA
12/92	1.6	0.043	0.0016	0.170	0.023	0.43	NA	NA
03/93				Not Accessible				
	MCLs	0.001	---	0.680	1.750	---	---	---
	DWAL	---	0.100	---	---	---	---	---

TABLE 2
CUMULATIVE RESULTS OF LABORATORY ANALYSES
OF GROUNDWATER SAMPLES
Exxon Station 7-3006
Oakland, California
Page 14 of 14

Results in parts per million (ppm).

<	:	Less than the laboratory detection limit.
NA	:	Not Analyzed
ND	:	Nondetectable
—	:	Not applicable
TPHg	:	Total petroleum hydrocarbons as gasoline using modified EPA method 5030/8015.
BTEX	:	Analyzed using modified EPA method 5030/8020.
TPHd	:	Total petroleum hydrocarbons as diesel using EPA method 3510/8015.
TOG	:	Total Oil and Grease by Standard Method 5520 B/F.
VOC	:	Volatile Organic Compounds analyzed by EPA method 5030/8010.
**	:	See Table 3
*	:	Analyzed by EPA method 624 (volatile organic compounds).
†	:	Chloromethane
‡	:	Analyzed for Stoddard Solvent using EPA method 3510/8015.
MCLs	:	Maximum Contaminant Levels in drinking water, DHS (October 1990).
DWAL	:	Drinking Water Action Level, DHS (October 1990).

APPENDIX A

**GROUNDWATER SAMPLING PROTOCOL
AND WELL PURGE DATA SHEETS**

Quarterly Groundwater Monitoring
Exxon 7-3006, Oakland, California

May 5, 1993
130006.01

GROUNDWATER SAMPLING PROTOCOL

The static water level and free-phase hydrocarbon level, if present, in each well that contained water and/or free-phase hydrocarbons are measured with an ORS Interphase Probe Model No. 106801, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from wellhead elevations and corrected for product thickness, when necessary, by multiplying product thickness (PT) by a correction factor 0.8 and subtracting from the DTW level (Adjusted DTW = DTW - [PT x 0.8]).

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

Before water samples are collected from the groundwater monitoring wells, the wells are purged until stabilization of the temperature, pH, and conductivity is obtained. Approximately four well casing volumes are purged before those characteristics stabilize. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples". Turbidity measurements are also collected from the purged well water. The quantity of water purged from each well is calculated as follows:

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

- r = radius of the well casing in feet.
- h = column of water in the well in feet
(depth to bottom - depth to water).
- 7.48 = conversion constant from cubic feet to gallons

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

After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples". Water samples were collected with an Environmental Protection Agency (EPA) approved Teflon® sampler which has been cleaned with Alconox® and deionized water. The groundwater was carefully poured into 40-milliliter (ml) glass vials, which are filled so as to produce a positive



Working to Restore Nature

May 5, 1993

130006.01

Quarterly Groundwater Monitoring
Exxon 7-3006, Oakland, California

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

WELL PURGE DATA SHEET

Project Name: Exxon 7-3006

Job No. 130006.01

Date: March 11, 1993

Page 1 of 1

Well No. MW-1

Time Started 12:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
12:45	Start purging MW-1				
12:45	0	66.8	7.87	1.03	NM
12:53	15	63.5	7.84	1.01	NM
1:00	30	62.5	7.68	1.00	NM
1:08	45	62.1	7.59	0.98	NM
1:16	61	62.3	7.62	1.01	NM
1:16	Stop purging MW-1				

Notes:

NM : Not Measured

Well Diameter (inches) : 4

Depth to Bottom (feet) : 28.90

Depth to Water - initial (feet) (3/10/93) : 6.12

Depth to Water - final (feet) : 7.20

% recovery : 95

Time Sampled : 3:00

Gallons per Well Casing Volume : 14.88

Gallons Purged : 61

Well Casing Volume Purged : 4.1

Approximate Pumping Rate (gpm) : 2.0

WELL PURGE DATA SHEET

Project Name: Exxon 7-3006

Job No. 130006.01

Date: March 11, 1993

Page 1 of 1

Well No. MW-7

Time Started 3:15

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
3:15	Start purging MW-7				
3:15	0	68.6	7.86	6.80	NM
3:21	19	66.8	7.85	6.40	NM
3:28	39	67.2	7.76	6.50	NM
3:34	58	67.2	7.77	6.60	NM
3:35	60	Dry			
4:12	78	65.8	7.59	6.20	NM
4:12	Stop purging MW-7				

Notes:

NM : Not Measured

Well Diameter (inches) : 4

Depth to Bottom (feet) : 34.45

Depth to Water - initial (feet) (3/10/93) : 4.78

Depth to Water - final (feet) : 8.88

% recovery : 86

Time Sampled : 5:35

Gallons per Well Casing Volume : 19.37

Gallons Purged : 78

Well Casing Volume Purged : 4.0

Approximate Pumping Rate (gpm) : 1.4

WELL PURGE DATA SHEET

Project Name: Exxon 7-3006

Job No. 130006.01

Date: March 10, 1993

Page 1 of 1

Well No. MW-9

Time Started 2:15

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
2:15	Start purging MW-9				
2:15	0	68.6	7.79	7.10	NM
2:26	17	68.4	7.82	7.50	NM
2:42	35	69.4	7.61	7.60	NM
2:45	40	Dry			
3:25	55	70.6	7.75	7.50	NM
3:25	55	Dry			
3:25	Stop purging MW-9				

Notes:

NM : Not Measured
 Well Diameter (inches) : 4
 Depth to Bottom (feet) : 31.50
 Depth to Water - initial (feet) : 5.25
 Depth to Water - final (feet) : 7.85
 % recovery : 90
 Time Sampled : 5:45
 Gallons per Well Casing Volume : 17.14
 Gallons Purged : 55
 Well Casing Volume Purged : 3.2
 Approximate Pumping Rate (gpm) : 0.8

WELL PURGE DATA SHEET

Project Name: Exxon 7-3006Job No. 130006.01Date: March 10, 1993Page 1 of 1Well No. MW-10Time Started 3:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
3:45	Start purging MW-10				
3:45	0	68.0	7.72	5.00	NM
3:53	13	67.9	7.73	5.10	NM
3:58	20	67.0	7.71	5.10	NM
3:58	20	Dry			
4:32	25	67.8	7.62	4.90	NM
4:35	30	Dry			
4:35	Stop purging MW-10				

Notes:

NM : Not Measured
Well Diameter (inches) : 4
Depth to Bottom (feet) : 24.78
Depth to Water - initial (feet) : 5.40
Depth to Water - final (feet) : 6.13
% recovery : 96
Time Sampled : 5:35
Gallons per Well Casing Volume : 12.66
Gallons Purged : 30
Well Casing Volume Purged : 2.4
Approximate Pumping Rate (gpm) : 0.6

WELL PURGE DATA SHEET

Project Name: Exxon 7-3006Job No. 130006.01Date: March 11, 1993Page 1 of 1Well No. MW-11Time Started 11:00

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
11:00	Start purging MW-11				
11:00	0	69.2	7.71	8.50	NM
11:08	16	68.9	7.71	8.20	NM
11:16	31	69.2	7.72	7.70	NM
11:18	34	Dry			
11:54	47	68.6	7.86	7.70	NM
11:58	54	Dry			
11:58	Stop purging MW-11				

Notes:

NM : Not Measured
Well Diameter (inches) : 4
Depth to Bottom (feet) : 30.00
Depth to Water - initial (feet) : 6.40
Depth to Water - final (feet) : 9.50
% recovery : 87
Time Sampled : 2:45
Gallons per Well Casing Volume : 15.41
Gallons Purged : 54
Well Casing Volume Purged : 3.5
Approximate Pumping Rate (gpm) : 0.9

WELL PURGE DATA SHEET

Project Name: Exxon 7-3006

Job No. 130006.01

Date: March 11, 1993

Page 1 of 1

Well No. MW-14

Time Started 1:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
1:45	Start purging MW-14				
1:45	0	64.9	7.81	8.70	NM
1:49	8	64.7	7.77	8.40	NM
1:53	15	65.5	7.76	8.80	NM
1:54	17	Dry			
2:28	23	66.1	7.78	8.80	NM
2:28	23	Dry			
2:28	Stop purging MW-14				

Notes:

NM : Not Measured

Well Diameter (inches) : 4

Depth to Bottom (feet) : 17.25

Depth to Water - initial (feet) (3/10/93) : 5.55

Depth to Water - final (feet) : 7.45

% recovery : 84

Time Sampled : 5:15

Gallons per Well Casing Volume : 7.64

Gallons Purged : 23

Well Casing Volume Purged : 3.0

Approximate Pumping Rate (gpm) : 0.5

APPENDIX B

**LABORATORY ANALYSIS REPORTS
AND CHAIN OF CUSTODY RECORDS**

March 29, 1993

APR 9 1993

Ms. Jeanne Buckthal
Resna Industries
3315 Almaden Expwy., Ste. 34
San Jose, CA 95118

RE: PACE Project No. 430312.519
Client Reference: Exxon 7-3006 (EE)

Dear Ms. Buckthal:

Enclosed is the report of laboratory analyses for samples received March 12 - 16, 1993.

Please note PACE received a request to run your sample W-5.5 MW14 (PACE #70 0027349) for stoddard solvent after the sample had been batched and extracted for diesel (as had been indicated on the chain of custody for this sample). The laboratory ran additional QC for this sample on 3/25, and recovered 48% of the stoddard solvent spike on the LCS and 52% of the spike on the LCS duplicate.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Stephanie Matzo
Stephanie Matzo
Project Manager

Enclosures

Ms. Jeanne Buckthal
 Page 7

March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0027349
 Date Collected: 03/11/93
 Date Received: 03/16/93
 Client Sample ID: W-5.5 MW14

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT): 03/18/93
 Purgeable Fuels, as Gasoline (EPA 8015M) ug/L 50 410 03/18/93

PURGEABLE AROMATICS (BTXE BY EPA 8020M): 03/18/93

Benzene ug/L 0.5 ND 03/18/93

Toluene ug/L 0.5 ND 03/18/93

Ethylbenzene ug/L 0.5 0.9 03/18/93

Xylenes, Total ug/L 0.5 1.6 03/18/93

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Stoddard Solvent mg/L 0.25 ND 03/25/93
 Date Extracted 03/18/93

REPORT OF LABORATORY ANALYSIS

Resna Industries
3315 Almaden Expwy., Ste. 34
San Jose, CA 95118

March 29, 1993
PACE Project Number: 430312519

Attn: Ms. Jeanne Buckthal

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0026920
Date Collected:	03/11/93
Date Received:	03/12/93
Client Sample ID:	W-5.0-MW7

Parameter	Units	MDL	DATE ANALYZED
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	0.016	03/19/93
Calcium (EPA Method 6010/200.7, ICP)	mg/L	0.05	28	03/17/93
Chloride (Argentometric, SM 407A)	mg/L	1	11	03/22/93
Hardness, Total, as CaCO ₃	mg/L	10	260	03/17/93
Iron (EPA Method 6010/200.7, ICP)	mg/L	0.02	1.6	03/17/93
Magnesium (EPA Method 6010/200.7, ICP)	mg/L	0.05	47	03/17/93
Manganese (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.4	03/17/93
Mercury (EPA Method 7470, Cold Vapor AA)	mg/L	0.0002	0.0004	03/16/93
Selenium (EPA Method 7740, Furnace AAS)	mg/L	0.005	ND	03/18/93
Sodium (EPA Method 6010, ICP)	mg/L	1.0	63	03/17/93
Solids, Total Dissolved (EPA 160.1)	mg/L	5	400	03/19/93
Specific Conductance, umhos/cm @ 25°C	umhos/cm	3.0	600	03/26/93
Sulfate (EPA 375.4)	mg/L	1	ND	03/25/93
pH (Units at 25 Degrees Celsius)	Units	0.1	7.0	03/15/93

ORGANIC LEAD IN WATER; DHS METHOD #338

Organic Lead, as Pb	mg/L	0.1	ND	03/25/93
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CYANIDES IN WATER

Cyanides, total	mg/L	0.005	ND	03/26/93
Date of Distillation, Cyanides	n/a		3/25/93	03/26/93

METALS IN AQUEOUS MATRIX, ICP SCAN

Antimony (EPA Method 6010/200.7, ICP)	mg/L	0.06	ND	03/17/93
Beryllium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	03/17/93
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	ND	03/17/93
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	03/17/93
Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	03/17/93
Lead (EPA Method 6010/200.7, ICP)	mg/L	0.1	ND	03/17/93
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND	03/17/93

Ms. Jeanne Buckthal
Page 2

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0026920
Date Collected:	03/11/93
Date Received:	03/12/93
Client Sample ID:	W-5.0-MW7

Parameter	Units	MDL	DATE ANALYZED
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INORGANIC ANALYSIS

METALS IN AQUEOUS MATRIX, ICP SCAN

Silver (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	03/17/93
Thallium (EPA Method 6010/200.7, ICP)	mg/L	0.2	ND	03/17/93
Zinc (EPA Method 6010/200.7, ICP)	mg/L	0.01	0.02	03/17/93

ALKALINITY SERIES:

Total Alkalinity, as CaCO ₃	mg/L	10	360	03/25/93
Bicarbonate Alkalinity, as CaCO ₃	mg/L	10	360	03/25/93
Carbonate Alkalinity, as CaCO ₃	mg/L	10	ND	03/25/93
Hydroxide Alkalinity, as CaCO ₃	mg/L	10	ND	03/25/93

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	3500	03/17/93
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PURGEABLE AROMATICS (BTXE BY EPA 8020M):

Benzene	ug/L	0.5	160	03/17/93
Toluene	ug/L	0.5	6.2	03/17/93
Ethylbenzene	ug/L	0.5	22	03/17/93
Xylenes, Total	ug/L	0.5	19	03/17/93

VOLATILE ORGANICS, EPA METHOD 624 GC/MS

Chloromethane	ug/L	10	ND	03/15/93
Vinyl Chloride	ug/L	10	ND	03/15/93
Bromomethane	ug/L	10	ND	03/15/93
Chloroethane	ug/L	10	ND	03/15/93
Trichlorofluoromethane	ug/L	5	ND	03/15/93
1,1,2-Trichlor-1,2,2-trifluoroethane	ug/L	5	ND	03/15/93
2-Butanone (MEK)	ug/L	50	ND	03/15/93
1,1-Dichloroethene	ug/L	5	ND	03/15/93
Carbon Disulfide	ug/L	5	ND	03/15/93
Acetone	ug/L	50	ND	03/15/93
Methylene Chloride	ug/L	10	ND	03/15/93
trans-1,2-Dichloroethene	ug/L	5	ND	03/15/93

Ms. Jeanne Buckthal
 Page 3

March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0026920
Date Collected:	03/11/93
Date Received:	03/12/93
Client Sample ID:	W-5.0-MW7

Parameter	Units	MDL	DATE ANALYZED
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ORGANIC ANALYSIS

VOLATILE ORGANICS, EPA METHOD 624 GC/MS

1,1-Dichloroethane	ug/L	5	ND	03/15/93
Chloroform	ug/L	5	ND	03/15/93
1,1,1-Trichloroethane	ug/L	5	ND	03/15/93
1,2-Dichloroethane	ug/L	5	ND	03/15/93
cis-1,2-Dichlorethane	ug/L	5	ND	03/15/93
Carbon Tetrachloride	ug/L	5	ND	03/15/93
Benzene	ug/L	5	180	03/15/93
1,2-Dichloropropane	ug/L	5	ND	03/15/93
Trichloroethene (TCE)	ug/L	5	ND	03/15/93
Bromodichloromethane	ug/L	5	ND	03/15/93
trans-1,3-Dichloropropene	ug/L	5	ND	03/15/93
4-Methyl-2-pentanone (MIBK)	ug/L	50	ND	03/15/93
Toluene	ug/L	5	6	03/15/93
cis-1,3-Dichloropropene	ug/L	5	ND	03/15/93
1,1,2-Trichloroethane	ug/L	5	ND	03/15/93
Dibromochloromethane	ug/L	5	ND	03/15/93
2-Hexanone	ug/L	50	ND	03/15/93
Tetrachloroethene	ug/L	5	ND	03/15/93
Chlorobenzene	ug/L	5	ND	03/15/93
Ethylbenzene	ug/L	5	16	03/15/93
Bromoform	ug/L	5	ND	03/15/93
Xylene(s) Total	ug/L	5	10	03/15/93
Styrene	ug/L	5	ND	03/15/93
1,1,2,2,-Tetrachloroethane	ug/L	5	ND	03/15/93
1,3-Dichlorobenzene	ug/L	5	ND	03/15/93
1,4-Dichlorobenzene	ug/L	5	ND	03/15/93
1,2-Dichlorobenzene	ug/L	5	ND	03/15/93
1,2-Dichloroethane-d4 (Surrog. Recovery)			99%	03/15/93
Toluene-d8 (Surrogate Recovery)			102%	03/15/93
4-Bromofluorobenzene (Surrog.Recovery)			96%	03/15/93

Ms. Jeanne Buckthal
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March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:		70 0026920	
Date Collected:		03/11/93	
Date Received:		03/12/93	
Client Sample ID:		W-5.0-MW7	
Parameter	Units	MDL	DATE ANALYZED
<u>ORGANIC ANALYSIS</u>			
OIL AND GREASE, SILICA GEL (LUFT)			
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND 03/17/93
Date Extracted			03/16/93
EXTRACTABLE FUELS EPA 3510/8015			
Extractable Fuels, as Diesel	mg/L	0.05	0.64 03/19/93
Date Extracted			03/16/93
EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)			
N-Nitrosodimethylamine	ug/L	10	ND 03/17/93
Bis(2-chloroethyl) ether	ug/L	10	ND 03/17/93
1,3-Dichlorobenzene	ug/L	10	ND 03/17/93
1,4-Dichlorobenzene	ug/L	10	ND 03/17/93
Benzyl Alcohol	ug/L	10	ND 03/17/93
1,2-Dichlorobenzene	ug/L	10	ND 03/17/93
Bis(2-chloroisopropyl) ether	ug/L	10	ND 03/17/93
N-Nitroso-di-n-propylamine	ug/L	10	ND 03/17/93
Hexachloroethane	ug/L	10	ND 03/17/93
Nitrobenzene	ug/L	10	ND 03/17/93
Bis(2-chloroethoxy)methane	ug/L	10	ND 03/17/93
1,2,4-Trichlorobenzene	ug/L	10	ND 03/17/93
Naphthalene	ug/L	10	27 03/17/93
Hexachlorobutadiene	ug/L	10	ND 03/17/93
2-Methylnaphthalene	ug/L	10	ND 03/17/93
Hexachlorocyclopentadiene	ug/L	10	ND 03/17/93
2-Chloronaphthalene	ug/L	10	ND 03/17/93
Dimethylphthalate	ug/L	10	ND 03/17/93
Acenaphthylene	ug/L	10	ND 03/17/93
2,6-Dinitrotoluene	ug/L	10	ND 03/17/93
Acenaphthene	ug/L	10	ND 03/17/93
Dibenzofuran	ug/L	10	ND 03/17/93
2,4-Dinitrotoluene	ug/L	10	ND 03/17/93
Diethyl phthalate	ug/L	10	ND 03/17/93
Fluorene	ug/L	10	ND 03/17/93

Ms. Jeanne Buckthal
Page 5

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0026920
Date Collected:	03/11/93
Date Received:	03/12/93
Client Sample ID:	W-5.0-MW7

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)

4-Chlorophenylphenyl ether	ug/L	10	ND	03/17/93
N-Nitrosodiphenyl amine	ug/L	10	ND	03/17/93
1,2-Diphenylhydrazine	ug/L	10	ND	03/17/93
4-Bromophenylphenyl ether	ug/L	10	ND	03/17/93
Hexachlorobenzene	ug/L	10	ND	03/17/93
Phenanthrene	ug/L	10	ND	03/17/93
Anthracene	ug/L	10	ND	03/17/93
Di-n-butyl phthalate	ug/L	10	ND	03/17/93
Fluoranthene	ug/L	10	ND	03/17/93
Pyrene	ug/L	10	ND	03/17/93
Butylbenzyl phthalate	ug/L	10	ND	03/17/93
Benzo(a)anthracene	ug/L	10	ND	03/17/93
3,3'-Dichlorobenzidine	ug/L	20	ND	03/17/93
Chrysene	ug/L	10	ND	03/17/93
Bis(2-ethylhexyl) phthalate	ug/L	10	ND	03/17/93
Di-n-octyl phthalate	ug/L	10	ND	03/17/93
Benzo(b)fluoranthene	ug/L	10	ND	03/17/93
Benzo(k)fluoranthene	ug/L	10	ND	03/17/93
Benzo(a)pyrene	ug/L	10	ND	03/17/93
Indeno(1,2,3-cd)pyrene	ug/L	10	ND	03/17/93
Dibenz(a,h)anthracene	ug/L	10	ND	03/17/93
Benzo(g,h,i)perylene	ug/L	10	ND	03/17/93
Phenol	ug/L	10	ND	03/17/93
2-Chlorophenol	ug/L	10	ND	03/17/93
2-Methylphenol	ug/L	10	ND	03/17/93
4-Methylphenol	ug/L	10	ND	03/17/93
2-Nitrophenol	ug/L	10	ND	03/17/93
2,4-Dimethylphenol	ug/L	10	ND	03/17/93
Benzoic Acid	ug/L	50	ND	03/17/93
2,4-Dichlorophenol	ug/L	10	ND	03/17/93
4-Chloro-3-methylphenol	ug/L	10	ND	03/17/93

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March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0026920
Date Collected:	03/11/93
Date Received:	03/12/93
Client Sample ID:	W-5.0-MW7

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)

2,4,6-Trichlorophenol	ug/L	10	ND	03/17/93
2,4,5-Trichlorophenol	ug/L	10	ND	03/17/93
2,4-Dinitrophenol	ug/L	50	ND	03/17/93
4-Nitrophenol	ug/L	50	ND	03/17/93
4,6-Dinitro-2-methylphenol	ug/L	50	ND	03/17/93
Pentachlorophenol	ug/L	50	ND	03/17/93

Nitrobenzene-d5 (Surrogate Recovery)	59%	03/17/93
2-Fluorobiphenyl (Surrogate Recovery)	62%	03/17/93
Terphenyl-d14 (Surrogate Recovery)	46%	03/17/93
2-Fluorophenol (Surrogate Recovery)	16%	03/17/93
Phenol-d6 (Surrogate Recovery)	14%	03/17/93
2,4,6-Tribromophenol (Surrogate Recovery)	32%	03/17/93

Date Extracted	03/16/93
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March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0027357
Date Collected: 03/11/93
Date Received: 03/16/93
Client Sample ID: BB1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):		-	03/18/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	ND	03/18/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	03/18/93
Benzene	ug/L	0.5	03/18/93
Toluene	ug/L	0.5	03/18/93
Ethylbenzene	ug/L	0.5	03/18/93
Xylenes, Total	ug/L	0.5	ND
			03/18/93

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March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0027365
Date Collected:	03/10/93
Date Received:	03/16/93
Client Sample ID:	W-5.5-MW9

Parameter	Units	MDL	DATE ANALYZED
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):	-	03/18/93		
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	ND	03/18/93	
PURGEABLE AROMATICS (BTXE BY EPA 8020M):	-	03/18/93		
Benzene	ug/L	0.5	ND	03/18/93
Toluene	ug/L	0.5	ND	03/18/93
Ethylbenzene	ug/L	0.5	ND	03/18/93
Xylenes, Total	ug/L	0.5	ND	03/18/93
EXTRACTABLE FUELS EPA 3510/8015				
Extractable Fuels, as Diesel	mg/L	0.05	ND	03/19/93
Date Extracted				03/17/93

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March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0027373
Date Collected:	03/10/93
Date Received:	03/16/93
Client Sample ID:	W-5.5-MW10

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/18/93
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PURGEABLE AROMATICS (BTXE BY EPA 8020M):

Benzene	ug/L	0.5	ND	03/18/93
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Toluene	ug/L	0.5	ND	03/18/93
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Ethylbenzene	ug/L	0.5	ND	03/18/93
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Xylenes, Total	ug/L	0.5	ND	03/18/93
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EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel	mg/L	0.05	ND	03/19/93
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Date Extracted				03/17/93
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REPORT OF LABORATORY ANALYSIS

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March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:
Date Collected:
Date Received:
Client Sample ID:

70 0027381
03/11/93
03/16/93
W-6.5-MW11

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M) ug/L 50 ND - 03/18/93

PURGEABLE AROMATICS (BTXE BY EPA 8020M):

Benzene ug/L 0.5 ND - 03/18/93

Toluene ug/L 0.5 ND - 03/18/93

Ethylbenzene ug/L 0.5 ND - 03/18/93

Xylenes, Total ug/L 0.5 ND - 03/18/93

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel mg/L 0.05 0.24 03/19/93

Date Extracted 03/18/93

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March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number:	70 0027390
Date Collected:	03/11/93
Date Received:	03/16/93
Client Sample ID:	W-6.0-MW1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M) ug/L

50 ND 03/18/93

PURGEABLE AROMATICS (BTXE BY EPA 8020M):

Benzene ug/L 0.5 ND 03/18/93

Toluene ug/L 0.5 ND 03/18/93

Ethylbenzene ug/L 0.5 ND 03/18/93

Xylenes, Total ug/L 0.5 ND 03/18/93

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel mg/L 0.05 0.14 03/19/93

Date Extracted 03/18/93

These data have been reviewed and are approved for release.

Darrell Cain

Darrell C. Cain
 Regional Director

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FOOTNOTES
for pages 1 through 12

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Arsenic (EPA Method 7060, Furnace AAS)
Batch: 70 19538
Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	0.050	92%	88%	4%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Chloride (Argentometric, SM 407A)
Batch: 70 19565
Samples: 70 0026920

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	Duplicate of	RPD
Chloride (Argentometric, SM 407A)	mg/L	1	ND	70 0024307	
Chloride (Argentometric, SM 407A)	mg/L	100		7300	7300 0%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Chloride (Argentometric, SM 407A)	mg/L	1	500	100%	100%	0%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Mercury (EPA Method 7470, Cold Vapor AA)
Batch: 70 19436
Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Mercury (EPA Method 7470, Cold Vapor AA	mg/L	0.0002	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Mercury (EPA Method 7470, Cold Vapor AA	mg/L	0.0002	0.01	96%	96%	0%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Organic Lead, as Pb
Batch: 70 19712
Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Organic Lead, as Pb	mg/L	0.1	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Organic Lead, as Pb	mg/L	0.1	1.25	112%	112%	0%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Selenium (EPA Method 7740, Furnace AAS)
Batch: 70 19503
Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Selenium (EPA Method 7740, Furnace AAS)	mg/L	0.005	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Selenium (EPA Method 7740, Furnace AAS)	mg/L	0.005	0.050	98%	98%	0%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Solids, Total Dissolved (EPA 160.1)
Batch: 70 19537
Samples: 70 0026920

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	Duplicate of	RPD
Solids, Total Dissolved (EPA 160.1)	mg/L	5	ND	70 0024307	0%
				17000	
				17000	

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QUALITY CONTROL DATA

March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Specific Conductance, umhos/cm @ 25oC
 Batch: 70 19696
 Samples: 70 0026920

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	Duplicate of	RPD
Specific Conductance, umhos/cm @ 25oC	umhos/cm	3.0	ND	70 0023750	0%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	RPD
Specific Conductance, umhos/cm @ 25oC	umhos/cm	3.0	1400	100%	0%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

Sulfate (EPA 375.4)
Batch: 70 19714
Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Sulfate (EPA 375.4)	mg/L	1	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Sulfate (EPA 375.4)	mg/L	1	20	100%	100%	0%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

pH (Units at 25 Degrees Celsius)
Batch: 70 19409
Samples: 70 0026920

SAMPLE DUPLICATE:

Parameter	Units	MDL	700027055	Duplicate of	RPD
pH (Units at 25 Degrees Celsius)	Units	0.1	7.3	70 0027055	0%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	RPD
pH (Units at 25 Degrees Celsius)	Units	0.1	7.0	100%	0%

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QUALITY CONTROL DATA

March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

ALKALINITY SERIES:

Batch: 70 19674
 Samples: 70 0026920

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	700023750	Duplicate of 70 0023750	RPD
Total Alkalinity, as CaCO ₃	mg/L	10	ND	250	240	4%
Bicarbonate Alkalinity, as CaCO ₃	mg/L	10	ND	250	240	4%
Carbonate Alkalinity, as CaCO ₃	mg/L	10	ND	ND	ND	NC
Hydroxide Alkalinity, as CaCO ₃	mg/L	10	ND	ND	ND	NC

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Total Alkalinity, as CaCO ₃	mg/L	10	236	100%	100%	0%

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QUALITY CONTROL DATA

March 29, 1993

PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

CAM METALS IN AQUEOUS MATRIX, ICP SCAN

Batch: 70 19477

Samples: 70 0026920

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
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INDIVIDUAL PARAMETERS

Boron (EPA Method 6010/200.7, ICP)	mg/L	0.1	ND
Calcium (EPA Method 6010/200.7, ICP)	mg/L	0.05	ND
Iron (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND
Magnesium (EPA Method 6010/200.7, ICP)	mg/L	0.05	ND
Manganese (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND
Potassium (EPA Method 6010, ICP)	mg/L	0.5	ND

CAM METALS IN AQUEOUS MATRIX, ICP SCAN

Antimony (EPA Method 6010/200.7, ICP)	mg/L	0.06	ND
Barium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND
Beryllium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	ND
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND
Cobalt (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND

Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND
Lead (EPA Method 6010/200.7, ICP)	mg/L	0.1	ND
Molybdenum (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND
Thallium (EPA Method 6010/200.7, ICP)	mg/L	0.2	ND

Vanadium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND
Zinc (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
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INDIVIDUAL PARAMETERS

Boron (EPA Method 6010/200.7, ICP)	mg/L	0.1	1.00	93%	95%	2%
Calcium (EPA Method 6010/200.7, ICP)	mg/L	0.05	10.0	107%	109%	1%
Iron (EPA Method 6010/200.7, ICP)	mg/L	0.02	10.0	100%	102%	1%
Magnesium (EPA Method 6010/200.7, ICP)	mg/L	0.05	1.00	104%	107%	2%

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

CAM METALS IN AQUEOUS MATRIX, ICP SCAN
Batch: 70 19477
Samples: 70 0026920

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
INDIVIDUAL PARAMETERS						
Manganese (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	103%	105%	1%
Potassium (EPA Method 6010, ICP)	mg/L	0.5	10.0	99%	100%	1%
CAM METALS IN AQUEOUS MATRIX, ICP SCAN						
Antimony (EPA Method 6010/200.7, ICP)	mg/L	0.06	1.00	107%	105%	1%
Barium (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	109%	111%	1%
Beryllium (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	98%	99%	1%
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	1.00	109%	111%	1%
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	93%	94%	1%
Cobalt (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	108%	109%	0%
Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	100%	101%	0%
Lead (EPA Method 6010/200.7, ICP)	mg/L	0.1	1.00	115%	116%	0%
Molybdenum (EPA Method 6010/200.7, ICP)	mg/L	0.02	1.00	119%	120%	0%
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.02	1.00	99%	102%	2%
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	92%	91%	1%
Thallium (EPA Method 6010/200.7, ICP)	mg/L	0.2	1.00	102%	101%	0%
Vanadium (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	99%	100%	1%
Zinc (EPA Method 6010/200.7, ICP)	mg/L	0.01	1.00	112%	114%	1%

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

CYANIDES IN WATER

Batch: 70 19697

Samples: 70 0026920

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method	Blank	700026920	W-5.0-MW7	Duplicate of	70 0026920	RPD
Cyanides, total	mg/L	0.005	ND	ND	ND	ND	ND	ND	NC
Date of Distillation, Cyanides	n/a		3/25/93	3/25/93		3/25/93		3/25/93	

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	91%	RPD
Cyanides, total	mg/L	0.005	0.1	0.1	91%	91%	4%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

EXTRACTABLE FUELS EPA 3510/8015
Batch: 70 19544
Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method
Extractable Fuels, as Diesel	mg/L	0.05	Blank
			ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Extractable Fuels, as Diesel	mg/L	0.05	1.00	68%	63%	7%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

EXTRACTABLE FUELS EPA 3510/8015
Batch: 70 19576
Samples: 70 0027365, 70 0027373

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Extractable Fuels, as Diesel	mg/L	0.05	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Extractable Fuels, as Diesel	mg/L	0.05	1.00	81%	85%	4%

REPORT OF LABORATORY ANALYSISMs. Jeanne Buckthal
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PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

EXTRACTABLE FUELS EPA 3510/8015

Batch: 70 19578

Samples: 70 0027349, 70 0027381, 70 0027390

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Extractable Fuels, as Diesel	mg/L	0.05	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Extractable Fuels, as Diesel	mg/L	0.05	1.00	83%	86%	3%

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)

Batch: 70 19478

Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
N-Nitrosodimethylamine	ug/L	10	ND
Bis(2-chloroethyl) ether	ug/L	10	ND
1,3-Dichlorobenzene	ug/L	10	ND
1,4-Dichlorobenzene	ug/L	10	ND
Benzyl Alcohol	ug/L	10	ND
1,2-Dichlorobenzene	ug/L	10	ND
Bis(2-chloroisopropyl) ether	ug/L	10	ND
N-Nitroso-di-n-propylamine	ug/L	10	ND
Hexachloroethane	ug/L	10	ND
Nitrobenzene	ug/L	10	ND
Bis(2-chloroethoxy)methane	ug/L	10	ND
1,2,4-Trichlorobenzene	ug/L	10	ND
Naphthalene	ug/L	10	ND
Hexachlorobutadiene	ug/L	10	ND
2-Methylnaphthalene	ug/L	10	ND
Hexachlorocyclopentadiene	ug/L	10	ND
2-Chloronaphthalene	ug/L	10	ND
Dimethylphthalate	ug/L	10	ND
Acenaphthylene	ug/L	10	ND
2,6-Dinitrotoluene	ug/L	10	ND
Acenaphthene	ug/L	10	ND
Dibenzofuran	ug/L	10	ND
2,4-Dinitrotoluene	ug/L	10	ND
Diethyl phthalate	ug/L	10	ND
Fluorene	ug/L	10	ND
4-Chlorophenylphenyl ether	ug/L	10	ND
N-Nitrosodiphenyl amine	ug/L	10	ND
1,2-Diphenylhydrazine	ug/L	10	ND
4-Bromophenylphenyl ether	ug/L	10	ND
Hexachlorobenzene	ug/L	10	ND
Phenanthrene	ug/L	10	ND
Anthracene	ug/L	10	ND

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QUALITY CONTROL DATA

March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)

Batch: 70 19478

Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Di-n-butyl phthalate	ug/L	10	ND
Fluoranthene	ug/L	10	ND
Pyrene	ug/L	10	ND
Butylbenzyl phthalate	ug/L	10	ND
Benzo(a)anthracene	ug/L	10	ND
3,3'-Dichlorobenzidine	ug/L	20	ND
Chrysene	ug/L	10	ND
Bis(2-ethylhexyl) phthalate	ug/L	10	ND
Di-n-octyl phthalate	ug/L	10	ND
Benzo(b)fluoranthene	ug/L	10	ND
Benzo(k)fluoranthene	ug/L	10	ND
Benzo(a)pyrene	ug/L	10	ND
Indeno(1,2,3-cd)pyrene	ug/L	10	ND
Dibenz(a,h)anthracene	ug/L	10	ND
Benzo(g,h,i)perylene	ug/L	10	ND
Phenol	ug/L	10	ND
2-Chlorophenol	ug/L	10	ND
2-Methylphenol	ug/L	10	ND
4-Methylphenol	ug/L	10	ND
2-Nitrophenol	ug/L	10	ND
2,4-Dimethylphenol	ug/L	10	ND
Benzoic Acid	ug/L	50	ND
2,4-Dichlorophenol	ug/L	10	ND
4-Chloro-3-methylphenol	ug/L	10	ND
2,4,6-Trichlorophenol	ug/L	10	ND
2,4,5-Trichlorophenol	ug/L	10	ND
2,4-Dinitrophenol	ug/L	50	ND
4-Nitrophenol	ug/L	50	ND
4,6-Dinitro-2-methylphenol	ug/L	50	ND
Pentachlorophenol	ug/L	50	ND
Nitrobenzene-d5 (Surrogate Recovery)			69%
2-Fluorobiphenyl (Surrogate Recovery)			63%

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)

Batch: 70 19478

Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Terphenyl-d14 (Surrogate Recovery)			33%
2-Fluorophenol (Surrogate Recovery)			32%
Phenol-d6 (Surrogate Recovery)			24%
2,4,6-Tribromophenol (Surrogate Recovery)			70%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
I,4-Dichlorobenzene	ug/L	10	100	71%	64%	10%
N-Nitroso-di-n-propylamine	ug/L	10	100	78%	69%	12%
1,2,4-Trichlorobenzene	ug/L	10	100	73%	68%	7%
Acenaphthene	ug/L	10	100	72%	68%	5%
2,4-Dinitrotoluene	ug/L	10	100	73%	66%	10%
Pyrene	ug/L	10	100	58%	53%	9%
Phenol	ug/L	10	200	27%	26%	3%
2-Chlorophenol	ug/L	10	200	67%	68%	1%
4-Chloro-3-methylphenol	ug/L	10	200	67%	70%	4%
4-Nitrophenol	ug/L	50	200	38%	41%	7%
Pentachlorophenol	ug/L	50	200	96%	100%	4%

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

PURGEABLE FUELS AND AROMATICS

Batch: 70 19527
Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT): Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
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
Methyl tert-butyl ether	ug/L	5.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	102%	99%	2%
Benzene	ug/L	0.5	40.0	107%	110%	2%
Toluene	ug/L	0.5	40.0	105%	106%	0%
Ethylbenzene	ug/L	0.5	40.0	105%	103%	1%
Xylenes, Total	ug/L	0.5	120	107%	108%	0%
Methyl tert-butyl ether	ug/L	5.0	40.0	97%	98%	1%

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QUALITY CONTROL DATA

March 29, 1993
 PACE Project Number: 4303I2519

Client Reference: Exxon 7-3006 (EE)

PURGEABLE FUELS AND AROMATICS

Batch: 70 19535

Samples: 70 0027349, 70 0027357, 70 0027365, 70 0027373, 70 0027381
 70 0027390

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
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	Dupl	Recv	Recv
			Value			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	104%	102%	1%
Benzene	ug/L	0.5	100	107%	111%	3%
Toluene	ug/L	0.5	100	108%	113%	4%
Ethylbenzene	ug/L	0.5	100	107%	111%	3%
Xylenes, Total	ug/L	0.5	300	105%	110%	4%

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

TOTAL OIL AND GREASE (SM 5520)

Batch: 70 19465

Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Total Oil and Grease (Freon Extractable)	mg/L	1.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv 95%	Dupl Recv 95%	RPD 0%
Total Oil and Grease (Freon Extractable)	mg/L	1.0	20.0			

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QUALITY CONTROL DATA

March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

VOLATILE ORGANICS, EPA METHOD 624 GC/MS

Batch: 70 19417

Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Chloromethane	ug/L	10	ND
Vinyl Chloride	ug/L	10	ND
Bromomethane	ug/L	10	ND
Chloroethane	ug/L	10	ND
Trichlorofluoromethane	ug/L	5	ND
1,1,2-Trichlor-1,2,2-trifluoroethane	ug/L	5	ND
2-Butanone (MEK)	ug/L	50	ND
1,1-Dichloroethene	ug/L	5	ND
Carbon Disulfide	ug/L	5	ND
Acetone	ug/L	50	ND
Methylene Chloride	ug/L	10	ND
trans-1,2-Dichloroethene	ug/L	5	ND
1,1-Dichloroethane	ug/L	5	ND
Chloroform	ug/L	5	ND
1,1,1-Trichloroethane	ug/L	5	ND
1,2-Dichloroethane	ug/L	5	ND
cis-1,2-Dichlorethene	ug/L	5	ND
Carbon Tetrachloride	ug/L	5	ND
Benzene	ug/L	5	ND
1,2-Dichloropropane	ug/L	5	ND
Trichloroethene (TCE)	ug/L	5	ND
Bromodichloromethane	ug/L	5	ND
trans-1,3-Dichloropropene	ug/L	5	ND
4-Methyl-2-pentanone (MIBK)	ug/L	50	ND
Toluene	ug/L	5	ND
cis-1,3-Dichloropropene	ug/L	5	ND
1,1,2-Trichloroethane	ug/L	5	ND
Dibromochloromethane	ug/L	5	ND
2-Hexanone	ug/L	50	ND
Tetrachloroethene	ug/L	5	ND
Chlorobenzene	ug/L	5	ND
Ethylbenzene	ug/L	5	ND

Ms. Jeanne Buckthal
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QUALITY CONTROL DATA

March 29, 1993
 PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

VOLATILE ORGANICS, EPA METHOD 624 GC/MS

Batch: 70 19417

Samples: 70 0026920

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Bromoform	ug/L	5	ND
Xylene(s) Total	ug/L	5	ND
Styrene	ug/L	5	ND
1,1,2,2,-Tetrachloroethane	ug/L	5	ND
1,3-Dichlorobenzene	ug/L	5	ND
1,4-Dichlorobenzene	ug/L	5	ND
1,2-Dichlorobenzene	ug/L	5	ND
1,2-Dichloroethane-d4 (Surrog. Recovery)			95%
Toluene-d8 (Surrogate Recovery)			96%
4-Bromofluorobenzene (Surrog.Recovery)			93%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Dupl Recv	Dupl Recv	RPD
1,1-Dichloroethene	ug/L	5	50	78%	78%	0%
Benzene	ug/L	5	50	86%	84%	2%
Trichloroethene (TCE)	ug/L	5	50	82%	82%	0%
Toluene	ug/L	5	50	86%	86%	0%
Chlorobenzene	ug/L	5	50	84%	84%	0%

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FOOTNOTES
for pages 14 through 37

March 29, 1993
PACE Project Number: 430312519

Client Reference: Exxon 7-3006 (EE)

MDL Method Detection Limit
NC No calculation due to value below detection limit.
ND Not detected at or above the MDL.
RPD Relative Percent Difference

CHAIN OF CUSTODY



Novato, CA, 11 Digital Drive, 94949
(415) 883-6100



Huntington Beach, CA, 5702 Bolsa Avenue, 92649
(714) 892-2565

Consultant's Name: Rena Industries

Page 1 of 2

Address: 42501 Albiae st. Fremont, CA 94538

Site Location: 720 Highst Oakland

Project #:

Consultant Project #: 130006 01

Consultant Work Release #: 09300303-(H2O)

Project Contact: Jeanne Buckthal

Phone #: 1-800-926-0815 Fax #:

Laboratory Work Release #: 09300303-CS#1(S1)

EXXON Contact: Marta Avernsky

EE C&M

Phone #: Fax #:

EXXON RAS #: 7-3006

Sampled by (print): Robin A. Adair

Sampler's Signature: Robin A. Adair

Shipment Method: Cooler

Air Bill #:

Shipment Date:

TAT: 24 hr 48 hr 72 hr Standard (5 day)

ANALYSIS REQUIRED

Sample Condition as Received
Temperature °C: _____

Cooler #: _____

Inbound Seal Yes No

Outbound Seal Yes No

Sample Received

COMMENTS

Sample Description	Collection Date/Time	Matrix Soil/Water	Prsv	# of Cont	PACE Sample #	TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1	for soil sample results, see PACE Job # 430310.501
P1-A	3/10/93	Soil		1		✓	✓		
P1-B	3:30PM			1		✓	✓		
P2-A				1		✓	✓		
P2-B	↓	↓		1		✓	✓		
B31	3/10/93 5:00	H2O	HOL	2	2738.7	✓			
J-5.5-MW9	5:45		HOL	3	36.5	✓	✓		
J-5.5-MW10	5:35		HOL	3	37.3	✓	✓		
J-6.5-MW11	3/11/93 2:45		HOL	3	38.1	✓	✓		
J-6.0-MW1	3/11/93 3:00		HOL	3	39.0	✓	✓		

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments:
<u>Robin A. Adair Rena</u>	3/11/93	7:15 PM	<u>Ed Bettis Pace</u>	3/12	4:00	<u>3/13/93 did not receive any or these samples. Client will send to us. but</u>
<u>Mark Pace</u>	3/12	12:30	<u>Mark Pace</u>	3/12	8:30	<u>3/16/93 Client sent samples.</u>
<u>Ma. BAE</u>			<u>Sherry Pace</u>	3/16	10:00	<u>PIA, PIB, P2-A, P2-B was made a superate project per SAM (SAC)</u>

