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

ENVIRONMENTAL ENGINEERING
MARLA D. GUENSLER
SENIOR ENVIRONMENTAL ENGINEER
(510) 246-8776
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July 15, 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 First Quarter 1994 groundwater monitoring and remediation events.

It was Exxon's intent to deliver and discuss this report in meetings scheduled with Mr. Scott Seery of your agency in April and May, however, Exxon was unable to attend the meetings as originally scheduled, and another has not been discussed recently. Exxon apologizes for delays in the submittal of this report due to these unusual circumstances.

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

Sincerely,

Marla D. Guensler
Senior Environmental Engineer

MDG/mdg

enclosure: RESNA Report dated April 27, 1994

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

RESNA
Working to Restore Nature

3315 Almaden Expressway, Suite 34
San Jose, CA 95118
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LETTER REPORT
QUARTERLY GROUNDWATER MONITORING AND REMEDIATION ACTIVITIES
First Quarter 1994

Exxon Station 7-0104
1725 Park Street
Alameda, California

170077.20

RESNA
Working to Restore Nature

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April 27, 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
First 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 first quarter 1994 groundwater monitoring and remediation activities performed by RESNA Industries Inc. (RESNA) at the above-referenced site (Plate 1, Site Vicinity Map). 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 consists of pumping groundwater from extraction wells EW-1 through EW-5, and passing the groundwater 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).

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QUARTERLY GROUNDWATER MONITORING AND SAMPLING

Groundwater Monitoring and Sampling

On February 24 and 25, 1994, RESNA measured the depth to water in monitoring wells MW-1 through MW-10, and extraction wells EW-1 through EW-5 and collected groundwater samples from the wells for laboratory analysis. Extraction wells EW-1 through EW-5 were not purged or subjectively monitored because they are coupled to the groundwater extraction system. Groundwater samples from selected wells were subjectively analyzed for the presence of liquid-phase hydrocarbons. RESNA's groundwater sampling protocol and well purge data sheets are in Appendix A, Groundwater Sampling Protocol and Well Purge Data Sheets.

Results of subjective analysis and depth-to-water levels of groundwater samples collected from the wells are as follows. Sheen was observed in the samples from well MW-5. The contents from the sample ports for wells EW-2 and EW-[illegible] were observed to contain a brown-colored sludge, which appears to be weathered gasoline hydrocarbon product. Based on February 24, 1994, depth to water measurements in wells MW-1 through MW-10, groundwater elevations at the site have increased approximately 1.8 feet since last quarter. The groundwater beneath the site appears to form a cone of depression centered around extraction well EW-3. Groundwater elevations are shown in Plate 2, Groundwater Gradient and Chemical Concentrations, and monthly and quarterly 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 2, 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.

- TPHg concentrations were greater than the MDL in wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-10, EW-1 through EW-5.

- Benzene concentrations were greater than the MCL in wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, EW-1, EW-2, EW-4, and EW-5.

- Toluene concentrations were greater than the DWAL in wells MW-2, MW-4, MW-6, MW-7, EW-2, and EW-4.

- Ethylbenzene and total xylenes concentrations were greater than their respective MCLs in well MW-2.

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 reactivated carbon canisters. Currently, however, because bio-remediation appears to be impractical at this time due to low influent gasoline hydrocarbon concentrations, the system uses the bioreactor as a holding tank for groundwater influent containment prior to treatment by three 200-pound liquid-phase virgin carbon canisters. The treated 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. Off gases generated in the bioreactor/holding tank are treated via two 200-pound vapor-phase carbon canisters.

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 recently renewed EBMUD wastewater discharge permit, effective January 25, 1994, through January 24, 1995, the requirements and procedures of the self-monitoring program have changed from a monthly to a quarterly sampling schedule and mandates collecting samples from only "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.

Modifications to the System

Sodium hydroxide caustic soda, formerly used as a supplemental oxygen source for the microbes during normal bio-remediation operation, has been replaced with hydrogen peroxide to be used for the same purpose. However, because of the low influent concentrations during this quarter, bio-remediation appears to be impractical at this time. Therefore, as mentioned previously, the bioreactor is currently being used as a holding tank, and the primary treatment is the carbon system. The use of bio-remediation will be re-evaluated if influent gasoline hydrocarbon concentrations increase in the future.

Remediation Activities

The system appears to have operated continuously during this quarter, with the exception of a 20 day period between January 18 and February 7, 1994, in which the system was shutdown to allow groundwater to return to static conditions before performing air sparge and vapor extraction tests. The air sparge and vapor extractions tests were conducted on January 31 and February 1, 1994. The system was restarted on February 7, 1994, with virgin carbon canisters in-line, as described in the Discussion of Analytical Results section later in this report.

On February 24, 1994, because of reduced pumping rate, the pump in extraction well EW-1 was inspected and cleared of bio-fouling obstructions, returning the pumping rate to normal capacity. On March 15, 1994, because a higher than normal pressure drop was notice across the sand filters, the sand filter media was inspected to identify causes of the clogging. Signs of bio-fouling were observed in the sand media inside one of the sand filters which appears to have restricted water flow, resulting in an approximately 1.4 gallons per minute (gpm) decrease in the discharge rate between March 15 and March 30, 1994. Subsequently, on

March 30, 1994, the sand filter media was soaked with hydrogen peroxide and backwashed extensively to reduce bio-fouling and improve water flow. The condition of the sand filter media will be further evaluated in second quarter 1994. 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 the monthly operations and maintenance routine conducted on the remediation system, water samples were collected from the system on January 10, February 24, and March 30, 1994. An additional effluent ("C") water sample was collected on March 7, 1994, to confirm the February 24, 1994, laboratory results. Influent samples (composite water samples from the extraction wells) were not collected for analyses in the first 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 February 24 and 25, 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 January 10, 1994 to evaluate whether the system discharge was in compliance with the EBMUD wastewater discharge permit limits. These additional samples were analyzed for inorganic compounds (collected semi-annually), 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. On January 10 and February 28, 1994, effluent water samples were also collected by EBMUD personnel. Analytical results from these samples are included in Appendix E, EBMUD Laboratory Analysis Results and Chain of Custody Record. Selected analytical results for the remediation water samples are summarized below.

"A": TPHg ranged from 190 to 1400 ppb, and BTEX ranged from not detected at the MDL to 310 ppb. Metals and total cyanide were not detected at their respective MDLs, except for zinc (0.30 ppm), iron (0.33 ppm), and arsenic (0.006 ppm). VOCs were less than their respective MDLs, except for benzene (19 ppb), tetrachloroethene (120 ppb), 2-butanone [MEK] (120), trichloroethene [TCE] (7), and total xylenes (8 ppb). EOCs were less than their respective MDLs.

"B1": A TPHg concentration of 120 ppb was detected in the January 10, 1994 sample. Consequently, on February 7, 1994, the first carbon canister was changed-out as discussed below. TPHg and BTEX were not detected at their respective MDLs in the February 24, 1994 sample; however, on March 30, 1994, a TPHg concentration of 55 ppb was detected. A decision was made to not to change-out the first carbon canister at this time until after collection and analysis of the April samples, as discussed below.

"B2": A TPHg concentration of 61 ppb was detected in the January 10, 1994 sample. Consequently, on February 7, 1994, the second carbon canister was changed-out as discussed below. TPHg and BTEX concentrations were not detected at their respective MDLs in the February and March samples.

"C" A TPHg concentration of 55 ppb was detected in the January 10, 1994 sample. Consequently, on February 7, 1994, the third carbon canister was changed-out as discussed below. Metals, arsenic, and the total cyanide were not detected at their respective MDLs, except for zinc (0.22 ppm) which was less than the maximum allowable discharge limit of 0.288 ppm. VOCs were not detected at their respective MDLs, and EOCs were not detected at their respective MDLs, thus complying with the EBMUD wastewater discharge permit limits. TPHg and benzene were detected at concentrations of 75 ppb and 1.3 ppb, respectively, in the February 24, 1994 sample. Consequently, a confirmation sample was collected on March 7, 1994. Laboratory results from the confirmation sample indicated that TPHg and BTEX were not detected at their respective MDLs. As a result, the decision was made to not change out the third carbon canister at this time. TPHg and BTEX were not detected in the March 30, 1994 sample. The EBMUD effluent water sample results indicated the system was in compliance with the permit limits.

Discussion of Analytical Results of Interim Remediation System Water Samples

The detectable concentrations of TPHg in water samples "B1", "B2", and "C", collected from the effluent of each carbon canister on January 10, 1994, indicated that breakthrough had occurred in all three canisters. Based on carbon breakthrough calculations, it appeared that the second and third carbon canisters exhibited premature breakthrough. Consequently, on February 7, 1994, all three reactivated carbon canisters were replaced with virgin carbon canisters.

As previously mentioned, because detectable concentrations of TPHg (75 ppb) and benzene (1.3 ppb) were present in the water sample collected from sample port "C" on February 24, 1994, a confirmation effluent sample was collected from sample port "C" on March 7, 1994.

The results of the confirmation effluent sample indicated TPHg and BTEX were not detected at their respective MDLs. Consequently, the third carbon canister was not changed out at this time. The reason that detectable levels of TPHg and benzene were detected in the on February 24, 1994 water sample "C" is unknown.

According to laboratory results of the March 30, 1994, "B1" water sample, TPHg was detected at a concentration of 55 ppb, which represents a carbon efficiency of 71% and indicates carbon breakthrough had occurred again in the first carbon canister (Table 3, Groundwater Remediation System Operation and Performance Data). However, because the breakthrough was only 5 ppb above the MDL and because of the relatively recent carbon canister change-out (February 7, 1994), a decision was made to not change-out the canister until after the collection, analysis, and review of the April "B1" sample results.

Air Monitoring

Monthly air monitoring is also being performed in accordance with the guidelines of the Bay Area Air Quality Management District (BAAQMD). Air monitoring was performed on the off-gases from the system was performed 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 less than 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 December 9, 1993, and March 30, 1994, approximately 334,792 gallons of groundwater have been extracted, and approximately 0.29 gallons of TPHg have been removed and treated. The average discharge rate to the sanitary sewer this quarter was approximately 2.76 gpm (3,974 gallons per day). The system has extracted a total of approximately 1,267,720 gallons, and treated a total of 3.96 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 (408) 264-7723.

Sincerely,
RESNA Industries Inc.

Mark A. Ebner
Staff Engineer

Jim Schollard
Project Manager

James L. Nelson, C.E.G.
Senior Project Geologist

REGISTERED GEOLOGIST
JAMES LEWIS
NELSON
No. 1463
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Enclosures:

Plate 1:	Site Vicinity Map
Plate 2:	Groundwater Gradient and Chemical Concentrations
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
Appendix E:	EBMUD Laboratory Analysis Results and Chain of Custody Record

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

Approximate Scale

2000 1000 0 2000

feet

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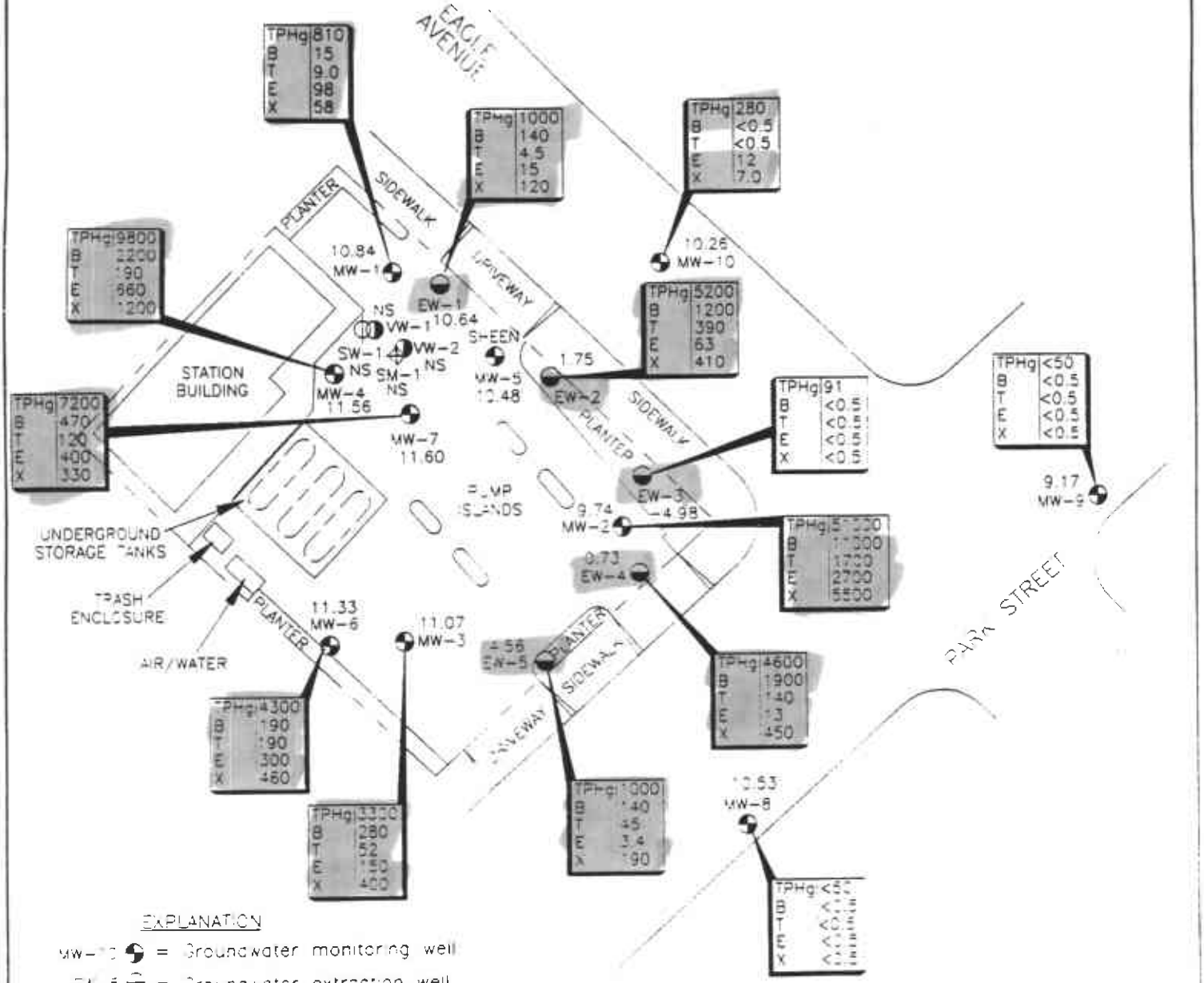
SITE VICINITY MAP
Exxon Service Station 7-0104
1725 Park Street
Alameda, California

PLATE 1



EXPLANATION

MW-10 = Groundwater monitoring well

EW-5 = Groundwater extraction well

VW-1 = Vapor well

SW-1 = Air-sparging well

SM-1 = Sparge monitoring point

NS = Not surveyed

= Magnitude of hydraulic gradient

TPHg 5100 B 1200 T 1700 E 2700 X 5500 = Chemical concentrations in groundwater in parts per billion, February 24 and 25, 1994

11.60 = Elevation of groundwater in feet above mean sea level February 24, 1994

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 AND CHEMICAL CONCENTRATIONS
Exxon Service Station 7-0104
1725 Park Street
Alameda, California

PLATE 2

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

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	800	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	54
	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 11 of 11.

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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 11)

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
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	3,700	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	3,300	730	1,600	3,900
	08/21/90#	NLPH	6.70	9.97					
	09/19/90	NLPH	6.84	9.83	33,000	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
	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					

See notes on page 11 of 11.

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

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-2 cont.	06/24/92#	NLPH	6.39	10.28					
(16.67)	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	28,000	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
MW-3	06/07/88	NM	NM	---	28,000	6,000	80	940	1,900
(17.11)	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	880	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	15,000	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					
	03/19/91	NLPH	5.35	11.76	13,000	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

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

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-3 cont. (17.11)	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	230	52	150	400
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	130	240	63	810
	09/18/89	NLPH	6.80	10.54	6,000	230	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					
	03/07/90a#	NM	NM	---					
	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					

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TABLE 1
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Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-4 cont.	05/17/91#	NLPH	5.60	11.74					
(17.34)	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
MW-5	01/17/89	NLPH	5.39	11.32	26,000	3,700	3,900	990	5,900
(16.71)	01/24/89#	NLPH	5.51	11.20					
	05/01/89	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					

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

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	..... >	<		parts per billion	.....	>
MW-5 cont. (16.71)	09/19/90	NLPH	6.70	10.01	3,500	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	8,300	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
	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					
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					

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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-6 cont.	03/07/90#	NM	NM	---					
(17.56)	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
	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	6.23	11.33	4,300	190	190	300	460

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

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	. . . . . >	<	parts per billion			. . . . . >
MW-7	01/09/90	NM	NM	---	17,000	380	180	330	1,300
(17.12)	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	13,000	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	25	1,900	490
	11/18/91#	NLPH	6.56	10.56					
	12/11/91#	NLPH	6.68	10.44					
	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	11.98					
	06/24/92#	NLPH	6.04	11.08					
	07/16/92	NLPH	6.19	10.93	3,700	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	3,900	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

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

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	>	<	parts per billion			>
MW-8	05/14/93	NLPH	6.54	9.79	<50	<0.5	<1.0	<0.5	<0.5
(16.33)	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
MW-9	05/14/93	NLPH	6.61	9.01	<50	<0.5	<1.0	<0.5	<0.5
(15.62)	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	---	---	---	---	---
	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
MW-10	05/14/93	NLPH	6.91	9.88	97	<0.5	<0.5	9.8	22
(16.79)	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
EW-1	10/21/93#	NM	6.67	9.55					
(16.22)	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
EW-2	10/21/93#	NM	6.71	9.34					
(16.05)	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
EW-3	10/21/93#	NM	6.55	9.47					
(16.02)	12/17/93#	NM	15.65	0.37					
	01/31/94#	NM	5.34	10.68					
	02/24-25/94	NLPH	21.00	-4.98	91	<0.5	<0.5	<0.5	<0.5

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

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
		<	feet	. . . . . >	<	parts per billion		. . . . .	>
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
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
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	<0.5
	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 11 of 11.

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

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

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	130	740	NA	NA	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 6 of 6

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 6)

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							

See notes on page 6 of 6

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	EDCs	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	88	730	NA	NA	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

See notes on page 6 of 6

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 4 of 6)

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] PCE	ND	270[a] Zinc
		"B"	<50	<0.5	<0.5	<0.5	<0.5	ND	ND	180[a] Zinc 100[a] Iron
		"C"	<50	<0.5	<0.5	<0.5	<0.5	ND	ND	80[a] Zinc

See notes on page 6 of 6

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 6)

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 (19)	2.3	<0.5	7.6 (8)	120[2] MEK 7[3] TCE 120[1] PCE	ND	6[c] Arsenic 330[b] Iron 300[a] Zinc
		"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] Zinc
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
MCLs	---	---	---	1.0	---	680	1,750		See Notes	
DWAL	---	---	---	---	100	---	---		See Notes	

See notes on page 6 of 6

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			>

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 recovery 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
1	:	Tetrachloroethene (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 104, ALAMEDA, CALIFORNIA (PAGE 1 of 2)

Sampling Date	1/10/94	2/7/94	2/24/94	3/15/94	3/30/94
Approx. days of operation	25	8.3	16.8	19	15
Cumulative days of operation (since 12/9/93)	25	33.3	50.1	69.1	84.1
Approx. days of downtime	7	20	0	0	0
Percentage of time system was operational[1]	78%	29%	100%	100%	100%
Approx. influent extraction rate (gpm)	NA	4.0	3.25	3.6	0
Approx. discharge rate to sewer (gpm)[2]	2.96	3.03	3.17	2.97	1.58
Approx. discharge rate to sewer (gpd)	4,264	4,360	4,558	4,279	2,275
Volume of water treated (gal)	106,602	36,190	76,570	81,300	34,130
Cumul. vol. of water treated (gal) [since 2/22/93]	1,039,530	1,075,720	1,152,290	1,233,590	1,267,720
LABORATORY ANALYSES RESULTS FOR TPH-AS-GASOLINE IN PARTS PER BILLION (PPB OR MICROGRAMS PER LITER):					
Influent to 1st carbon (W-A)	340	NS	1400	NS	190
Effluent from 1st carbon (W-B1)	120	NS	< 50	NS	55
Effluent from 2nd carbon (W-B2)	61	NS	< 50	NS	< 50
Effluent from 3rd carbon/to sewer (W-C)	55	NS	75/< 50*	NS	< 50
Removal efficiency of the 1st carbon[3]	65%	NA	≈100%	NA	71%
Removal efficiency of the 2nd carbon[3]	49%	NA	≈100%	NA	≈100%
Removal efficiency of the 3rd carbon[3]	10%	NA	≈100%*	NA	≈100%
HYDROCARBON REMOVAL RATE IN GALLONS [GAL] PER PERIOD AND TOTALS TO DATE:					
Removal Rate[4] (gal)	**.049**	**NA**	**.212**	**NA**	**.029**
Total Cumulative Removed (gal) [since 2/22/93]	**3.72**	**NA**	**3.93**	**NA**	**3.96**

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TABLE 3
GROUNDWATER REMEDIATION SYSTEM OPERATION & PERFORMANCE DATA
EXXON 104, ALAMEDA, CALIFORNIA (PAGE 2 of 2)

Sampling Date	1/10/94	2/7/94	2/24/94	3/15/94	3/30/94

Notes:

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

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 = Removal efficiency of carbon is estimated as: [Influent conc. - Effluent conc.]/Influent conc. x 100%
4 = 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
* = Indicates confirmation lab results following breathrough lab results.

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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

Notes:

Values in parts per million by volume (ppmv)

GAC : Granular Activated Carbon (vapor-phase carbon canisters)

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 free-phase hydrocarbons or sheen. Any free-phase hydrocarbons are removed from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until stabilization of the temperature, pH, and conductivity is obtained, 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

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.

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WELL PURGE DATA SHEET

Project Name: Q & Exxon 7-0104 Job No. 130077.22

Date: 2/24/94 Page __ of __

Well No. MW-1 Time Started 11:15

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
11:15					
11:15	0	61.2	6.69	5.16	31.8
11:22	10	62.8	6.71	5.48	20.0
11:30	20	63.5	6.74	5.53	10.8
	21	Dry at 21 gallons (11:31)			
11:31					

Notes:
- Grundfos
- Conductivity out (x100)

Well diameter (inches) : 4
Depth to Bottom (feet) : 20.20
Depth to Water - initial (feet) : 6.23
Depth to Water - final (feet) : 7.05
% recovery : 94
Time Sampled : 14:20
Gallons per Well Casing Volume : 4.5
Gallons Purged : 21
Well Casing Volumes Purged : 2.2
Approximate Pumping Rate (gpm) : 1.4

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WELL PURGE DATA SHEET

Project Name: Q M Exxon 7-0104

Job No. 13007720

Date: 2/22/94

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Well No. MW-2

Time Started 13:55

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
13:55					
13:55	0	63.1	6.70	8.88	14.9
13:59	6	64.1	6.73	9.27	12.1
	10	Dry at 10 gallons (14:03)			
14:41	12	68.1	6.75	9.29	16.3
14:45	15	Dry at 15 gallons			
14:45					

Notes:
- Grundfos
- conductivity at (x100)
- noticable sheen after purging

Well diameter (inches) : 4
Depth to Bottom (feet) : 15.94
Depth to Water - initial (feet) : 6.93
Depth to Water - final (feet) : 7.70
% recovery : 91
Time sampled : 16:10
Gallons per Well Casing Volume : 5.8
Gallons Purged : 15
Well Casing Volumes Purged : 2.6
Approximate Pumping Rate (gpm) : 0.3

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Working to Restore Nature

WELL PURGE DATA SHEET

Project Name: Q2 Exxon 7-0104 Job No. 13077.20

Date: 2/25/94 Page __ of __

Well No. EW-3 Time Started 11:45

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
11:45					
11:45	0	63.0	6.73	5.97	233
11:50	5	63.9	6.74	6.05	11.1
11:54	10	63.3	6.78	5.94	35.9
11:56	12	Dry at 12 gallons (11:56)			
11:56					

Notes:
- Grundfos
- Conductivity at (x100)
- Strong odor

Well diameter (inches)	: 4
Depth to Bottom (feet)	: 14.19
Depth to Water - initial (feet)	: 6.04
Depth to Water - final (feet)	: 6.28
% recovery	: 99
Time Sampled	: 15:30
Gallons per Well Casing Volume	: 5.3
Gallons Purged	: 12
Well Casing Volumes Purged	: 2.3
Approximate Pumping Rate (gpm)	: 1.1

3/2/94

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Working to Restore Nature

WELL PURGE DATA SHEET

Project Name: BP Exxon 7-0104 **Job No.** 130077.20

Date: 2/25/94 **Page** __ **of** __

Well No. MW-4 **Time Started** 12:07

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
12:07					
12:07	0	67.9	6.62	7.72	96
12:14	8	68.7	6.63	7.83	11.0
	14	Dry at 14 gallons (12:20)			
12:55	16	73.4	6.67	7.72	11.8
13:03	23	72.2	6.68	7.10	3.7
13:06	25	71.2	6.~~88~~	6.70	4.3
	28	Dry at 28 gallons (13:08)			
13:08					

Notes:
- Grundfos
- Conductivity at (x100)
- odor

Well diameter (inches) : 4
Depth to Bottom (feet) : 18.20
Depth to Water - initial (feet) : 5.78 2/24 6.22
Depth to Water - final (feet) : ~~5.92~~
% recovery : 96
Time Sampled : 15:40
Gallons per Well Casing Volume : 8.1
Gallons Purged : 28
Well Casing Volumes Purged : 3.5
Approximate Pumping Rate (gpm) : 0.5

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Working to Restore Nature

WELL PURGE DATA SHEET

Project Name: Q4 Exxon 7-0104 Job No. 130027.20

Date: 2/25/94 Page __ of __

Well No. MW-6 Time Started 9:58

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
9:58					
9:58	0	59.6	6.66	5.44	19.8
10:02	10	61.1	6.60	5.75	6.4
	16.5	Dry at 16.5		(10:06)	
10:40	20	60.3	6.60	5.16	9.2
10:46	27	61.0	6.61	5.32	8.0
10:48	30	61.7	6.65	5.20	17.6
10:52	33	62.1	6.66	4.96	7.6

Notes:
Grundfos
Conductivity at (x100)
Odor

Well diameter (inches) : 4
Depth to Bottom (feet) : 20.70
Depth to Water - initial (feet) : 6.23 2/10/94
Depth to Water - final (feet) : 6.31
% recovery : 100
Time Sampled : 14:05
Gallons per Well Casing Volume : 9.5
Gallons Purged : 33
Well Casing Volumes Purged : 3.5
Approximate Pumping Rate (gpm) : 0.6

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Working to Restore Nature

WELL PURGE DATA SHEET

Project Name: Q.M. Exxon 7-0104 Job No. 13077.20

Date: 2/25/94 Page __ of __

Well No. MW-7 Time Started 13:22

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
13:22					
13:22	0	68.2	6.41	5.26	13.0
13:28	7	64.8	6.39	4.21	2.6
13:36	14	63.3	6.37	3.80	0.8
13:40	18	63.3	6.38	3.77	0.8
13:43	21	63.1	6.37	3.74	0.6
13:45	23				
13:45					

Notes:
- Grundfos
- Conductivity at (x100)
- odor

Well diameter (inches)	: 4
Depth to Bottom (feet)	: 16.06
Depth to Water - initial (feet)	: 5.52 2/24/94
Depth to Water - final (feet)	: 5.58
% recovery	: 100
Time Sampled	: 16.00
Gallons per Well Casing Volume	: 6.9
Gallons Purged	: 23
Well Casing Volumes Purged	: 3.3
Approximate Pumping Rate (gpm)	: 1.0

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WELL PURGE DATA SHEET

Project Name: Q & Exxon 7-0104 Job No. 13077.20

Date: 2/24/94 Page __ of __

Well No. SVE-8 Time Started 10:13

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
10:13					
10:13	0	60.9	6.50	4.58	19.8
10:18	2	61.7	6.54	4.52	154.3
10:22	4	61.2	6.56	4.54	>200
10:26	6	60.9	6.59	4.43	>200
10:30	8	62.2	6.52	4.38	>200
10:30					

Notes:

Well diameter (inches) : 2
Depth to Bottom (feet) : 17.47
Depth to Water - initial (feet) : 5.80
Depth to Water - final (feet) : 5.92
% recovery : 100
Time sampled : 12:45
Gallons per Well Casing Volume : 2.0
Gallons Purged : 8.0
Well Casing Volumes Purged : 4.0
Approximate Pumping Rate (gpm) : 0.5

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Working to Restore Nature

WELL PURGE DATA SHEET

Project Name: Q4 Exxon 7-0104 **Job No.** 13077.20

Date: 2/24/94 **Page** __ **of** __

Well No. MW-9 **Time Started** 14:10

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
14:10					
14:10	0	66.1	6.63	6.01	23.3
14:15	2	65.2	6.72	5.10	>200
14:20	4	65.6	6.62	5.29	>200
14:24	6	66.1	6.67	5.38	>200
14:39	8	66.1	6.82	5.93	>200
14:39					

Notes:
Hand bailed
turbidity
at (x100)

Well diameter (inches) : 4
Depth to Bottom (feet) : 18.85
Depth to Water - initial (feet) : 6.40
Depth to Water - final (feet) : 6.48
% recovery : 100
Time Sampled : 16.30
Gallons per Well Casing Volume : 2.1
Gallons Purged : 8.0
Well Casing Volumes Purged : 3.8
Approximate Pumping Rate (gpm) : 0.3

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Working to Restore Nature

WELL PURGE DATA SHEET

Project Name: 24 Exxon 7-0104 Job No. 130017.20

Date: 2/24/94 Page __ of __

Well No. EW-10 Time Started 14:44

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
14:44					
14:44	0	66.2	6.60	4.30	136.7
14:50	2	65.7	6.68	4.18	>200
14:56	4	64.8	6.62	4.23	>200
13:00	6	63.7	6.64	4.15	>200
13:04	8	63.2	6.68	4.11	>200

Notes:
Hand bailed
Conductivity adj (x100)

Well diameter (inches)	2
Depth to Bottom (feet)	17.98
Depth to Water - initial (feet)	6.53
Depth to Water - final (feet)	6.61
% recovery	100
Time Sampled	17:00
Gallons per Well Casing Volume	1.9
Gallons Purged	8.0
Well Casing Volumes Purged	4.2
Approximate Pumping Rate (gpm)	0.4

APPENDIX B

LABORATORY ANALYSIS REPORTS AND CHAIN OF CUSTODY RECORD

TPE0071.20

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REPORT OF LABORATORY ANALYSIS

March 07, 1994

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

RE: PACE Project No. 440228.502
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Briggs:

Enclosed is the report of laboratory analyses for samples received February 28, 1994.

Please note sample EW-5 (PACE ID# 700256070) was received with no analyses requested. Per Client's request on March 02, 1994, Gas/BTEX analysis was added to this sample.

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. Echert

for Stephanie Matzo
Project Manager

Enclosures

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FAX 415 883 2673

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REPORT OF LABORATORY ANALYSIS

RESNA
3315 Almaden Expressway Suite 34
San Jose, CA 95118

March 07, 1994
PACE Project Number: 440228502

Attn: Mr. Marc Briggs

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0255740	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			R9	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	ND	03/02/94
Toluene	ug/L	0.5	ND	03/02/94
Ethylbenzene	ug/L	0.5	ND	03/02/94
Xylenes, Total	ug/L	0.5	ND	03/02/94

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REPORT OF LABORATORY ANALYSIS

March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0255759	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			W-6-MW9	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	ND	03/02/94
Toluene	ug/L	0.5	ND	03/02/94
Ethylbenzene	ug/L	0.5	ND	03/02/94
Xylenes, Total	ug/L	0.5	ND	03/02/94

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REPORT OF LABORATORY ANALYSIS

March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0255937	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			W-6-MW10	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	280	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			- (1)	03/02/94
Benzene	ug/L	0.5	ND	03/02/94
Toluene	ug/L	0.5	ND	03/02/94
Ethylbenzene	ug/L	0.5	12	03/02/94
Xylenes, Total	ug/L	0.5	7.0	03/02/94

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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0255953	
Date Collected:			02/25/94	
Date Received:			02/28/94	
Client Sample ID:			W-5-MW8	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	ND	03/02/94
Toluene	ug/L	0.5	ND	03/02/94
Ethylbenzene	ug/L	0.5	ND	03/02/94
Xylenes, Total	ug/L	0.5	ND	03/02/94

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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0255961	
Date Collected:			02/25/94	
Date Received:			02/28/94	
Client Sample ID:			W-6-MW6	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	4300	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	190	03/02/94
Toluene	ug/L	0.5	190	03/02/94
Ethylbenzene	ug/L	0.5	300	03/02/94
Xylenes, Total	ug/L	0.5	460	03/02/94

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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0255970	
Date Collected:			02/25/94	
Date Received:			02/28/94	
Client Sample ID:			W-7-MW1	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	810	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	15	03/02/94
Toluene	ug/L	0.5	9.0	03/02/94
Ethylbenzene	ug/L	0.5	98	03/02/94
Xylenes, Total	ug/L	0.5	58	03/02/94

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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0255988	
Date Collected:			02/25/94	
Date Received:			02/28/94	
Client Sample ID:			W-6-MW3	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	3300	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	280	03/02/94
Toluene	ug/L	0.5	52	03/02/94
Ethylbenzene	ug/L	0.5	150	03/02/94
Xylenes, Total	ug/L	0.5	400	03/02/94

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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0255996	
Date Collected:			02/25/94	
Date Received:			02/28/94	
Client Sample ID:			W-6-MW4	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	9800	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	2.5	2200	03/02/94
Toluene	ug/L	2.5	190	03/02/94
Ethylbenzene	ug/L	2.5	660	03/02/94
Xylenes, Total	ug/L	2.5	1200	03/02/94

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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0256003	
Date Collected:			02/25/94	
Date Received:			02/28/94	
Client Sample ID:			W-5-MW7	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	7200	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	2.5	470	03/02/94
Toluene	ug/L	2.5	120	03/02/94
Ethylbenzene	ug/L	2.5	400	03/02/94
Xylenes, Total	ug/L	2.5	330	03/02/94

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REPORT OF LABORATORY ANALYSIS

March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0256011	
Date Collected:			02/25/94	
Date Received:			02/28/94	
Client Sample ID:			W-7-MW2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	2500	51000	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	25	11000	03/02/94
Toluene	ug/L	25	1700	03/02/94
Ethylbenzene	ug/L	25	2700	03/02/94
Xylenes, Total	ug/L	25	5500	03/02/94

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Mr. Marc Briggs
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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0256020	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			EW-1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	140	03/02/94
Toluene	ug/L	0.5	4.5	03/02/94
Ethylbenzene	ug/L	0.5	15	03/02/94
Xylenes, Total	ug/L	0.5	120	03/02/94

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Mr. Marc Briggs
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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0256038	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			EW-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	5200	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	2.5	1200	03/02/94
Toluene	ug/L	2.5	390	03/02/94
Ethylbenzene	ug/L	2.5	63	03/02/94
Xylenes, Total	ug/L	2.5	410	03/02/94

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REPORT OF LABORATORY ANALYSIS

March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0256046	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			EW-3	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	91	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	0.5	ND	03/02/94
Toluene	ug/L	0.5	ND	03/02/94
Ethylbenzene	ug/L	0.5	ND	03/02/94
Xylenes, Total	ug/L	0.5	ND	03/02/94

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REPORT OF LABORATORY ANALYSIS

Mr. Marc Briggs
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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0256062	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			EW-4	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/02/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	4600	03/02/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/02/94
Benzene	ug/L	2.5	1900	03/02/94
Toluene	ug/L	2.5	140	03/02/94
Ethylbenzene	ug/L	2.5	13	03/02/94
Xylenes, Total	ug/L	2.5	450	03/02/94

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REPORT OF LABORATORY ANALYSIS

Mr. Marc Briggs
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March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0256070	
Date Collected:			02/24/94	
Date Received:			02/28/94	
Client Sample ID:			EW-5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	03/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/03/94
Benzene	ug/L	0.5	140	03/03/94
Toluene	ug/L	0.5	45	03/03/94
Ethylbenzene	ug/L	0.5	3.4	03/03/94
Xylenes, Total	ug/L	0.5	190	03/03/94

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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Mr. Marc Briggs
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FOOTNOTES
for pages 1 through 15

March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

MDL Method Detection Limit
ND Not detected at or above the MDL.
(1) Compounds confirmed by secondary column.

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Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 28585
Samples: 70 0255740, 70 0255759, 70 0255937, 70 0255953, 70 0255961
70 0255970, 70 0255988, 70 0255996, 70 0256003

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	700254663	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	82%	95%	14%

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	92%	91%	1%

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REPORT OF LABORATORY ANALYSIS

Mr. Marc Briggs
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QUALITY CONTROL DATA

March 07, 1994
PACE Project Number: 440228502

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 28674
Samples: 70 0256011, 70 0256020, 70 0256038, 70 0256046, 70 0256062
70 0256070

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	700254809	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	52(AT)	1000	84%	82%	3%

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	98%	100%	2%

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Mr. Marc Briggs
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FOOTNOTES
for pages 17 through 18

March 07, 1994
PACE Project Number: 440228502

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

CHAIN OF CUSTODY

440228-502

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

Consultant's Name: RESNA

Page 1 of 2

Address: 3315 Almaden Expwy #34 San Jose CA 95118

Site Location: 1725 Park St.

Project #:

Consultant Project #: 130077.20

Consultant Work Release #: 09300238 CO#

Project Contact: Joane Bathel/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: Courier

Air Bill #:

Shipment Date:

TAT: [ ] 24 hr [ ] 48 hr [ ] 72 hr [✓] Standard (5 day)

Sample Condition as Received

Temperature ° C. 10°

Cooler #:

Inbound Seal Yes No

Outbound Seal Yes No

ANALYSIS REQUIRED

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
Rinsade	2/24	H2O	HCL	2	255732				X								
R9	"			2	255740	X											
W-6-MW9	"			3	255759	X											
R10	"			2	255767				X								
W-6-MW10	"			3	255937	X											
R8	2/25			2	255945				X								
W-5-MW8				3	255953	X											
W-6-MW6				3	255961	X											
W-7-MW1				3	255970	X											
W-6-MW3	↓	↓	↓	3	255985	X											

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Chris Allen	2/25	6:00	Ed Elliott - Pace	2/25/94	1800
Elliott - Pace	2/28	1720	Sandra Amard/Pace	2/28/94	1720

Additional Comments:

10K

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

4410228.502

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Consultant's Name: RESNA

Page 2 of 2

Address: 3315 Almaden Expwy #34 San Jose CA 95118

Site Location: 1725 Park St.

Project #:

Consultant Project #: 130077.20

Consultant Work Release #: 09300238 CO #

Project Contact: Jeanne Buckthal/Mark Boggs

Phone #: (408) 264-7723 Fax #: 264-2435

Laboratory Work Release #:

EXXON Contact: Marla Guensler [✓] EE [ ] C&M

Phone #: (510) 246-8776 Fax #:

EXXON RAS #:

Sampled by (print): Chris Allen

Sampler's Signature: Chris Allen

Shipment Method: Courier

Air Bill #:

Shipment Date:

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										COMMENTS
W-6-MW4	2/25	H2O	HCl	3	25594 6	X												
W-5-MW7	"	"	"	3	25600 3	X												
W-7-MW2	"	"	"	3	25601 1	X												
EW-1	2/24	"	"	3	25602 0	X												
EW-2	"	"	"	3	25603 8	X												
EW-3	"	"	"	3	25604 6	X												
EW-4	"	"	"	3	25606 2	X												
EW-5	"	"	"	3	25607 0	(X)												(X) analyze for gas/BTEX on this sample per Jeanne @ RESNA on 3/2/94 (initials)

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Chris Allen	2/25	6:00	[signature] - Pace	2/25/94	1800
[signature] Pace	2/28	1720	Sandra Amaro / Pace	2/28/94	1720

Additional Comments: EW-5 rec'd not marked for analysis on COC (initials) 10/41

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

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REPORT OF LABORATORY ANALYSIS

January 20, 1994

Ms. Dora Chew
RESNA
3315 Almaden Expressway, Suite 34
San Jose, CA 95118

RE: PACE Project No. 440111.516
Client Reference: Exxon 7-0104 (EE)

Dear Ms. Chew:

Enclosed is the report of laboratory analyses for samples received January 11, 1994.

Please note a peak eluting earlier than Benzene and suspected to be methyl tert butyl ether was present in your samples W-B1, W-B2, and W-C.

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
Project Manager

Enclosures

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REPORT OF LABORATORY ANALYSIS

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

January 20, 1994
PACE Project Number: 440111516

Attn: Ms. Dora Chew

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0227020	
Date Collected:			01/10/94	
Date Received:			01/11/94	
			W-A	
Parameter	Units	MDL		DATE ANALYZED
INORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	0.006	01/18/94
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	ND	01/18/94
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	01/18/94
Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	01/18/94
Iron (EPA Method 6010/200.7, ICP)	mg/L	0.15	0.33	01/18/94
Lead (EPA Method 6010/200.7, ICP)	mg/L	0.1	ND	01/18/94
Mercury (EPA Method 7470, Cold Vapor AA)	mg/L	0.0002	ND	01/13/94
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND	01/18/94
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	01/18/94
Zinc (EPA Method 6010/200.7, ICP)	mg/L	0.03	0.30	01/18/94
CYANIDES IN WATER				
Cyanides, total (EPA 335.2)	mg/L	0.005	ND	01/17/94
Date of Distillation, Cyanides	n/a		01/13/94	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	01/13/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	340	01/13/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	01/13/94
Benzene	ug/L	0.5	17	01/13/94
Toluene	ug/L	0.5	2.3	01/13/94
Ethylbenzene	ug/L	0.5	ND	01/13/94
Xylenes, Total	ug/L	0.5	7.6	01/13/94
VOLATILE ORGANICS, EPA METHOD 624 GC/MS				
Chloromethane	ug/L	10	ND	01/13/94
Vinyl Chloride	ug/L	10	ND	01/13/94
Bromomethane	ug/L	10	ND	01/13/94
Chloroethane	ug/L	10	ND	01/13/94

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REPORT OF LABORATORY ANALYSIS

Ms. Dora Chew
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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0227020	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-A	
ORGANIC ANALYSIS				
VOLATILE ORGANICS, EPA METHOD 624 GC/MS				
Trichlorofluoromethane	ug/L	5	ND	01/13/94
1,1,2-Trichlor-1,2,2-trifluoroethane	ug/L	5	ND	01/13/94
2-Butanone (MEK)	ug/L	50	120	01/13/94
1,1-Dichloroethene	ug/L	5	ND	01/13/94
Carbon Disulfide	ug/L	5	ND	01/13/94
Acetone	ug/L	50	ND	01/13/94
Methylene Chloride	ug/L	10	ND	01/13/94
trans-1,2-Dichloroethene	ug/L	5	ND	01/13/94
1,1-Dichloroethane	ug/L	5	ND	01/13/94
Chloroform	ug/L	5	ND	01/13/94
1,1,1-Trichloroethane	ug/L	5	ND	01/13/94
1,2-Dichloroethane	ug/L	5	ND	01/13/94
Vinyl Acetate	ug/L	50	ND	01/13/94
cis-1,2-Dichloroethene	ug/L	5	ND	01/13/94
Carbon Tetrachloride	ug/L	5	ND	01/13/94
Benzene	ug/L	5	19	01/13/94
1,2-Dichloropropane	ug/L	5	ND	01/13/94
Trichloroethene (TCE)	ug/L	5	7	01/13/94
Bromodichloromethane	ug/L	5	ND	01/13/94
2-Chloroethyl Vinyl Ether	ug/L	10	ND	01/13/94
trans-1,3-Dichloropropene	ug/L	5	ND	01/13/94
4-Methyl-2-pentanone (MIBK)	ug/L	50	ND	01/13/94
Toluene	ug/L	5	ND	01/13/94
cis-1,3-Dichloropropene	ug/L	5	ND	01/13/94
1,1,2-Trichloroethane	ug/L	5	ND	01/13/94
Dibromochloromethane	ug/L	5	ND	01/13/94
2-Hexanone	ug/L	50	ND	01/13/94
Tetrachloroethene	ug/L	5	120	01/13/94
Chlorobenzene	ug/L	5	ND	01/13/94
Ethylbenzene	ug/L	5	ND	01/13/94
Bromoform	ug/L	5	ND	01/13/94

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REPORT OF LABORATORY ANALYSIS

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0227020	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
VOLATILE ORGANICS, EPA METHOD 624 GC/MS				
Xylene(s) Total	ug/L	5	8	01/13/94
Styrene	ug/L	5	ND	01/13/94
1,1,2,2,-Tetrachloroethane	ug/L	5	ND	01/13/94
1,3-Dichlorobenzene	ug/L	5	ND	01/13/94
1,4-Dichlorobenzene	ug/L	5	ND	01/13/94
1,2-Dichlorobenzene	ug/L	5	ND	01/13/94
1,2-Dichloroethane-d4 (Surrog. Recovery)	%		98	01/13/94
Toluene-d8 (Surrogate Recovery)	%		90	01/13/94
4-Bromofluorobenzene (Surrog.Recovery)	%		101	01/13/94
EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)				
N-Nitrosodimethylamine	ug/L	10	ND	01/14/94
Bis(2-chloroethyl) ether	ug/L	10	ND	01/14/94
1,3-Dichlorobenzene	ug/L	10	ND	01/14/94
1,4-Dichlorobenzene	ug/L	10	ND	01/14/94
Benzyl Alcohol	ug/L	10	ND	01/14/94
1,2-Dichlorobenzene	ug/L	10	ND	01/14/94
Bis(2-chloroisopropyl) ether	ug/L	10	ND	01/14/94
N-Nitroso-di-n-propylamine	ug/L	10	ND	01/14/94
Hexachloroethane	ug/L	10	ND	01/14/94
Nitrobenzene	ug/L	10	ND	01/14/94
Bis(2-chloroethoxy)methane	ug/L	10	ND	01/14/94
1,2,4-Trichlorobenzene	ug/L	10	ND	01/14/94
Naphthalene	ug/L	10	ND	01/14/94
Hexachlorobutadiene	ug/L	10	ND	01/14/94
2-Methylnaphthalene	ug/L	10	ND	01/14/94
Hexachlorocyclopentadiene	ug/L	10	ND	01/14/94
2-Chloronaphthalene	ug/L	10	ND	01/14/94
Dimethylphthalate	ug/L	10	ND	01/14/94
Acenaphthylene	ug/L	10	ND	01/14/94
2,6-Dinitrotoluene	ug/L	10	ND	01/14/94
Acenaphthene	ug/L	10	ND	01/14/94

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REPORT OF LABORATORY ANALYSIS

Ms. Dora Chew
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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0227020	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)				
Dibenzofuran	ug/L	10	ND	01/14/94
2,4-Dinitrotoluene	ug/L	10	ND	01/14/94
Diethyl phthalate	ug/L	10	ND	01/14/94
Fluorene	ug/L	10	ND	01/14/94
4-Chlorophenylphenyl ether	ug/L	10	ND	01/14/94
N-Nitrosodiphenyl amine	ug/L	10	ND	01/14/94
1,2-Diphenylhydrazine	ug/L	10	ND	01/14/94
4-Bromophenylphenyl ether	ug/L	10	ND	01/14/94
Hexachlorobenzene	ug/L	10	ND	01/14/94
Phenanthrene	ug/L	10	ND	01/14/94
Anthracene	ug/L	10	ND	01/14/94
Di-n-butyl phthalate	ug/L	10	ND	01/14/94
Fluoranthene	ug/L	10	ND	01/14/94
Pyrene	ug/L	10	ND	01/14/94
Butylbenzyl phthalate	ug/L	10	ND	01/14/94
Benzo(a)anthracene	ug/L	10	ND	01/14/94
3,3'-Dichlorobenzidine	ug/L	20	ND	01/14/94
Chrysene	ug/L	10	ND	01/14/94
Bis(2-ethylhexyl) phthalate	ug/L	10	ND	01/14/94
Di-n-octyl phthalate	ug/L	10	ND	01/14/94
Benzo(b)fluoranthene	ug/L	10	ND	01/14/94
Benzo(k)fluoranthene	ug/L	10	ND	01/14/94
Benzo(a)pyrene	ug/L	10	ND	01/14/94
Indeno(1,2,3-cd)pyrene	ug/L	10	ND	01/14/94
Dibenz(a,h)anthracene	ug/L	10	ND	01/14/94
Benzo(g,h,i)perylene	ug/L	10	ND	01/14/94
Phenol	ug/L	10	ND	01/14/94
2-Chlorophenol	ug/L	10	ND	01/14/94
2-Methylphenol	ug/L	10	ND	01/14/94
4-Methylphenol	ug/L	10	ND	01/14/94
2-Nitrophenol	ug/L	10	ND	01/14/94

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REPORT OF LABORATORY ANALYSIS

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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0227020	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)				
2,4-Dimethylphenol	ug/L	10	ND	01/14/94
Benzoic Acid	ug/L	50	ND	01/14/94
2,4-Dichlorophenol	ug/L	10	ND	01/14/94
4-Chloro-3-methylphenol	ug/L	10	ND	01/14/94
2,4,6-Trichlorophenol	ug/L	10	ND	01/14/94
2,4,5-Trichlorophenol	ug/L	10	ND	01/14/94
2,4-Dinitrophenol	ug/L	50	ND	01/14/94
4-Nitrophenol	ug/L	50	ND	01/14/94
4,6-Dinitro-2-methylphenol	ug/L	50	ND	01/14/94
Pentachlorophenol	ug/L	50	ND	01/14/94
Nitrobenzene-d5 (Surrogate Recovery)			72%	01/14/94
2-Fluorobiphenyl (Surrogate Recovery)			77%	01/14/94
Terphenyl-d14 (Surrogate Recovery)			53%	01/14/94
2-Fluorophenol (Surrogate Recovery)			29%	01/14/94
Phenol-d6 (Surrogate Recovery)			42%	01/14/94
2,4,6-Tribromophenol(Surrogate Recovery)			74%	01/14/94
Date Extracted			01/12/94	

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REPORT OF LABORATORY ANALYSIS

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Page 6

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0227038	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-B1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	01/13/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	120	01/13/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	01/13/94
Benzene	ug/L	0.5	2.3	01/13/94
Toluene	ug/L	0.5	ND	01/13/94
Ethylbenzene	ug/L	0.5	ND	01/13/94
Xylenes, Total	ug/L	0.5	ND	01/13/94

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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0227046	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-B2	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	01/13/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	61	01/13/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	01/13/94
Benzene	ug/L	0.5	0.6	01/13/94
Toluene	ug/L	0.5	ND	01/13/94
Ethylbenzene	ug/L	0.5	ND	01/13/94
Xylenes, Total	ug/L	0.5	ND	01/13/94

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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0227054	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-C	
INORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	ND	01/18/94
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	ND	01/18/94
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	01/18/94
Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	01/18/94
Iron (EPA Method 6010/200.7, ICP)	mg/L	0.15	ND	01/18/94
Lead (EPA Method 6010/200.7, ICP)	mg/L	0.1	ND	01/18/94
Mercury (EPA Method 7470, Cold Vapor AA)	mg/L	0.0002	ND	01/13/94
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND	01/18/94
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	01/18/94
Zinc (EPA Method 6010/200.7, ICP)	mg/L	0.03	0.22	01/18/94
CYANIDES IN WATER				
Cyanides, total (EPA 335.2)	mg/L	0.005	ND	01/17.94
Date of Distillation, Cyanides	n/a		01/13/94	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	01/13/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	55	01/13/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	01/13/94
Benzene	ug/L	0.5	ND	01/13/94
Toluene	ug/L	0.5	ND	01/13.94
Ethylbenzene	ug/L	0.5	ND	01/13 94
Xylenes, Total	ug/L	0.5	ND	01/13.94
VOLATILE ORGANICS, EPA METHOD 624 GC/MS				
Chloromethane	ug/L	10	ND	01/13/94
Vinyl Chloride	ug/L	10	ND	01/13/94
Bromomethane	ug/L	10	ND	01/13/94
Chloroethane	ug/L	10	ND	01/13/94
Trichlorofluoromethane	ug/L	5	ND	01/13/94
1,1,2-Trichlor-1,2,2-trifluoroethane	ug/L	5	ND	01/13/94
2-Butanone (MEK)	ug/L	50	ND	01/13/94

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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL	70 0227054	DATE ANALYZED
PACE Sample Number:			70 0227054	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-C	
ORGANIC ANALYSIS				
VOLATILE ORGANICS, EPA METHOD 624 GC/MS				
1,1-Dichloroethene	ug/L	5	ND	01/13/94
Carbon Disulfide	ug/L	5	ND	01/13/94
Acetone	ug/L	50	ND	01/13/94
Methylene Chloride	ug/L	10	ND	01/13/94
trans-1,2-Dichloroethene	ug/L	5	ND	01/13/94
1,1-Dichloroethane	ug/L	5	ND	01/13/94
Chloroform	ug/L	5	ND	01/13/94
1,1,1-Trichloroethane	ug/L	5	ND	01/13/94
1,2-Dichloroethane	ug/L	5	ND	01/13/94
Vinyl Acetate	ug/L	50	ND	01/13/94
cis-1,2-Dichlorethene	ug/L	5	ND	01/13/94
Carbon Tetrachloride	ug/L	5	ND	01/13/94
Benzene	ug/L	5	ND	01/13/94
1,2-Dichloropropane	ug/L	5	ND	01/13/94
Trichloroethene (TCE)	ug/L	5	ND	01/13/94
Bromodichloromethane	ug/L	5	ND	01/13/94
2-Chloroethyl Vinyl Ether	ug/L	10	ND	01/13/94
trans-1,3-Dichloropropene	ug/L	5	ND	01/13/94
4-Methyl-2-pentanone (MIBK)	ug/L	50	ND	01/13/94
Toluene	ug/L	5	ND	01/13/94
cis-1,3-Dichloropropene	ug/L	5	ND	01/13/94
1,1,2-Trichloroethane	ug/L	5	ND	01/13/94
Dibromochloromethane	ug/L	5	ND	01/13/94
2-Hexanone	ug/L	50	ND	01/13/94
Tetrachloroethene	ug/L	5	ND	01/13/94
Chlorobenzene	ug/L	5	ND	01/13/94
Ethylbenzene	ug/L	5	ND	01/13/94
Bromoform	ug/L	5	ND	01/13/94
Xylene(s) Total	ug/L	5	ND	01/13/94
Styrene	ug/L	5	ND	01/13/94
1,1,2,2,-Tetrachloroethane	ug/L	5	ND	01/13/94

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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0227054	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-C	
ORGANIC ANALYSIS				
VOLATILE ORGANICS, EPA METHOD 624 GC.MS				
1,3-Dichlorobenzene	ug/L	5	ND	01/13/94
1,4-Dichlorobenzene	ug/L	5	ND	01/13/94
1,2-Dichlorobenzene	ug/L	5	ND	01/13/94
1,2-Dichloroethane-d4 (Surrog. Recovery)	%		102	01/13/94
Toluene-d8 (Surrogate Recovery)	%		94	01/13/94
4-Bromofluorobenzene (Surrog.Recovery)	%		106	01/13/94
EXTRACTABLE ORGANICS BY EPA 625 (GC.MS)				
N-Nitrosodimethylamine	ug/L	10	ND	01/14/94
Bis(2-chloroethyl) ether	ug/L	10	ND	01/14/94
1,3-Dichlorobenzene	ug/L	10	ND	01/14/94
1,4-Dichlorobenzene	ug/L	10	ND	01/14/94
Benzyl Alcohol	ug/L	10	ND	01/14/94
1,2-Dichlorobenzene	ug/L	10	ND	01/14/94
Bis(2-chloroisopropyl) ether	ug/L	10	ND	01/14/94
N-Nitroso-di-n-propylamine	ug/L	10	ND	01/14/94
Hexachloroethane	ug/L	10	ND	01/14/94
Nitrobenzene	ug/L	10	ND	01/14/94
Bis(2-chloroethoxy)methane	ug/L	10	ND	01/14/94
1,2,4-Trichlorobenzene	ug/L	10	ND	01/14/94
Naphthalene	ug/L	10	ND	01/14/94
Hexachlorobutadiene	ug/L	10	ND	01/14/94
2-Methylnaphthalene	ug/L	10	ND	01/14/94
Hexachlorocyclopentadiene	ug/L	10	ND	01/14/94
2-Chloronaphthalene	ug/L	10	ND	01/14/94
Dimethylphthalate	ug/L	10	ND	01/14/94
Acenaphthylene	ug/L	10	ND	01/14/94
2,6-Dinitrotoluene	ug/L	10	ND	01/14/94
Acenaphthene	ug/L	10	ND	01/14/94
Dibenzofuran	ug/L	10	ND	01/14/94
2,4-Dinitrotoluene	ug/L	10	ND	01/14/94
Diethyl phthalate	ug/L	10	ND	01/14/94
Fluorene	ug/L	10	ND	01/14/94

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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0227054	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)				
4-Chlorophenylphenyl ether	ug/L	10	ND	01/14/94
N-Nitrosodiphenyl amine	ug/L	10	ND	01/14/94
1,2-Diphenylhydrazine	ug/L	10	ND	01/14/94
4-Bromophenylphenyl ether	ug/L	10	ND	01/14/94
Hexachlorobenzene	ug/L	10	ND	01/14/94
Phenanthrene	ug/L	10	ND	01/14/94
Anthracene	ug/L	10	ND	01/14/94
Di-n-butyl phthalate	ug/L	10	ND	01/14/94
Fluoranthene	ug/L	10	ND	01/14/94
Pyrene	ug/L	10	ND	01/14/94
Butylbenzyl phthalate	ug/L	10	ND	01/14/94
Benzo(a)anthracene	ug/L	10	ND	01/14/94
3,3'-Dichlorobenzidine	ug/L	20	ND	01/14/94
Chrysene	ug/L	10	ND	01/14/94
Bis(2-ethylhexyl) phthalate	ug/L	10	ND	01/14/94
Di-n-octyl phthalate	ug/L	10	ND	01/14/94
Benzo(b)fluoranthene	ug/L	10	ND	01/14/94
Benzo(k)fluoranthene	ug/L	10	ND	01/14/94
Benzo(a)pyrene	ug/L	10	ND	01/14/94
Indeno(1,2,3-cd)pyrene	ug/L	10	ND	01/14/94
Dibenz(a,h)anthracene	ug/L	10	ND	01/14/94
Benzo(g,h,i)perylene	ug/L	10	ND	01/14/94
Phenol	ug/L	10	ND	01/14/94
2-Chlorophenol	ug/L	10	ND	01/14/94
2-Methylphenol	ug/L	10	ND	01/14/94
4-Methylphenol	ug/L	10	ND	01/14/94
2-Nitrophenol	ug/L	10	ND	01/14/94
2,4-Dimethylphenol	ug/L	10	ND	01/14/94
Benzoic Acid	ug/L	50	ND	01/14/94
2,4-Dichlorophenol	ug/L	10	ND	01/14/94
4-Chloro-3-methylphenol	ug/L	10	ND	01/14/94

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January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0227054	
Date Collected:			01/10/94	
Date Received:			01/11/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)				
2,4,6-Trichlorophenol	ug/L	10	ND	01/14/94
2,4,5-Trichlorophenol	ug/L	10	ND	01/14/94
2,4-Dinitrophenol	ug/L	50	ND	01/14/94
4-Nitrophenol	ug/L	50	ND	01/14/94
4,6-Dinitro-2-methylphenol	ug/L	50	ND	01/14/94
Pentachlorophenol	ug/L	50	ND	01/14/94
Nitrobenzene-d5 (Surrogate Recovery)			60%	01/14/94
2-Fluorobiphenyl (Surrogate Recovery)			57%	01/14/94
Terphenyl-d14 (Surrogate Recovery)			72%	01/14/94
2-Fluorophenol (Surrogate Recovery)			22%	01/14/94
Phenol-d6 (Surrogate Recovery)			27%	01/14/94
2,4,6-Tribromophenol(Surrogate Recovery)			43%	01/14/94
Date Extracted			01/12/94	

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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FOOTNOTES
for pages 1 through 12

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

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

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QUALITY CONTROL DATA

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

Arsenic (EPA Method 7060, Furnace AAS)
Batch: 70 27769
Samples: 70 0227020, 70 0227054

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	700227020 W-A	Duplicate of 70 0227020	RPD
Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	ND	0.006	0.005	18%

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700227020 W-A	Spike	Spike Recv	Spike Dupl Recv	RPD
Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	0.006	0.040	85%	81%	4%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Arsenic (EPA Method 7060, Furnace AAS)	mg/L	0.005	0.040	92%	91%	1%

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Client Reference: Exxon 7-0104 (EE)

Cadmium (EPA Method 6010/200.7, ICP)
Batch: 70 27747
Samples: 70 0227020, 70 0227054

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	700226449	Duplicate of 70 0226449	RPD
Antimony (EPA Method 6010/200.7, ICP)	mg/L	0.06	ND	ND	ND	NC
Barium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	ND	ND	NC
Beryllium (EPA Method 6010/200.7, ICP)	mg/L	0.007	ND	ND	ND	NC
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	ND	ND	ND	NC
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	ND	ND	NC
Cobalt (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	ND	ND	NC
Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	ND	ND	NC
Iron (EPA Method 6010/200.7, ICP)	mg/L	0.15	ND			
Lead (EPA Method 6010/200.7, ICP)	mg/L	0.1	ND	ND	ND	NC
Magnesium (EPA Method 6010/200.7, ICP)	mg/L	0.05	ND			
Molybdenum (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND	ND	ND	NC
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.007	ND			
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.02		ND	ND	NC
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.002	ND			
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.01		ND	ND	NC
Thallium (EPA Method 6010/200.7, ICP)	mg/L	0.2	ND	ND	ND	NC
Vanadium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	ND	ND	NC
Zinc (EPA Method 6010/200.7, ICP)	mg/L	0.03	ND	ND	ND	NC

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700226449	Spike	Spike Recv	Spike Dupl Recv	RPD
Antimony (EPA Method 6010/200.7, ICP)	mg/L	0.06	ND	0.50	106%	104%	1%
Barium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	2.0	100%	100%	0%
Beryllium (EPA Method 6010/200.7, ICP)	mg/L	0.007	ND	0.050	104%	104%	0%
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	ND	0.050	100%	104%	3%
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	0.20	100%	100%	0%
Cobalt (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	0.50	106%	106%	0%
Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	0.25	108%	104%	3%
Lead (EPA Method 6010/200.7, ICP)	mg/L	0.1	ND	0.50	106%	104%	1%
Molybdenum (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND	1.0	100%	100%	0%

Client Reference: **Exxon** 7-0104 (EE)

Cadmium (EPA Method 6010/200.7, ICP)
Batch: 70 27747
Samples: 70 0227020, 70 0227054

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700226449	Spike	Spike Recv	Spike Dupl Recv	RPD
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.02	ND	0.50	108%	108%	0%
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	0.050	96%	94%	2%
Thallium (EPA Method 6010/200.7, ICP)	mg/L	0.2	ND	2.0	105%	105%	0%
Vanadium (EPA Method 6010/200.7, ICP)	mg/L	0.01	ND	0.50	102%	102%	0%
Zinc (EPA Method 6010/200.7. ICP)	mg/L	0.03	ND	0.50	104%	104%	0%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Antimony (EPA Method 6010/200.7, ICP)	mg/L	0.06	0.50	102%	104%	1%
Barium (EPA Method 6010/200.7, ICP)	mg/L	0.01	2.0	100%	100%	0%
Beryllium (EPA Method 6010/200.7, ICP)	mg/L	0.007	0.050	102%	100%	1%
Cadmium (EPA Method 6010/200.7, ICP)	mg/L	0.005	0.050	96%	96%	0%
Chromium (EPA Method 6010/200.7, ICP)	mg/L	0.01	0.20	100%	100%	0%
Cobalt (EPA Method 6010/200.7, ICP)	mg/L	0.01	0.50	104%	104%	0%
Copper (EPA Method 6010/200.7, ICP)	mg/L	0.01	0.25	104%	104%	0%
Iron (EPA Method 6010/200.7. ICP)	mg/L	0.15	1.0	110%	120%	9%
Lead (EPA Method 6010/200.7. ICP)	mg/L	0.1	0.50	104%	100%	3%
Magnesium (EPA Method 6010/200.7, ICP)	mg/L	0.05	5.0	98%	98%	0%
Molybdenum (EPA Method 6010/200.7, ICP)	mg/L	0.02	1.0	100%	100%	0%
Nickel (EPA Method 6010/200.7, ICP)	mg/L	0.007	0.50	104%	106%	1%
Silver (EPA Method 6010/200.7, ICP)	mg/L	0.002	0.050	94%	94%	0%
Thallium (EPA Method 6010/200.7, ICP)	mg/L	0.2	2.0	105%	100%	4%
Vanadium (EPA Method 6010/200.7, ICP)	mg/L	0.01	0.50	100%	100%	0%
Zinc (EPA Method 6010/200.7. ICP)	mg/L	0.03	0.50	104%	106%	1%

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QUALITY CONTROL DATA

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

Mercury (EPA Method 7470, Cold Vapor AA)
Batch: 70 27670
Samples: 70 0227020, 70 0227054

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	700226937	Duplicate of 70 0226937	RPD
Mercury (EPA Method 7470, Cold Vapor AA	mg/L	0.0002	ND	ND	ND	NC

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700226902	Spike	Spike Recv	Spike Dupl Recv	RPD
Mercury (EPA Method 7470, Cold Vapor AA	mg/L	0.0002	ND	0.01	96%	95%	1%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Mercury (EPA Method 7470, Cold Vapor AA	mg/L	0.0002	0.01	98%	98%	0%

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QUALITY CONTROL DATA

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

CYANIDES IN WATER
Batch: 70 27734
Samples: 70 0227020, 70 0227054

METHOD BLANK AND SAMPLE DUPLICATE:

Parameter	Units	MDL	Method Blank	700227020 W-A	Duplicate of 70 0227020	RPD
Cyanides, total (EPA 335.2)	mg/L	0.005	ND	ND	ND	NC

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700226848	Spike	Spike Recv	Spike Dupl Recv	RPD
Cyanides, total (EPA 335.2)	mg/L	0.005	ND	0.10	93%	87%	6%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Cyanides, total (EPA 335.2)	mg/L	0.005	0.100	90%	84%	6%

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TEL: 415-883-6100
FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

Ms. Dora Chew
Page 19

QUALITY CONTROL DATA

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)
Batch: 70 27717
Samples: 70 0227020, 70 0227054

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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Client Reference: Exxon 7-0104 (EE)

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)
Batch: 70 27717
Samples: 70 0227020, 70 0227054

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)			77%
2-Fluorobiphenyl (Surrogate Recovery)			80%

Ms. Dora Chew
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QUALITY CONTROL DATA

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

EXTRACTABLE ORGANICS BY EPA 625 (GC/MS)
Batch: 70 27717
Samples: 70 0227020, 70 0227054

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Terphenyl-d14 (Surrogate Recovery)			94%
2-Fluorophenol (Surrogate Recovery)			64%
Phenol-d6 (Surrogate Recovery)			64%
2,4,6-Tribromophenol(Surrogate Recovery			87%

LABORATORY CONTROL SAMPLE:

Parameter	Units	MDL	Reference Value	Recv
1,4-Dichlorobenzene	ug/L	10	100	51%
N-Nitroso-di-n-propylamine	ug/L	10	100	55%
1,2,4-Trichlorobenzene	ug/L	10	100	65%
Acenaphthene	ug/L	10	100	77%
2,4-Dinitrotoluene	ug/L	10	100	80%
Pyrene	ug/L	10	100	96%
Phenol	ug/L	10	150	49%
2-Chlorophenol	ug/L	10	150	48%
4-Chloro-3-methylphenol	ug/L	10	150	73%
4-Nitrophenol	ug/L	50	150	83%
Pentachlorophenol	ug/L	50	150	99%

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Ms. Dora Chew
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QUALITY CONTROL DATA

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 27643
Samples: 70 0227020, 70 0227038, 70 0227046, 70 0227054

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	700226201	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	54	1000	105%	97%	7%
Benzene	ug/L	0.5	3.8	100	90%	102%	12%
Toluene	ug/L	0.5	15	100	95%	108%	12%
Ethylbenzene	ug/L	0.5	2.1	100	95%	107%	11%
Xylenes, Total	ug/L	0.5	11	300	100%	111%	10%

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	93%	97%	4%
Benzene	ug/L	0.5	100	91%	95%	4%
Toluene	ug/L	0.5	100	99%	101%	2%
Ethylbenzene	ug/L	0.5	100	96%	97%	1%
Xylenes, Total	ug/L	0.5	300	100%	101%	0%

Client Reference: Exxon 7-0104 (EE)

VOLATILE ORGANICS, EPA METHOD 624 GC/MS
Batch: 70 27698
Samples: 70 0227020, 70 0227054

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-Dichloroethene	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

Client Reference: Exxon 7-0104 (EE)

VOLATILE ORGANICS, EPA METHOD 624 GC/MS
Batch: 70 27698
Samples: 70 0227020, 70 0227054

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	%		107
Toluene-d8 (Surrogate Recovery)	%		96
4-Bromofluorobenzene (Surrog.Recovery)	%		111

LABORATORY CONTROL SAMPLE:

Parameter	Units	MDL	Reference Value	Recv
1,1-Dichloroethene	ug/L	5	20	90%
Benzene	ug/L	5	20	100%
Trichloroethene (TCE)	ug/L	5	20	95%
Toluene	ug/L	5	20	95%
Chlorobenzene	ug/L	5	20	95%

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REPORT OF LABORATORY ANALYSIS

FOOTNOTES
for pages 14 through 24

January 20, 1994
PACE Project Number: 440111516

Client Reference: Exxon 7-0104 (EE)

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

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

CHAIN OF CUSTODY

440111.516

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

Consultant's Name: RESNA

Page 1 of 1

Address: 3315 Almaden Expwy, Suite 34, San Jose CA 95066

Site Location: 1725 Park St, Alameda

Project #: 170077.03

Consultant Project #: 170077.03

Consultant Work Release #: 093002380*

Project Contact: Dora Chen

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

Laboratory Work Release #:

EXXON Contact: Marla Guenster ☒ 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: Carrier

Air Bill #:

Shipment Date: 1/11/94

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 1/10/94	Matrix Soil/Water	Prsv	# of Cont	PACE Sample #	TPH GAS BTEX EPA 8015 8020	TPH Diesc. EPA 8015	TRPH EPA 418.1	EPA 624	EPA 625	metals: As, Cd, Cr, Cu, Fe, Pb, Hg	Ni, Ag + Zn	Cyanide	COMMENTS
W-A	13:00-10	W	HCL	6		X			X					
W-A	↓	W	—	1						X				
W-A		W	—	1							X	X		22702.0
W-A		W	—	1									X	
W-B1	12:40	W	HCL	3	22703.8	X								
W-B2	12:30	W	HCL	3	22704.6	X								
W-C	12:10-20	W	HCL	6		X			X					
W-C	↓	W	—	1						X				22705.4
W-C		W	—	1							X	X		
W-C		W	—	1									X	

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Jim Schollard	1/11/94	13:08	Jo McIntosh Pace	1/11/94	1303
Jim McIntosh	1/11/94	1445	Turnaround Time Pace	1/11/94	1445

Additional Comments: 15/2 A/4 ✓ PDLs M/1

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

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170077.21

REPORT OF LABORATORY ANALYSIS

March 04, 1994

Mr. Dave Higgins
RESNA
3315 Almaden Expressway Suite 34
San Jose, CA 95118

RE: PACE Project No. 440225.506
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Higgins:

Enclosed is the report of laboratory analyses for samples received February 25, 1994.

Please note your sample W-C was also analyzed on 3/3/94, per the request of Mr. Jim Schollard. Unknown peaks eluting before Benzene were observed on the chromatograph of sample W-C on 2/28/94 as well as 3/3/94.

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
Project Manager

Enclosures

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REPORT OF LABORATORY ANALYSIS

RESNA
3315 Almaden Expressway Suite 34
San Jose, CA 95118

March 04, 1994
PACE Project Number: 440225506

Attn: Mr. Dave Higgins

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0254647	
Date Collected:			02/24/94	
Date Received:			02/25/94	
			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/28/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1400	02/28/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/28/94
Benzene	ug/L	0.5	310	02/28/94
Toluene	ug/L	0.5	22	02/28/94
Ethylbenzene	ug/L	0.5	ND	02/28/94
Xylenes, Total	ug/L	0.5	99	02/28/94

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REPORT OF LABORATORY ANALYSIS

March 04, 1994
PACE Project Number: 440225506

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0254655	
Date Collected:			02/24/94	
Date Received:			02/25/94	
Client Sample ID:			W-B1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/01/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/01/94
Benzene	ug/L	0.5	ND	03/01/94
Toluene	ug/L	0.5	ND	03/01/94
Ethylbenzene	ug/L	0.5	ND	03/01/94
Xylenes, Total	ug/L	0.5	ND	03/01/94

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REPORT OF LABORATORY ANALYSIS

Mr. Dave Higgins
Page 3

March 04, 1994
PACE Project Number: 440225506

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0254663	
Date Collected:			02/24/94	
Date Received:			02/25/94	
Client Sample ID:			W-B2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/28/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/28/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/28/94
Benzene	ug/L	0.5	ND	02/28/94
Toluene	ug/L	0.5	ND	02/28/94
Ethylbenzene	ug/L	0.5	ND	02/28/94
Xylenes, Total	ug/L	0.5	ND	02/28/94

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REPORT OF LABORATORY ANALYSIS

Mr. Dave Higgins
Page 4

March 04, 1994
PACE Project Number: 440225506

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0254671	
Date Collected:			02/24/94	
Date Received:			02/25/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/28/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	75	02/28/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/28/94
Benzene	ug/L	0.5	1.3	02/28/94
Toluene	ug/L	0.5	ND	02/28/94
Ethylbenzene	ug/L	0.5	ND	02/28/94
Xylenes, Total	ug/L	0.5	ND	02/28/94

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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Mr. Dave Higgins
Page 5

FOOTNOTES
for pages 1 through 4

March 04, 1994
PACE Project Number: 440225506

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 28585
Samples: 70 0254647, 70 0254663

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	700254663 W-B2	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	82%	95%	14%

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	92%	91%	1%

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REPORT OF LABORATORY ANALYSIS

Mr. Dave Higgins
Page 7

QUALITY CONTROL DATA

March 04, 1994
PACE Project Number: 440225506

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 28586
Samples: 70 0254671

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	700254671 W-C	Spike	Spike Recv	Spike Dupl Recv	RPD
Benzene	ug/L	0.5	1.3	40	91%	91%	0%
Toluene	ug/L	0.5	ND	40	88%	87%	1%
Ethylbenzene	ug/L	0.5	ND	40	88%	83%	5%
Xylenes, Total	ug/L	0.5	ND	120	88%	83%	5%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Benzene	ug/L	0.5	40	100%	99%	1%
Toluene	ug/L	0.5	40	97%	97%	0%
Ethylbenzene	ug/L	0.5	40	101%	100%	0%
Xylenes, Total	ug/L	0.5	120	100%	99%	1%

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Mr. Dave Higgins
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QUALITY CONTROL DATA

March 04, 1994
PACE Project Number: 440225506

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 28620
Samples: 70 0254655

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
Xylene (total)	ug/L	0.5	ND

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700254000	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	114%	113%	0%

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	103%	110%	6%

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REPORT OF LABORATORY ANALYSIS

FOOTNOTES
for pages 6 through 8

March 04, 1994
PACE Project Number: 440225506

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

Consultant's Name: RESNA

Address: 3315 Almaden Expwy. Suite 34, San Jose CA 95118

Project #: 170077.21

Project Contact: Dave Higgins

EXXON Contact: Marla Guensler ☒ EE ☐ C&M

Sampled by (print): Jim Scholland

Shipment Method: ~~Fed~~ Courier

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

Site Location: 1725 Park St., Alameda

Consultant Project #: 170077.21

Consultant Work Release #: 09300238CO#1

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

Laboratory Work Release #:

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

EXXON RAS #: 7-0104

Sampler's Signature: Jim Scholland

Air Bill #:

Shipment Date:

ANALYSIS REQUIRED

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

Sample Description	Collection Date/Time 2/24/94	Matrix (soil/water)	Preservative	# of Cont.	EACH Sample #	TPH GAS BTEX EPA 8015 8020	TPH Diesel EPA 8015	TRPH EPA 418.1	COMMENTS
W-A	14:30-35	W	HCl	3	25464.7	X			
W-B1	14:40-45	W	/	3	25465.5	X			
W-B2	14:35-40	W	/	3	25466.3	X			
W-C	14:45-50	W	↓	3	25467.1	X			

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Mary Rydell/RESNA	2/25/94	900A	[illegible] Roberson	2/25	9:00 AM
[illegible] Roberson/Pace	2/25	10'45	Sandra Amarante/Pace	2/25/94	10'45

Additional Comments: 9/2

✓ PDLs

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

pace
INCORPORATED
THE ASSURANCE OF QUALITY

17001 41

REPORT OF LABORATORY ANALYSIS

March 14, 1994

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

RE: PACE Project No. 440308.509
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Schollard:

Enclosed is the report of laboratory analyses for samples received March 08, 1994.

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
Project Manager

Enclosures

[illegible] Digital Drive
Novato CA 94949
TEL: 415 883 6100
FAX 415 883 2673

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REPORT OF LABORATORY ANALYSIS

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

March 14, 1994
PACE Project Number: 440308509

Attn: Mr. Jim Schollard

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0268079	
Date Collected:			03/07/94	
Date Received:			03/08/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/11/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/11/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/11/94
Benzene	ug/L	0.5	ND	03/11/94
Toluene	ug/L	0.5	ND	03/11/94
Ethylbenzene	ug/L	0.5	ND	03/11/94
Xylenes, Total	ug/L	0.5	ND	03/11/94

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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

Mr. Jim Schollard | FOOTNOTES | March 14, 1994
Page 2 | for page 1 | PACE Project Number: 440308509

Client Reference: Exxon 7-0104 (EE)

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

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Mr. Jim Schollard
Page 3

QUALITY CONTROL DATA

March 14, 1994
PACE Project Number: 440308509

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 28870
Samples: 70 0268079

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
Xylene (total)	ug/L	0.5	ND

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700267927	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50.00	1880.0 DS				
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	2500		50000	286%	298%	4%

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	92%	99%	7%

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FAX: 415-883-2673

Mr. Jim Schollard
Page 4

FOOTNOTES
for page 3

March 14, 1994
PACE Project Number: 440308509

Client Reference: Exxon 7-0104 (EE)

DS	Concentration found on diluted sample.
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

416308.509

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

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

Consultant's Name: RESNA

Page 1 of 1

Address: 3315 Almaden Expwy Suite 34 San Jose, CA 95118		Site Location: 1725 Park St, Alameda
Project #: 170077.21	Consultant Project #: 170077.21	Consultant Work Release #: 09300238
Project Contact: Jim Scholland	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): Mark Ebner	Sampler's Signature: Mark C. Ebner	
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	Matrix Soil Water	Pres	# of Cont	PACE Sample #	TPH GAS BTEX EPA 8015/8020	TPH Diesel EPA 8015	TRPH EPA 418.1	COMMENTS
W-C	3/7/94 8:15-20	W	HCL	3	216819	X			

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
[illegible]	3/8/94	1111	[illegible]	3/8/94	1411
[illegible]	3/8/94	1730	[illegible] PACE	3/8/94	1730

Additional Comments:
15/3
✓ PDLs

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

PACE INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

April 06, 1994

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

RE: PACE Project No. 440331.515
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Schollard:

Enclosed is the report of laboratory analyses for samples received March 31, 1994.

Please note a peak eluting earlier than Benzene and suspected to be methyl tert butyl ether was present in your sample W-B1. Also, an atypical peak eluting between Benzene and methyl tert butyl ether was present in W-B1.

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

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

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REPORT OF LABORATORY ANALYSIS

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

April 06, 1994
PACE Project Number: 440331515

Attn: Mr. Jim Schollard

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0296358	
Date Collected:			03/30/94	
Date Received:			03/31/94	
Client Sample ID:			W-A	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/04/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	190	04/04/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/04/94
Benzene	ug/L	0.5	0.9	04/04/94
Toluene	ug/L	0.5	0.9	04/04/94
Ethylbenzene	ug/L	0.5	ND	04/04/94
Xylenes, Total	ug/L	0.5	ND	04/04/94

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FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

April 06, 1994
PACE Project Number: 440331515

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0296366	
Date Collected:			03/30/94	
Date Received:			03/31/94	
Client Sample ID:			W-B1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/04/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	55	04/04/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/04/94
Benzene	ug/L	0.5	ND	04/04/94
Toluene	ug/L	0.5	ND	04/04/94
Ethylbenzene	ug/L	0.5	ND	04/04/94
Xylenes, Total	ug/L	0.5	ND	04/04/94

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PACE INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Jim Schollard
Page 3

April 06, 1994
PACE Project Number: 440331515

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0296374	
Date Collected:			03/30/94	
Date Received:			03/31/94	
Client Sample ID:			W-B2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/04/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/04/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/04/94
Benzene	ug/L	0.5	ND	04/04/94
Toluene	ug/L	0.5	ND	04/04/94
Ethylbenzene	ug/L	0.5	ND	04/04/94
Xylenes, Total	ug/L	0.5	ND	04/04/94

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FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

Mr. Jim Schollard
Page 4

April 06, 1994
PACE Project Number: 440331515

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0296382	
Date Collected:			03/30/94	
Date Received:			03/31/94	
Client Sample ID:			W-C	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/04/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/04/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/04/94
Benzene	ug/L	0.5	ND	04/04/94
Toluene	ug/L	0.5	ND	04/04/94
Ethylbenzene	ug/L	0.5	ND	04/04/94
Xylenes, Total	ug/L	0.5	ND	04/04/94

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

11 Digital Drive
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TEL: 415-883-6100
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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

FOOTNOTES
for pages 1 through 4

April 06, 1994
PACE Project Number: 440331515

Client Reference: Exxon 7-0104 (EE)

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

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FAX: 415-883-2673

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 29471
Samples: 70 0296358, 70 0296366, 70 0296374, 70 0296382

METHOD BLANK:

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

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	89%	83%	7%

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

Mr. Jim Schollard | FOOTNOTES | April 06, 1994
Page 7 | for page 6 | PACE Project Number: 440331515

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

440331.515

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

Consultant's Name: RESNA — Page 1 of 1

Address: 3315 Almaden Expwy. Suite 34, San Jose CA 95118 — Site Location: 1725 Park St., Alameda

Project #: 1700077.21 — Consultant Project #: 1700077.21 — Consultant Work Release #: 09300238C04

Project Contact: Jim Schollard — Phone #: 408/264-7723 Fax #: 2435 — Laboratory Work Release #:

EXXON Contact: Marla Guensler [X] EE [ ] C&M — Phone #: 510/246-8768 Fax #: 8778 — EXXON RAS #: 7-0104

Sampled by (print): Jim Schollard — Sampler's Signature: [signature]

Shipment Method: Courier — Air Bill #: — Shipment Date:

TAT: [ ] 24 hr [ ] 48 hr [ ] 72 hr [X] Standard (5 day)

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

Sample Description	Collection Date/Time 3/30/94	Matrix Soil/Water	Prsv	# of Cont	PACE Sample #	TPH/GAS BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1										COMMENTS
W-A	13:30-40	W	HCL	3	296035.8	X												
W-B1	13:20-30	W	↓	↓	296036.6	X												
W-B2	13:10-20	W	↓	↓	296037.4	X												
W-C	13:00-10	W	↓	↓	296038.2	X												

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments:
[signature]	3/31/94	1530	[signature]	3/31/94	1530	10/4 ✓ PDLs
[signature] Pace	3/31/94	1900	[signature] Pace	3/31/94	1950	

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

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

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

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)

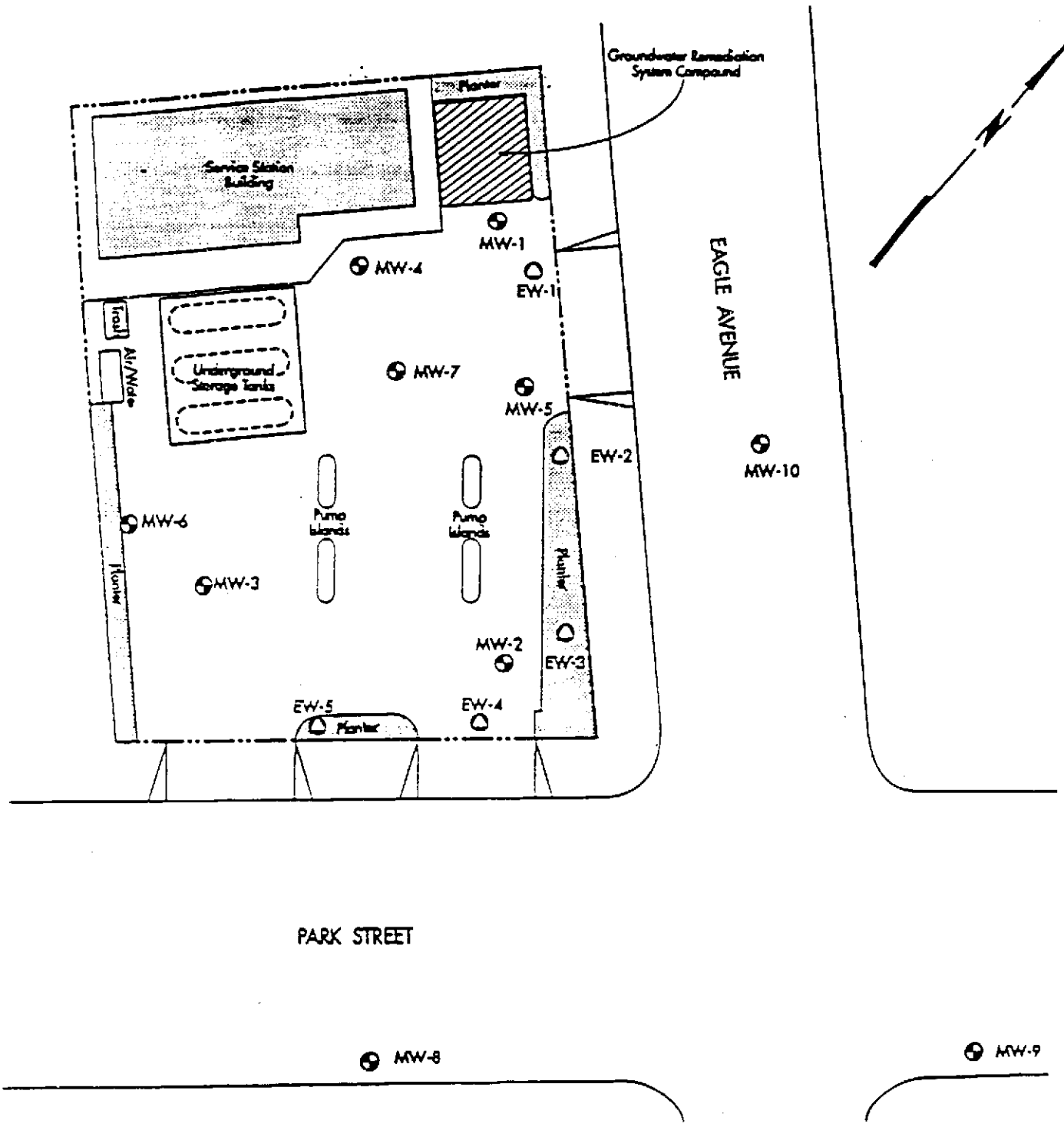
a. Day(s) of the week 0 b. Time(s) of the day

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			

Permit No. 502-66631



EXPLANATION

- MW-1 Monitoring well location
- EW-1 Extraction well location

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

0 30' 60' 90'

RESNA

GENERALIZED SITE PLAN

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

PLATE 2

PROJECT NO. 170077.03 | 7/93

EBMUD

Business Name Exx ompany, 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			

EBMUD

WASTEWATER DISCHARGE PERMIT

Terms and Conditions

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

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

WASTEWATER DISCHARGE PERMIT

EBMUD

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 J. Weller — MANAGER, WASTEWATER DEPARTMENT

1/31/94 — DATE

EAST BAY
MUNICIPAL UTILITY DISTRICT

MICHAEL J. WALLIS
DIRECTOR OF WASTEWATER

C E R T I F I E D M A I L
(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 510/237-1512.

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.

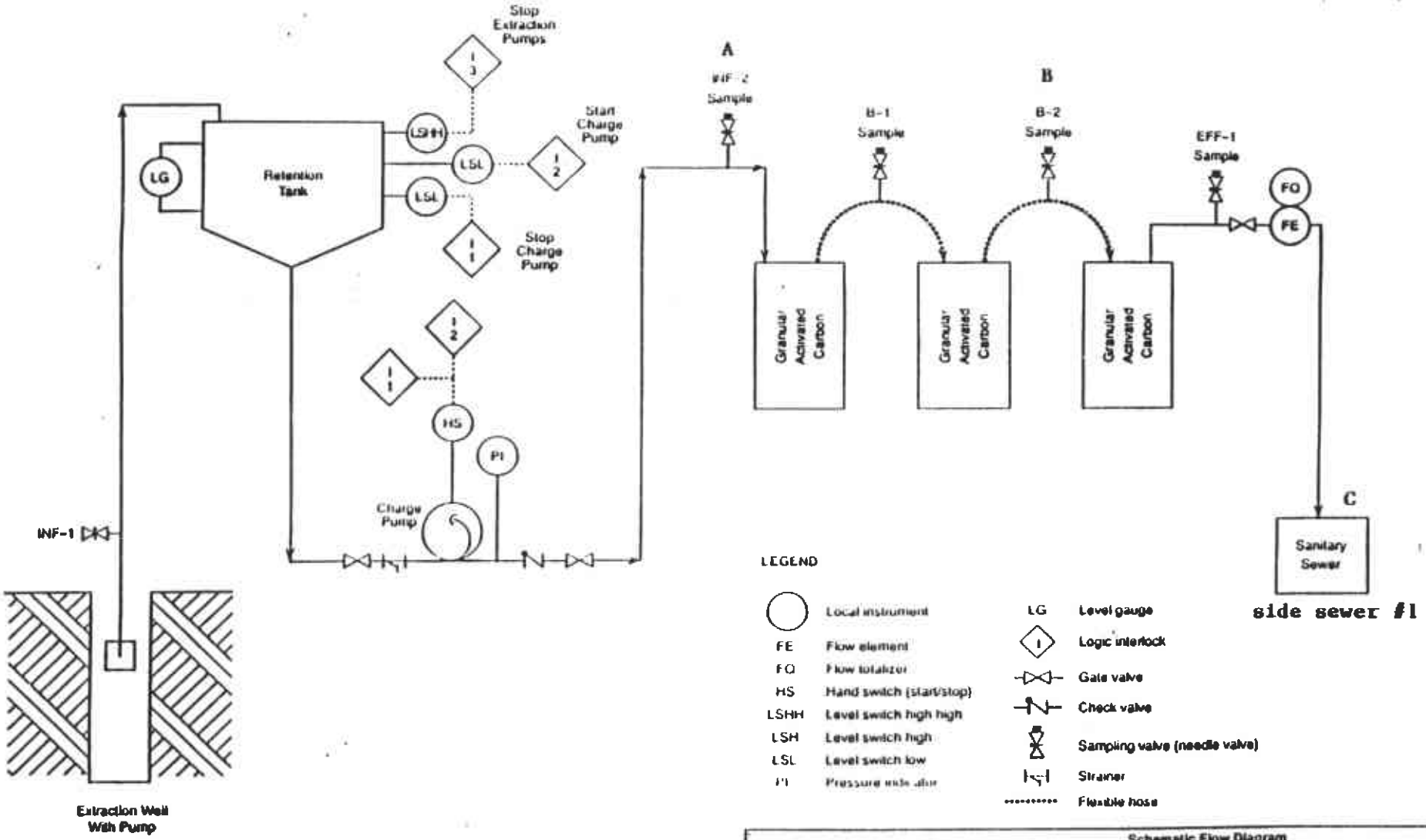
III. Sample location "C", also known as Side Sewer no. 1, shall be the sample tap located on the effluent side of the final carbon vessel. Sample location "B" shall be the sample tap located intermediate of the end two carbon vessels. Sample location "A" shall be the sample tap located on the influent 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: S. Patel
PROJECT NUMBER: 10495.395
APPROVED:
DATE: 1/6/93
REVISED DATE:

Permit #502-6663

WASTEWATER DISCHARGE PERMIT APPLICATION

EBMUD

PERMIT NUMBER
502-66631

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

ADDRESS OF PREMISE DISCHARGING WASTEWATER
1725 Park Street
STREET ADDRESS
Alameda
CITY ZIP CODE

BUSINESS MAILING ADDRESS
P.O. Box 4032
STREET ADDRESS
Concord, CA 94520
CITY ZIP CODE

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

PERSON TO BE CONTACTED ABOUT THIS APPLICATION
Ms. Dora Chew/RESNA Industries Inc.
NAME
Project Engineer (408) 264-7723
TITLE PHONE

PERSON TO BE CONTACTED IN EVENT OF EMERGENCY
Ms. Marla Guensler
NAME
(510) 246-8776 same
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

APPENDIX D

FACILITY INSPECTION LOGS

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 2
JOB NO. 170077.03
DATE: 1/10/94

PROJECT NAME: Exxon 104

WORK SCOPE: O+M + Sampling

TIME: 10:30 a.m. Jim S. on site
12:00 pm Maria Kulka, EBMUD on site for effluent sample collection, offsite @ 12:30
3:15 Jim S. off site

Operational Data (10:45):

Control Panel: On
Extract. Pumps all pumping: Yes
Approx. rate (influent Q): 1.83 gpm ok
Nutrient + H_2O_2 Feed Pumps: off (not in use)
Nutrient + H_2O_2 Tank Levels + Condition: Same - ok
Transfer Pump: Auto (+ currently running)
Alarms: None
Flowmeter Reading: 1,039,530
Intermittent Discharge rate: ~4.8 gpm
Tot. Gallons pumped since last recorded visit + ave. discharge rate:
48,310 ga. = 4,129.1 gpd or 2.87 gpm < <7,200 gpd or 5.0 gpm regulation > ok

A.C. operating? + pressure: Yes 82 psi (ok)
Extract. purge pressure (PI-105): 65 psi (60-80 psi ok)
PH (Signet): 6.86
PSV-2 o/c? No, v. slow leak
PG (inlet) @ Sand filter (PI-101): 14 psi (too high)
PG (outlet) @ " " (PI-102): NO
PG (inlet) @ Bag filter (PI-103): 12.5 psi
PG (outlet) @ 1st C.C. (PI-501): 12 (adjusted to 10 psi*) } $\Delta P = 2.5$ psi ok
PG (outlet) @ 1st CC. (PI-501): 12 (adjusted to 10 psi*) } $\Delta P = 10$ psi backwashing hi, needs
PG @ last C.C. (PI-502): 2
Any probs / observations: Quick disconnect Pork fitting @ inlet of 2nd C.C. is leaking (minor leak).
Samples Collected: 9 W-C @ 12:10-20 (BTEX/TPHG, EPA 624+625, metals + Cy; 3 W-B2 @ 12:30 (BTEX/TPHG); 3 W-B1 @ 12:40 (BTEX/TPHG); + 9 W-A @ 13:00-10 (Same as W-C)

* decreased pressure + pumping rate by slowly throttling down HV-103

ATTACHMENTS: _____ INITIAL: _____

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 2 OF 2
PROJECT NAME: Exxon 104
JOB NO. 170077.03
DATE: 11/10/94
WORK SCOPE: O+M + Sampling Cont.

TIME: Work Conducted

Repaired leaky Parker fitting on C.C. #3; replaced sample port tubing on all sample ports + added new tubing to effluent (C) Sample port for easier access + reach; Collect Water samples; backwashed Sand filters (10 min/ea.); backwashed Carbon Canisters for 15 min; drained Condensate from Compressor + tank; monitored air sparge carbon canister sample ports: A = 0.0 B = 0.0 C = 0.0 @ 13:30 (ppm); replace pressure guage PI-102 @ backwash outlet of Sand filter (reads ~ 3psi ΔP during sand backwashing); Adjusted PSV-2 (liquid relief valve) + stopped leak; set it @ 10 psi max pressure** as indicated by PI-501) @ the 1st C.C. → this allowed for a max discharge rate of 7.2 gpm (PI-501 = 9.5 (max) psi) w/ HV-103 fully open.

** 10 PSI represents Aquatec's suggested max. C.C. operating PSI

Post Maintenance Operational Data (3:00 pm):

Control Panel: On
Transfer Pump: Auto (put in 'Hand' setting to obtain data below)
Flowmeter Reading: 1049010
Intermittent Discharge rate: ~6.0 → 6.7 gpm
A.C. pressure: 80 psi (ok)
Extraction Pumps Pressure (PI-405): 65 psi (ok)
pH (Signet): 6.90
PI-101: 11.5 → 15.0*
PI-102 (during backwashing): 11.5
PI-103: 10.5 → 14.0* } ΔP = 5.5 psi > 50% reduction = possible filter change out point
PI-501: 6.5 → 8.5*
PI-501: 6.5 → 8.5* } ΔP = 6.5 psi
PI-502: 1 → 2.0* } (ok)

* following adjustment of PSV-2 + opening-up HV-103 to increase flow (to 8.5 psi max)

ATTACHMENTS: 0

INITIAL: [illegible]

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: 2/9/94

WORK SCOPE: Carbon Canister Change-Out + potential System Start-up

TIME:

10:30 Jim Schollard, RESNA onsite

Aquatec not onsite yet, called in to their East Coast + CA offices + left them my pager #.

Begin disconnecting 3 C.C. drums

~12:00 . Gary (Jerry?) + John Robards w/ Aquatec onsite, assist w/ disconnecting. Removed all 3 drums + replaced w/ 3 virgin 55 ga. carbon drums

Of the 3 drums removed, #1 + 2 were prematurely spent, #3 was Technically spent.

New drums placed into 1st, 2nd + 3rd positions + labeled accordingly. They all have the new PVC FPT 1 1/4" inlet/outlets. Drums have filled with water + allowed to hydrate from 1:15 — 3:00 (1-2 hrs. as recommended)

1:30 - 2:15 Lunch (offsite)

2:45 - 3:15 ~~After~~ Backwashed Carbon (30 min. as recommended)

Additional O+M work Conducted:

Backwashed Sand filters (10 min/ea), drained condensate from Compressor + tank, replaced bag filter based on previous O+M data (1/10/94) + started up system (See next pg. for start-up data)

ATTACHMENTS: _____

INITIAL: _____

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

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 2 OF 2
JOB NO. 17007721
DATE: 2/7/94

PROJECT NAME: Exxon 104

WORK SCOPE: System Restart-up

TIME:

Operational Data : (4:00 pm)

Control Panel: On
Extraction Pumps all Pumping : Yes
Approx rate (influent Q) : 4.0 gpm (previous rates not accurate)
Nutrient + H_2O_2 Feed Pumps : off (not in use)
Nutrient + H_2O_2 Tank Levels + condition : Same + ok
Transfer Pump : Hand position (to collect data)
Alarms : none
Flow meter Reading : 1,075,720 ga.
Instantaneous Discharge Rate (Fm Q) : 6.5 gpm
Tot. ga. pumped since last recorded visit + ave. discharge rate : NA
AC! operating + pressure : Ok + 80 psi (ok)
Extraction Pumps' pressure (PI-405) : 60 psi (60-80 psi ok)
pH (Signet) : 7.19
PSV-2 Condition : Good (no leak visible)
PG (inlet) @ sand filter (PI-101) : 15.5 psi
PG (outlet) @ sand filter (during backwashing) : 5 psi } ΔP = 6.5 psi (too hi), may need to replace sand media
PG (inlet) @ Bag filter (PI-103) : 9 psi
PG (outlet) @ 1st C.C. (PI-501) : 7 psi } ΔP = 2 psi = new filter (ok)
PG (outlet) @ 1st CC. (PI-501) : 7 psi
PG @ last CC. (PI-502) : 2 psi } ΔP = 5 psi = new carbon (ok)
Any Probs./Observations : None observed

4:45 Jims offsite

INITIAL:

ATTACHMENTS: _____

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

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 3
JOB NO. 170077.21
DATE: 2/24/94

PROJECT NAME: Exxon 104

WORK SCOPE: O + M + Sampling

TIME:
11:00 Jim Schollard onsite (Chris Allen onsite conducting QM)
5:00 pm offsite (1 hr. lunch)

Operational Data: (11:15 am)

Control Panel: On
Extraction Pumps all pumping: NO, EW1 not pumping water only air + orange sludge (bio?)
Approx rate (influent Q): 3.25 gpm (approx rate has ↓ due to EW1 non operation)
Nutrient + H_2O_2 Feed Pumps: off (not in use)
Nutrient + H_2O_2 tank levels + condition: Same & ok (H_2O_2 evaporating slowly)
Transfer Pump: Put in Hand position to collect data
Alarms: None
Flowmeter reading: 1,152,290
Intermittent Discharge rate (per FM): 3.0 gpm (dropped ~3.5 gpm)
Tot. gal. pumped since last visit + ave. discharge rate: 76,570 ga. = 4,558 gpd ≅ 3.16 gpm <<7,200 gpd or 50 gpm regulation> ok ✓

AC operation + pressure: ok, 80 psi (ok)
Extract pumps pressure (PI-405): 65 psi (60-80 psi ok)
PH (Signet): 6.76
TSV-2 ok: ok, no leak
PG (inlet) @ sand filter (PI-101): 18 psi
PG (PI-101 → PI-502) @ Sand filter (following backwashing) } SF1A = 18 psi → 2 psi; SF1B = 13 psi → 5 psi
PG (inlet) @ Bag filter (PI-102): 12 psi } ΔP = 6 psi
PG (outlet) @ 1ST C.C (PI-501): 9 psi } ΔP = 3 psi
PG (outlet) @ 1st CC (PI-501): 9 psi } ΔP = 9 psi
PG @ last C.C. (PI-502): 0 psi
Samples Collected: W-A (3), W-B1 (3), W-B2 (3) + W-C (3)
Potential Bio Samples: W-EW1 - ?1 + W-EW1 (#2) - ?2
Any Probs./Comments: EW1 pump not pumping water,

ATTACHMENTS: _____

INITIAL: JS

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

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 2 OF 3
PROJECT NAME: Exxon 104
JOB NO.
DATE: 2/24/94
WORK SCOPE: O+M Cont.

TIME:

Work Conducted: Backwashed Sand filters 10 min/ea; backwashed carbon canister system for 15 min; drained condensate from compressor + tank; monitored air sparge carbon canister sample ports: A=0.7 B=0.0 C=0.0 @ 12:32 pm; collected water samples (see previous page), cleared + repaired EW1 extraction pump (see below)

EW1 evaluation & repair: Advised to Chris Allen EW1 has some kind of white insect in the water column, he had brought a sample in to Penn Beck plant quarter for inspection. Today, upon pulling up the water level probe the entire end of the probe was covered w/ live white insects which somewhat look like larvae w/ legs (size: 1mm to 3mm.) We collected a water sample (W-EW1-?1) for inspection + possible biologic analysis. The sample port inside the compound to assured EW1 (labeled #1) produces an orange slime material (biologic?). Collected a sample from it as well. It appears as if this material (possibly a by-product or waste product of the larvae) is clogging the discharge lines because the pipes make loud clicking + banging noises as if trying to pass particulate matter. (Sample = W-EW1(#1)-?2)
Pulled up pump, it was covered w/ orange slime (presumed bio growth). It appears the slots @ the pump intake were bio-fouled + that the pump discharge line was kinked @ the well head + that the parker fittings @ the well head were also clogged. Disconnected lines @ the well head + allowed to discharge until particulates cleared; cleaned exterior of pump + pump intake slots until it appeared interior check + discharge valves seated properly. Also untangled/unkinked surface discharge lines. After presumably unclogging the pump + lines, the pump operated correctly.
Note - may be necessary to re-develop this well to remove the potential well casing slotted interval bio fouling + determine if the larval organisms are bio fouling this well.

ATTACHMENTS:
INITIAL: JS

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

Working to Restore Nature

DAILY FIELD REPORT

SHEET 3 OF 3

PROJECT NAME: Exxon 104

JOB NO.

DATE: 2/24/94

WORK SCOPE: O+M Cont.

TIME:

Post maintenance Operational Data (4:30):

Control Panel: On
Transfer Pump: Auto mode
Extraction wells all Pumping: Yes (repaired EW1)
Approx rate: 4.5 gpm (ok = optimum)
Flowmeter Reading: 1,152,940
Intermittent Discharge rate: ~6.0 gpm (ok / ~~optimum~~ optimum)
PI-101: 15 psi } ΔP = 4 psi after backwashing → sand media needs replacement
PI-103: 11 psi
PI-103: 11 psi } ΔP = 6 psi → ~50% flow reduction, may need filter replacement on next O+M
PI-501: 7 psi
PI-501: 7 psi } ΔP = 6 psi → ok (new = ΔP 5 psi)
PI-502: ~1 psi

To Do: replace sand media; possibly re-develop EW1 well; determine if apparent larvae organisms are causing the ~~[illegible]~~ bio fouling in EW1 (re analyze them + their presumed byproduct)

INITIAL: JF

ATTACHMENTS:

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

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 3
PROJECT NAME: Exxon 104
JOB NO. 170077.21
WORK SCOPE: O+M of DTWs
DATE: 3/15/94

TIME: 10:45 Jim S. on site (1/2 hr. lunch)
5:10 off site

Operational Data (11:00 am):

Control Panel: On
Extraction Pumps all pumping*: Yes
Approx. rate (influent)*: 3.6 gpm (~0.9 gpm lower than normal)
Nutrient & H_2O_2 Feed Pumps: off (not in use)
Nutrient & H_2O_2 tank levels & condition: Same & ok
Transfer Pump: on auto (put in Hand mode to collect data)
Alarms: None
Flowmeter Reading: 1,233,590
Intermittent Discharge rate to Sewer (per Fm): ~2.7 gpm (dropped ~1.6 gpm)
Tot. gallons pumped since last visit & ave. discharge rate: 80,650 ga.
≅ 4,301 gpd = 3.0 gpm (< 10,080 gpd or 7.0 gpm regulation) ok ✓

A.C. operation & pressure: Ok & 80 psi (ok)
Fluid level: @ the low mark (needs fluid) A.C. hrs. of operation: 41,400.5
Extract. Pumps pressure (PI-105): 64 psi (60-80 psi ok)
pH (Signet): 6.14
PSV-2 condition: Ok, no leaks
PG (inlet) @ sand filter (PI-101): 18 psi } ΔP = 5 psi → needs backwashing (sand filters)
PG @ bag filter (PI-103): 13 psi } ΔP ~ 2.5 psi → bag filter ok
PG @ 1st C.C. (PI-501): 10.5 psi } ΔP ≈ 7.5 psi → C.C.s need backwashing
PG @ last CC. (PI-502): 1.0 psi
Samples Collected / DTWs Collected:
* EW1 Q rate: 1.4 gpm (water clear, no bailing) EW4: 0.35 gpm
EW2 " : 0.5 gpm EW5: 0.6 gpm
EW3 " : 1.1 gpm TOT. = 3.9 gpm (within 0.2 gpm of int. rate: 3.6 gpm)
Any Problems or Comments: AC. needs annual maintenance by Airdale Sub Con & is low on oil; well head caps need to be secured to top of casing, pumps need to be rehung @ the appropriate heights, Sand media may need replacement

ATTACHMENTS: 2 pgs.
INITIAL: JS

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

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 2 OF 3
JOB NO. 170077.21
DATE: 3/15/94

PROJECT NAME: Exxon 104

WORK SCOPE: O+M Cont'd.

TIME:

Work Conducted: Placed new + revised EBMUD Discharge Permit (expiration 1/25/94) in O+M Log notebook; Backwashed sand filters 10 min/ea: SF1B ΔP @ (15-4 psi) = 11psi; + SF1A ΔP (16-3 psi) = 13psi; Drained condensate from compressor + tank; Monitored air sparge carbon cannister Sample ports: A = 2.4, B = 1.7, C = 0.0 @ 12:04 pm; Backwashed Carbon cannister system for > 15 minutes w/ clean tap water, began monitoring + recording individual EW pumping rates (refer to operational data); Posted EPA Proposition 65 Warning Statement on front gate; re-mounted fire extinguisher; added 1 gal. of Aqua Clean Muriatic Acid (31% Hydrogen Chloride) down EW1 in order to reduce the biofouling in EW1 (see previous O+M evaluation on EW1) per S. Young, RESNA (see March telecon. file for further info.); conducted well pad condition inventory (see DTW pg. 3); conducted sand media inspection (see below); measured depths to top of pumps (see pg. 3).

Post Maintenance Operational Data (12:50):

Control Panel: On
Transfer Pump: Hand mode to collect data
Extraction wells all pumping: Yes
~~App~~ Flowmeter reading: 1,233,700
Intermittent discharge rate (per FM) to sewer: 6.0 gpm (ok/optimum)
PI-101 @ Sand filter: 15 psi } Sand filters ΔP = 3 psi (accd. to filter vendor < 5 psi ΔP ok)
PI-103 @ Bag filter: 12 psi } Bag filter ΔP = 5 psi (ok, ΔP↑ after sand + C.C. backwashing)
PI-501 @ 1st C.C.: 7 psi } C.C. ΔP = 5 psi (ok, new = ΔP = 5 psi)
PI-502 @ last C.C.: 2 psi

Sand Media Condition: Inspected sand inside Sand filters (SF1A + 1B) for signs of biofouling + attrition.
SF1A (1st filter): Water & sand were laden w/ bio growth/build-up (rusty orange). Some of the sand has collected into lumps/globs of bio mass (gray mucous color + orange color). Collected sample for Everitt sand filter vendor to inspect media condition. Sand grain sizes range from fn-med, rounded-SA.
SF1B (2nd filter): water much clearer, slight gray color, minor bio mass formed, no lumps of fouling, media looked free of debris. Sand grain sizes ranged from fn.-med, rounded-SA. See Sample

INITIAL: JS

ATTACHMENTS: ____________

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RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 3 OF 3

PROJECT NAME: Exxon 104

JOB NO. 170077.21

WORK SCOPE: O&M & DTW's Contd

DATE: 3/15/94

TIME:

Well ID	Time	DTW	Depth to Top of Pump:	Condition
EW3	13:51	~20.80**	~20.60	Well cap not secured to well casing, No twine supporting line lines
EW1	14:02	~14.00**	14.00	" " " → well cap needs to be secured
EW5	14:18	~10.00**	13.64	" " + pump re-hung sagging dg
EW4	14:25	~14.35**	13.64	" "
EW2	14:30	~14.20**	13.50	" "
MW9	14:40	6.60	—	Good
MW8	14:50	6.12	—	Good
MW10	14:55	6.90	—	Good
MW1	14:59	7.07	—	Good
MW3	15:08	6.43	—	Good
MW6	15:10	6.54	—	~1/2 of rim is missing, thus well cover not secure
MW7	15:15	6.01	—	Good
MW4	15:18	6.41	—	Good
MW2(s)	15:23	7.43	—	Good
MW5(s)	15:25	7.15	— Sheen Present	Good

* well caps have 2 of the 4 lines secured to them but they are have not been secured to the well casing. The remaining 2 lines which are open + unconnected to the well head (pumping components (as should be) need to be secured to the well cap. The pumps need to be hung @ the appropriate depth for the well caps secured to the casing.

** measurements were collected just prior to the discharge cycle of the pumps, thus they represent well recharge level prior to discharge.

ATTACHMENTS: _____

INITIAL: JS

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

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 1 OF 2
JOB NO. 170077.21
DATE: 3/30/94

PROJECT NAME: Exxon 104

WORK SCOPE: O&M + Sampling

TIME: 11:30 Jim Scholl and onsite
5:00 pm offsite

Operational Data (12:00):
Control Panel / System Status: On/[illegible] Partially up
Extraction pumps all pumping*: No, none → because Alarm triggered
Approx. rate (influent): 0.0 gpm
Nutrient + H_2O_2 Feed pumps: off (not in use)
Nutrient + H_2O_2 tank levels + condition: Same + ok
Transfer pump: Auto (has been running continuously since arrival onsite)
Alarms: Bio reactor High/high level switch had been triggered
Flowmeter reading: 1,267,720
Intermittent discharge rate to sewer (per FM): 1 gpm   34,130
TOT. gallons pumped since last visit + approx. discharge rate: ~~3,361 ga.~~
32,295 [illegible] gpd ≈ [illegible] 16 gpm <w/in compliance>. Discharge rate has fallen off to ~ [illegible] 1.4 gpm (under normal operation)
A.C. operation + pressure: On + 73 psi too low (should be 80 psi) → probably as a result of solenoid shut-off via alarm + slight air escape during down period.
A.C. hours of operation: 42,066.2
Fluid level: ok
Extraction pumps pressure (PI-405): 75 [illegible] psi ok [illegible] (60-80 psi)
PH (Signet): 6.12
PG (inlet) @ sand filter (PI-101): 20 psi } ΔP = 14 psi (much too high; needs backwashing)
PG @ Bag filter (PI-103): 6 psi } ΔP = 1 psi (bag filter ok)
PG @ 1st C.C. (PI-501): 5 psi } → should be at or near 10 psi, too low.
PG @ last C.C. (PI-502): 1 psi } ΔP = 4 psi → ok, but will backwash
Samples collected [illegible] / MW's Collected: Samples: W-A (3) @ 13:30-40; W-B1 (3) @ 13:20-30; W-B2 (3) @ 13:10-20; + W-C (3) @ 13:00-10

* EW1 Q rate:	0.0 gpm	EW4:	0.0 gpm
EW2 " :	"	EW5:	"
EW3 " :	"	Cumulative:	"

Any problems or comments: extraction pumps not operating due to Alarm Triggering; [illegible] Sand filters severely clogged ⇒ causing system back-up + hi/hi level switch triggering + thus pumps shut-down

ATTACHMENTS: ____________   INITIAL: ____

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

RESNA
Working to Restore Nature

DAILY FIELD REPORT

SHEET 2 OF 2
PROJECT NAME: Exxon 104
JOB NO. 17000772
DATE: 3/30/94
WORK SCOPE: O&M

TIME: Work Conducted: Drained Condensate from compressor & tank; backwashed Carbon system for ~15 min. w/ clean tap water, monitored air sparge Carbon cannister sample ports: A=0.0; B: 0.4 & C = 0.0 ppm (14:30)pm; collected GW water samples (see previous page); Backwashed Sand filters for ~4.5 minutes each in an attempt to lower the ΔP. Pressure differential during backwashing indicated 11 psi (15-4) for SF1A & 18 psi (20-2) for SF1B. Per Manufacturers recommendations (Talk w/ Bill Ryan of Everfilt filters on 3/30/94) added ~1/2 ga. of H_2O_2 to SF1A (previously bio-fouled based on last O&M visits inspection) & allowed to saturated sand for ~1 hr. Strong to violent effervescence even after 1 hr. Will repeat process upon next visit pending results. Backwashed sand filters for ~5 min each under maximum pumping rate conditions (HV-103 fully open).

Post Maintenance Operational Data (4:30pm):
Control Panel & System Status: On
Extraction Pumps all pumping? Yes ~Rate**: 8.0 gpm (not representative)
Transfer Pump Setting: Auto
Alarms: None
Flowmeter Reading: 1,267,84.0 Discharge rate: 6.0 gpm (ok, optimum)
AC operation & pressure: 83 psi (~80 psi, ok)
Extraction Pumps Pressure (PI-405): 75 psi (60-80 psi ok)
PG @ Sand filter: 16 psi ; ΔP = 4 psi (ok need to reduce <5 psi ΔP ok) → still needs more treatment
PG @ Bag filter: 12 psi ; ΔP = 4 psi for bag filter (ok) ΔP after C.C. & sand backwashing
PG @ PST C.C: 78 psi ; C.C. ΔP = 6 psi (ok, new = ΔP of 5 psi)
PG @ last C.C: 2 psi

** EW1 Q rate: NA, not representative EW4 " : " "
EW2 " : " " EW5 " : " "
EW3 " : " " Cumulative Q: " "

** Discharge rate not representative due to wells being fully recovered → pumping maximum
Any Problems or Comments: Sand media needs additional anti-bio growth agent application & additional (ie overnight) soak time

ATTACHMENTS: _____ INITIAL: _____

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

APPENDIX E

EBMUD LABORATORY ANALYSIS RESULTS AND CHAIN OF CUSTODY RECORD

NOTIFICATION OF EBMUD TEST RESULTS

EAST BAY MUNICIPAL UTILITY DISTRICT

MICHAEL J. WALLIS
DIRECTOR OF WASTEWATER

January 25, 1994

Exxon Company USA
P. O. Box 4032
Concord, CA 94520

Sample Location: Side Sewer No. 1
(1) Lab Number: 94 01 10 165
Sample Type: Grab @ 1222-EBMUD

Attention: Ms. Marla D. Guensler

Account No. 502-66631

EBMUD inspected your facility and sampled the wastewater discharged on January 10, 1994. No discharge violations were noted. District test results of sample analyses and Permit Limitations are listed in the table below. Laboratory results and Chain of Custody report are attached.

Sample	Parameter	Test Result ug/l	Limitation ug/L
1	Benzene	<0.5	5
1	Toluene	<1.0	12
1	Ethylbenzene	<1.0	5
1	Xylenes	<1.0	11
1	Chlorinated Hydrocarbons	<0.001	50

If you have any questions regarding the inspection or the sample results, please contact me at (510) 287-1512.

Sincerely,

SAFA TOMA
Wastewater Control Representative
Industrial Discharge Section

EBMUD - Mail Slot #702
Source Control Division
P. O. Box 24055
Oakland, CA 94623-1055
510/287-1512

SAT:sat

Attachments

cc: Ms. Dora Chew
RESNA Industries Inc.
3315 Alamaden Expressway, Suite 34
San Jose, California 95118

EBMUD LAB RESULTS

Account No.: 502-66631 Station Name: EX0104
Lab Number : 94 01 10 165 Side Sewer : 1
Sample Type: Grab

SILVER	<	.003	mg/L
ALUMINUM		.120	mg/L
ARSENIC	<	.060	mg/L
BORON		.150	mg/L
BARIUM		.110	mg/L
BERYLLIUM	<	.001	mg/L
CALCIUM		38.000	mg/L
CADMIUM	<	.003	mg/L
COBALT	<	.004	mg/L
CHROMIUM	<	.006	mg/L
COPPER	<	.006	mg/L
IRON	<	.060	mg/L
MERCURY	<	.010	mg/L
POTASSIUM		5.000	mg/L
LITHIUM		.006	mg/L
MAGNESIUM		40.000	mg/L
MANGANESE		.520	mg/L
MOLYBDENUM	<	.007	mg/L
SODIUM		59.000	mg/L
NICKEL	<	.010	mg/L
LEAD	<	.030	mg/L
ANTIMONY	<	.030	mg/L
SCANDIUM	<	.001	mg/L
SELENIUM	<	.070	mg/L
SILICON		18.000	mg/L
TIN	<	.020	mg/L
STRONTIUM		.270	mg/L
TITANIUM	<	.100	mg/L
THALLIUM	<	.040	mg/L
VANADIUM		.002	mg/L
ACROLEIN	<	5.000	ug/L
ACRYLONITRILE	<	5.000	ug/L
BENZENE	<	.500	ug/L
BROMODICHLOROMETHANE-GC/MS	<	.400	ug/L
BROMOFORM-GC/MS	<	.600	ug/L
BROMOMETHANE	<	1.000	ug/L
CARBON TETRACHLORIDE	<	.800	ug/L
CHLOROBENZENE	<	.900	ug/L
CHLOROETHANE	<	.800	ug/L
2-CHLOROETHYLVINYL ETHER	<	1.000	ug/L
CHLOROFORM	<	.300	ug/L
CHLOROMETHANE	<	1.000	ug/L
DIBROMOCHLOROMETHANE	<	.500	ug/L
1,2-DICHLOROBENZENE	<	.300	ug/L
1,3-DICHLOROBENZENE	<	.700	ug/L
1,4-DICHLOROBENZENE	<	.400	ug/L
1,1-DICHLOROETHANE	<	.400	ug/L
1,2-DICHLOROETHANE	<	1.000	ug/L
1,1-DICHLOROETHENE	<	1.000	ug/L
TRANS-1,2-DICHLOROETHENE	<	.600	ug/L
1,2-DICHLOROPROPANE	<	1.000	ug/L
CIS-1,2-DICHLOROPROPENE	<	1.000	ug/L

Account No.: 502-66631 Station Name: EX0104
Lab Number : 94 01 10 165 Side Sewer : 1
Sample Type: Grab

TRANS-1,3-DICHLOROPROPENE	<	.900	ug/L
ETHYL BENZENE	<	1.000	ug/L
METHYLENE CHLORIDE	<	1.000	ug/L
1,1,2,2-TETRACHLOROETHANE	<	.700	ug/L
TETRACHLOROETHENE	<	1.000	ug/L
TOLUENE	<	1.000	ug/L
1,1,1-TRICHLOROETHANE	<	1.000	ug/L
1,1,2-TRICHLOROETHANE	<	.700	ug/L
TRICHLOROETHENE	<	.600	ug/L
VINYL CHLORIDE	<	1.000	ug/L
ACETONE	<	10.000	ug/L
DIBROMOCHLOROPROPANE	<	1.000	ug/L
ETHYLENE DIBROMIDE	<	.900	ug/L
METHYLETHYL KETONE	<	10.000	ug/L
METHYL ISOBUTYL KETONE	<	2.000	ug/L
STYRENE	<	.800	ug/L
TETRAHYDROFURAN	<	20.000	ug/L
FREON 113	<	.800	ug/L
SATURATED HYDROCARBONS	<	20.000	ug/L
UNSATURATED HYDROCARBONS	<	20.000	ug/L
AROMATIC HYDROCARBONS	<	20.000	ug/L
XYLENES	<	1.000	ug/L
1,2,4-TRICHLOROBENZENE	<	.800	ug/L
FLUOROTRICHLOROMETHANE	<	.800	ug/L
DICHLORODIFLUOROMETHANE	<	.800	ug/L
M-CHLOROTOLUENE	<	.700	ug/L
DIBROMOMETHANE	<	.900	ug/L
1,3-DICHLOROPROPANE	<	1.000	ug/L
BROMOCHLOROMETHANE	<	.500	ug/L
1,2,3-TRICHLOROPROPANE	<	1.000	ug/L
1,2,3-TRICHLOROBENZENE	<	.800	ug/L
N-PROPYLBENZENE	<	1.000	ug/L
1,1,1,2-TETRACHLOROETHANE	<	.700	ug/L
PENTACHLOROETHANE	<	1.000	ug/L
BIS (2-CHLOROISOPROPYL) ETHER	<	3.000	ug/L
SEC-DICHLOROPROPANE	<	1.000	ug/L
1,2,4-TRIMETHYLBENZENE	<	1.000	ug/L
N-BUTYLBENZENE	<	1.000	ug/L
NAPHTHALENE	<	1.000	ug/L
HEXACHLOROBUTADIENE	<	.800	ug/L
P-CHLOROTOLUENE	<	.800	ug/L
1,3,5-TRIMETHYLBENZENE	<	.990	ug/L
P-ISOPROPYLTOLUENE	<	1.000	ug/L
1,1-DICHLOROPROPANE	<	1.000	ug/L
ISOPROPYLBENZENE	<	1.000	ug/L
TERT-BUTYLBENZENE	<	1.000	ug/L
SEC-BUTYLBENZENE	<	1.000	ug/L
BROMOBENZENE	<	.900	ug/L
CIS-1,2-DICHLOROETHENE	<	.600	ug/L
O-CHLOROTOLUENE	<	.600	ug/L
CARBON DISULFIDE	<	1.000	ug/L
1,1-DICHLOROPROPENE	<	.700	ug/L

Account No.: 502-66631 Station Name: EX0104
Lab Number : 94 01 10 165 Side Sewer : 1
Sample Type: Grab

ETHYL ACETATE	<	1.000	ug/L
ETHYL ETHER	<	10.000	ug/L
2-HEXANONE	<	1.000	ug/L
DIBUTYL ETHER	<	10.000	ug/L
VINYL ACETATE	<	1.000	ug/L
1,3-BUTADIENE	<	1.000	ug/L
DIMETHYL SULFIDE	<	1.000	ug/L
DIMETHYL DISULFIDE	<	1.000	ug/L
VOLATILE REGULATED ORGANICS	<	.001	mg/L
VOLATILE CHLOR. HYDROCARBONS	<	.001	mg/L
VOA TOTAL TOXIC ORGANICS	<	.010	mg/L
ZINC		.190	mg/L

LABORATORY SERVICES CHAIN OF CUSTODY RECORD

Lab Number Date (1) 940103 10

Budget Unit Name & Code	Contact	Ext.
EX0104		
Program Title	**Program Codes**	
acct # 502-66663		
Sampled by	**Report attention**	**MS**
Mak		

Lab [2] Sample Number	Date Sampled	Time Sampled	Type [3] See Key Below	[4] ✓	Station Code	No. of Cont.	Account Codes	Analysis Required: +624	Analysis Required: ICP	Sample Description/Remarks
165	1/10/94	1222	GW		EX0104	4	IND	X	X	Sample location Port 'C' (SS #1)
166	1/10/94		GW		TRIPQC	1	IND	X		
										624 were preserved with HCL in the field
										624 = (3) 40mL VOA. THIO, HCL metals = 1(L) plastic
										Samples stored on ice during transport.

	Signature	Print Name	Time	Date
Relinquished by	Marie Kulka	Marie Kulka	4/10/94	1458
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by		K Gerst	1/10/94	1500

NOTES:

(1) First six digits (YYMMDD)

(2) Last three digits only.

(3) Sample type codes: G = Grab, C = Composite

Sample Matrix Codes: Water, Wastewater (WW), Tissue, Bay, Soil, Compost, Sludge, Petroleum, Other

(4) Check if a followup sample.

(5) Cont. = Containers

SO 188 5/92 AYS

NOTIFICATION OF EBMUD TEST RESULTS

EAST BAY MUNICIPAL UTILITY DISTRICT

MICHAEL J. WALLIS
DIRECTOR OF WASTEWATER

March 28, 1994

Exxon Company USA
P. O. Box 4032
Concord, CA 94520

Sample Location: Side Sewer No. 1
(1) Lab Number: 94 02 28 159
Sample Type: Grab @ 1248-EBMUD

Attention: Ms. Marla D. Guensler

Account No. 502-66631

EBMUD inspected your facility (Exxon Service Station #7-0104) and sampled the wastewater discharged on February 28, 1994. No discharge violations were noted. District test results of sample analyses and Permit Limitations are listed in the table below. Laboratory results and Chain of Custody report are attached.

Sample	Parameter	Test Result ug/l	Limitation ug/L
1	Benzene	<0.5	5
1	Toluene	<1.0	7
1	Ethylbenzene	<1.0	5
1	Xylenes	<1.0	7
1	Chlorinated Hydrocarbons	<0.001	35
1	Metals	Varied	Varied

If you have any questions regarding the inspection or the sample results, please contact me at (510) 287-1512.

Sincerely,

SAFA TOMA
Wastewater Control Representative
Industrial Discharge Section

EBMUD - Mail Slot #702
Source Control Division
P. O. Box 24055
Oakland, CA 94623-1055
510/287-1512

SAT:sat

Attachments

cc: **Ms. Dora Chew**
RESNA Industries Inc.
3315 Alamaden Expressway, Suite 34
San Jose, California 95118

SOURCE CONTROL SAMPLING & CHAIN-OF-CUSTODY REPORT

Account Name: EXXON SERVICE STATION #7-0104
Account No. : 502-66631
Code: IND
Ins: MAK
Rep: SAT

DATE 02-28-94

DAY(S) M T W T F S S

AUTO SAMPLER INFORMATION

SS#	START Date	Time	COMPOSITE BOTTLE #'S Bott #	w/sample	used	Sampler Settings (if un-usual)

CHAIN OF CUSTODY INFORMATION

Lab Number	Sta.ID	SS#	Analyses Requested	Samp Type	Samp Mtrx	# of Bott	Collected by Initial Date Time
940228 150A	EX0104	1	+624, MET	G	AQ	4	MAK 02-28-94 1248
Comments: Samples preserved in the field with HCL (+624 only) Sample color = clear							
940228 160	TRIPQC	1	+624	G	AQ	1	MAK 02-28-94 0000
Comments: QC for sample #940228							

Marie Kulka 2/28/94 1438
Relinquished by Date/Time

J. Knipfe 2-28-94 1438
Accepted by Date/Time

Sample Type Codes: G=Grab, C=Composite
Sample Matrix Codes: AQueous, SLudge, GW=Ground Water, SOil, PEtroleum, OTther

E B M U D L A B R E S U L T S

28-Mar-1994

Account No.: 502-66631
Lab Number : 94 02 28 159
Sample Type: Grab

Station Name: EX0104
Side Sewer : 1

SILVER	<	.003	mg/L
ALUMINUM	<	.020	mg/L
ARSENIC	<	.060	mg/L
BORON		.170	mg/L
BARIUM		.110	mg/L
BERYLLIUM	<	.001	mg/L
CALCIUM		37.000	mg/L
CADMIUM	<	.003	mg/L
COBALT	<	.004	mg/L
CHROMIUM	<	.006	mg/L
COPPER	<	.006	mg/L
IRON	<	.060	mg/L
MERCURY	<	.010	mg/L
POTASSIUM	<	1.000	mg/L
LITHIUM	<	.003	mg/L
MAGNESIUM		40.000	mg/L
MANGANESE		.530	mg/L
MOLYBDENUM	<	.007	mg/L
SODIUM		60.000	mg/L
NICKEL	<	.010	mg/L
LEAD	<	.030	mg/L
ANTIMONY	<	.030	mg/L
SCANDIUM	<	.001	mg/L
SELENIUM	<	.070	mg/L
SILICON		18.000	mg/L
TIN	<	.020	mg/L
STRONTIUM		.270	mg/L
TITANIUM	<	.100	mg/L
THALLIUM	<	.040	mg/L
VANADIUM	<	.002	mg/L
ACROLEIN	<	5.000	ug/L
ACRYLONITRILE	<	5.000	ug/L
BENZENE	<	.500	ug/L
BROMODICHLOROMETHANE-GC/MS	<	.400	ug/L
BROMOFORM-GC/MS	<	.600	ug/L
BROMOMETHANE	<	1.000	ug/L
CARBON TETRACHLORIDE	<	.800	ug/L
CHLOROBENZENE	<	.900	ug/L
CHLOROETHANE	<	.800	ug/L
2-CHLOROETHYLVINYL ETHER	<	1.000	ug/L
CHLOROFORM	<	.300	ug/L
CHLOROMETHANE	<	1.000	ug/L
DIBROMOCHLOROMETHANE	<	.500	ug/L
1,2-DICHLOROBENZENE	<	.300	ug/L
1,3-DICHLOROBENZENE	<	.700	ug/L
1,4-DICHLOROBENZENE	<	.400	ug/L
1,1-DICHLOROETHANE	<	.400	ug/L
1,2-DICHLOROETHANE	<	1.000	ug/L
1,1-DICHLOROETHENE	<	1.000	ug/L
TRANS-1,2-DICHLOROETHENE	<	.600	ug/L
1,2-DICHLOROPROPANE	<	1.000	ug/L
CIS-1,2-DICHLOROPROPENE	<	1.000	ug/L

Account No.: 502-66631 Station Name: EX0104
Lab Number : 94 02 28 159 Side Sewer : 1
Sample Type: Grab

TRANS-1,3-DICHLOROPROPENE	<	.900	ug/L
ETHYL BENZENE	<	1.000	ug/L
METHYLENE CHLORIDE	<	1.000	ug/L
1,1,2,2-TETRACHLOROETHANE	<	.700	ug/L
TETRACHLOROETHENE	<	1.000	ug/L
TOLUENE	<	1.000	ug/L
1,1,1-TRICHLOROETHANE	<	1.000	ug/L
1,1,2-TRICHLOROETHANE	<	.700	ug/L
TRICHLOROETHENE	<	.600	ug/L
VINYL CHLORIDE	<	1.000	ug/L
ACETONE	<	10.000	ug/L
DIBROMOCHLOROPROPANE	<	1.000	ug/L
ETHYLENE DIBROMIDE	<	.900	ug/L
METHYLETHYL KETONE	<	10.000	ug/L
METHYL ISOBUTYL KETONE	<	2.000	ug/L
STYRENE	<	.800	ug/L
TETRAHYDROFURAN	<	20.000	ug/L
FREON 113	<	.800	ug/L
SATURATED HYDROCARBONS	<	20.000	ug/L
UNSATURATED HYDROCARBONS	<	20.000	ug/L
AROMATIC HYDROCARBONS	<	20.000	ug/L
XYLENES	<	1.000	ug/L
1,2,4-TRICHLOROBENZENE	<	.800	ug/L
FLUOROTRICHLOROMETHANE	<	.800	ug/L
DICHLORODIFLUOROMETHANE	<	.800	ug/L
M-CHLOROTOLUENE	<	.700	ug/L
DIBROMOMETHANE	<	.900	ug/L
1,3-DICHLOROPROPANE	<	1.000	ug/L
BROMOCHLOROMETHANE	<	.500	ug/L
1,2,3-TRICHLOROPROPANE	<	1.000	ug/L
1,2,3-TRICHLOROBENZENE	<	.800	ug/L
N-PROPYLBENZENE	<	1.000	ug/L
1,1,1,2-TETRACHLOROETHANE	<	.700	ug/L
PENTACHLOROETHANE	<	1.000	ug/L
BIS (2-CHLOROISOPROPYL) ETHER	<	3.000	ug/L
SEC-DICHLOROPROPANE	<	1.000	ug/L
1,2,4-TRIMETHYLBENZENE	<	1.000	ug/L
N-BUTYLBENZENE	<	1.000	ug/L
NAPHTHALENE	<	1.000	ug/L
HEXACHLOROBUTADIENE	<	.800	ug/L
P-CHLOROTOLUENE	<	.800	ug/L
1,3,5-TRIMETHYLBENZENE	<	.990	ug/L
P-ISOPROPYLTOLUENE	<	1.000	ug/L
1,1-DICHLOROPROPANE	<	1.000	ug/L
ISOPROPYLBENZENE	<	1.000	ug/L
TERT-BUTYLBENZENE	<	1.000	ug/L
SEC-BUTYLBENZENE	<	1.000	ug/L
BROMOBENZENE	<	.900	ug/L
CIS-1,2-DICHLOROETHENE	<	.600	ug/L
O-CHLOROTOLUENE	<	.600	ug/L
CARBON DISULFIDE	<	1.000	ug/L
1,1-DICHLOROPROPENE	<	.700	ug/L

Account No.: 502-66631 Station Name: EX0104
Lab Number : 94 02 28 159 Side Sewer : 1
Sample Type: Grab

ETHYL ACETATE	<	1.000	ug/L
ETHYL ETHER	<	10.000	ug/L
2-HEXANONE	<	1.000	ug/L
DIBUTYL ETHER	<	10.000	UG/L
VINYL ACETATE	<	1.000	ug/L
1,3-BUTADIENE	<	1.000	ug/L
DIMETHYL SULFIDE	<	1.000	ug/L
DIMETHYL DISULFIDE	<	1.000	ug/L
VOLATILE REGULATED ORGANICS	<	.001	mg/L
VOLATILE CHLOR. HYDROCARBONS	<	.001	mg/L
VOA TOTAL TOXIC ORGANICS	<	.010	mg/L
ZINC		.270	mg/L