EXXON COMPANY, U.S.A.
P.O. BOX 4032 . CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING
MARLA D. GUENSLER
SENIOR ENVIRONMENTAL ENGINEER
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August 3, 1994

Ms. Juliet Shin
Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

RE: Exxon RAS #7-0104, 1725 Park Street, Alameda, CA

Dear Ms. Shin:

Attached for your review and comment is a report entitled **Letter Report Quarterly Groundwater Monitoring and Remediation Activities** for the above referenced site. This report, prepared by RESNA Industries, Inc., of San Jose, California, details the results of the Second Quarter 1994 groundwater monitoring and remediation events.

If you have any questions or comments, or require additional information, please contact me at the above listed phone number.

Sincerely,

Marla D. Guensler

Marla D. Guensler
Senior Environmental Engineer

MDG/mdg

enclosure: RESNA Report dated Second Quarter 1994

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

RESNA
Working to Restore Nature

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LETTER REPORT
QUARTERLY GROUNDWATER MONITORING AND REMEDIATION ACTIVITIES
Second Quarter 1994

Exxon Station 7-0104
1725 Park Street
Alameda, California

170077.20

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July 15, 1994

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

Subject: Letter Report, Quarterly Groundwater Monitoring and Remediation Activities
Second Quarter 1994
Exxon Station 7-0104
1725 Park Street, Alameda, California

Ms. Guensler:

As requested by Exxon Company U.S.A. (Exxon), this letter report summarizes the methods and results of the second quarter 1994 groundwater monitoring and remediation activities performed by RESNA Industries Inc. (RESNA) at the above-referenced site (Plate 1, Site Vicinity Map). Remediation activities conducted between March 30 and June 30, 1994, are addressed in this report.

The objectives of groundwater monitoring are to evaluate: groundwater elevations, gradient and flow direction; the presence and thickness of any liquid-phase hydrocarbons; and the distribution of dissolved gasoline hydrocarbons in groundwater.

The objectives of the remediation activities are to operate, maintain, and evaluate the performance of the groundwater remediation system. Remediation activities at this site currently consist of pumping groundwater from extraction wells EW-1 through EW-5 to reduce gasoline hydrocarbon concentrations in the local groundwater. Extracted groundwater, from the above mentioned wells, is pumped through subsurface collection piping to an aboveground treatment system located east of the station building. Extracted groundwater is then passed through a bioreactor (used as a holding tank), two sand media filters in parallel, a bag filter, and three liquid-phase virgin carbon adsorption canisters for treatment. After treatment, groundwater is discharged into the sanitary sewer under permit from the East Bay Municipal Utility District (EBMUD).

QUARTERLY GROUNDWATER MONITORING AND SAMPLING

Groundwater Monitoring and Sampling

On April 4 and 5, 1994, RESNA measured the depth to water (DTW) in monitoring wells MW-1 through MW-10, and extraction wells EW-1, EW-3 through EW-5 and collected groundwater samples from selected wells for laboratory analysis. Extraction well EW-2 was not monitored because the system went down before measuring the DTW. Groundwater samples from the monitoring wells were subjectively analyzed for the presence of free-phase hydrocarbons. Extraction wells EW-1 through EW-5 were not purged or subjectively monitored because they are coupled to the groundwater extraction system. RESNA's groundwater sampling protocol and well purge data sheets are in Appendix A, Groundwater Sampling Protocol and Well Purge Data Sheets.

Sheen was observed in the subjective sample collected from well MW-2, and well MW-5 contained less than 0.01 foot of free-phase hydrocarbons. Consequently, groundwater samples were not collected from wells MW-2 and MW-5 for laboratory analysis per RESNA's groundwater sampling protocol (Appendix A). Based on April 4, 1994, depth to water measurements in wells MW-1 through MW-10, groundwater elevations at the site have decreased approximately 1.4 feet since last quarter (Plate 2, Groundwater Gradient Map). Historical and recent monitoring data are summarized in Table 1, Cumulative Groundwater Monitoring and Sampling Data.

Laboratory Analyses and Results

Groundwater samples were submitted to Pace Incorporated Laboratories (California State Certification Number 1282) in Novato, California, under chain of custody protocol. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), using the Environmental Protection Agency methods listed in the notes in Table 1. The laboratory analysis reports and chain of custody record are in Appendix B, Laboratory Analysis Reports and Chain of Custody Record.

Results of laboratory analysis of groundwater samples are shown on Plate 3, Chemical Concentrations In Groundwater, and are summarized in Table 1. Selected analytical results are summarized below if the concentrations detected are greater than the method detection limits (MDLs) for TPHg; the California Department of Health (DHS) maximum contaminant levels (MCLs) for benzene, ethylbenzene, or total xylenes; and the DHS drinking water action level (DWAL) for toluene, as listed in Table 1.

- The concentrations of TPHg were greater than the MDL in wells MW-1, MW-3, MW-4, MW-6, MW-7, MW-10, and EW-1 through EW-5.

- The concentrations of benzene were greater than the MCL in wells MW-1, MW-3, MW-4, MW-6, MW-7, and EW-1 through EW-5.

- The concentrations of toluene were greater than or equal to the DWAL in wells MW-4, MW-6, and EW-4.

GROUNDWATER REMEDIATION ACTIVITIES AND PERFORMANCE

The interim groundwater remediation system (system) was installed in February 1993, by Harding Lawson Associates to treat gasoline hydrocarbons in groundwater extracted from the first water-bearing zone beneath the site. The system consists of five pneumatic pumps in on-site extraction wells EW-1 through EW-5, collection piping, and associated instrumentation and controls. The original system consisted of treatment via a bioreactor with associated aeration, nutrient, and caustic supply system, and post-treatment via filtration, followed by carbon polishing using three 200-pound liquid-phase granular activated carbon canisters. Currently, however, because bioremediation appears to be impractical at this time due to low influent gasoline hydrocarbon concentrations, the bioreactor tank is used as a holding tank for groundwater influent containment prior to treatment by the three 200-pound liquid-phase virgin carbon canisters. The effluent groundwater is discharged to the sanitary sewer under current permit #502-66631 of EBMUD. A copy of the EBMUD wastewater discharge permit is included in Appendix C, Wastewater Discharge Permit. Gases generated in the bioreactor/holding tank are treated via two 200-pound vapor-phase carbon canisters. The use of bioremediation will be reevaluated if influent gasoline hydrocarbon concentrations increase in the future.

Sampling ports were installed at various locations on the treatment system and are designated as follows:

"influent"	Composite water sample from recovery wells
"bioreactor"	Water sample from the first compartment of the bioreactor
"A"	Effluent from bioreactor, influent to first granular activated carbon (GAC) canister
"B1"	Effluent from first GAC canister, influent to second GAC canister
"B2"	Effluent from second GAC canister, influent to third GAC canister
"C"	Effluent from third GAC canister to sanitary sewer

Monitoring and maintenance of the system was conducted by RESNA in accordance with the Operation and Maintenance Manual for the system. Beginning in May 1993, routine operation and maintenance of the system has been performed by RESNA twice a month. When system repairs or adjustments are necessary, additional site visits have been conducted.

In accordance with the self-monitoring program of EBMUD wastewater discharge permit, effective January 25, 1994, through January 24, 1995, the requirements for sampling have changed from monthly to quarterly and to include only samples from "Side Sewer no. 1" or "C" (effluent to sanitary sewer). However, RESNA is continuing to collect samples from locations "A", "B1", "B2", and "C" on a monthly basis to monitor the carbon efficiency. A copy of the EBMUD wastewater discharge permit is included in Appendix C.

Remediation Activities

The system operated continuously from March 30 to April 19, 1994, and was inoperative for the remainder of the quarter due to ~~of~~ an air compressor failure and apparent carbon breakthrough in all three canisters, as discussed later.

On May 4, 1994, repairs were made to the air compressor, however, the system was left inoperative pending the delivery of replacement carbon canisters. On May 17, 1994, as a result of a the continued increasing pressure differential across the sand filters and restricted water flow, as discussed in the first quarter 1994 report, the sand filter media was again inspected for signs of bio-fouling and attrition. On June 30, 1994, the sand media was replaced reducing the pressure differential to acceptable levels. Copies of RESNA's facility inspection logs are included in Appendix D, Facility Inspection Logs.

Analytical Results of the Interim Remediation System Water Samples

As part of monthly operations and maintenance conducted on the remediation system, water samples were collected from the system on April 11, 1994. Influent samples (composite water samples from the extraction wells) were not collected for analyses in the second quarter, 1994, because the bioreactor was not being used as part of the treatment during this quarter. However, individual water samples were collected from the extraction wells on April 4-5, 1994, and analyzed as part of the quarterly groundwater monitoring and sampling event, as summarized in Table 1.

Water samples collected from the system were submitted to Pace Incorporated Laboratories in Novato, California, under chain of custody protocol. The samples were analyzed for TPHg and BTEX using the methods listed in the notes in Table 2, Cumulative Analytical Results of Water Samples from the Remediation System. The chain of custody record and

laboratory analysis reports are in Appendix B. At the request of Exxon, additional "A" and "C" water samples were collected on April 11, 1994, to evaluate whether the system discharge was in compliance with the EBMUD wastewater discharge permit limits. These additional samples were analyzed for volatile organic compounds (VOCs) (collected quarterly), and extractable organic compounds (EOCs) (collected quarterly), using the methods listed in the notes in Table 2. Table 2 summarizes the results of laboratory analyses. Selected analytical results for the remediation system water samples are summarized below.

"A": The concentration of TPHg was 420 parts per billion (ppb), and BTEX ranged from not detected at the MDL to 19 ppb. VOCs were less than their respective MDLs, except for benzene (9 ppb), total xylenes (21 ppb), trichlorethene [TCE] (6 ppb), and tetrachloroethene (73 ppb). EOCs were less than their respective MDLs.

"B1": The concentration of TPHg was 53 ppb. Consequently, on April 19, 1994, the system was shut down until the first carbon canister could be changed-out as discussed below.

"B2": The concentration of TPHg was 120 ppb. Consequently, on April 19, 1994, the system was shut down until the second carbon canister could be changed-out as discussed below.

"C": TPHg and BTEX were not detected at their respective MDLs, however, 2-butanone (MEK) was detected at a concentration of 260 ppb. Consequently, on April 19, 1994, the system was shut down until the third carbon canister could be changed-out as discussed below. With the exception of MEK, VOCs and EOCs were not detected at their respective MDLs.

Discussion of Analytical Results of Interim Remediation System Water Samples

The detectable concentrations of TPHg in water samples "B1", "B2", and MEK in water samples "C" collected from the effluent of each carbon canister on April 11, 1994, indicate that breakthrough had occurred in all three canisters (Table 3, Groundwater Remediation System Operation and Performance Data). Based on carbon breakthrough calculations, it appeared that the second and third carbon canisters exhibited premature breakthrough apparently because of faulty carbon media. Consequently, on April 19, 1994, the system was shut down until all three carbon canisters could be replaced. On June 30, 1994, the replacement carbon was delivered. The remediation system will be restarted after the carbon has been sufficiently hydrated and the appropriate connections are completed.

Air Monitoring

Monthly air monitoring is performed in accordance with the guidelines of the Bay Area Air Quality Management District (BAAQMD) Permit to Operate (Condition ID #8674). Air monitoring was performed on the off-gases from the system using a photoionization detector (PID) at the influent to the first vapor-phase carbon canister (A1), in between the two carbon canisters, and at the effluent of the second carbon canister (A2). The field measurements of the air monitoring indicated concentrations below the BAAQMD allowable discharge conditions (10 parts per million by volume TPHg). The air monitoring data is summarized in Table 4, Cumulative Air Monitoring Data.

System Performance

Based on field measurements, which have been collected between March 30 and June 30, 1994, approximately 63,067 gallons of groundwater have been extracted, and approximately 0.035 gallons of TPHg have been removed. The average discharge rate to the sanitary sewer this quarter was approximately 2.19 gpm (3,153 gallons per day). In total, the system has extracted approximately 1,330,787 gallons, and treated 4.00 gallons of TPHg since system start-up in February 1993. A summary of the remediation system performance is presented in Table 3. Copies of RESNA's facility inspection logs are included in Appendix D.

LIMITATIONS

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.

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If you have any questions or comments regarding this report, please call (510) 440-3300.

Sincerely,
RESNA Industries Inc.

Mark G. Ebner

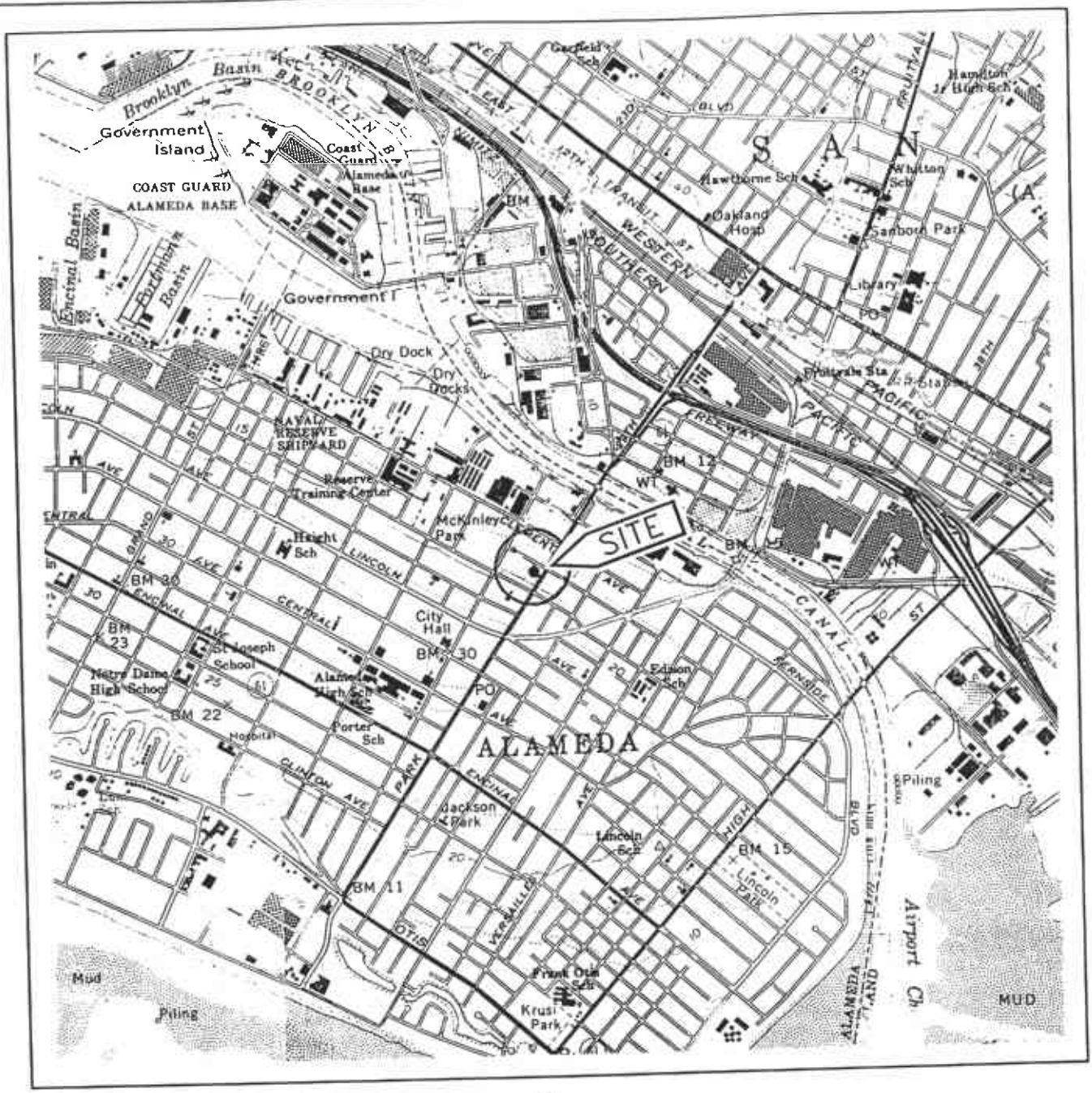
Mark A. Ebner → Adel Affas (602)-961-0777 Arizona 1-800-926-0804
Staff Engineer

Jim Schollard
Project Manager

(916) 253-2555
Russel W. Juncal, R.G. 3864
Chief Hydrogeologist

Enclosures:

Plate 1:	Site Vicinity Map
Plate 2:	Groundwater Gradient Map
Plate 3:	Chemical Concentrations in Groundwater
Table 1:	Cumulative Groundwater Monitoring and Sampling Data
Table 2:	Cumulative Analytical Results of Water Samples from the Remediation System
Table 3:	Groundwater Remediation System Operation and Performance Data
Table 4:	Cumulative Air Monitoring Data
Appendix A:	Groundwater Sampling Protocol and Well Purge Data Sheets
Appendix B:	Laboratory Analysis Reports and Chain of Custody Record
Appendix C:	Wastewater Discharge Permit
Appendix D:	Facility Inspection Logs



Source: U.S. Geological Survey
7.5–Minute Quadrangles
Oakland East/Oakland West, California
Photorevised 1980

N

Approximate Scale

2000 1000 0 2000

feet

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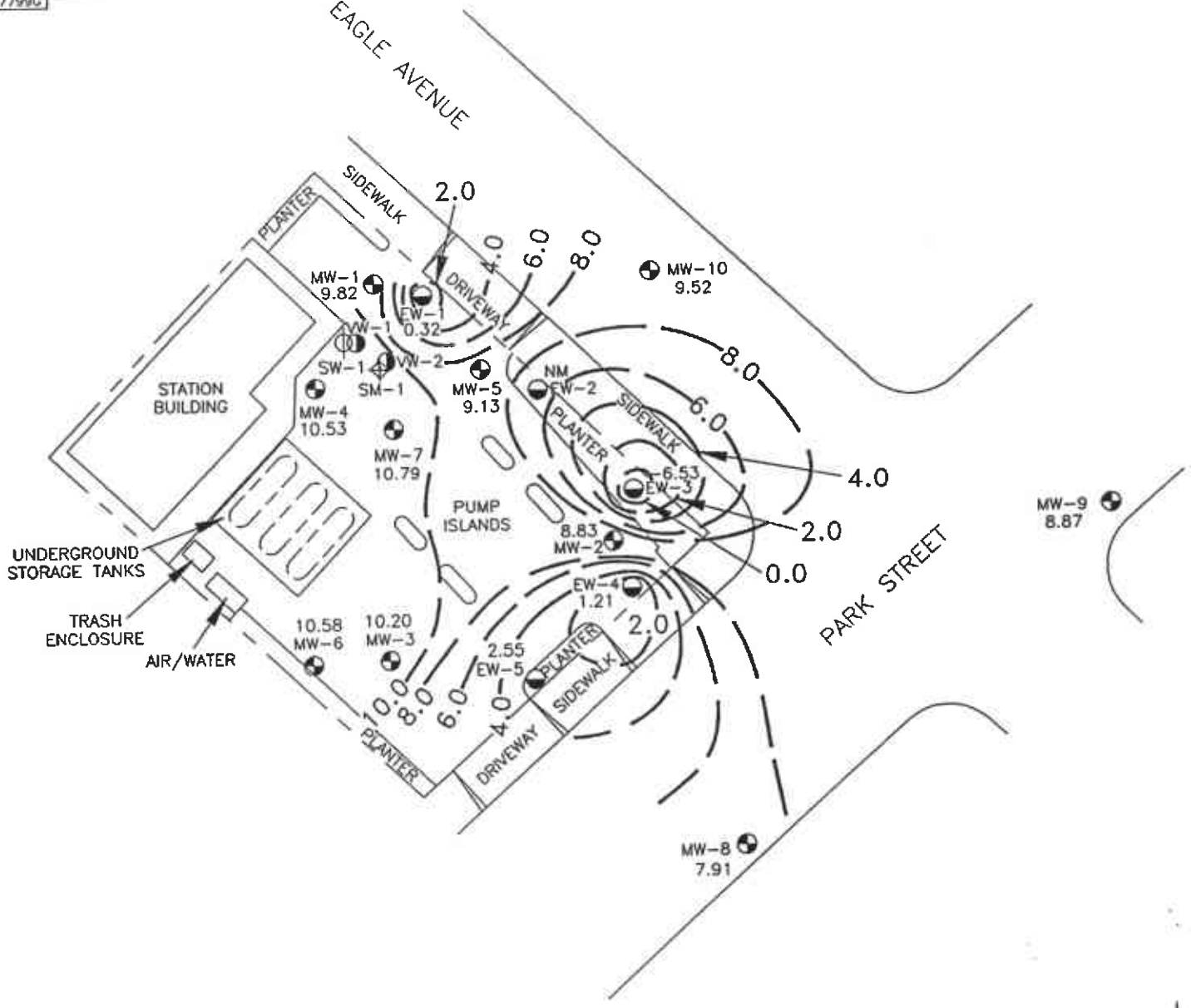
SITE VICINITY MAP
Exxon Station 7-0104
1725 Park Street
Alameda, California

PLATE
1

7007799G



EXPLANATION

MW-10 ◒ = Groundwater monitoring well

EW-5 ◒ = Groundwater extraction well

VW-2 ◑ = Vapor well

SW-1 ⊕ = Air-sparging well

SM-1 ⊕ = Sparge monitoring point

10.0 — = Line of equal elevation of groundwater in feet above mean sea level

10.79 = Elevation of groundwater in feet above mean sea level, (April 4, 1994)

NM = Not monitored

N

Approximate Scale

40 20 0 40

feet

Source: Modified from map supplied by Harding Lawson Associates, 1992; survey by Ron Archer, Civil Engineer, Inc., 1993

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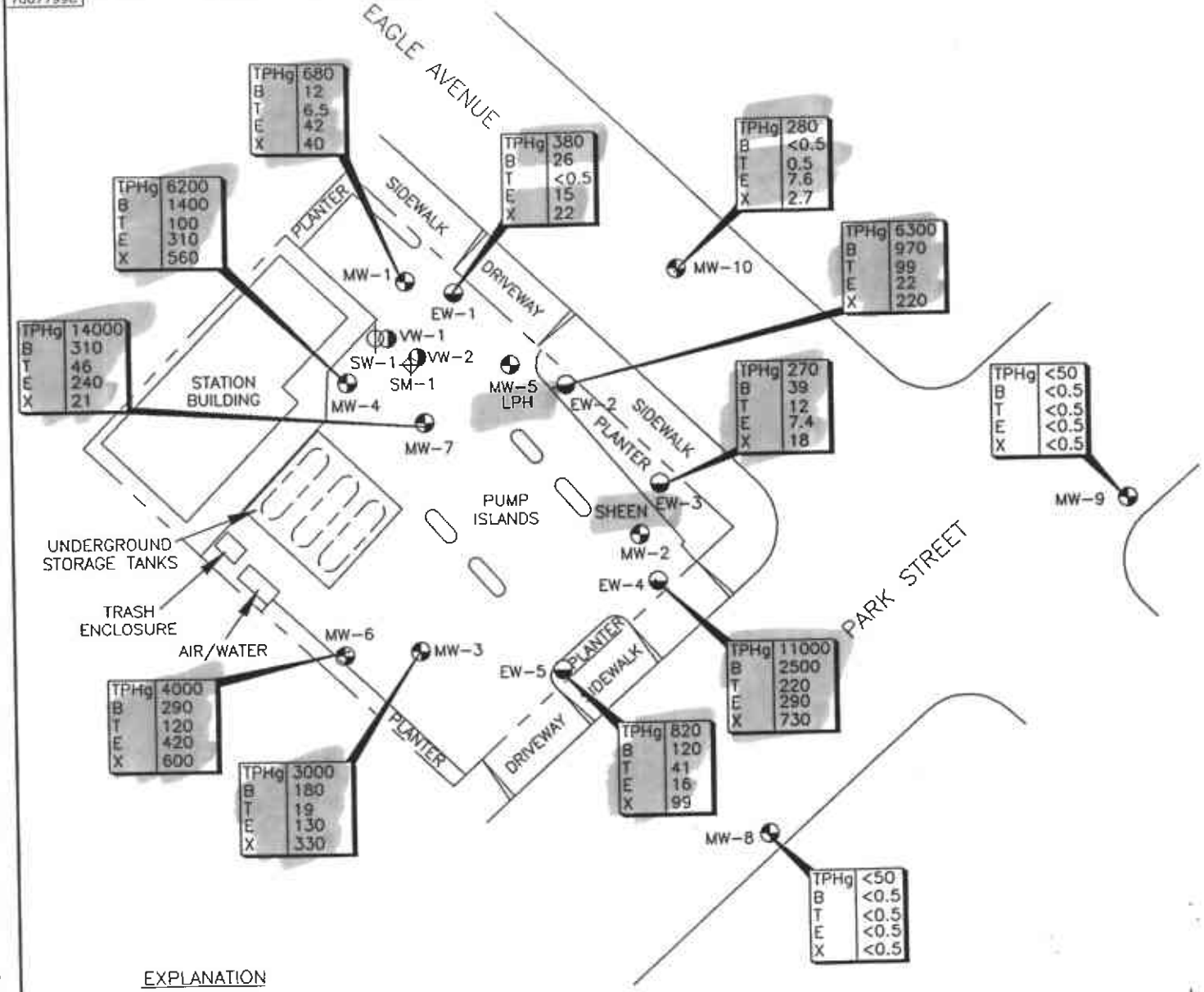
GROUNDWATER GRADIENT MAP
Exxon Station 7-0104
1725 Park Street
Alameda, California

PLATE 2

7007799C



EXPLANATION

MW-10 = Groundwater monitoring well

EW-5 = Groundwater extraction well

VW-2 = Vapor well

SW-1 = Air-sparging well

SM-1 = Sparge monitoring point

TPHg 11000 B 2500 T 220 E 290 X 730 = Concentrations of Petroleum Hydrocarbons in groundwater in parts per billion, April 4 and 5, 1994

LPH = Liquid phase hydrocarbons

N

Approximate Scale

40 20 0 40

feet

Source: Modified from map supplied by Harding Lawson Associates, 1992; survey by Ron Archer, Civil Engineer, Inc., 1993

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CHEMICAL CONCENTRATIONS IN GROUNDWATER
Exxon Station 7-0104
1725 Park Street
Alameda, California

PLATE 3

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
(Page 1 of 12)

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-1	06/07/88	NM	NM	---	27,000	5,000	77	1,100	2,700
(17.35)	06/10/88#	NLPH	6.35	11.00					
	01/17/89	NLPH	5.81	11.54	6,800	2,000	91	800	1,600
	01/24/89#	NLPH	5.16	12.19					
	06/01/89	sheen	6.27	11.08	1,700	170	6.9	13	230
	09/18/89	NLPH	7.11	10.24	2,100	9.0	53	18	130
	10/20/89#	NLPH	7.28	10.07					
	11/22/89#	NLPH	7.02	10.33					
	12/11/89	NLPH	6.60	10.75	5,800	200	42	290	330
	02/13/90#	NLPH	6.02	11.33					
	03/07/90a#	NM	NM	---					
	03/13/90	NLPH	5.91	11.44	2,300	430	14	16	220
	04/18/90#	NLPH	6.18	11.17					
	05/23/90#	NLPH	6.29	11.06					
	06/14/90	NLPH	6.19	11.28	32,000	1,400	19	<5	120
	08/21/90#	NLPH	7.03	10.32					
	09/19/90	NLPH	7.26	10.09	950	290	2.9	<0.5	27
	12/17/90	NLPH	6.75	10.60	2,100	550	13	350	110
	01/31/91#	NLPH	6.78	10.57					
	02/25/91#	NLPH	6.59	10.76					
	03/19/91	NLPH	5.85	11.50	1,400	900	45	390	150
	04/22/91#	sheen	5.72	11.63					
	05/17/91#	NLPH	6.00	11.35					
	07/24/91	NLPH	6.79	10.56	9,700	1,300	670	950	2,100
	09/10/91#	NLPH	7.25	10.10					
	09/23/91#	NLPH	7.33	10.02					
	10/21/91#	NLPH	7.53	9.82					
	10/22/91	NM	NM	---	540	220	1.8	110	7.8
	11/18/91#	NLPH	7.13	10.22					
	12/11/91#	NLPH	7.25	10.10					
	01/21/92	NLPH	6.54	10.81	1,800	650	23	300	64
	02/20/92#	NLPH	4.82	12.53					
	03/19/92#	NLPH	5.24	12.11					
	04/24/92	NLPH	5.71	11.64	4,900	1,600	78	660	250
	05/13/92#	NLPH	5.99	11.36					
	06/24/92#	NLPH	6.65	10.70					
	07/16/92	NLPH	6.72	10.63	3,400	1,000	11	550	100
	08/19/92#	NLPH	7.07	10.28					
	09/24/92	NLPH	7.36	9.99	3,700	1,300	21	330	<10
	02/05/93	NLPH	5.21	12.14	11,000	2,400	160	1,400	790
	04/30/93	NLPH	5.88	11.47	6,500	330	320	640	1,300
	05/14/93#	NLPH	7.22	10.13					

See notes on page 12 of 12.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
(Page 2 of 12)

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-1 cont.	07/15/93	NLPH	8.01	9.34	7,600	270	62	1,100	1,000
(17.35)	10/21/93#	NM	7.83	9.52					
	11/16/93	NLPH	8.69	8.66	840	18	1.4	72	17
	11/30/93#	NM	8.38	8.69					
	12/17/93#	NM	7.42	9.93					
	01/31/93#	NM	6.37	10.98					
	02/24-25/94	NLPH	6.23	10.84	810	15	9.0	98	58
	03/15/94	NM	7.07	10.28					
	04/04-05/94	NLPH	7.53	9.82	680	12	6.5	42	40
	05/27/94	NLPH	6.24	11.11					
	06/30/94	NLPH	6.83	10.42					
MW-2	06/07/88	---	---	---	110,000	12,000	12,000	2,100	12,000
(16.67)	06/10/88#	NLPH	6.20	10.47					
	01/17/89	NLPH	5.96	10.71	30,000	6,600	3,300	1,600	7,700
	01/24/89#	NLPH	5.04	11.63					
	06/01/89	sheen	6.32	10.35	8,700	330	280	680	1,200
	09/18/89	NLPH	6.73	9.94	17,000	580	280	570	220
	10/20/89#	NLPH	6.87	9.80					
	11/22/89#	NLPH	6.80	9.87					
	12/11/89	NLPH	6.57	10.10	32,000	1,000	850	310	1,200
	02/13/90#	NLPH	6.12	10.55					
	03/13/90	NLPH	6.02	10.65	39,000	3,500	1,500	2,100	3,900
	04/18/90#	NLPH	6.35	10.32					
	05/23/90#	NLPH	6.28	10.39					
	06/14/90	NLPH	6.14	10.53	34,000	3,800	730	1,600	3,900
	08/21/90#	NLPH	6.70	9.97					
	09/19/90	NLPH	6.84	9.83	63,000	670	180	390	1,000
	12/17/90	NLPH	6.46	10.21	140,000	3,700	2,500	3,000	8,300
	01/31/91#	sheen	6.66	10.01					
	02/25/91#	NLPH	6.50	10.17					
	03/19/91	sheen	5.76	10.91	48,000	4,500	1,600	2,100	5,500
	04/22/91#	NLPH	5.78	10.89					
	05/17/91#	NLPH	6.01	10.66					
	07/24/91	NLPH	6.43	10.24	49,000	3,500	2,200	2,000	6,400
	09/10/91#	NLPH	6.81	9.86					
	09/23/91#	NLPH	6.82	9.85					
	10/21/91#	NLPH	7.01	9.66					
	10/22/91	---	---	---	34,000	3,700	1,100	1,800	5,200
	11/18/91#	NLPH	6.66	10.01					
	12/11/91#	NLPH	6.85	9.82					
	01/21/92	NLPH	6.22	10.45	21,000	4,600	1,300	1,700	5,100

See notes on page 12 of 12.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
(Page 3 of 12)

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	..... >	<		parts per billion		..... >
MW-2 cont. (16.67)	02/20/92#	NLPH	5.28	11.39					
	03/19/92#	NLPH	5.34	11.33					
	04/24/92	sheen	5.75	10.92	36,000	5,000	970	2,300	5,200
	05/13/92#	NLPH	5.95	10.72					
	06/24/92#	NLPH	6.39	10.28					
	07/16/92	sheen	6.50	10.17	42,000	3,500	490	1,800	3,700
	08/19/92#	NLPH	6.69	9.98					
	09/24/92	sheen	6.74	9.93	26,000	3,600	670	1,700	3,300
	02/05/93#	0.01	5.56	11.10					
	04/30/93	sheen	5.78	10.89	280,000	11,000	6,500	5,500	160,000
	05/14/93#	NA	NA	---					
	07/15/93#	0.01	7.89	8.79					
	10/21/93#	NM	7.24	9.43					
	11/16/93#	0.02	8.37	8.32					
	11/30/93#	NM	7.93	8.74					
	12/17/93#	NM	7.74	8.93					
	01/31/94#	NM	6.32	10.35					
	02/24-25/94	NLPH	6.93	9.74	51,000	11,000	1,700	2,700	5,500
	03/15/94	NM	7.43	9.24					
	04/04-05/94#	sheen	7.84	8.83					
	05/27/94	sheen	6.11	10.56					
	06/30/94	NLPH	6.70	9.97					
MW-3 (17.11)	06/07/88	NM	NM	---	28,000	6,000	80	940	1,900
	06/10/88#	NLPH	6.05	11.06					
	01/17/89	NLPH	5.49	11.62	5,300	2,500	230	590	1,100
	01/24/89#	NLPH	5.38	11.73					
	06/01/89	NLPH	5.96	11.15	5,400	330	300	570	680
	09/18/89	NLPH	6.65	10.46	12,000	680	170	350	860
	10/20/89#	NLPH	6.88	10.23					
	11/22/89#	NLPH	6.74	10.37					
	12/11/89	NLPH	6.37	10.74	14,000	1,100	150	670	690
	02/13/90#	NLPH	5.58	11.53					
	03/13/90	NLPH	5.48	11.63	18,000	6,300	200	1,100	1,100
	04/18/90#	NLPH	6.01	11.10					
	05/23/90#	NLPH	6.14	10.97					
	06/14/90	NLPH	5.83	11.28	9,500	1,300	880	310	1,800
	08/21/90#	NLPH	6.67	10.44					
	09/19/90	NLPH	6.88	10.23	16,000	5,000	65	1,500	450
	12/17/90	NLPH	6.46	10.65	6,700	1,500	64	650	460
	01/31/91#	NLPH	6.24	10.87					
	02/25/91#	NLPH	6.18	10.93					

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-3 cont. (17.11)	03/19/91	NLPH	5.35	11.76	18,000	4,200	2,100	1,100	1,200
	04/22/91#	NLPH	5.72	11.39					
	05/17/91#	NLPH	5.55	11.56					
	07/24/91	NLPH	6.41	10.70	38,000	6,200	990	2,900	9,600
	09/10/91#	NLPH	6.80	10.31					
	09/23/91#	NLPH	6.80	10.31					
	10/21/91#	NLPH	7.09	10.02					
	10/22/91	NM	NM	---	23,000	3,400	150	2,500	4,400
	11/18/91#	NLPH	6.74	10.37					
	12/11/91#	NLPH	6.79	10.32					
	01/21/92	NLPH	6.16	10.95	13,000	2,700	30	1,800	740
	02/20/92#	NLPH	4.89	12.22					
	03/19/92#	NLPH	4.85	12.26					
	04/24/92	NLPH	5.28	11.83	17,000	4,200	170	1,600	600
	05/13/92#	NLPH	5.58	11.53					
	06/24/92#	NLPH	6.22	10.89					
	07/16/92	NLPH	6.36	10.75	11,000	2,700	230	1,100	570
	08/19/92#	NLPH	6.65	10.46					
	09/24/92	NLPH	6.93	10.18	7,100	2,000	44	1,000	220
	02/05/93	NLPH	4.71	12.40	13,000	3,600	110	1,300	430
	04/30/93	NLPH	5.46	11.65	13,000	1,600	370	1,600	1,800
	05/14/93#	NLPH	6.53	10.58					
	07/15/93	NLPH	7.28	9.83	2,100	310	15	230	58
	10/21/93#	NM	7.42	9.69					
	11/16/93	NLPH	8.02	9.09	4,000	400	400	120	490
	11/30/93	---	7.79	9.32	---	---	---	---	---
	12/17/93#	NM	7.13	9.98					
	01/31/94#	NM	6.32	10.79					
	02/24-25/94	NLPH	6.04	11.07	3,300	280	52	150	400
	03/15/94	NM	6.43	10.68					
	04/04-05/94	NLPH	6.91	10.20	3,000	180	19	130	330
	05/27/94	NLPH	5.91	11.20					
	06/30/94	NLPH	6.33	10.78					
MW-4 (17.34)	01/17/89	NLPH	5.36	11.98	19,000	1,000	1,500	360	2,200
	01/24/89#	NLPH	5.46	11.88					
	06/01/89	NLPH	6.01	11.33	3,600	180	240	63	810
	09/18/89	NLPH	6.80	10.54	6,000	290	200	28	510
	10/20/89#	NLPH	7.08	10.26					
	11/22/89#	NLPH	6.82	10.52					
	12/11/89	NLPH	6.37	10.97	13,000	750	910	510	1,200
	02/13/90#	NLPH	5.49	11.85					

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-4 cont.	03/07/90a#	NM	NM	---					
(17.34)	03/13/90	NLPH	5.44	11.90	12,000	1,500	1500	470	28,000
	04/18/90#	NLPH	6.14	11.20					
	05/23/90#	NLPH	6.22	11.12					
	06/14/90	NLPH	5.92	11.42	12,000	5,700	400	1,300	760
	08/21/90#	NLPH	6.83	10.51					
	09/19/90	NLPH	7.07	10.27	5,500	670	180	390	1,000
	12/17/90	NLPH	6.50	10.84	14,000	1,400	620	540	2,100
	01/31/91#	NLPH	6.66	10.68					
	02/25/91#	NLPH	6.21	11.13					
	03/19/91	NLPH	5.29	12.05	11,000	1,500	740	620	2,100
	04/22/91#	NLPH	5.26	12.08					
	05/17/91#	NLPH	5.60	11.74					
	07/24/91	NLPH	6.54	10.80	10,000	1,200	440	410	1,200
	09/10/91#	NLPH	7.04	10.30					
	09/23/91#	NLPH	7.14	10.20					
	10/21/91#	sheen	7.30	10.04					
	10/22/91	---	---	---	4,600	750	190	350	780
	11/18/91#	NLPH	6.90	10.44					
	12/11/91#	NLPH	7.01	10.33					
	01/21/92	NLPH	6.25	11.09	6,000	1,300	320	510	1,200
	02/20/92#	NLPH	4.79	12.55					
	03/19/92#	NLPH	4.70	12.64					
	04/24/92	sheen	5.25	12.09	11,000	1,700	630	710	1,600
	05/13/92#	sheen	5.62	11.72					
	06/24/92#	sheen	6.19	11.15					
	07/16/92	sheen	6.51	10.83	5,400	870	240	440	700
	08/19/92#	NLPH	6.85	10.49					
	09/24/92	NLPH	7.17	10.17	5,900	1,300	130	530	690
	02/05/93	NLPH	4.61	12.73	15,000	2,300	820	980	2,200
	04/30/93	NLPH	5.59	11.75	21,000	4,000	960	1,500	2,900
	05/14/93#	NLPH	6.50	10.84					
	07/15/93	NLPH	7.50	9.84	2,300	440	55	130	220
	10/21/93#	NM	7.77	9.57					
	11/16/93	NLPH	8.27	9.07	5,100	820	160	260	760
	11/30/93	---	8.02	9.32	---	---	---	---	---
	12/17/93#	NM	7.04	10.30					
	01/31/94#	NM	6.36	10.98					
	02/24-25/94	NLPH	5.78	11.56	9,800	2,200	190	660	1,200
	03/15/94	NM	6.41	10.93					
	04/04-05/94	NLPH	6.81	10.53	6,200	1,400	100	310	560

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<		parts per billion		>
MW-4 cont.	05/27/94	NLPH	5.99	11.35					
(17.34)	06/30/94	NLPH	6.40	10.94					
MW-5	01/17/89	NLPH	5.39	11.32	26,000	8,700	3,900	990	5,900
(16.71)	01/24/89#	NLPH	5.51	11.20					
	06/01/89	sheen	5.83	10.88	5,200	240	220	130	690
	09/18/89	NLPH	6.52	10.19	8,000	340	150	140	460
	10/20/89#	NLPH	6.72	9.99					
	11/22/89#	NLPH	6.54	10.17					
	12/11/89	NLPH	6.21	10.50	15,000	720	320	450	870
	02/13/90#	NLPH	5.60	11.11					
	03/07/90#	NM	NM	---					
	03/13/90	NLPH	5.54	11.17	10,000	3,400	220	280	800
	04/18/90#	NLPH	5.75	10.96					
	05/23/90#	NLPH	5.98	10.73					
	06/14/90	NLPH	5.81	10.90	12,000	3,300	160	350	730
	08/21/90#	NLPH	6.51	10.20					
	09/19/90	NLPH	6.70	10.01	8,500	1,800	85	120	460
	12/17/90	sheen	6.24	10.47	18,000	2,300	810	430	1,400
	01/31/91#	NLPH	6.31	10.40					
	02/25/91#	NLPH	6.13	10.58					
	03/19/91	NLPH	5.32	11.39	17,000	2,900	610	580	1,200
	04/22/91#	sheen	5.30	11.41					
	05/17/91#	NLPH	5.59	11.12					
	07/24/91	NLPH	6.33	10.38	16,000	3,200	320	690	1,100
	09/10/91#	NLPH	6.66	10.05					
	09/23/91#	NLPH	6.75	9.96					
	10/21/91#	sheen	6.92	9.79					
	10/22/91	NM	NM	---	6,600	2,000	64	320	480
	11/18/91#	NLPH	6.55	10.16					
	12/11/91#	NLPH	6.64	10.07					
	01/21/92	sheen	6.07	10.64	14,000	4,000	190	630	1,300
	02/20/92#	NLPH	4.83	11.88					
	03/19/92#	sheen	4.83	11.88					
	04/24/92	sheen	5.32	11.39	12,000	2,600	120	620	530
	05/13/92#	sheen	5.61	11.10					
	06/24/92#	NLPH	6.17	10.54					
	07/16/92	sheen	6.25	10.46	20,000	4,000	48	880	720
	08/19/92#	sheen	6.53	10.18					
	09/24/92	sheen	6.80	9.91	9,300	2,200	31	330	250
	02/05/93b#	NLPH	4.70	12.01					
	04/30/93	sheen	5.43	11.28	30,000	5,900	450	1,900	1,500

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TABLE 1
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Exxon Service Station No. 7-0104
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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-5 cont. (16.71)	05/14/93#	NLPH	7.31	9.40					
	07/15/93#	0.07	7.93	8.84					
	10/21/93#	NM	7.25	9.46					
	11/15/93#	0.04	8.42	8.32					
	11/30/93#	---	8.10	8.61					
	12/17/93#	NM	7.43	9.28					
	01/31/94#	NM	5.95	10.76					
	02/24-25/94#	sheen	6.23	10.48					
	03/15/94	NM	7.15	9.56					
	04/04-05/94#	<0.01	7.57	9.13					
	05/27/94	<0.1	5.77	10.86					
	06/30/94	<0.1	6.45	10.18					
MW-6 (17.56)	01/17/89	NLPH	5.59	11.97	38,000	7,400	9,300	2,000	9,900
	01/24/89#	NLPH	5.27	12.29					
	06/01/89	sheen	6.25	11.31	23,000	1,900	2,500	2,000	6,000
	09/18/89	NLPH	6.95	10.61	17,000	650	410	650	320
	10/20/89#	NLPH	7.24	10.32					
	11/22/89#	NLPH	7.05	10.51					
	12/11/89	NLPH	6.63	10.93	29,000	1,100	810	330	1,500
	02/13/90#	NLPH	5.70	11.86					
	03/07/90#	NM	NM	---					
	03/13/90	NLPH	5.63	11.93	38,000	12,000	15,000	2,500	12,000
	04/18/90#	NLPH	6.26	11.30					
	05/23/90#	NLPH	6.42	11.14					
	06/14/90	NLPH	6.19	11.37	38,000	9,100	7,800	2,900	12,000
	08/21/90#	NLPH	7.01	10.55					
	09/19/90	NLPH	7.23	10.33	22,000	4,200	300	1,400	3,400
	12/17/90	NLPH	6.66	10.90	20,000	3,100	4,100	890	2,700
	01/31/91#	NLPH	6.39	11.17					
	02/25/91#	NLPH	6.39	11.17					
	03/19/91	NLPH	5.57	11.99	180,000	11,000	55,000	5,600	28,000
	04/22/91#	NLPH	5.42	12.14					
	05/17/91#	NLPH	5.73	11.83					
	07/24/91	NLPH	6.72	10.84	48,000	5,400	2,300	2,000	9,000
	09/10/91#	NLPH	7.15	10.41					
	09/23/91#	NLPH	7.25	10.31					
	10/21/91#	NLPH	7.42	10.14					
	10/22/91	NM	NM	---	18,000	3,100	700	1,400	2,900
	11/18/91#	NLPH	7.08	10.48					
	12/11/91#	NLPH	7.17	10.39					
	01/21/92	NLPH	6.40	11.16	9,400	2,100	370	1,000	1,100

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TABLE 1
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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-6 cont. (17.56)	02/20/92#	NLPH	5.06	12.50					
	03/19/92#	NLPH	4.86	12.70					
	04/24/92	NLPH	5.44	12.12	42,000	3,500	8,000	2,100	8,000
	05/13/92#	NLPH	5.83	11.73					
	06/24/92#	NLPH	6.50	11.06					
	07/16/92	NLPH	6.68	10.88	14,000	1,600	1,000	1,000	2,500
	08/19/92#	NLPH	7.00	10.56					
	09/24/92	NLPH	7.28	10.28	4,700	790	97	640	540
	02/05/93	NLPH	4.84	12.72	26,000	2,500	4,300	1,700	5,300
	04/30/93	NLPH	5.69	11.87	9,600	1,000	410	1,100	1,600
	05/14/93#	NLPH	6.52	11.04					
	07/15/93	NLPH	7.51	10.05	4,600	250	72	540	650
	10/21/93#	NM	7.85	9.71					
	11/16/93	NLPH	8.29	9.27	410	41	12	47	71
	11/30/93#	NM	8.08	9.48					
	12/17/93#	NM	7.27	10.29					
	01/31/94#	NM	6.62	10.94					
	02/24-25/94	NLPH	6.09	11.47	4,300	190	190	300	460
	03/15/94	NM	6.54	11.02					
	04/04-05/94	NLPH	6.98	10.58	4,000	290	120	420	600
	05/27/94	NLPH	6.18	11.38					
	06/30/94	NLPH	6.58	10.98					
MW-7 (17.12)	01/09/90	NM	NM	---	17,000	380	180	330	1,300
	02/13/90#	NLPH	4.98	12.14					
	03/13/90	NLPH	4.94	12.18	16,000	360	270	83	460
	05/23/90#	NLPH	5.87	11.25					
	06/14/90	NLPH	5.55	11.57	14,000	1,200	2,800	75	930
	09/19/90	NLPH	6.79	10.33	16,000	2,800	95	2,500	1,700
	12/17/90	NLPH	6.15	10.97	75,000	2,600	7,000	3,300	14,000
	01/31/91#	NLPH	6.64	10.48					
	02/25/91#	NLPH	5.80	11.32					
	03/19/91	NLPH	4.96	12.16	44,000	1,600	740	3,400	8,600
	04/22/91#	NLPH	4.82	12.30					
	05/17/91#	NLPH	5.18	11.94					
	07/24/91	NLPH	6.22	10.90	18,000	1,300	160	2,700	1,000
	09/10/91#	NLPH	6.71	10.41					
	09/23/91#	NLPH	6.84	10.28					
	10/21/91#	NLPH	7.00	10.12					
	10/22/91	---	---	---	10,000	990	26	1,900	490
	11/18/91#	NLPH	6.56	10.56					
	12/11/91#	NLPH	6.68	10.44					

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TABLE 1
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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-7 cont. (17.12)	01/21/92	NLPH	5.99	11.13	23,000	2,200	3,000	1,800	6,100
	02/20/92#	NLPH	4.36	12.76					
	03/19/92#	NLPH	4.22	12.90					
	04/24/92	NLPH	4.84	12.28	25,000	1,400	220	2,100	2,600
	05/13/92#	NLPH	5.24	11.88					
	06/24/92#	NLPH	6.04	11.08					
	07/16/92	NLPH	6.19	10.93	8,700	470	45	970	86
	08/19/92#	NLPH	6.55	10.57					
	09/24/92	NLPH	6.83	10.29	9,200	560	48	1,300	54
	02/05/93	NLPH	4.11	13.01	33,000	1,100	2,300	1,200	4,200
	04/30/93b	NLPH	5.29	11.83	13,000	240	85	710	320
	05/14/93#	NLPH	5.91	11.21					
	07/15/93	NLPH	7.07	10.05	6,900	200	30	500	48
	10/21/93#	NM	7.55	9.57					
	11/16/93	NLPH	7.85	9.27	7,400	300	85	480	120
	11/30/93#	NM	7.66	9.46					
	12/17/93#	NM	6.75	10.37					
	01/31/94#	NM	6.22	10.90					
	02/24-25/94	NLPH	5.52	11.60	7,200	470	120	400	330
	03/15/94	NM	6.01	11.11					
	04/04-05/94	NLPH	6.33	10.79	14,000	310	46	240	21
	05/27/94	NLPH	5.66	11.46					
	06/30/94	NLPH	6.04	11.08					
MW-8 (16.33)	05/14/93	NLPH	6.54	9.79	<50	<0.5	<1.0	<0.5	<0.5
	07/15/93	NLPH	6.57	9.76	<50	<0.5	<0.5	<0.5	<0.5
	10/21/93#	NM	6.83	9.50					
	11/16/93	NLPH	7.15	9.18	<50	<0.5	<0.5	<0.5	<0.5
	11/30/93	---	6.94	9.39	---	---	---	---	---
	12/17/93#	NM	6.48	9.85					
	01/31/94#	NM	6.13	10.20					
	02/24-25/94	NLPH	5.80	10.53	<50	<0.5	<0.5	<0.5	<0.5
	03/15/94	NM	6.12	10.21					
	04/04-05/94	NLPH	6.42	7.91	<50	<0.5	<0.5	<0.5	<0.5
	05/27/94	NLPH	5.87	10.46					
	06/30/94	NLPH	6.10	10.23					
MW-9 (15.62)	05/14/93	NLPH	6.61	9.01	<50	<0.5	<1.0	<0.5	<0.5
	07/15/93	NLPH	6.79	8.83	<50	<0.5	<0.5	<0.5	<0.5
	10/21/93#	NM	6.97	8.65					
	11/16/93	NLPH	7.12	8.50	<50	<0.5	<0.5	<0.5	<0.5
	11/30/93	---	6.98	8.64	---	---	---	---	---

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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-9 cont. (15.62)	12/17/93#	NM	6.73	8.87					
	01/31/94#	NM	6.71	8.91					
	02/24-25/94	NLPH	6.45	9.17	<50	<0.5	<0.5	<0.5	<0.5
	03/15/94	NM	6.60	9.02					
	04/04-05/94	NLPH	6.75	8.87	<50	<0.5	<0.5	<0.5	<0.5
	05/27/94	NLPH	6.54	9.08					
	06/30/94	NLPH	6.68	8.94					
MW-10 (16.79)	05/14/93	NLPH	6.91	9.88	97	<0.5	<0.5	9.8	22
	07/15/93	NLPH	7.47	9.32	160	<0.5	<0.5	15	19
	10/21/93#	NM	7.57	9.22					
	11/16/93	NLPH	8.17	8.62	<50	<0.5	<0.5	<0.5	<0.5
	11/30/93	---	7.96	8.83	---	---	---	---	---
	12/17/93#	NM	7.25	9.54					
	01/31/94#	NM	6.66	10.13					
	02/24-25/94	NLPH	6.53	10.26	280	<0.5	<0.5	12	7.0
	03/15/94	NM	6.90	9.89					
	04/04-05/94	NLPH	7.27	9.52	280	<0.5	0.5	7.6	2.7
	05/27/94	NLPH	6.48	10.31					
	06/30/94	NLPH	6.79	10.00					
EW-1 (16.22)	10/21/93#	NM	6.67	9.55					
	12/17/93#	NM	10.09	6.13					
	01/31/94#	NM	5.38	10.84					
	02/24-25/94	NLPH	5.58	10.64	1,000	140	4.5	15	120
	03/15/94	NM	14.00	2.22					
	04/04-05/94	NLPH	15.90	0.32	380	26	<0.5	15	22
	05/27/94	NLPH	5.29	10.93					
	06/30/94	NLPH	5.98	10.24					
EW-2 (16.05)	10/21/93#	NM	6.71	9.34					
	12/17/93#	NM	14.95	1.10					
	01/31/94#	NM	5.35	10.70					
	02/24-25/94	LPH	14.30	1.75	5,200	1,200	390	63	410
	03/15/94	NM	14.20	1.85					
	04/04-05/94	NLPH	NM	NM	6,300	970	99	22	220
	05/27/94	LPH	5.25	10.80					
	06/30/94	LPH	6.00	10.05					
EW-3 (16.02)	10/21/93#	NM	6.55	9.47					
	12/17/93#	NM	15.65	0.37					
	01/31/94#	NM	5.34	10.68					

See notes on page 12 of 12.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
(Page 11 of 12)

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
EW-3 cont.	02/24-25/94	NLPH	21.00	-4.98	91	<0.5	<0.5	<0.5	<05
(16.02)	03/15/94	NM	20.80	-4.78					
	04/04-05/94	NLPH	22.5	-6.53	270	39	12	7.4	18
	05/27/94	NLPH	5.22	10.80					
	06/30/94	NLPH	6.10	9.92					
EW-4	10/21/93#	NM	6.13	9.48					
(15.61)	12/17/93#	NM	14.60	1.01					
	01/31/94#	NM	5.08	10.53					
	02/24-25/94	LPH	14.88	0.73	4,600	1,900	140	13	450
	03/15/94	NM	14.35	1.26					
	04/04-05/94	NLPH	14.40	1.21	11,000	2,500	220	290	730
	05/27/94	NLPH	4.93	10.68					
	06/30/94	NLPH	5.65	9.96					
EW-5	10/21/93#	NM	6.77	9.74					
(16.51)	12/17/93#	NM	14.20	2.31					
	01/31/94#	NM	5.64	10.87					
	02/24-25/94	NLPH	11.95	4.56	1,000	140	45	3.4	190
	03/15/94	NM	10.10	6.41					
	04/04-05/94	NLPH	13.96	2.55	820	120	41	16	99
	05/27/94	NLPH	5.48	11.03					
	06/30/94	NLPH	6.10	10.41					
Field	12/11/89	---	---	---	<50	0.88	0.95	0.62	1.7
Blanks	12/17/90	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	03/19/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	07/24/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.6
	10/22/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	01/21/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	07/16/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
Travel	06/14/90	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
Blanks	09/19/90	---	---	---	<50	0.8	<0.5	0.6	1.0
	04/24/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	09/24/92	---	---	---	230	<0.5	<0.5	<0.5	<0.5
	Maximum Contaminant Levels (MCLs) (DHS)				---	1.0	---	680	1,750
	Drinking Water Action Level (DWAL) (DHS)				---	---	100	---	---

See notes on page 12 of 12.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
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Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>

Notes:

TOC	=	Elevation of top of well casing; datum is mean sea level, revised February 10, 1994.
SUBJ	=	Results of subjective evaluation, liquid-phase product thickness (PT) in feet
DTW	=	Depth to water
Elev.	=	Elevation of groundwater; datum is mean sea level; adjusted for free-phase petroleum hydrocarbons when present using the equation:Elev. = TOC - [DTW + (PT * 0.8)] where PT is the product thickness
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA method 5030/8015
BTEX	=	Benzene, Toluene, Ethylbenzene, and total Xylenes analyzed using EPA method 5030/8020
NM	=	Not Monitored
NLPH	=	No liquid-phase petroleum hydrocarbons present in well
LPH	=	Liquid-phase petroluem hydrocarbons present in well, thickness not measured, or not measurable.
NA	=	Well not accessible on this date
<	=	Less than the indicated detection limit shown by the laboratory
---	=	Not applicable
#	=	Well not sampled on this date
a	=	03/07/90 sampling: Total Dissolved Solids were detected in samples from MW-1 and MW-4 at 910 parts-per-million (ppm) and 370 ppm, respectively.
b	=	a peak eluting before benzene was present in the groundwater samples from MW-5 and MW-7, and is suspected to be methyl-tert-butyl-ether (MTBE).

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 1 of 7)

Date	Total Discharge	Sample Location	TPHg	B	T	E	X	VOCs	EOCs	Inorganics
			< parts per billion >							
02/16/93	NA	"bioreactor"	660	120	40	25	56	NA	NA	NA
02/17/93	NA	"bioreactor"	140	23	5.3	2.8	9.3	NA	NA	NA
02/18/93	NA	"bioreactor"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/22/93	0	"influent"	NS	NS	NS	NS	NS	NA	NA	NA
		"A"	150,	16	11	3.7	15	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/23/93	230	"influent"	NS	NS	NS	NS	NS	NA	NA	NA
		"A"	110	12	7.4	2.7	14	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/24/93	4,165	"influent"	4,800	1,000	700	83	50	NA	NA	NA
		"A"	800	200	110	5.1	80	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/25/93	10,130	"influent"	3,800	930	820					NA
		"A"	300	11	2.9	<0.5	33	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	NS	NS	NS	NS	NS	NA	NA	NA

See notes on page 7 of 7

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 2 of 7)

Date	Total Discharge	Sample Location	TPHg	B	T	E	X	VOCs	EOCs	Inorganics
			< parts per billion >							
02/26/93	15,440	None	Not Sampled							
03/04/93	36,240	"influent"	3,600	760	430	45	600	NA	NA	NA
		"A"	170	5.1	2.1	<0.5	20	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
03/11/93	80,000	"influent"	3,800	480	390	84	600	NA	NA	NA
		"A"	63	0.5	<0.5	<0.5	0.8	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
03/19/93	NR	"influent"	NS	NS	NS	NS	NS	NS	NS	NS
		"A"	4,100	530	420	100	800	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NS	NS	NS
		"C"	110	0.8	<0.5	<0.5	7.6	NA	NA	NA
03/31/93	184,321	None	Not Sampled							
04/02/93	192,674	None	Not Sampled							
04/05/93	208,161	None	Not Sampled							
04/07/93	214,604	None	Not Sampled							
04/09/93	223,530	None	Not Sampled							

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TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 3 of 7)

Date	Total Discharge	Sample Location	TPHg	B	T	E	X	VOCs	EOCs	Inorganics
			< parts per billion >							
04/13/93	238,370	None	Not Sampled							
04/16/93	250,960	None	Not Sampled							
04/30/93	270,400	"influent"	2,700	240	140	35	500	NA	NA	NA
		"A"	380	31	22	14	81	NA	NA	NA
		"B"	55	1.3	<0.5	<0.5	2.3	NA	NA	NA
		"C"	<50	1.5	0.9	<0.5	2.4	NA	NA	NA
05/11/93	308,640	None	Not Sampled							
05/20/93	346,407	None	Not Sampled							
06/14/93	346,407	"influent"	3,300	540	340					NA
		"A"	<50	<0.5	<0.5	<0.5	1.1	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
06/24/93	393,810	None	Not Sampled							
06/29/93	415,739	None	Not Sampled							
07/08/93	455,820	"influent"	1,600	310	24	11	130	NA	NA	NA
		"A"	110	2.2	0.7	<0.5	1.4	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA

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TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California

Date	Total Discharge	Sample Location	TPHg	B	T	E	X	VOCs	EOCs	Inorganics
			< parts per billion >							
08/06/93	569,132	"influent"	2,900	510	180	56	710	NA	NA	NA
		"A"	94	1.9	<0.5	<0.5	1.1	NA	NA	NA
		"B"	61	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
09/08/93	675,360	"influent"	2,200	330	51	21	210	NA	NA	NA
		"A"	<50	2.1	<0.5	<0.5	<0.5	NA	NA	NA
		"B"	60	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
10/06/93	772,440	"Influent"	5,000	810	56	100	460	NA	NA	NA
		"A"	740	18	1.3	<0.5	39	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	390	7.5	0.6	<0.5	18	NA	NA	NA
10/15/93	810,448	"Influent"	2,300	770	38	40	220	NA	NA	NA
		"A"	530	17	3.0	<0.5	33	NA	NA	NA
		"B"	69	0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
11/09/93	851,840	"A"	550	20 (16)	<0.5	<0.5	19 (20)	86[1]	ND	270[a]
		"B"	<50	<0.5	<0.5	<0.5	<0.5	ND	ND	180[a] 100[b]
		"C"	<50	<0.5	<0.5	<0.5	<0.5	ND	ND	80[a]

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TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 5 of 7)

Date	Total Discharge	Sample Location	TPHg	B	T	E	X	VOCs	EOCs	Inorganics
			< parts per billion >							
12/09/93	932,928	"A"	1,500	130	350	10	82	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	3.6	9.5	<0.5	<0.5	NA	NA	NA
12/22/93	---	"Eff"	190	1.9	1.6	<0.5	10	NA	NA	NA
01/10/94	1,039,530	"A"	340	17	2.3	<0.5	7.6	120[2]	ND	6[c]
				(19)			(8)	7[3]		330[b]
								120[1]		300[a]
		"B1"	120	2.3	<0.5	<0.5	<0.5	NA	NA	NA
		"B2"	61	0.6	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	55	<0.5	<0.5	<0.5	<0.5	ND	ND	220[a]
02/24/94	1,152,290	"A"	1400	310	22	<0.5	99	NA	NA	NA
		"B1"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"B2"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	75	1.3	<0.5	<0.5	<0.5	NA	NA	NA
03/07/94	---	"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
03/30/94	1,267,720	"A"	190	0.9	0.9	<0.5	<0.5	NA	NA	NA
		"B1"	55	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"B2"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA

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TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California

Date	Total Discharge	Sample Location	TPHg	B	T	E	X	VOCs	EOCs	Inorganics
			< ..... parts per billion ..... >							
04/11/94	1,319,760	"A"	420	11 (9)	3.0	<0.5	19 (21)	6[3] 73[1]	ND	NA
		"B1"	53*	0.8	<0.5	<0.5	<0.5	NA	NA	NA
		"B2"	120*	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	260[2]	ND	NA
05/30/94	1,330,787	None	System was down pending replacement carbon delivery							
06/30/94	1,330,787	None	System was down pending replacement carbon delivery							
MCLs	---	---	---	1.0	---	680	1,750		See Notes	
DWAL	---	---	---	---	100	---	---		See Notes	

See notes on page 7 of 7

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 7 of 7)

Date	Total Discharge	Sample Location	TPHg	B	T	E	X	VOCs	EOCs	Inorganics
			<			parts per billion				>

Notes:

gal	:	Gallons
TPHg	:	Total petroleum hydrocarbons as gasoline analyzed using modified EPA method 5030/8015
BTEX	:	Benzene, Toluene, Ethylbenzene, and total Xylenes analyzed using EPA method 5030/8020
VOC	:	Volatile organic compounds analyzed using EPA method 624
EOC	:	Extractable organic compounds analyzed using EPA method 625
Inorganics	:	Arsenic analyzed using EPA method 7060; Cadmium, Chromium, Copper, Iron, Lead, Nickel, Silver, and Zinc analyzed using EPA method 6010/200.7; Mercury analyzed using EPA method 7470; and total Cyanides analyzed using EPA 335.2
NA	:	Not analyzed
NS	:	Not sampled
NR	:	Not recorded
ND	:	Non detected at or above the method detection limit
"influent"	:	composite sample from extraction wells
"bioreactor"	:	water sample from the first compartment of the bioreactor
"Eff"	:	effluent from bioreactor, influent to first granular activated carbon (GAC) canister
"A"	:	effluent from bioreactor, influent to first GAC canister
"B"	:	effluent from second GAC canister, influent to third GAC canister
"B1"	:	effluent from first GAC canister, influent to second GAC canister
"B2"	:	effluent from second GAC canister, influent to third GAC canister
"C"	:	effluent from third GAC canister into sanitary sewer
( )	:	Analyzed using EPA method 624
<	:	Less than the laboratory method detection limit
*	:	An unkown peak is present in the sample between Benzene and Methyl Tert Butyl Ether
1	:	Tetrachlorethene (MCL = 5 ppb)
2	:	2-Butanone (MEK)
3	:	Trichloroethene (TCE) (MCL = 5 ppb)
a	:	Zinc (MCL = 5000 ppb)
b	:	Iron (MCL = 300 ppb)
c	:	Arsenic (MCL = 50 ppb)
MCL	:	Maximum Contaminant Level
DWAL	:	Drinking Water Action Level

TABLE 3
GROUNDWATER REMEDIATION SYSTEM OPERATION & PERFORMANCE DATA
EXXON 7-0104, FREMONT, CALIFORNIA (PAGE 1 of 2)

Period	First Quarter Totals	Second Quarter per Month				Second Quarter Totals
Period or Sampling Date	12/9/93-3/30/94	4/11/94	4/30/94	5/30/94	6/30/94	3/17/94-6/13/94
Approx. days of operation	84.1	12	8	System down since 4/19/94		20
Cumulative days of operation (since 12/9/93)	84.1	96.1	104.1	104.1	104.1	104.1
Approx. days of downtime	27	0	11	30	31	72
Percentage of time system was operational[1]	76%	100%	42%	0%	0%	22%
Approx. ave. discharge rate to sewer (gpm)[2]	2.76 (ave.)	3.01	0.96	0	0	2.19 (ave.)
Approx. ave. discharge rate to sewer (gpd)[3]	3981 (ave.)	4,337	1,378	0	0	3,153 (ave.)
Volume of water treated (gal)	334,792	52,040	11,027	0	0	63,067
Cumul. vol. of water treated (gal) [since 2/22/93]	1,267,720	1,319,760	1,330,787	1,330,787	1,330,787	1,330,787
LABORATORY ANALYSES RESULTS FOR TPH-AS-GASOLINE IN PARTS PER BILLION (PPB OR MICROGRAMS PER LITER):						
Influent to 1st carbon (W-A)	643 (ave.)	420	NS	NS	NS	420
Effluent from 1st carbon (W-B1)	<50 - 120	53	NS	NS	NS	53
Effluent from 2nd carbon (W-B2)	<50 - 61	120	NS	NS	NS	120
Effluent from 3rd carbon/to sewer (W-C)	<50 - 55	<50@	NS	NS	NS	<50
Removal Efficiency of the 1st carbon[4]	≈100% - 65%	90%	NA	NA	NA	90%
Removal Efficiency of the 2nd carbon[4]	≈100% - 49%	-126%	NA	NA	NA	-126%
Removal Efficiency of the 3rd carbon[4]	≈100% - 10%	≈100%@	NA	NA	NA	≈100%
VOLUME OF GASOLINE HYDROCARBONS REMOVED PER PERIOD AND TOTALS TO DATE:						
Gallons Removed[5] (gal)	**0.29**	**0.029**	**0.006***	**0**	**0**	**0.035**
Total Cumulative Removed (gal) [since 2/22/93]	**3.96**	**3.99**	**4.00**	**4.00**	**4.00**	**4.00**

TABLE 3
GROUNDWATER REMEDIATION SYSTEM OPERATION & PERFORMANCE DATA
EXXON 7-0104, FREMONT, CALIFORNIA (PAGE 2 of 2)

Period	First Quarter Totals	Second Quarter per Month				Second Quarter Totals
Period or Sampling Date	12/9/93-3/30/94	4/11/94	4/30/94	5/30/94	6/30/94	3/17/94-6/13/94

Notes:

NS = Not Sampled
NA = Not available
gpm = gallons per minute
NM = Not measured
approx. = Approximate for given period
ave. = Average

1 = Percentage of time system was operational is estimated as: Days of operation/Total days of period x 100%
2 = Approx. discharge rate to sewer is estimated as: Vol. of water treated (gal) x 1 day/1440 minutes x 1/Days of operation
3 = Approx. discharge rate to sewer is estimated as: Vol. of water treated (gal) X 1/Days of operation
4 = Removal efficiency of carbon is estimated as: [Influent conc. - Effluent conc.]/Influent conc. x 100%
5 = Removal rate is estimated as: Infl. TPHg conc (μg/liter) x Net volume of water treated in a given period (gal) x 3.785 liter/gal x 1 lb/454x$10^6$$\mu$g x 1 gal/6.2 lbs
* = Influent concentration from the April 11, 1994 analytical results was used to calculate gallons of TPHg removed.
@ = 2-Butanone (MEK) was detected at a concentration of 260 ppb indicating carbon breakthrough had occurred.

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TABLE 4
CUMULATIVE AIR MONITORING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
(non Methane results)

Sample Date	Time	Influent to first GAC (A1)	Effluent from first GAC (A1)/ Influent to second GAC (A2)	Effluent from second GAC (A2)
03/01/93	1700	8.0	0.0	0.0
03/02/93	0915	7.4	2.5	0.0
03/03/93	0905	4.6	1.5	0.0
03/04/93	0910	4.9	7.6	0.4
04/13/93	1455	2.1	0.0	0.0
05/11/93	1450	2.0	0.0	0.0
06/15/93	1520	1.5	0.0	0.0
07/08/93	1220	1.2	0.0	0.0
08/13/93	1540	1.7	0.0	0.0
09/23/93	1020	0.5	0.0	0.0
10/06/93	0445	0.2	0.0	0.0
11/08/93	1657	0.4	0.0	0.0
11/22/93	1616	0.9	0.5	0.3
12/08/93	1510	0.5	0.3	0.0
12/29/93	1730	0.0	0.0	0.0
01/10/94	1330	0.0	0.0	0.0
02/24/94	1232	0.0	0.0	0.0
03/30/94	1430	0.0	0.4	0.0
04/12/94	1440	1.0	0.0	0.0
05/30/94		System down pending delivery of replacment carbon		
06/30/94		System down pending delivery of replacment carbon		

Notes:

Values in parts per million by volume (ppmv)
GAC : Granular Activated Carbon (vapor-phase carbon canisters)

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APPENDIX A

GROUNDWATER SAMPLING PROTOCOL AND WELL PURGE DATA SHEETS

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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 liquid-phase hydrocarbons or sheen. Any liquid-phase hydrocarbons are removed from the well. If liquid-phase hydrocarbons or sheen are present, samples are not collected for laboratory analysis.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until stabilization of the temperature, pH, and conductivity is obtained, or until a maximum of four well casing volumes are purged. Turbidity measurements are also collected from the purged well water. Wells having demonstrated stabilization within purging of four well volumes for at least three consecutive quarters are not monitored for the above parameters. Instead, four well volumes are purged. The quantity of water purged from each well is calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ 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 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 form, to a California-certified laboratory.

For those sites that include a remediation system, groundwater samples are taken as part of the operation and maintenance to help evaluate system performance. Typically, samples are taken from the influent and effluent of the system and between remediation components. Groundwater samples are only taken when the extraction pumps are operational and water is pumping through the remediation components. The groundwater is carefully poured directly from sample ports into 40 ml glass vials following the same protocol as mentioned above.

Wells connected to the remediation system are sampled using a different protocol than mentioned above. Because remediation components limit access for purging and sampling with a bailer, extraction (recovery) wells are sampled by temporarily opening the sample port in the flow line from the dedicated groundwater extraction pump and closing the discharge line to the remediation system. Groundwater samples are collected as mentioned above.

WELL PURGE DATA SHEET

Project Name: Exxon 7-0104 Job No. 120077.20

Date: 4/5/94 Page 1 of 1

Well No. MW-1 Time Started 9:55

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
9:55	Start purging MW-				
9:55	0	67.5	6.55	5.48	94.2
10:00	8.5	68.4	6.55	5.60	38.6
10:07	17	68.9	6.55	6.08	7.4
10:12		Dry at 20 gallons (10:12)			
10:12	Stop purging MW-1				

Notes:
- Grunfos
- conductivity at (x100)

Well Diameter (inches) : 4

Depth to Bottom (feet) : 20.69

Depth to Water - initial (feet) : 7.53

Depth to Water - final (feet) : 6.87 4/5/94

% recovery : 105

Time Sampled : 14:00

Gallons per Well Casing Volume : 8.6

Gallons Purged : 20

Well Casing Volume Purged : 2.3

Approximate Pumping Rate (gpm) : 1.2

WELL PURGE DATA SHEET

Project Name: Exxon 7-3104 Job No. 180027.20

Date: 4/5/94 Page 1 of 1

Well No. MW-3 Time Started 10:50

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
10:50	Start purging MW-				
10:50	0	67.1	6.59	7.00	6.0
10:55	5	66.3	6.59	6.57	44.3
11:02	10	65.3	6.53	6.33	111.0
11:15	15	64.3	6.63	6.09	108.2
	17	Dry at 17 gallons			
11:18	Stop purging MW-				

Notes:
- Hand bailed
- Conductivity at (X100)
- odor

Well Diameter (inches) : 4

Depth to Bottom (feet) : 14.19

Depth to Water - initial (feet) : 6.91

Depth to Water - final (feet) : 6.53 4/5/94

% recovery : 105

Time Sampled : 14:15

Gallons per Well Casing Volume : 4.8

Gallons Purged : 17

Well Casing Volume Purged : 3.5

Approximate Pumping Rate (gpm) : 0.6

WELL PURGE DATA SHEET

Project Name: Exxon 7-0104 Job No. 1200 77.20

Date: 4/5/94 Page 1 of 1

Well No. MW-4 Time Started 12:25

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
12:25	Start purging MW-4				
12:25	0	73.7	6.51	7.83	146.5
12:31	7.5	70.7	6.53	7.61	86.1
12:37	15	69.5	6.60	7.03	10.7
13:01	22.5	69.2	6.57	6.96	19.4
13:01	Stop purging MW-4				

Notes:
- Grundfos
- Conductivity adj (x100)

Well Diameter (inches) : 4

Depth to Bottom (feet) : 18.21

Depth to Water - initial (feet) : 6.81

Depth to Water - final (feet) : 6.94 4/5/94

% recovery : 99

Time Sampled : 15 00

Gallons per Well Casing Volume : 7.4

Gallons Purged : 22.5

Well Casing Volume Purged : 3.0

Approximate Pumping Rate (gpm) : 0.6

WELL PURGE DATA SHEET

Project Name: Exxon 7-0104 Job No. 1300 77.20

Date: 4/5/94 Page 1 of 1

Well No. MW-6 Time Started 10:40

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
10:40	Start purging MW-6				
10:40	0	69.6	6.42	6.80	14.7
10:45	7.5	68.1	6.43	6.84	9.0
10:52	15	67.2	6.50	5.80	37.7
	20	Dry at 20 gallons			
10:57	Stop purging MW-6				

Notes:
- Groundfos
- conductivity at (x100)
- odor

Well Diameter (inches) : 4

Depth to Bottom (feet) : 18.63

Depth to Water - initial (feet) : 6.88

Depth to Water - final (feet) : 6.76

% recovery : 101

Time Sampled : 14:30

Gallons per Well Casing Volume : 7.6

Gallons Purged : 20

Well Casing Volume Purged : 2.6

Approximate Pumping Rate (gpm) : 1.2

4/5/94

WELL PURGE DATA SHEET

Project Name: Exxon 7-0104 Job No. 7700 77.20

Date: 4/5/94 Page 1 of 1

Well No. MW-7 Time Started 12:28

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
12:28	Start purging MW-7				
12:28	0	69.7	6.38	5.41	4.8
12:35	6.5	68.1	6.39	5.26	134.2
12:40	13	66.8	6.42	5.07	167.0
12:47	20	66.7	6.37	5.02	143.6
12:53	26	65.7	6.38	4.89	156.5
12:53	Stop purging MW-7				

Notes:
- Hand Sailed
- Conductivity at (x100)

Well Diameter (inches) : 4

Depth to Bottom (feet) : 16.10

Depth to Water - initial (feet) : 6.33

Depth to Water - final (feet) : 6.34 4/5/94

% recovery : 100

Time Sampled : 14:45

Gallons per Well Casing Volume : 6.4

Gallons Purged : 26

Well Casing Volume Purged : 4

Approximate Pumping Rate (gpm) : 1.0

WELL PURGE DATA SHEET

Project Name: Exxon 7-0104 Job No. 130077.20

Date: 4/5/94 Page 1 of 1

Well No. MW-8 Time Started 8:30

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
8:30	Start purging MW-				
8:30	0	60.3	6.42	5.01	315
8:33	2	61.9	6.46	5.29	130.4
8:37	4	61.9	6.42	5.12	158.9
8:40	6	62.3	6.48	5.43	>200
8:43	8	63.3	6.40	5.16	>200
8:43	Stop purging MW-				

Notes:
Hand bailed
Conductivity at (X100)

Well Diameter (inches) : 2
Depth to Bottom (feet) : 17.44
Depth to Water - initial (feet) : 6.42
Depth to Water - final (feet) : 6.28 4/5/94
% recovery : 101
Time Sampled : 13:30
Gallons per Well Casing Volume : 1.8
Gallons Purged : 8
Well Casing Volume Purged : 4.4
Approximate Pumping Rate (gpm) : 0.6

WELL PURGE DATA SHEET

Project Name: Exxon 7-C104 Job No. 120077.20

Date: 4/5/94 Page 1 of 1

Well No. MW-9 Time Started 8:02

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
8:02	Start purging MW-9				
8:02	0	57.0	7.13	3.36	10.4
8:07	2	59.9	7.12	4.12	>200
8:15	4	60.8	6.65	4.12	>200
8:21	6	60.5	6.72	4.55	>200
8:27	8	59.7	6.69	4.68	>200
8:27	Stop purging MW-9				

Notes:
- Hand bailed
- Conductivity adj (x100)

Well Diameter (inches) : 2

Depth to Bottom (feet) : 18.80

Depth to Water - initial (feet) : 6.75

Depth to Water - final (feet) : 6.73 4/5/94

% recovery : 100

Time Sampled : 12:00

Gallons per Well Casing Volume : 2.0

Gallons Purged : 8

Well Casing Volume Purged : 4.0

Approximate Pumping Rate (gpm) : 0.3

WELL PURGE DATA SHEET

Project Name: Exxon 7-0104 Job No. 17007.20

Date: 4/5/94 Page 1 of 1

Well No. MW-10 Time Started 8:55

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
8:55	Start purging MW-10				
8:55	0	63.4	6.47	4.47	26.3
8:59	2	64.7	6.60	4.47	182.9
9:03	4	65.7	6.52	4.70	>200
9:06	6	66.5	6.57	4.66	>200
9:10	8	67.4	6.65	4.60	>200
9:10	Stop purging MW-10				

Notes:
- Hand bailed
- Conductivity at (X100)

Well Diameter (inches) : 2

Depth to Bottom (feet) : 17.86

Depth to Water - initial (feet) : 7.27

Depth to Water - final (feet) : 7.03 4/5/94

% recovery : 102

Time Sampled : 10:00

Gallons per Well Casing Volume : 1.8

Gallons Purged : 8

Well Casing Volume Purged : 4.4

Approximate Pumping Rate (gpm) : 0.5

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APPENDIX B

LABORATORY ANALYSIS REPORTS AND CHAIN OF CUSTODY RECORD

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REPORT OF LABORATORY ANALYSIS

April 13, 1994

Mr. Marc Briggs
RESNA
3315 Almaden Expressway Suite 34
San Jose, CA 95118

RE: PACE Project No. 440406.512
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Briggs:

Enclosed is the report of laboratory analyses for samples received April 06, 1994.

Please note an unidentified peak was present in the chromatogram of samples W-6-MW9, EW-3, and EW-5.

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

RECEIVED
APR 18 1994
RESNA
SAN JOSE

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

REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299896	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-6-MW9	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	0.5	ND	04/11/94
Toluene	ug/L	0.5	ND	04/11/94
Ethylbenzene	ug/L	0.5	ND	04/11/94
Xylenes, Total	ug/L	0.5	ND	04/11/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299918	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-6-MW 8	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	0.5	ND	04/11/94
Toluene	ug/L	0.5	ND	04/11/94
Ethylbenzene	ug/L	0.5	ND	04/11/94
Xylenes, Total	ug/L	0.5	ND	04/11/94

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REPORT OF LABORATORY ANALYSIS

Mr. Marc Briggs
Page 4

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299934	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-7-MW10	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	280	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	0.5	ND	04/11/94
Toluene	ug/L	0.5	0.5	04/11/94
Ethylbenzene	ug/L	0.5	7.6	04/11/94
Xylenes, Total	ug/L	0.5	2.7	04/11/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299942	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-6-MW3	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	3000	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	2.5	180	04/11/94
Toluene	ug/L	2.5	19	04/11/94
Ethylbenzene	ug/L	2.5	130	04/11/94
Xylenes, Total	ug/L	2.5	330	04/11/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299950	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-6-MW1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	680	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	0.5	12	04/11/94
Toluene	ug/L	0.5	6.5	04/11/94
Ethylbenzene	ug/L	0.5	42	04/11/94
Xylenes, Total	ug/L	0.5	40	04/11/94

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REPORT OF LABORATORY ANALYSIS

Mr. Marc Briggs
Page 7

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299969	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-6-MW6	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	4000	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	0.5	290	04/11/94
Toluene	ug/L	0.5	120	04/11/94
Ethylbenzene	ug/L	0.5	420	04/11/94
Xylenes, Total	ug/L	0.5	600	04/11/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299977	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-6-MW 7	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	14000	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	2.5	310	04/11/94
Toluene	ug/L	2.5	46	04/11/94
Ethylbenzene	ug/L	2.5	240	04/11/94
Xylenes, Total	ug/L	2.5	21	04/11/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0299985	
Date Collected:			04/05/94	
Date Received:			04/06/94	
Client Sample ID:			W-6-MW 4	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	6200	04/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/11/94
Benzene	ug/L	2.5	1400	04/11/94
Toluene	ug/L	2.5	100	04/11/94
Ethylbenzene	ug/L	2.5	310	04/11/94
Xylenes, Total	ug/L	2.5	560	04/11/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0299993	
Date Collected:			04/04/94	
Date Received:			04/06/94	
Client Sample ID:			EW-1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/12/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	380	04/12/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/12/94
Benzene	ug/L	0.5	26	04/12/94
Toluene	ug/L	0.5	ND	04/12/94
Ethylbenzene	ug/L	0.5	15	04/12/94
Xylenes, Total	ug/L	0.5	22	04/12/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0300002	
Date Collected:			04/04/94	
Date Received:			04/06/94	
Client Sample ID:			EW-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/12/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	6300	04/12/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/12/94
Benzene	ug/L	2.5	970	04/12/94
Toluene	ug/L	0.5	99	04/12/94
Ethylbenzene	ug/L	0.5	22	04/12/94
Xylenes, Total	ug/L	0.5	220	04/12/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0300010	
Date Collected:			04/04/94	
Date Received:			04/06/94	
Client Sample ID:			EW-3	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/12/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	270	04/12/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/12/94
Benzene	ug/L	0.5	39	04/12/94
Toluene	ug/L	0.5	12	04/12/94
Ethylbenzene	ug/L	0.5	7.4	04/12/94
Xylenes, Total	ug/L	0.5	18	04/12/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0300029	
Date Collected:			04/04/94	
Date Received:			04/06/94	
Client Sample ID:			EW-4	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/12/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	11000	04/12/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/12/94
Benzene	ug/L	2.5	2500	04/12/94
Toluene	ug/L	0.5	220	04/12/94
Ethylbenzene	ug/L	0.5	290	04/12/94
Xylenes, Total	ug/L	0.5	730	04/12/94

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REPORT OF LABORATORY ANALYSIS

April 13, 1994
PACE Project Number: 440406512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0300037	
Date Collected:			04/04/94	
Date Received:			04/06/94	
Client Sample ID:			EW-5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/12/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	820	04/12/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/12/94
Benzene	ug/L	0.5	120	04/12/94
Toluene	ug/L	0.5	41	04/12/94
Ethylbenzene	ug/L	0.5	16	04/12/94
Xylenes, Total	ug/L	0.5	99	04/12/94

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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Client Reference: Exxon 7-0104 (EE)

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

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Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 29597
Samples: 70 0299888, 70 0299896, 70 0299918, 70 0299934, 70 0299942
70 0299950, 70 0299969, 70 0299977, 70 0299985, 70 0299993
70 0300002, 70 0300010, 70 0300029, 70 0300037

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

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700299772	Spike	Spike Recv	Spike Dupl Recv	RPD
Benzene	ug/L	0.5	ND	40	99%	95%	4%
Toluene	ug/L	0.5	ND	40	101%	97%	4%
Ethylbenzene	ug/L	0.5	ND	40	110%	105%	5%
Xylenes, Total	ug/L	0.5	ND	120	105%	101%	4%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Benzene	ug/L	0.5	40	96%	97%	1%
Toluene	ug/L	0.5	40	96%	96%	0%
Ethylbenzene	ug/L	0.5	40	103%	102%	1%
Xylenes, Total	ug/L	0.5	120	99%	98%	1%

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Client Reference: Exxon 7-0104 (EE)

MDL	Method Detection Limit
ND	Not detected at or above the MDL.
RPD	Relative Percent Difference

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EXXON COMPANY, U.S.A.

P.O. Box 4415, Houston, TX 77210-4415

CHAIN OF CUSTODY

440406.512

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

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

Consultant's Name: RESNA Industries Inc — Page 1 of 2

Address: 3315 Almaden Expwy. San Jose CA 95118 — Site Location: 1725 Park St

Project #: — Consultant Project #: 170077.20 — Consultant Work Release #: 09300238/01

Project Contact: Joane Bockhal/Mark Briggs — Phone #: (408) 264-7723 — Fax #: 264-2435 — Laboratory Work Release #:

EXXON Contact: Marla Guensler ☑ EE ☐ C&M — Phone #: (510) 246-8776 — Fax #: — EXXON RAS #: 7-0104

Sampled by (print): Chris Allen — Sampler's Signature: Chris Allen

Shipment Method: Carrier — Air Bill #: — Shipment Date: 4/6/94

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

Sample Condition as Received: Temperature ° C: _____ Cooler #: _____ Inbound Seal Yes No Outbound Seal Yes No

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	Hold								COMMENTS
Rinsate	4/5/94	H2O	HCL	2	29987.0				X								
R9	↓	↓	↓	2	29988.8	X											
W-6-MW9				3	29989.6	X											
R8				2	29990.0				X								
W-6-MW8				3	29991.8	X											
R10				2	29992.6				X								
W-7-MW10				3	29993.4	X											
W-6-MW1				3	29995.0	X											
W-B-MW3				3	29994.2	X											
W-6-MW6	↓	↓	↓	3	29996.9	X											

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments:
Chris Allen	4/5/94	6:15PM	Ed [illegible] - Pace	4/6/94	1440	5/2
Ed [illegible] Pace	4/6	1700	[illegible] Pace	4/6/94	1700	

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

EXXON COMPANY, U.S.A.

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

Consultant's Name: RESNet Industries Inc. Page 2 of 2

Address: 3315 Alameda Expwy. #54 San Jose CA 95118 Site Location: 1725 Park St.

Project #: Consultant Project #: 170077.20 Consultant Work Release #: 08300238/10

Project Contact: Jeane Buckthal/Mark Briggs Phone #: (408) 264-7723 Fax #: 264-8243 Laboratory Work Release #:

EXXON Contact: Mark Gwaskell ☑ BE ☐ C&M Phone #: (510) 246-8876 Fax #: EXXON RAS #: 7-0104

Sampled by (print): Chris Allen Sampler's Signature:

Shipment Method: Courier Air Bill #: Shipment Date: 4/6/94

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 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	COMMENTS
W-6-MW7	4/5/94	H_2O	HCL	3	29997.7	X			
W-6-MW4	"	"	"	3	29998.5	X			
EW-1	4/4/94			3	29999.3	X			
EW-2				3	30000.2	X			
EW-3				3	30001.0	X			
EW-4				3	30002.9	X			
EW-5	↓	↓	↓	3	30003.7	X			

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Chris Allen	4/5/94	6:15	Edith Valera	4/6/94	1440
Edith Valera	4/6	1700	Jim McIntosh PACE	4/6/94	1700

Additional Comments: 5/2

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

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REPORT OF LABORATORY ANALYSIS

April 19, 1994

Mr. Jim Schollard
RESNA
3315 Almaden Expwy, Suite 34
San Jose, CA 95118

RE: PACE Project No. 440412.505
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Schollard:

Enclosed is the report of laboratory analyses for samples received April 12, 1994.

Please note that when analyzing the following sample a peak eluting earlier than Benzene and suspected to be Methyl Tert Butyl Ether was present:

Client ID	PACE Sample #
W-B1	700302366

Footnotes are given at the end of the report.

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

Sincerely,

Ronald M. Lehew

for Stephanie Matzo
Project Manager

Enclosures

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SAN JOSE

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REPORT OF LABORATORY ANALYSIS

RESNA
3315 Almaden Expwy, Suite 34
San Jose, CA 95118

April 19, 1994
PACE Project Number: 440412505

Attn: Mr. Jim Schollard

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302358	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/15/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	420	04/15/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/15/94
Benzene	ug/L	0.5	11	04/15/94
Toluene	ug/L	0.5	3.0	04/15/94
Ethylbenzene	ug/L	0.5	ND	04/15/94
Xylenes, Total	ug/L	0.5	19	04/15/94
VOLATILE ORGANICS, EPA METHOD 8240 GC/MS				
Chloromethane	ug/L	10	ND	04/13/94
Vinyl Chloride	ug/L	10	ND	04/13/94
Bromomethane	ug/L	10	ND	04/13/94
Chloroethane	ug/L	10	ND	04/13/94
Trichlorofluoromethane	ug/L	5	ND	04/13/94
1,1,2-Trichlor-1,2,2-trifluoroethane	ug/L	5	ND	04/13/94
2-Butanone (MEK)	ug/L	50	ND	04/13/94
1,1-Dichloroethene	ug/L	5	ND	04/13/94
Carbon Disulfide	ug/L	5	ND	04/13/94
Acetone	ug/L	50	ND	04/13/94
Methylene Chloride	ug/L	10	ND	04/13/94
trans-1,2-Dichloroethene	ug/L	5	ND	04/13/94
1,1-Dichloroethane	ug/L	5	ND	04/13/94
Chloroform	ug/L	5	ND	04/13/94
1,1,1-Trichloroethane	ug/L	5	ND	04/13/94
1,2-Dichloroethane	ug/L	5	ND	04/13/94
Vinyl Acetate	ug/L	50	ND	04/13/94
cis-1,2-Dichlorethene	ug/L	5	ND	04/13/94
Carbon Tetrachloride	ug/L	5	ND	04/13/94
Benzene	ug/L	5	9	04/13/94

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REPORT OF LABORATORY ANALYSIS

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302358	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
VOLATILE ORGANICS, EPA METHOD 8240 GC/MS				
1,2-Dichloropropane	ug/L	5	ND	04/13/94
Trichloroethene (TCE)	ug/L	5	6	04/13/94
Bromodichloromethane	ug/L	5	ND	04/13/94
2-Chloroethyl Vinyl Ether	ug/L	10	ND	04/13/94
trans-1,3-Dichloropropene	ug/L	5	ND	04/13/94
4-Methyl-2-pentanone (MIBK)	ug/L	50	ND	04/13/94
Toluene	ug/L	5	ND	04/13/94
cis-1,3-Dichloropropene	ug/L	5	ND	04/13/94
1,1,2-Trichloroethane	ug/L	5	ND	04/13/94
Dibromochloromethane	ug/L	5	ND	04/13/94
2-Hexanone	ug/L	50	ND	04/13/94
Tetrachloroethene	ug/L	5	73	04/13/94
Chlorobenzene	ug/L	5	ND	04/13/94
Ethylbenzene	ug/L	5	ND	04/13/94
Bromoform	ug/L	5	ND	04/13/94
Xylene(s) Total	ug/L	5	21	04/13/94
Styrene	ug/L	5	ND	04/13/94
1,1,2,2,-Tetrachloroethane	ug/L	5	ND	04/13/94
1,3-Dichlorobenzene	ug/L	5	ND	04/13/94
1,4-Dichlorobenzene	ug/L	5	ND	04/13/94
1,2-Dichlorobenzene	ug/L	5	ND	04/13/94
1,2-Dichloroethane-d4 (Surrog. Recovery)	%		92	04/13/94
Toluene-d8 (Surrogate Recovery)	%		95	04/13/94
4-Bromofluorobenzene (Surrog.Recovery)	%		106	04/13/94
EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)				
N-Nitrosodimethylamine	ug/L	10	ND	04/15/94
Bis(2-chloroethyl) ether	ug/L	10	ND	04/15/94
1,3-Dichlorobenzene	ug/L	10	ND	04/15/94
1,4-Dichlorobenzene	ug/L	10	ND	04/15/94
Benzyl Alcohol	ug/L	10	ND	04/15/94
1,2-Dichlorobenzene	ug/L	10	ND	04/15/94
Bis(2-chloroisopropyl) ether	ug/L	10	ND	04/15/94

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Mr. Jim Schollard
Page 3

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302358	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)				
N-Nitroso-di-n-propylamine	ug/L	10	ND	04/15/94
Hexachloroethane	ug/L	10	ND	04/15/94
Nitrobenzene	ug/L	10	ND	04/15/94
Bis(2-chloroethoxy)methane	ug/L	10	ND	04/15/94
1,2,4-Trichlorobenzene	ug/L	10	ND	04/15/94
Naphthalene	ug/L	10	ND	04/15/94
Hexachlorobutadiene	ug/L	10	ND	04/15/94
2-Methylnaphthalene	ug/L	10	ND	04/15/94
Hexachlorocyclopentadiene	ug/L	10	ND	04/15/94
2-Chloronaphthalene	ug/L	10	ND	04/15/94
Dimethylphthalate	ug/L	10	ND	04/15/94
Acenaphthylene	ug/L	10	ND	04/15/94
2,6-Dinitrotoluene	ug/L	10	ND	04/15/94
Acenaphthene	ug/L	10	ND	04/15/94
Dibenzofuran	ug/L	10	ND	04/15/94
2,4-Dinitrotoluene	ug/L	10	ND	04/15/94
Diethyl phthalate	ug/L	10	ND	04/15/94
Fluorene	ug/L	10	ND	04/15/94
4-Chlorophenylphenyl ether	ug/L	10	ND	04/15/94
N-Nitrosodiphenyl amine	ug/L	10	ND	04/15/94
1,2-Diphenylhydrazine	ug/L	10	ND	04/15/94
4-Bromophenylphenyl ether	ug/L	10	ND	04/15/94
Hexachlorobenzene	ug/L	10	ND	04/15/94
Phenanthrene	ug/L	10	ND	04/15/94
Anthracene	ug/L	10	ND	04/15/94
Di-n-butyl phthalate	ug/L	10	ND	04/15/94
Fluoranthene	ug/L	10	ND	04/15/94
Pyrene	ug/L	10	ND	04/15/94
Butylbenzyl phthalate	ug/L	10	ND	04/15/94
Benzo(a)anthracene	ug/L	10	ND	04/15/94
3,3'-Dichlorobenzidine	ug/L	20	ND	04/15/94

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REPORT OF LABORATORY ANALYSIS

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302358	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)				
Chrysene	ug/L	10	ND	04/15/94
Bis(2-ethylhexyl) phthalate	ug/L	10	ND	04/15/94
Di-n-octyl phthalate	ug/L	10	ND	04/15/94
Benzo(b)fluoranthene	ug/L	10	ND	04/15/94
Benzo(k)fluoranthene	ug/L	10	ND	04/15/94
Benzo(a)pyrene	ug/L	10	ND	04/15/94
Indeno(1,2,3-cd)pyrene	ug/L	10	ND	04/15/94
Dibenz(a,h)anthracene	ug/L	10	ND	04/15/94
Benzo(g,h,i)perylene	ug/L	10	ND	04/15/94
Phenol	ug/L	10	ND	04/15/94
2-Chlorophenol	ug/L	10	ND	04/15/94
2-Methylphenol	ug/L	10	ND	04/15/94
4-Methylphenol	ug/L	10	ND	04/15/94
2-Nitrophenol	ug/L	10	ND	04/15/94
2,4-Dimethylphenol	ug/L	10	ND	04/15/94
Benzoic Acid	ug/L	50	ND	04/15/94
2,4-Dichlorophenol	ug/L	10	ND	04/15/94
4-Chloro-3-methylphenol	ug/L	10	ND	04/15/94
2,4,6-Trichlorophenol	ug/L	10	ND	04/15/94
2,4,5-Trichlorophenol	ug/L	10	ND	04/15/94
2,4-Dinitrophenol	ug/L	50	ND	04/15/94
4-Nitrophenol	ug/L	50	ND	04/15/94
4,6-Dinitro-2-methylphenol	ug/L	50	ND	04/15/94
Pentachlorophenol	ug/L	50	ND	04/15/94
Nitrobenzene-d5 (Surrogate Recovery)	%		87	04/15/94
2-Fluorobiphenyl (Surrogate Recovery)	%		81	04/15/94
Terphenyl-d14 (Surrogate Recovery)	%		80	04/15/94
2-Fluorophenol (Surrogate Recovery)	%		63	04/15/94
Phenol-d6 (Surrogate Recovery)	%		81	04/15/94
2,4,6-Tribromophenol(Surrogate Recovery)	%		60	04/15/94
Date Extracted			04/13/94	

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REPORT OF LABORATORY ANALYSIS

Mr. Jim Schollard
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April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302366	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-B1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/15/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	53 (AT)	04/15/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/15/94
Benzene	ug/L	0.5	0.8	04/15/94
Toluene	ug/L	0.5	ND	04/15/94
Ethylbenzene	ug/L	0.5	ND	04/15/94
Xylenes, Total	ug/L	0.5	ND	04/15/94

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REPORT OF LABORATORY ANALYSIS

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302374	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-B2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/15/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	120(AT)	04/15/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/15/94
Benzene	ug/L	0.5	ND	04/15/94
Toluene	ug/L	0.5	ND	04/15/94
Ethylbenzene	ug/L	0.5	ND	04/15/94
Xylenes, Total	ug/L	0.5	ND	04/15/94

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Mr. Jim Schollard
Page 7

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302382	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/15/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/15/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/15/94
Benzene	ug/L	0.5	ND	04/15/94
Toluene	ug/L	0.5	ND	04/15/94
Ethylbenzene	ug/L	0.5	ND	04/15/94
Xylenes, Total	ug/L	0.5	ND	04/15/94
VOLATILE ORGANICS, EPA METHOD 8240 GC/MS				
Chloromethane	ug/L	10	ND	04/13/94
Vinyl Chloride	ug/L	10	ND	04/13/94
Bromomethane	ug/L	10	ND	04/13/94
Chloroethane	ug/L	10	ND	04/13/94
Trichlorofluoromethane	ug/L	5	ND	04/13/94
1,1,2-Trichlor-1,2,2-trifluoroethane	ug/L	5	ND	04/13/94
2-Butanone (MEK)	ug/L	50	260	04/13/94
1,1-Dichloroethene	ug/L	5	ND	04/13/94
Carbon Disulfide	ug/L	5	ND	04/13/94
Acetone	ug/L	50	ND	04/13/94
Methylene Chloride	ug/L	10	ND	04/13/94
trans-1,2-Dichloroethene	ug/L	5	ND	04/13/94
1,1-Dichloroethane	ug/L	5	ND	04/13/94
Chloroform	ug/L	5	ND	04/13/94
1,1,1-Trichloroethane	ug/L	5	ND	04/13/94
1,2-Dichloroethane	ug/L	5	ND	04/13/94
Vinyl Acetate	ug/L	50	ND	04/13/94
cis-1,2-Dichlorethene	ug/L	5	ND	04/13/94
Carbon Tetrachloride	ug/L	5	ND	04/13/94
Benzene	ug/L	5	ND	04/13/94
1,2-Dichloropropane	ug/L	5	ND	04/13/94
Trichloroethene (TCE)	ug/L	5	ND	04/13/94
Bromodichloromethane	ug/L	5	ND	04/13/94

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REPORT OF LABORATORY ANALYSIS

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April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302382	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
VOLATILE ORGANICS, EPA METHOD 8240 GC/MS				
2-Chloroethyl Vinyl Ether	ug/L	10	ND	04/13/94
trans-1,3-Dichloropropene	ug/L	5	ND	04/13/94
4-Methyl-2-pentanone (MIBK)	ug/L	50	ND	04/13/94
Toluene	ug/L	5	ND	04/13/94
cis-1,3-Dichloropropene	ug/L	5	ND	04/13/94
1,1,2-Trichloroethane	ug/L	5	ND	04/13/94
Dibromochloromethane	ug/L	5	ND	04/13/94
2-Hexanone	ug/L	50	ND	04/13/94
Tetrachloroethene	ug/L	5	ND	04/13/94
Chlorobenzene	ug/L	5	ND	04/13/94
Ethylbenzene	ug/L	5	ND	04/13/94
Bromoform	ug/L	5	ND	04/13/94
Xylene(s) Total	ug/L	5	ND	04/13/94
Styrene	ug/L	5	ND	04/13/94
1,1,2,2,-Tetrachloroethane	ug/L	5	ND	04/13/94
1,3-Dichlorobenzene	ug/L	5	ND	04/13/94
1,4-Dichlorobenzene	ug/L	5	ND	04/13/94
1,2-Dichlorobenzene	ug/L	5	ND	04/13/94
1,2-Dichloroethane-d4 (Surrog. Recovery)	%		92	04/13/94
Toluene-d8 (Surrogate Recovery)	%		96	04/13/94
4-Bromofluorobenzene (Surrog.Recovery)	%		107	04/13/94
EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)				
N-Nitrosodimethylamine	ug/L	10	ND	04/15/94
Bis(2-chloroethyl) ether	ug/L	10	ND	04/15/94
1,3-Dichlorobenzene	ug/L	10	ND	04/15/94
1,4-Dichlorobenzene	ug/L	10	ND	04/15/94
Benzyl Alcohol	ug/L	10	ND	04/15/94
1,2-Dichlorobenzene	ug/L	10	ND	04/15/94
Bis(2-chloroisopropyl) ether	ug/L	10	ND	04/15/94
N-Nitroso-di-n-propylamine	ug/L	10	ND	04/15/94
Hexachloroethane	ug/L	10	ND	04/15/94

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REPORT OF LABORATORY ANALYSIS

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April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302382	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)				
Nitrobenzene	ug/L	10	ND	04/15/94
Bis(2-chloroethoxy)methane	ug/L	10	ND	04/15/94
1,2,4-Trichlorobenzene	ug/L	10	ND	04/15/94
Naphthalene	ug/L	10	ND	04/15/94
Hexachlorobutadiene	ug/L	10	ND	04/15/94
2-Methylnaphthalene	ug/L	10	ND	04/15/94
Hexachlorocyclopentadiene	ug/L	10	ND	04/15/94
2-Chloronaphthalene	ug/L	10	ND	04/15/94
Dimethylphthalate	ug/L	10	ND	04/15/94
Acenaphthylene	ug/L	10	ND	04/15/94
2,6-Dinitrotoluene	ug/L	10	ND	04/15/94
Acenaphthene	ug/L	10	ND	04/15/94
Dibenzofuran	ug/L	10	ND	04/15/94
2,4-Dinitrotoluene	ug/L	10	ND	04/15/94
Diethyl phthalate	ug/L	10	ND	04/15/94
Fluorene	ug/L	10	ND	04/15/94
4-Chlorophenylphenyl ether	ug/L	10	ND	04/15/94
N-Nitrosodiphenyl amine	ug/L	10	ND	04/15/94
1,2-Diphenylhydrazine	ug/L	10	ND	04/15/94
4-Bromophenylphenyl ether	ug/L	10	ND	04/15/94
Hexachlorobenzene	ug/L	10	ND	04/15/94
Phenanthrene	ug/L	10	ND	04/15/94
Anthracene	ug/L	10	ND	04/15/94
Di-n-butyl phthalate	ug/L	10	ND	04/15/94
Fluoranthene	ug/L	10	ND	04/15/94
Pyrene	ug/L	10	ND	04/15/94
Butylbenzyl phthalate	ug/L	10	ND	04/15/94
Benzo(a)anthracene	ug/L	10	ND	04/15/94
3,3'-Dichlorobenzidine	ug/L	20	ND	04/15/94
Chrysene	ug/L	10	ND	04/15/94
Bis(2-ethylhexyl) phthalate	ug/L	10	ND	04/15/94

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April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0302382	
Date Collected:			04/11/94	
Date Received:			04/12/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)				
Di-n-octyl phthalate	ug/L	10	ND	04/15/94
Benzo(b)fluoranthene	ug/L	10	ND	04/15/94
Benzo(k)fluoranthene	ug/L	10	ND	04/15/94
Benzo(a)pyrene	ug/L	10	ND	04/15/94
Indeno(1,2,3-cd)pyrene	ug/L	10	ND	04/15/94
Dibenz(a,h)anthracene	ug/L	10	ND	04/15/94
Benzo(g,h,i)perylene	ug/L	10	ND	04/15/94
Phenol	ug/L	10	ND	04/15/94
2-Chlorophenol	ug/L	10	ND	04/15/94
2-Methylphenol	ug/L	10	ND	04/15/94
4-Methylphenol	ug/L	10	ND	04/15/94
2-Nitrophenol	ug/L	10	ND	04/15/94
2,4-Dimethylphenol	ug/L	10	ND	04/15/94
Benzoic Acid	ug/L	50	ND	04/15/94
2,4-Dichlorophenol	ug/L	10	ND	04/15/94
4-Chloro-3-methylphenol	ug/L	10	ND	04/15/94
2,4,6-Trichlorophenol	ug/L	10	ND	04/15/94
2,4,5-Trichlorophenol	ug/L	10	ND	04/15/94
2,4-Dinitrophenol	ug/L	50	ND	04/15/94
4-Nitrophenol	ug/L	50	ND	04/15/94
4,6-Dinitro-2-methylphenol	ug/L	50	ND	04/15/94
Pentachlorophenol	ug/L	50	ND	04/15/94
Nitrobenzene-d5 (Surrogate Recovery)	%		89	04/15/94
2-Fluorobiphenyl (Surrogate Recovery)	%		83	04/15/94
Terphenyl-d14 (Surrogate Recovery)	%		82	04/15/94
2-Fluorophenol (Surrogate Recovery)	%		65	04/15/94
Phenol-d6 (Surrogate Recovery)	%		81	04/15/94
2,4,6-Tribromophenol(Surrogate Recovery)	%		60	04/15/94
Date Extracted			04/13/94	

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REPORT OF LABORATORY ANALYSIS

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April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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FOOTNOTES
for pages 1 through 11

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

MDL	Method Detection Limit
ND	Not detected at or above the MDL.
AT	An unknown peak is present in the sample between Benzene and Methyl Tert Butyl Ether.

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QUALITY CONTROL DATA

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)
Batch: 70 29737
Samples: 70 0302358, 70 0302382

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

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)
Batch: 70 29737
Samples: 70 0302358, 70 0302382

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)	%		93
2-Fluorobiphenyl (Surrogate Recovery)	%		78

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QUALITY CONTROL DATA

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)
Batch: 70 29737
Samples: 70 0302358, 70 0302382

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Terphenyl-d14 (Surrogate Recovery)	%		74
2-Fluorophenol (Surrogate Recovery)	%		68
Phenol-d6 (Surrogate Recovery)	%		84
2,4,6-Tribromophenol(Surrogate Recovery	%		53

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
1,4-Dichlorobenzene	ug/L	10	100	76%	67%	13%
N-Nitroso-di-n-propylamine	ug/L	10	100	82%	68%	19%
1,2,4-Trichlorobenzene	ug/L	10	100	78%	69%	12%
Acenaphthene	ug/L	10	100	94%	86%	9%
2,4-Dinitrotoluene	ug/L	10	100	98%	91%	7%
Pyrene	ug/L	10	100	105%	102%	3%
Phenol	ug/L	10	150	77%	65%	17%
2-Chlorophenol	ug/L	10	150	77%	64%	18%
4-Chloro-3-methylphenol	ug/L	10	150	89%	80%	11%
4-Nitrophenol	ug/L	50	150	97%	89%	9%
Pentachlorophenol	ug/L	50	150	63%	53%	17%

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QUALITY CONTROL DATA

April 19, 1994
PACE Project Number: 440412505

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 29716
Samples: 70 0302358, 70 0302366

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

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700301831	Spike	Spike Recv	Spike Dupl Recv	RPD
Benzene	ug/L	0.5	20	100	92%	94%	2%
Toluene	ug/L	0.5	7.7	100	92%	94%	2%
Ethylbenzene	ug/L	0.5	9.0	100	101%	101%	0%
Xylenes, Total	ug/L	0.5	11	300	98%	98%	0%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Benzene	ug/L	0.5	100	104%	97%	7%
Toluene	ug/L	0.5	100	104%	98%	6%
Ethylbenzene	ug/L	0.5	100	100%	99%	1%
Xylenes, Total	ug/L	0.5	300	106%	98%	8%

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Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 29744
Samples: 70 0302374, 70 0302382

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

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700302382 W-C	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	105%	104%	1%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	111%	111%	0%

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QUALITY CONTROL DATA

Client Reference: Exxon 7-0104 (EE)

VOLATILE ORGANICS, EPA METHOD 8240 GC/MS
Batch: 70 29621
Samples: 70 0302358, 70 0302382

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
Vinyl Acetate	ug/L	50	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
2-Chloroethyl Vinyl Ether	ug/L	10	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

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Client Reference: Exxon 7-0104 (EE)

VOLATILE ORGANICS, EPA METHOD 8240 GC/MS
Batch: 70 29621
Samples: 70 0302358, 70 0302382

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Chlorobenzene	ug/L	5	ND
Ethylbenzene	ug/L	5	ND
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	%		89
Toluene-d8 (Surrogate Recovery)	%		94
4-Bromofluorobenzene (Surrog.Recovery)	%		106

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700300835	Spike	Spike Recv	Spike Dupl Recv	RPD
1,1-Dichloroethene	ug/L	5	ND	20	78%	81%	4%
Benzene	ug/L	5	ND	20	86%	93%	8%
Trichloroethene (TCE)	ug/L	5	ND	20	80%	85%	6%
Toluene	ug/L	5	ND	20	82%	86%	5%
Chlorobenzene	ug/L	5	ND	20	87%	92%	6%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
1,1-Dichloroethene	ug/L	5	20	87%	86%	1%
Benzene	ug/L	5	20	99%	96%	3%
Trichloroethene (TCE)	ug/L	5	20	94%	90%	4%
Toluene	ug/L	5	20	94%	90%	4%
Chlorobenzene	ug/L	5	20	100%	96%	4%

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FOOTNOTES
for pages 13 through 19

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Client Reference: Exxon 7-0104 (EE)

MDL	Method Detection Limit
ND	Not detected at or above the MDL.
RPD	Relative Percent Difference

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

CHAIN OF CUSTODY

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

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

Page 1 of 1

Consultant's Name: RESNA

Address: 3315 Almaden Expwy., Suite 34 San Jose CA

Site Location: 1725 Park ST., Alam

Project #: 170077.21

Consultant Project #: 170077.21

Consultant Work Release #: 09300 238 Co

Project Contact: Jim Schollard

Phone #: 408/264-7723 Fax #: 2435

Laboratory Work Release #:

EXXON Contact: Marla Guensler ☒ EE ☐ C&M

Phone #: 510/246-8768 Fax #: 8798

EXXON RAS #: 7-0104

Sampled by (print): Jim Schollard

Sampler's Signature: Jim Schollard

Shipment Method: Courier

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 Description	Collection Date/Time 4/11/94	Matrix Soil/Water	Prsv	# of Cont	PACE Sample #	TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1	EPA 624	EPA 625								COMMENTS
W-A	13:50-14:00	W	HCL	6	302358	X			X									
W-A	"	W	—	1						X								Ph~7
W-B1	13:45-50	W	HCL	3	302360	X												
W-B2	13:40-45	W	HCL	3	302374	X												
W-C	13:30-40	W	HCL	6	302382	X			X									
W-C	"	W	—	1						X								Ph~7

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Jim Schollard / RESNA	4/12/94	12:25	Ed Kotty - Pace	4/12/94	1213
Ed Kotty Pace	4/12	1635	Jon McIntosh PACE	4/12/94	1635

Additional Comments: 10/2 D/I

✓ PDLs

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

RESNA
Working to Restore Nature

APPENDIX C

WASTEWATER DISCHARGE PERMIT

EAST BAY
MUNICIPAL UTILITY DISTRICT

MICHAEL J. WALLIS
DIRECTOR OF WASTEWATER

CERTIFIED MAIL
(Return Receipt Requested)
Certified Mail No. P 790 283 409

January 26, 1994

Marla Guensler
Environmental Engineer
Exxon Company, USA
P. O. Box 4032
Concord, California 94520

Dear Ms. Guensler:

Re: Wastewater Discharge Permit (Account No. 502-66631)

Enclosed is the Wastewater Discharge Permit for the remediation project for Exxon Service Station No.7-0104, effective January 25, 1994, through January 24, 1995. Please note that new and stringent Wastewater Discharge Limitations are in effect. Please read the Permit Terms and Conditions and the attached Standard Provisions and Reporting Requirements. You are responsible for complying with all Permit conditions and requirements.

Exxon Company, USA shall report to the Source Control Division any changes, either permanent or temporary, to the premise or operation that significantly affect either the volume or quality of wastewater discharged or deviate from the Terms and Conditions under which this Permit is granted.

If you have any questions regarding this matter, please contact Safa Toma of the Source Control Division at 510/287-1512.

Sincerely,

JOSEPH G. DAMAS, JR.
Manager of Source Control

JGD:SAT:llg

sc4a.08_034

Enclosures

cc: Dora Chew, Project Engineer
RESNA, 3315 Almaden Expressway, Suite 34
San Jose, CA 95118

EBMUD

WASTEWATER DISCHARGE PERMIT APPLICATION

PERMIT NUMBER
502-66631

APPLICANT BUSINESS NAME
Exxon Company, U.S.A.

ADDRESS OF PREMISE DISCHARGING WASTEWATER	BUSINESS MAILING ADDRESS
1725 Park Street	P.O. Box 4032
STREET ADDRESS	STREET ADDRESS
Alameda	Concord, CA 94520
CITY ZIP CODE	CITY ZIP CODE

~~CHIEF EXECUTIVE OFFICER~~ Exxon Contact

Ms. Marla d. Guensler	Senior Environmental Engineer
NAME	TITLE
P.O. Box 4032 2300 Clayton Road	Concord, CA 94520
STREET ADDRESS	CITY ZIP CODE

PERSON TO BE CONTACTED ABOUT THIS APPLICATION	PERSON TO BE CONTACTED IN EVENT OF EMERGENCY
Ms. Dora Chew/RESNA Industries Inc.	Ms. Marla Guensler
NAME	NAME
Project Engineer (408) 264-7723	(510) 246-8776 same
TITLE PHONE	DAY PHONE NIGHT PHONE

DOCUMENTATION TO BE RETURNED WITH THE PERMIT APPLICATION:

- [X] PROCESS DESCRIPTION
- [X] WATER BALANCE CALCULATIONS
- [X] WASTEWATER STRENGTH DATA BASE
- [X] SCHEMATIC FLOW DIAGRAM
- [X] BUILDING LAYOUT PLAN
- [ ] DESCRIPTION OF TREATMENT SYSTEM
- [ ] SELF-MONITORING METHOD
- [ ] SPILL PREVENTION AND CONTAINMENT PLAN
- [ ] A LIST OF ALL ENVIRONMENTAL PERMITS (E.G. Air, Hazardous Waste)
- [ ] OTHER _____ SPECIFY

PROVISIONS

Applicant will comply with the EBMUD Wastewater Control Ordinance and all applicable rules and regulations.

Applicant will report to EBMUD, Wastewater Department any changes, permanent or temporary, to the premise or operations that significantly change the quality or volume of the wastewater discharge or deviation from the terms and conditions under which this permit is granted.

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Marla D. Guensler
NAME (See certification requirements on reverse)

Marla D. Guensler
SIGNATURE

Senior Environmental Engineer
TITLE

12-02-93
DATE

EBMUD

Exxon Company, U.S.A.

BUSINESS NAME

Process Description

PURPOSE – The Process Description is intended to provide a description of the primary business activities and the substances which may enter into the wastewater from the business activity.

EBMUD USE

Permit Number 502-6663[illegible]

Business Classification Code

BUSINESS ACTIVITY

Groundwater Extraction and Treatment

DESCRIPTION OF PRODUCT

TYPE OF PRODUCT OR BRAND NAME	QUANTITIES	
	Past Calendar Year	Estimated This Year
Effluent from Groundwater Treament System	980,000 gal (Est.)	10,080 gpd

PROCESS DESCRIPTION

PROCESS DESCRIPTION List all wastewater generating operations	CHARACTERISTICS List all substances that may be discharged to the sewer.
Example: Rinsewater from electroplating bath	Cr, Cu, Ni, Zn
Example: Washdown of milk filling area	fatty acids, milk
Remediation of extracted hydrocarbon-impacted groundwater by a bioreactor and granular activated carbon	Benzene, Toluene, Ethylbenzene, Xylenes, Total Petroleum Hydrocarbons as Gasoline

DISCHARGE PERIOD

a. Time of day from continuous to (24 hrs/day)

b. Days of the week 7

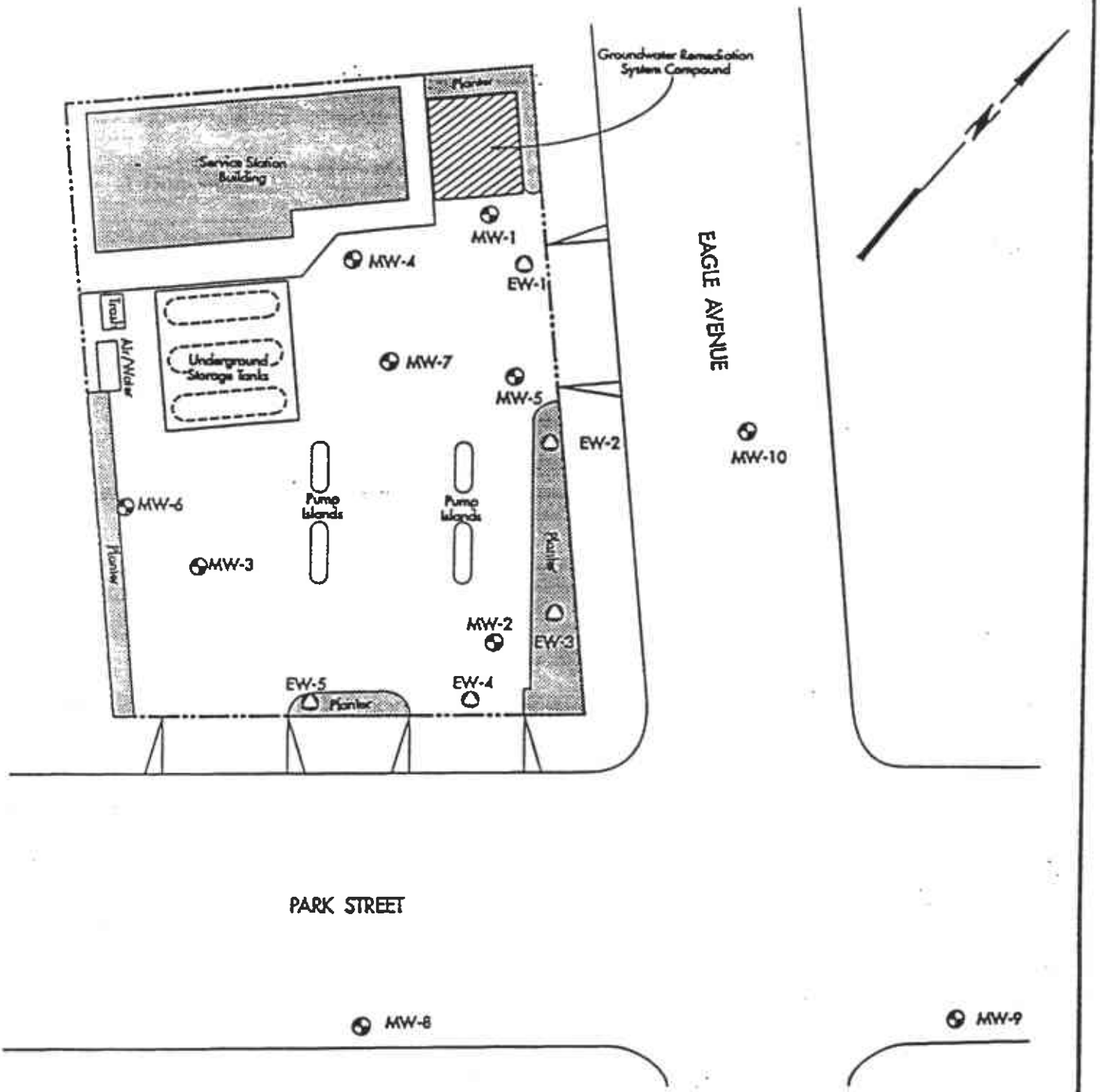
BATCH DISCHARGE(S)

a. Day(s) of the week 0 b. Time(s) of the day _____

c. Volume discharged _____ d. Rate of discharge _____

OTHER WASTES – List the type and volume of liquid waste and sludges removed from the premises by means other than the community sewer.

WASTE REMOVED BY (Name, address and State Transporter ID No.)	TYPE OF WASTE (Example: alkaline cleaners, organic solvents, treatment sludge)	WASTE I.D. No.	VOLUME (lbs)(gal)/mo
NONE			



Map Source: Site Map by Harding Lawson Associates, 1992; survey by Ron Archer, Civil Engineer, Inc., 1993

RESNA

PROJECT NO. 170077.03 | 7/93

GENERALIZED SITE PLAN
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California

PLATE
2

EBMUD

Business Name Exx mpany, U.S.A.

Water Bal: ce / Strength Summary

PURPOSE: This information will enable EBMUD to evaluate the volumes, source(s) and strengths of wastewater discharged to the community sewer.

Permit Number 502-66631

WATER USE AND DISPOSITION: Show on a separate sheet the method and calculations used to determine the quantities shown in the table.

Figures are: ☒ gallons per calendar day ☐ gallons per working day Number of working days per year_____

WATER USE	WATER SUPPLY FROM:			WASTEWATER DISCHARGED TO:					
	EBMUD	OTHER (1)		SIDE SEWER (gal/day)				OTHER (2)	
	gal/day	gal/day	CODE	No.1	No.____	No.____	No.____	gal/day	CODE
Sanitary									
Processes									
Boiler									
Cooling									
Washing									
Irrigation									
Product									
Stormwater									
Other (3)		10,080	a	10,080					
Subtotal		10,080		10,080					

EBMUD AND OTHER SUPPLY TOTAL 10,080

ALL SIDE SEWERS TOTAL 10,080

NOTES:

1. Enter the quantity and the appropriate code letter indicating the source:
   a. Well b. Creek c. Stormwater d. Reclaimed Water e. Raw Materials.
2. Enter the quantity and appropriate code letter indicating the discharge point:
   a. Stormdrain b. Rail, Truck, Barge c. Evaporation d. Product
3. Describe Other: Extracted hydrocarbon-impacted groundwater remediated by a bioreactor and activated carbon adsorption, prior to discharge to the sanitary sewer.

SANITARY DISCHARGE: Please use the following data from the Uniform Plumbing Code, 1985, to determine sanitary wastewater volumes.

Field service employees - 5 gallons per employee per day
Office employees - 20 gallons per employee per day
Production employees - 25 gallons per employee per day
Production employees with showers - 35 gallons per employee per day

Include the effect that seasonal and weekend staffing changes may have on determining average volumes.

AVERAGE WASTEWATER STRENGTH: Data base must be attached, average self-monitoring and EBMUD data.

SIDE SEWER (mg/L)

	No. 1	No.____	No.____	No.____
CODF	15			
TSS	2			

34 • 10/88

Exxon Service Station - No. 7-0104
Account No. 502-66631

GENERAL CONDITIONS

I. Exxon Service Station - No. 7-0104 shall comply with all items of the attached STANDARD PROVISIONS AND REPORTING REQUIREMENTS, rev. 11/92 (SPARR).

REPORTING REQUIREMENTS

I. Exxon Service Station - No. 7-0104 shall immediately discontinue the discharge of any treated wastewater that is known to be, or suspected of, violating wastewater discharge limitations. This violation shall be reported, per Section B, Paragraph II of SPARR.

II. Exxon Service Station - No. 7-0104 shall monitor discharges per the schedule found in the Self Monitoring and Reporting Requirements, Section IV, on page 3 of this permit and submit quarterly reports as required below.

Date Due	Reporting Period
April 29, 1994	January 1 through March 31, 1994
July 29, 1994	April 1 through June 30, 1994
October 31, 1994	July 1 through September 30, 1994
January 24, 1995	October 1 through December 31, 1994

The quarterly report shall contain:

1. A summary of the treatment unit self monitoring results as required on Page 3, and any monitoring well sample results that occurred during the reporting period.

2. Copies of the Facility Inspection Log. This log must include flow totalizer readings, comments on maintenance, operational changes, visual observations of the unit for leaks or fouling and off-haul of hazardous wastes.

WASTEWATER DISCHARGE LIMITATIONS

Exxon Service Station - No. 7-0104 shall not discharge wastewater from a side sewer into a community sewer if the strength of the wastewater exceeds the following:

REGULATED PARAMETER	DAILY MAXIMUM
Arsenic	0.0013 mg/L
Cadmium	0.0047 mg/L
Chromium	0.043 mg/L
Copper	0.128 mg/L
Cyanide	0.0081 mg/L
Iron	2.708 mg/L
Lead	0.028 mg/L
Mercury	0.0008 mg/L
Nickel	0.034 mg/L
Oil and Grease	100 mg/L
Phenolic compounds	0.135 mg/L
Silver	0.012 mg/L
Zinc	0.288 mg/L
pH (not less than)	5.5 S.U.
Temperature	150 °F
VOC	0.035 mg/L
Benzene	0.005 mg/L
Toluene	0.007 mg/L
Ethylbenzene	0.005 mg/L
Xylenes	0.007 mg/L

EBMUD

Exxon Service Station No. 7-0104
Account No. 502-66631
Page 4

MONITORING and TESTING CHARGES

Total EBMUD Inspections Per Year: 3 @ $510.00 each = $1,530.00 /year

Total Analyses Per Year:

Parameter	Tests per year	Charge per test	Total Charge per year
EPA 624	3	$156.00	$468.00
EPA 625	1	$199.00	$199.00
Metals	1	$111.00	$111.00

Monitoring and Testing Charge = $2,308.00 /year
$192.33 /month

WASTEWATER DISPOSAL CHARGE

All wastewater discharged will be charged for treatment and disposal service at the unit rate measured for other carbon treated groundwater discharges.
Current unit rate: $0.31 /Ccf

Volume discharged in Ccf/month = 409.9 $127.07 /month

WASTEWATER CAPACITY FEE

The capacity fee is calculated by multiplying the monthly wastewater discharge volume by the applicable fee in effect at start-up. Each month, 1/36 of the capacity fee will be charged, until the entire fee has been paid in 3 years.

Discharge volume = 306432 gallons per month
Capacity fee rate = $47.64 /Ccf-month
Capacity fee = $19,516.60 or $542.13 /month
Capacity charge paid during permit year 1993 to 1994 = $4,557.12
Amount to be paid = $19,516.60 - 4557.12 = $14,959.48 or $623.31 /month

EBMUD

WASTEWATER DISCHARGE PERMIT

Terms and Conditions

Exxon Service Station No. 7-0104
Account No. 502-66631

FEES AND WASTEWATER CHARGES

The following fees and charges are due when billed by the District:

Permit Fee (paid $2,260) balance:	$0.00
Monthly Monitoring Charges	$192.33
Monthly Wastewater Disposal Charge	$127.07
Monthly Wastewater Capacity Fee	$623.31
Total Monthly Charges =	$942.71

This Permit may be amended to include changes to rates and charges which may be established by the District during the term of this Permit.

AVERAGE WASTEWATER DISCHARGE *

LAST 12 MONTHS	PRECEDING 12 - 24 MONTHS
7,200	N/A

* Gallons per calendar day.

AUTHORIZATION

The above named Applicant is hereby authorized to discharge wastewater to the community sewer, subject to said Applicant's compliance with EBMUD Wastewater Control Ordinance, compliance conditions, reporting requirements and billing conditions.

Effective Date: January 25, 1994

Expiration Date: January 24, 1995

Michael Frisbee 1/31/94

MANAGER, WASTEWATER DEPARTMENT — DATE

EAST BAY MUNICIPAL UTILITY DISTRICT

EAST BAY
MUNICIPAL UTILITY DISTRICT

MICHAEL J. WALLIS
DIRECTOR OF WASTEWATER

CERTIFIED MAIL
(Return Receipt Requested)
Certified Mail No. P 790 283 449

March 8, 1994

Marla Guensler, Environmental Engineer
Exxon Company USA
P. O. Box 4032
Concord, California 94520

Dear Ms. Guensler:

Re: Wastewater Discharge Permit Amendment - Account #502-66631

Enclosed is page 3 of the Wastewater Discharge Permit (Permit) for the remediation project for Exxon Service Station No.7-0104, effective January 25, 1994, through January 24, 1995.

The Self Monitoring Reporting Requirements section of your Permit, paragraph III, has been revised. The sample locations "A", and "C" were changed. Sample location "C" now is Side Sewer No. 1, and sample location "A" is the influent into the carbon treatment unit. This revision is effective on January 25, 1994.

Exxon Company USA shall report to the Source Control Division any changes, either permanent or temporary, to the premise or operation that significantly affect either the volume or quality of wastewater discharged or deviate from the Terms and Conditions under which this Permit is granted.

If you have any questions regarding this matter, please contact Safa Toma of the Source Control Division at 510/287-1512.

Sincerely,

JOSEPH G. DAMAS, JR.
Manager of Source Control

JGD:SAT:llg

sc4a.26_054

Enclosures

cc: Dora Chew, Project Engineer
RESNA, 3315 Almaden Expressway, Suite 34
San Jose, CA 95118

EBMUD

SELF MONITORING REPORTING REQUIREMENTS

I. Exxon Service Station - No. 7-0104 shall obtain representative samples of the wastewater discharge. The sampling shall be performed according to the frequency and methods outlined below and according to the methods and requirements found in SPARR.

II. Self Monitoring Reports shall be submitted per the schedule on page 1 and shall contain:

1. The laboratory results
2. The chain of custody documentation
3. Signatory requirements.

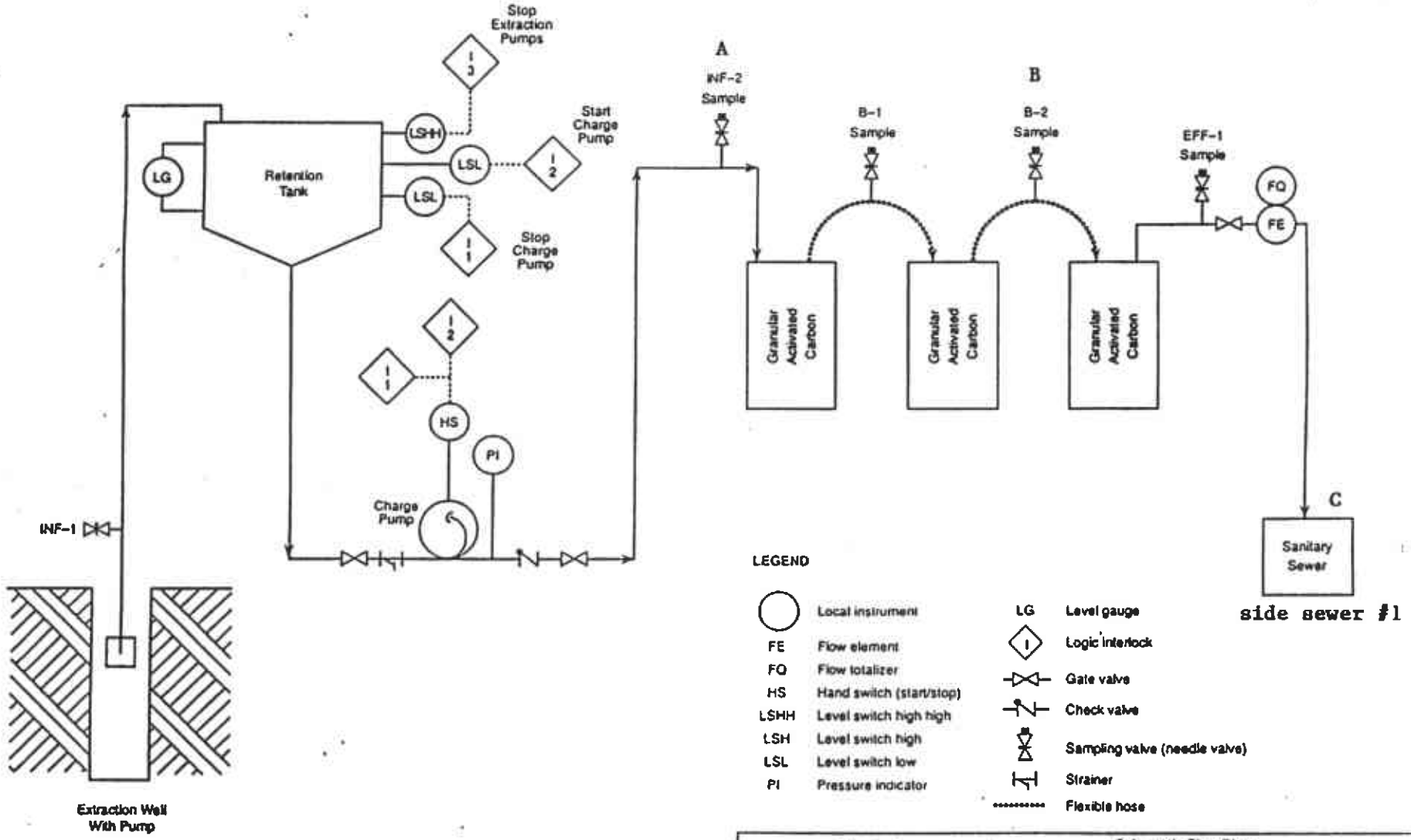
III. Sample location "C", also known as Side Sewer no. 1, shall be the sample tap located on the effluent side of the final carbon vessel. Sample location "B" shall be the sample tap located intermediate of the end two carbon vessels. Sample location "A" shall be the sample tap located on the influent side of the first carbon vessel. The sample locations are shown on Harding Lawson Associates Schematic Flow Diagram, Project Number 10495.395 dated 1/6/93 in this Permit.

IV. Collect a sample for analysis from side sewer no. 1 once per quarter with a minimum of one calendar month between sampling events.

V. Parameters to be monitored and sample types shall be:

TPH (as gasoline)	EPA 8015	- grab sample
BTEX	EPA 8020	- grab sample

VI. All samples must be obtained using containers, collection methods, preservation techniques, holding times and analytical methods set forth in 40 CFR Part 136, except for the 8000 series methods, which are found in U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Test Methods for Evaluating Solid Waste, SW-846.



Harding Lawson Associates
Engineering and Environmental Services

Schematic Flow Diagram
Exxon Service Station #7-0104
1725 Park Street
Alameda, California

PLATE 2

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
S. Patel	10495.395		1/6/93	

Permit #502-666

RESNA
Working to Restore Nature

APPENDIX D

FACILITY INSPECTION LOGS

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 1
JOB NO. 17007.21
DATE: 4/4/94

PROJECT NAME: Exxon 104

WORK SCOPE: System Check

TIME: on-site 8:00 am Mark Ebner

Sand Filter pressure SF#1 = 28 psi
SF#2 = 0 psi
Bag Filter pressure BF#1 = 5 psi
Carbon filter pressure CC#1 = 4 psi
CC#2 = 1 psi
CC#3 = 1 psi

Fin Q = 3.4 gpm

off-site 8:15 am

System-up

ATTACHMENTS: _____

INITIAL: ME

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 1
JOB NO. 150027.21
DATE: 4/4-5/94

PROJECT NAME: ~~Bell~~ Exxon 104

WORK SCOPE: Clean sand filter 1A

Chris Allen

TIME:

4/4
- emptied 2-3 inches of water out of sand filter 1A
- poured ½ gallon of ~~muriatic~~ muriatic acid and stirred around as much as could be done through the side hole. Let stand over night.

4/5
- plugged side hole and washed ~~muriatic~~ muriatic acid out of sand filter.

Sand filter	bag filter	1st CD	GPM
18 psi	12.25 psi	8.1 psi	~5.8 gpm

ATTACHMENTS: _____ INITIAL: _____

WHITE — PROJECT FILE • YELLOW — PROJECT MANAGER • PINK — SIGHT COPY

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 2

PROJECT NAME: Exxon 104

JOB NO. 170077.21

DATE: 4/11/94

WORK SCOPE: O+M + Sampling

TIME: 12:15 Jim S. onsite
3:45 offsite

Operational Data (12:30):

Control Panel/System Status: On/Operating
Extraction Pumps all pumping: Yes
Approx rate (influent) * 5.0 gpm (optimum ✓)
Nutrient + H_2O_2 Feed Pumps: Off (not in use)
Nutrient + H_2O_2 tank Levels + Condition: Same + ok
Transfer Pump: Placed in "Hand" mode to collect data
Alarms: None
Flowmeter Reading: 131,976.0
Intermittent Discharge Rate to sewer (per FM): ~2.0 gpm
TOT. gallons pumped since last visit + approx. discharge rate: ~~5,192 gal~~ 52,000 gal
≈ 4,333 gpd or ~~[illegible]~~ 3.0 gpm < 7.0 K gpd regulation> ~~[illegible]~~ (JS)
~~[illegible]~~
AC operation + pressure: On + 80 psi
AC hrs. of operation: 43,068.0
Fluid level: ok (nearing the low level -- AC servicing has been scheduled)
Extraction pumps pressure (PI-405): 65 psi (60-80 psi ok)
pH (Signet): 6.05
PG (Inlet) @ Sand filter (PI-101): 20 psi } ΔP = 15 psi for Sand filter (much too high; SF1A sand media needs replacement)
PG @ Bag filter (PI-103): 5 psi }
PG @ 1st C.C. (PI-501): 4 psi } Bag filter ΔP = 1 psi (ok)
PG @ last CC (PI-502): 0 psi } C.C ΔP = 4 psi (ok, but will backwash
Samples Collected: W-A (7) 13:50-14:00 for BTEX, TPHG, EPA 624+625;
W-B1 (3) 13:45-50 for BTEX/TPHG; W-B2 (3) 13:40-45 for BTEX/TPHG;
W-C (7) 13:30-40 for BTEX, TPHG, 624+625 [monthly + quarterly samples]

* EW1 Q: ~1.35 gpm (✓ uniform) EW4: ~0.35 (✓)
EW2 Q: ~0.65 gpm (✓) EW5: ~0.85 gpm (✓)
EW3 Q: ~1.25 gpm (✓) Cummulative Total: ~4.45 (w/in ~0.5 gpm of influent Q; ok ✓)

HV103 Setting: 2 full turns from fully open

Any problems/comments: ———

ATTACHMENTS: 1 pg

INITIAL: JS

WHITE — PROJECT FILE • YELLOW — PROJECT MANAGER • PINK — SIGHT COPY

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 2 OF 2
JOB NO. 17007.21
DATE: 4/[redacted]/94

PROJECT NAME: Exxon 104

WORK SCOPE: O+M + Sampling

TIME:

Work Conducted: Drained Condensate from compressor + tank; Backwashed SF1B sand filter for 10 min, ΔP during backwashing = 10 psi (too high); SF1A sand filter for 20 min, ΔP during backwashing = 16 psi (much too high) → need to replace sand media; Collected monthly + quarterly water samples (see pg. 1); Backwashed carbon system for ~ 10 min. w/ clean tap water; Replaced bag filter cartridge; Drained + cleaned-out bag filter housing; monitored air sparge carbon canister sample ports: A = 1.0, B = 0.0, + C = 0.0 (ppm) @ 14:40 pm;

Post Operational Data (15:30):

Control Panel + System Status: On + Up
Transfer Pump: Auto
Flowmeter Reading: 132,022.0
Intermittent Discharge Rate to Sewer: 7.25 gpm (above optimum)
HV103 setting: 2 complete turns from fully open
A.C. Operation: on
PG (inlet) @ sand filter: 17 psi ; sand filter ΔP = 10 psi (too high, replace media)
PG @ Bag filter: 10 psi ; bag filter ΔP = 1.5 psi (ok = new filter)
PG @ 1st C.C.: 8.5 psi ; C.C. ΔP = 6.5 psi (ok, new = 5.0 psi)
PG @ last C.C.: 2 psi

Any problems/comments: Need to replace clogged/fouled sand media, causing high ΔP over time (slow build-up) + eventually reduces discharge rate to < 1.0 gpm (w/in estimated 2 weeks).

ATTACHMENTS: _____ INITIAL: JS

WHITE — PROJECT FILE • YELLOW — PROJECT MANAGER • PINK — SIGHT COPY

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 1
JOB NO. 17007721
DATE: 4-19-94

PROJECT NAME: Exxon 104

WORK SCOPE: System Check & Shutdown

TIME: on-site 10:00 pm off-site 10:15 pm
System up.

Pre-Shut-down Data:
Control panel: on
Nutrient + H_2O_2 feed pump: NO
Transfer pump: NO (set to hand to collect below data)
Alarms: None
Flowmeter Reading: 1330787 / Rate: 5.5 gpm
Intermittent discharge rate: ~~[illegible]~~ NA
Tot. gallons pumped since last recorded visit: 1,102 ga ~~[illegible]~~

D.C. operating & pressure: Yes, 20 psi (hrs=044,849.6
Extraction wells & pumping rate: Not operating due to low AC pressure

Shut-system down: 10:05 pm

Filled a fresh carbon canister with water to let it soak.

PG & Sand filter = 18psi
" Bag filter = 6psi
" 1st C.C. = 5psi
" last C.C = 1psi

ATTACHMENTS: _____ INITIAL: ME.

WHITE — PROJECT FILE • YELLOW — PROJECT MANAGER • PINK — SIGHT COPY

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF ____

PROJECT NAME: Exxon 104

JOB NO. 170077.21

DATE: 4/20/94

WORK SCOPE: O+M

TIME: 3:00 pm - Jim S. onsite
5:30 - offsite

System Status: Shutdown (last night)

Air Compressor Evaluation:
Compressor pressure @ <20psi; electrical seems ok, will start & stop but doesn't seem to generate any pressure. No pressure found in tank. Isolated tank from AC, AC still would not build-up pressure. Possibly motor not turning over.
Followed AC. troubleshooting in O+M manual to no avail. AC. Servicing still pending P.O. approval; will be scheduled shortly. As a result of inoperative AC, extraction pumps can not operate, Thus system will have to be left down.

Carbon Canisters:
Carbon Cannisters 1-3 exhibited breakthrough as a result of 4/11/94 sampling as such they will be replaced pending Exxon & Agitates decisions. IT appears CC#1 is acceptably Spent, however #2+3 exhibited breakthrough & need to be replaced w/ fresh virgin GAC. The back-up CC. is reactivated GAC & can be put in place as an interim measure if AC is repaired prior to C.C. & change-out.

Work Conducted:

Drained carbon canisters 1-3 + back-up & pumped water back into bioreactor/holding tank. Drained Condensate from AC + Conducted troubleshooting. Office telecons. Monitored air sparge sample ports: A, B+C = 0.0 ppm
→ System left down

Note - based on M. Ebrels 4/19/94 Shut-down notes, The Sand filter is still exhibiting a much too high ΔP (12 psi); This issue needs mitigation (ie media replacement upon Exxon's approval of addtl. costs).

ATTACHMENTS: 2

INITIAL: JS

WHITE — PROJECT FILE • YELLOW — PROJECT MANAGER • PINK — SIGHT COPY

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 1

PROJECT NAME: Exxon 104

JOB NO. 170077.21

DATE: 5/4/94

WORK SCOPE: Annual Air Compressor Servicing & Attempted Repairs

TIME:

System Status: Down (has been shut-down pending A.C. repair & C.C. changeout)

10:00 am - Jim Scholland RESNA onsite
Mark Wiley, Airdale Compressors onsite
12:15 - Both off site.

A.C. Servicing: (Annual every ~ 3000 hrs.):
oper. Hrs.: 4,485.0 hrs.

Assessment: both belts were broken (will be replaced); auto drain faulty. Mark is concerned re. the modified & additional piping @ the air outlet & discharge points on the A.C., making access exceedingly difficult.

Work Conducted: Replaced air & oil filters; replaced oil (~2 gal.); replaced separator element & both belts w/ dual belt (unanticipated replacement), inspected cooling unit (clear of obstructions & looks good), replaced float on automatic condensate drain to A.C. (which was faulty); constructed fill port piping (extension) for easy oil fill access.

- left ~ 3 gal. of remaining A.C. oil to add oil to AC as necessary.

- Auto-drain assembly will now automatically drain the AC unit, no longer need to drain manually; only A.C. tank draining necessary.

Results:
AC. back up & in full operation. ✓
All extraction pumps operating
PI-405: ~70 psi (60-80 psi ok) ✓
AC. pressure: ~100 psi (ok) ✓

System left down due to CC. Change-out still pending.

ATTACHMENTS: _____ INITIAL: JS

WHITE — PROJECT FILE • YELLOW — PROJECT MANAGER • PINK — SIGHT COPY

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DAILY FIELD REPORT

SHEET 1 OF 1

PROJECT NAME: Exxon 104

JOB NO. 170077.21

DATE: 5/17/94

WORK SCOPE: Inspect Sand Filters / Field Mtg.

TIME:

11:00 Jim Schollard, RESNA onsite → offsite @ 2:00 pm
Ken Nogaredo, Bill Ryan Assoc. (Everfil Sand filters distributor) offsite @ ~1:00 pm

Work Conducted / Sand Filter Media Inspection Observations:

- Posted new BAAQMD permit

SF1A - Ken inspected the sand media in SF1A via disconnecting the hardpiped top header; appears to only be minor bio growth. The prolonged H_2O_2 treatment appeared to successfully eliminate the biofouling from the media. The sand was grey + appeared fairly clean. However, the media around the edges of the canister was fairly packed. Also, there is an ~4½" long ¾" ~~wide steel screened riser which protrudes up from the bottom of the canister~~ steel screened/slotted riser inside the cannister which protruding up from the bottom. This is the discharge point. I noticed that the gravel holding layer was only ~2" high thus allowing the finer grained sand to actually come in contact w/ the screened riser potentially causing excessive backpressure + thus the standard 18 psi pressure (which is too high). The sand level in the filter is also too far below the fill port. Should be ~2", it was over 6". Removed ~70% of the sand from the filter + stored onsite.

SF1B - Inspected the sand in SF1B as well, which has not had a history of excessively high pressure differentials but does exhibit high ΔP during backwashing. Note - The media had not been treated w/ a bio agent as a result of my initial ~~findings~~ media inspection findings in which the media appeared ~~free~~ relatively clear of bio fouling. Removed the top header (hardpiped) + inspected the media. The sand media now appears bio fouled (moderate). Orangish lenses present in the sand + it appears sticky. Also the sand is extremely compacted along around the edges + there is evidence of channelizing about the screened discharge port. Removed ~20% of the sand media.

Proposed Mitigation Measures: Remove all media, clean out filter + piping via closing + ~~back up~~ then backwashing, record background ΔP; replace w/ new sand + compare ΔP. Need to backwash more frequently. Ken recommends an automated backwash system

ATTACHMENTS: —

INITIAL: JS

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FIELD REPORT/ DATA SHEET

Project Number: 130 700772 Field Technician: Chris Allen
Date: 5/27/94 Day: M Tu W Th (F) Weather S
Station Number: 7-8104 Station Address: 1025 Park St

DTW Order	Well ID	Diam.	Lock	Exp. Cap	Total Depth	DTW Intial	DTW Final	Depth to Product	Product Thickness	Time Sampled	Comments
1	MW-9					6.54					
2	MW-8					5.87					
3	MW-10					6.48					
4	MW-1					6.24					
5	MW-3					5.91					
6	MW-6					6.18					
7	MW-7					5.66					
8	MW-4					5.99					
9	MW-2					6.11					Sheen
10	MW-5					5.77			<.10'		
11	EW-3					5.22			~~<.10'~~		
12	EW-1					5.29					
13	EW-5					5.48					
14	EW-4					4.93					
15	EW-2					5.25					Heavy product

Notes:

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DAILY FIELD REPORT

SHEET 1 OF 2
PROJECT NAME: Exxon 104
JOB NO. 70077.21
DATE: 6/30/94
WORK SCOPE: hydrate carbon; sand filter cleaning + sand media replacement

TIME:

11.30 Jim + Jeanne arrive onsite
12-1230 lunch
1230-130 Jim explains how to hydrate carbon canisters + how to back flush sand filters.
1250 4 carbon canisters (virgin carbon) delivered
130 Jim offsite
130-300 hydrate carbon; remove sand media from both sand filters + fill with water

300 start backflushing SF-1A
after 3 minutes, PI-101 reads ~17.2
PI-102 reads ~4.7

start backflushing SF-1B
top of SF-1A leaking, had to stop + tighten
after 3 minutes, PI-101 reads ~11.9
PI-102 reads ~7.2

dripping from all unions at HV-104 and HV-105
320 Called Jim + gave him pressure readings
filled with granite 1/4 x ID to 2" above screen and #20 sand to bottom of front outlet.
400 Eze onsite to take DTWs
440 start backflushing SF-1A
after 3 minutes PI-101 reads ~20.5
PI-102 reads ~2.5

start backflushing SF-1B
after 3 minutes PI-101 reads ~20.5
PI-102 reads ~1.9
500 Called Jim. Backflush each filter 10 min., Prelim. system testing. water rerouted back into bioreactor for 10 min.

ATTACHMENTS: none
INITIAL: JB

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DAILY FIELD REPORT

SHEET 2 OF 2
JOB NO. 170077.21
DATE: 6/30/94

PROJECT NAME: Exxon 104

WORK SCOPE:

TIME:

515 After 10 minutes backflushing SF-1A
PI-101 reads ~ 15.0
PI-102 " ~ 5.2

After 10 minutes backflushing SF-1B
PI-101 reads ~ 18.8
PI-102 " ~ 3.0

530 Test system with effluent bypassing carbon + into bioreactor for ~ 10 min.

541 PI-101 reads ~ 12.1
~~PI-102 " ~ 7.5~~
PI-103 (bag filter) ~ 8.5
} $\Delta P = 3.6$ psi

White plastic plug on sand filter SF-1A leaks.

"ΔP of 3.6 indicates excellent through-flow" Jim S.

ΔP of 12.1 psi significantly lower than previous readings.

600 offsite

ATTACHMENTS: none

INITIAL: JB

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FIELD REPORT / DATA SHEET

Project Number: 170077.99 Field Technician: E. Cardona
Date: 6/30/94 Day: M Tu W (Th) F Weather Hot 85 °F
Station Number: 7-0104 Station Address: 1725 Park Street

DTW Order	Well ID	Diam.	Lock	Exp. Cap	Total Depth	DTW Intial X	DTW Final	Depth to Product	Product Thickness	Time Sampled	Comments
1	MW-9					6.68'					
2	MW-8					6.48'					
3	MW-10					6.79'				✓	
4	MW-1					6.83'					
5	MW-3					6.33'					
6	MW-6					6.58'					
7	MW-7					6.04'					Strong Odor
8	MW-4					6.40'					
9	MW-2					6.70'					
10	MW-5					6.45'		6.44	0.10		Floating ?
11	EW-3					6.10'					
12	EW-1					5.98'					
13	EW-5					6.10'					
14	EW-4					5.65					
15	EW-2					6.00	Degreated		Gasoline/Heavy.		

Notes: