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

ENVIRONMENTAL ENGINEERING
MARLA D. GUENSLER
SENIOR ENVIRONMENTAL ENGINEER
(510) 246-8776
(510) 246-8798 FAX

93 JUL 30 PM 2:08

July 29, 1993

Mr. Safa Toma
East Bay Municipal Utility District
P. O. Box 24055
Oakland, CA 94623-1055

RE: Exxon RAS #7-0104; 1725 Park Street, Alameda, CA/EBMUD System Discharge Permit #502-66631

Dear Mr. Toma:

This letter is written as certification of the report submitted to your attention on July 12, 1993 entitled **Remediation System Quarterly Self-Monitoring Report** dated July 12, 1993, which detailed data from the operations of the groundwater treatment system at the referenced site. This is done in response to your letter dated July 14, 1993 to Exxon stating that the report was incomplete in this regard, under the permit's Section V, Paragraphs (a) 2 and (c), "Signatory Requirements".

I certify under penalty of law that the referenced document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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 inforamtion, the information submitted is, to the best of my knowledge and belief, ture, 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.

A letter dated July 26, 1993 authorizing myself as a representative signature of the statement from Mr. Gord Thomson, Exxon Marketing Vice President, was sent directly to your attention.

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

Sincerely,

Marla D. Guensler

Marla D. Guensler
Senior Environmental Engineer

MDG/mdg

cc: Mr. Richard Hiett - San Francisco Bay RWQCB
Mr. John Margowski - Wickland Oil Company
Mr. Gary Pischke - RESNA - Novato
Ms. Juliet Shin - Alameda County Health Department

RESNA
Working To Restore Nature

73 Digital Drive
Novato, CA 94949
Phone: (415) 382-7400
FAX: (415) 382-7415

July 12, 1993

Ms. Marla Guensler
Exxon Company, U.S.A.
P.O. Box 4032
2300 Clayton Road
Concord, California 94524

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

Ms. Guensler:

Enclosed please find four bound and one unbound copies of the Remediation System Quarterly Self-Monitoring Report for the subject site. Please include the following statement of certification in the cover letters when forwarding copies of this report to the regulators:

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

Please call with any questions or comments regarding this report.

Sincerely,
RESNA Industries Inc.

Kin W. Leung
Staff Engineer

REMEDIATION SYSTEM
QUARTERLY SELF-MONITORING REPORT

First Quarter 1993
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California

6/30/93

0628mgue
170077.03

RESNA
Working To Restore Nature

73 Digital Drive
Novato, CA 94949
Phone: (415) 382-7400
FAX: (415) 382-7415

June 30, 1993

Ms. Marla Guensler
Exxon Company, U.S.A.
P.O. Box 4032
2300 Clayton Road
Concord, California 94524

Subject: Remediation System Quarterly Self-Monitoring Report, First Quarter 1993, Exxon Service Station No. 7-0104, 1725 Park Street, Alameda, California

Ms. Guensler:

This report presents the results and findings of the self-monitoring activities performed during the initial startup of the groundwater extraction and remediation system (GRS) currently operating at the subject site (Plate 1, Site Vicinity Map). The purpose of the self-monitoring activities is to comply with the East Bay Municipal Utility District (EBMUD) Wastewater Discharge Permit (Account No. 502-66631). Exxon Company, U.S.A. (Exxon) requested that RESNA Industries (RESNA) prepare this report based on the field notes and laboratory reports submitted by Harding Lawson Associates (HLA) of Novato, California during the period between February 16 and March 26, 1993.

SYSTEM DESCRIPTION

The GRS was installed in February 1993 to treat dissolved hydrocarbons in groundwater extracted from the water bearing zone beneath the site (Plate 2, Generalized Site Plan). The extraction system consists of five pneumatic pumps in on-site extraction wells (EW-1 through EW-5), collection piping, and associated instrumentation and controls. The treatment system consists of two main modules: treatment (bioreactor) and post-treatment (filtration and carbon polishing). The treatment module consists of a bioreactor, two 200-pound vapor-phase granular activated carbon (GAC) canisters, and the associated air sparging, nutrient and caustic supply systems. The post-treatment consists of a dual-chamber sand filter, a bag filter, and three 200-pound liquid-phase GAC canisters connected in series. Effluent from the system is discharged to the sanitary sewer regulated by the EBMUD.

FIELD PROCEDURES

Installation of the GRS was completed in early February, 1993. On February 16, 1993 HLA initiated system operation and filled up the first two compartments of the bioreactor with extracted groundwater. A sample was collected from the first compartment of the bioreactor and

submitted to Pace Inc. (Pace), a California certified laboratory in Novato, California, following proper preservation and Chain-of-Custody procedures. The sample was analyzed within 24 hours for the presence of total petroleum hydrocarbon as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX) using modified Environmental Protection Agency (EPA) Methods 8015/8020.

Nutrients, caustic fluids and air were pumped into the bioreactor after proper adjustment to evaluate whether adequate mixing was being achieved. A second sample was collected 24 hours later from the bioreactor and analyzed for TPHg and BTEX after evaluation of the results of the initial groundwater sample. A third sample was collected 48 hours later and after evaluation of the 24-hour sample results to evaluate destruction efficiency of the bioreactor.

During the initial operation of the bioreactor, water samples were also collected and submitted for biological evaluation (bio count).

HLA indicated the bioreactor was ready for flowthrough after analytical results of the 48-hour sample indicated over 99 percent destruction of TPHg. On February 22, 1993, HLA started up the GRS and began discharging effluent into the sanitary sewer in the presence of EBMUD inspector. In accordance with the EBMUD permit requirements, HLA collected groundwater samples from the influent of the first GAC canister and the effluent of the third GAC canister (sampling ports "A" and "C") two hours after system startup. The water samples collected were analyzed for the presence of TPHg and BTEX. Analytical results indicated that TPHg and BTEX concentrations in the effluent from the first day's sampling were below the limitations of the wastewater discharge permit. A copy of the wastewater discharge permit is included in Attachement A.

HLA repeated the sampling procedures daily for the first three days after system startup. Thereafter, per EBMUD permit conditions, the sampling frequency was changed to weekly during the first three weeks. HLA also collected composite well samples and samples from the effluent of the second GAC canister (sampling port "B") during this period. All water samples collected were delivery to Pace and analyzed for the presence of TPHg and BTEX. Analytical results indicated that TPHg and BTEX concentrations in the effluent discharged were below the wastewater discharge permit limitations. Laboratory analysis also indicated that Methyl tert butyl ether and tetrachloroethylene occassionally appeared in the well influent samples.

DISCUSSIONS OF RESULTS

Operation and performance data for the groundwater treatment system including analytical results of water samples collected for the period of February 16, 1993 through March 19, 1993 are summarized in Table 1. Copies of laboratory reports and chain-of-custody records are included in Attachment B. Attachment C contains copies of the facility inspection logs. Results of the self-monitoring and sampling activities indicate the following:

- A cumulative total of 184,321 gallons of groundwater has been treated and discharged into the sanitary sewer during this monitoring period, ending March 31, 1993.

RESNA
Working To Restore Nature

- TPHg and BTEX concentrations in effluent water discharged into the sewer were in compliance with the wastewater discharge permit.

RESNA recommends that signed copies of this report be forwarded to:

Mr. Safa Toma
East Bay Municipal Utility District
P.O.Box 24055
Oakland, California 94623-1055

Mr. Richard Hiett
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street
Oakland, California 94612

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

Please call with any questions or comments regarding this report.

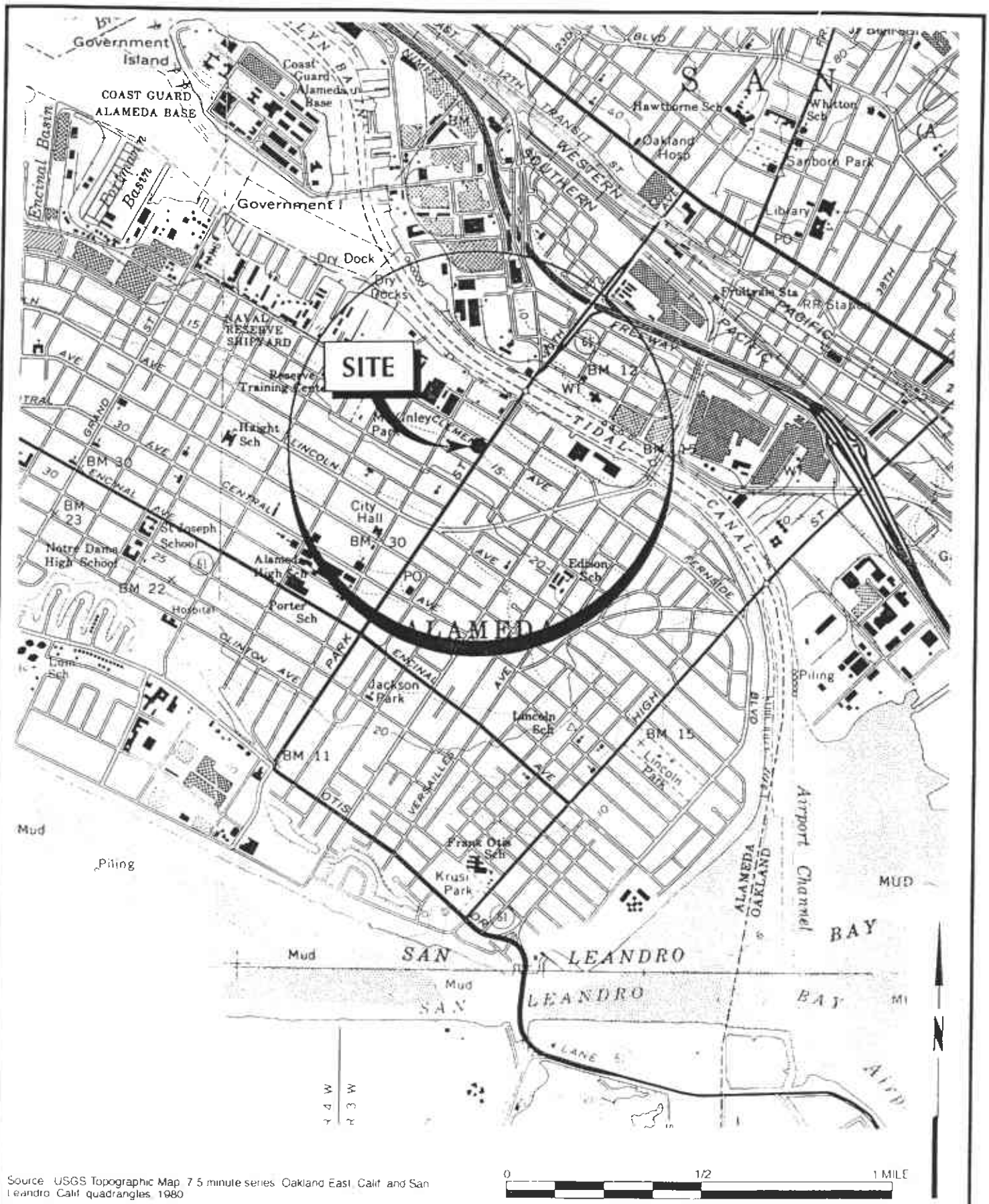
Sincerely,
RESNA Industries Inc.

Kin W. Leung
Staff Engineer

REGISTERED GEOLOGIST
GARY PISCHKE
No. 1501
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Gary Pischke, C.E.G. 1501
Project Manager

Enclosures:
Plate 1, Site Vicinity Map
Plate 2, Generalized Site Plan
Table 1, Operation & Performance Data for Groundwater Treatment System
Attachment A: Wastewater Discharge Permit
Attacement B: Laboratory Reports and Chain-of-Custody Records
Attachment C: Facility Inspection Logs



Source: USGS Topographic Map, 7.5 minute series, Oakland East, Calif. and San Leandro, Calif. quadrangles, 1980

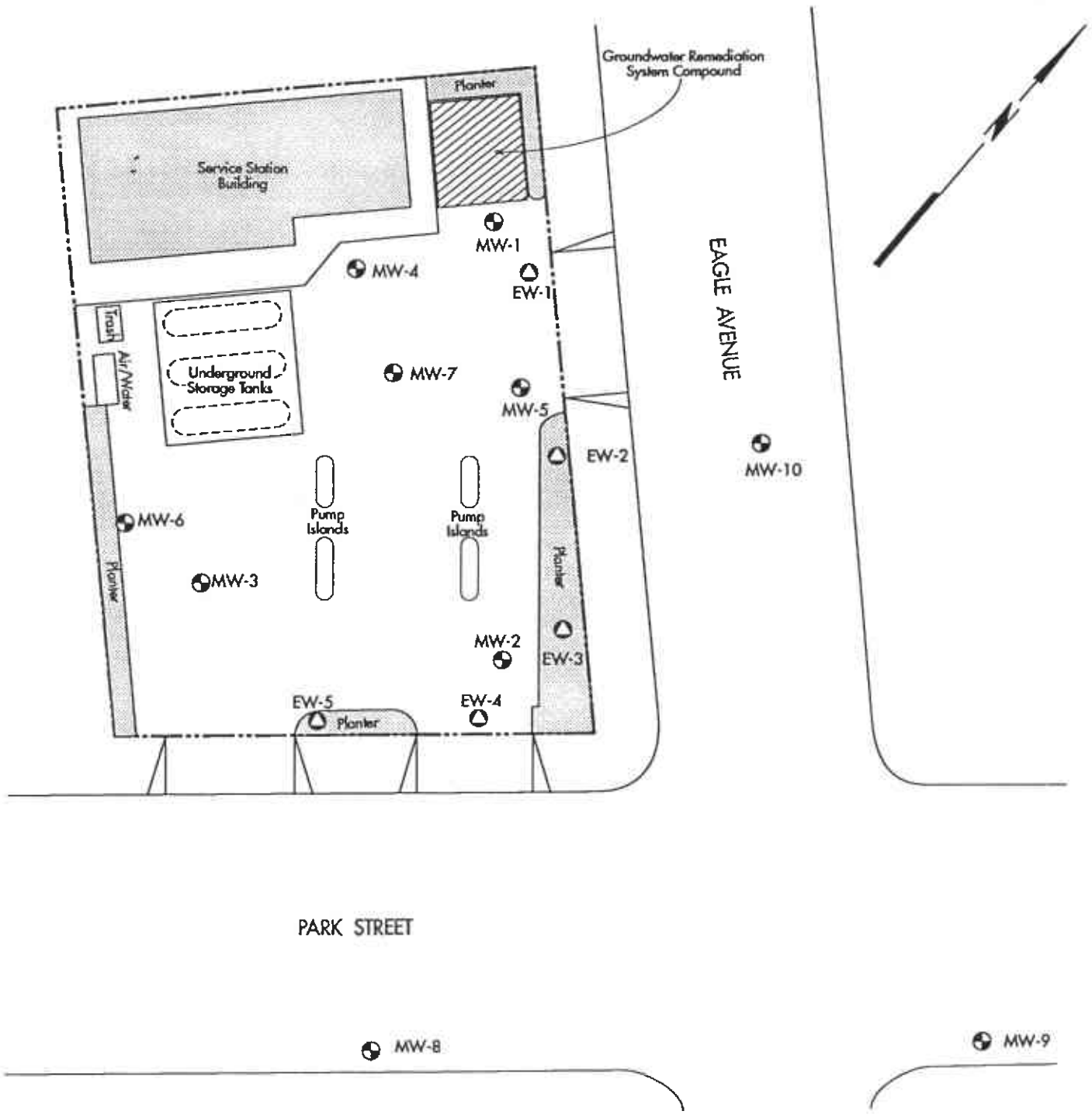
RESNA

PROJECT NO. 170077.05 1/93

SITE VICINITY MAP

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

PLATE 1



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

PROJECT NO. 170077.03 | 7/93

GENERALIZED SITE PLAN

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

PLATE 2

TABLE 1
OPERATION AND PERFORMANCE DATA
FOR GROUNDWATER REMEDIATION SYSTEM
Exxon Station No. 7-0104
1725 Park Street
Alameda, California

Sample Date	Total Flow (gal)	Average Flow Rate (gpm)	Sample ID	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TPHg (ppb)
			BIO REACTOR (DURING SYSTEM STARTUP)					
02/16/93	NA	NA	93021601	120	40	25	56	660
02/17/93	NA	NA	93021702	23	5.3	2.8	9.3	140
02/18/93	NA	NA	93021803	<0.5	<0.5	<0.5	<0.5	<50
			WELLS INFLUENT (COMPOSITE)					
02/22/93	0	NS	NA	NS	NS	NS	NS	NS
02/23/93	230	0.2	NA	NS	NS	NS	NS	NS
02/24/93	4,165	3.7	93022410	1,000	700	83	50	4,800
02/25/93	10,130	3.3	93022512	930	820	130	740	3,800
02/26/93	15,440	3.7	NA	NS	NS	NS	NS	NS
03/04/93	36,240	2.4	93030416	760	430	45	600	3,600
03/11/93	80,000	4.3	93031120	480	390	84	600	3,800
03/19/93	NS	NS	NA	NS	NS	NS	NS	NS
03/31/93	184,321	3.7	NA	NS	NS	NS	NS	NS
			EFFLUENT FROM BIO REACTOR, INFLUENT TO 1ST CARBON CANISTER ("A")					
02/22/93	NA	NA	93022205	16	11	3.7	15	150
02/23/93	NA	NA	93022307	12	7.4	2.7	14	110
02/24/93	NA	NA	93022409	200	110	5.1	80	800
02/25/93	NA	NA	93022511	11	2.9	<0.5	33	300
02/26/93	NA	NA	NA	NS	NS	NS	NS	NS
03/04/93	NA	NA	93030415	5.1	2.1	<0.5	20	170
03/11/93	NA	NA	93031119	0.5	<0.5	<0.5	0.8	63
03/19/93	NA	NA	93031921	530	420	100	800	4,100
03/31/93	NA	NA	NA	NS	NS	NS	NS	NS

TABLE 1
OPERATION AND PERFORMANCE DATA
FOR GROUNDWATER REMEDIATION SYSTEM
Exxon Station No. 7-0104
1725 Park Street
Alameda, California

Sample Date	Total Flow (gal)	Average Flow Rate (gpm)	Sample ID	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TPHg (ppb)
EFFLUENT FROM 2ND CARBON CANISTER, INFLUENT TO 3RD CARBON CANISTER ("B")								
02/22/93	NA	NA	NA	NS	NS	NS	NS	NS
02/23/93	NA	NA	NA	NS	NS	NS	NS	NS
02/24/93	NA	NA	NA	NS	NS	NS	NS	NS
02/25/93	NA	NA	NA	NS	NS	NS	NS	NS
02/26/93	NA	NA	NA	NS	NS	NS	NS	NS
03/04/93	NA	NA	93030414	<0.5	<0.5	<0.5	<0.5	<50
03/11/93	NA	NA	93031118	<0.5	<0.5	<0.5	<0.5	<50
03/19/93	NA	NA	NA	NS	NS	NS	NS	NS
03/31/93	NA	NA	NA	NS	NS	NS	NS	NS
EFFLUENT FROM 3RD CARBON CANISTER INTO SANITARY SEWER ("C")								
02/22/93	NA	NA	93022204	<0.5	<0.5	<0.5	<0.5	<50
02/23/93	NA	NA	93022306	<0.5	<0.5	<0.5	<0.5	<50
02/24/93	NA	NA	93022408	<0.5	<0.5	<0.5	<0.5	<50
02/25/93	NA	NA	NA	NS	NS	NS	NS	NS
02/26/93	NA	NA	NA	NS	NS	NS	NS	NS
03/04/93	NA	NA	93030413	<0.5	<0.5	<0.5	<0.5	<50
03/11/93	NA	NA	93031117	<0.5	<0.5	<0.5	<0.5	<50
03/19/93	NA	NA	93031922	[illegible]	<0.5	<0.5	[illegible]	110
03/31/93	NA	NA	NA	NS	NS	NS	NS	NS

Abbreviations:

B = benzene
E = ethylbenzene
TPHg = total petroleum hydrocarbons as gasoline
gal = gallons
NA = not applicable
T = toluene
X = total xylenes
gpm = gallons per minute
ppb = parts per billion
NS = not sampled/not measured

ATTACHMENT A

WASTEWATER DISCHARGE PERMIT

EBMUD

STANDARD PROVISIONS AND REPORTING REQUIREMENTS

I. Exxon Service Station #7-0104, located at 1725 Park Street, in Oakland, shall comply with all items of the attached STANDARD PROVISIONS AND REPORTING REQUIREMENTS, 11/92 Revision.

REPORTING REQUIREMENTS

I. Exxon Service Station #7-0104 shall notify EBMUD Source Control in writing, one week prior to start up. The District will conduct a site inspection before discharge may be initiated.

II. Exxon Service Station #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 the reports as required below.

III. Exxon Service Station #7-0104 shall submit quarterly reports as follows:

Date Due	Reporting Period
April 30, 1993	January 25 through March 31, 1993
July 30, 1993	April 1 through June 30, 1993
October 29, 1993	July 1 through September 30, 1993
January 28, 1994	October 1 through December 31, 1993

The quarterly report shall contain:

1. A summary of the treatment unit self-monitoring results, any other monitoring, and well sample results that occurred during the reporting period.

2. The estimated date that primary carbon canister breakthrough will occur, using current loading data.

3. Copies of the Facility Inspection Log. This log must include flow totalizer readings from each sample date, maintenance activities performed, description of operational changes, visual observations of the unit for leaks or fouling and off-haul of hazardous wastes.

EBMUD

WASTEWATER DISCHARGE LIMITATIONS

Exxon Service Station #7-0104 shall not discharge wastewater from Side Sewer number 1 into the sanitary sewer if the strength of the wastewater exceeds the following:

REGULATED PARAMETER	DAILY MAXIMUM, mg/L	
Arsenic	2	mg/L
Cadmium	1	mg/L
Chlorinated Hydrocarbons (Total Identifiable)	0.5	mg/L
Chromium	2	mg/L
Copper	5	mg/L
Cyanide	5	mg/L
Iron	100	mg/L
Lead	2	mg/L
Mercury	0.05	mg/L
Nickel	5	mg/L
Oil and Grease	100	mg/L
Phenolic compounds	100	mg/L
Silver	1	mg/L
Zinc	5	mg/L
pH (not less than)	5.5	S.U.
Temperature	150	°F
Benzene	0.005	mg/L
Toluene	0.012	mg/L
Ethylbenzene	0.005	mg/L
Xylenes	0.011	mg/L

SELF-MONITORING AND REPORTING REQUIREMENTS

I. Exxon Service Station #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 STANDARD PROVISIONS AND REPORTING REQUIREMENTS, 11/92 Revision.

II. Self-monitoring Reports shall contain:

1. Laboratory results.
2. Chain of custody documentation.
3. Signatory requirements.

III. Sample location "C", also known as Side Sewer number 1, shall be the sample port located on the effluent side of the final carbon vessel. Sample location "B" shall be the sample port located between the end two carbon vessels. Sample location "A" shall be the sample port located on the influent side of the first carbon vessel, after the retention tank. The sample locations are shown on Harding Lawson Associates Plate 2 in this Permit.

IV. Sample locations "A", "B", and "C" per the following schedule:

Two hours after system start-up[1,2]
Daily for first three days[1,2]
Weekly for the first three weeks
Monthly for the first year

[1] Sample locations "A" and "C" only.
[2] Laboratory results to be available within 24 hours of sample collection and faxed to 510/287-1351.

V. Parameters to be monitored and sample types:

EPA 8020 (as gasoline) - grab sample
BTEX - 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.

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: $0.32 /Ccf

Volume discharged in Ccf/month = 292.8 $93.70 /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 = 218880 gallons per month
Capacity fee rate = $46.72 /Ccf-month
Capacity fee = $13,671.22 or $379.76 /month

EBMUD

WASTEWATER DISCHARGE PERMIT

Terms and Conditions

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

FEES AND WASTEWATER CHARGES

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

Permit Fee (Paid $2,260). Balance:	$0.00
Monthly Monitoring Charges	$192.33
Monthly Wastewater Disposal Charge	$93.70
Monthly Wastewater Capacity Fee	$379.76
Total Monthly Charges =	$665.79

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
N/A	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, 1993

Expiration Date: January 24, 1994

Michael J. Walker — MANAGER, WASTEWATER DEPARTMENT

1/22/93 — DATE

SD 30 2 2/91

ATTACHMENT B

LABORATORY REPORTS
AND
CHAIN-OF-CUSTODY RECORDS

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

February 17, 1993

FEB 18 '93 AM 9:13

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430216.508
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received February 16, 1993.

Footnotes are given at the end of the report.

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

Sincerely,

Caron E. Sontag

for Carol Reid
Project Manager

Enclosures

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

February 17, 1993
PACE Project Number: 430216508

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0010691	
Date Collected:			02/16/93	
Date Received:			02/16/93	
			93021601	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/16/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	660	02/16/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/16/93
Benzene	ug/L	0.5	120	02/16/93
Toluene	ug/L	0.5	40	02/16/93
Ethylbenzene	ug/L	0.5	25	02/16/93
Xylenes, Total	ug/L	0.5	56	02/16/93

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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

Mr. Scott Steinmetz
Page 2

FOOTNOTES
for page 1

February 17, 1993
PACE Project Number: 430216508

Client Reference: Exxon 7-0104 (EE)

MDL Method Detection Limit

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

Mr. Scott Steinmetz
Page 3

QUALITY CONTROL DATA

February 17, 1993
PACE Project Number: 430216508

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 18807
Samples: 70 0010691

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	100%	107%	6%
Benzene	ug/L	0.5	40.0	99%	93%	6%
Toluene	ug/L	0.5	40.0	98%	93%	5%
Ethylbenzene	ug/L	0.5	40.0	99%	92%	7%
Xylenes, Total	ug/L	0.5	120	97%	91%	6%

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

Mr. Scott Steinmetz
Page 4

FOOTNOTES
for page 3

February 17, 1993
PACE Project Number: 430216508

Client Reference: Exxon 7-0104 (EE)

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

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

EXXON COMPANY, U.S.A.

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

430216.508

CHAIN OF CUSTODY

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

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

Consultant's Name: HARDING LAWSON ASSOCIATES

Page 1 of 1

Address: 7655 REDWOOD BLVD. NOVATO, CA

Site Location: 1725 PARK ST. ALAMEDA

Project #:

Consultant Project #: 10495 576

Consultant Work Release #: 910 64698

Project Contact: SCOTT STEINMETZ

Phone #: (415) 899-8867 Fax #: 892-4989

Laboratory Work Release #:

EXXON Contact: MARLA G ☒ EE ☐ C&M

Phone #: 7 Fax #:

EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ

Sampler's Signature: Scott M Steinmetz

Shipment Method: ICE CHEST

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
CLIENT COURIER

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
93021601	2-16-93 1:30 PM	WATER	HCl	3	1069.1	✓												

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott M Steinmetz	2-16-93	5:30	Shirley Grove/Pace	2/16/93	1730

Additional Comments:

RAS# 7-0104 per. S. Steinmetz (2/17 JO)

Distribution: 10/1 White - Original Yellow - Exxon Pink - Lab Goldenrod - Consultant Field Staff

Harding Lawson Associates
7655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821
Telecopy: General: 415/892-0831
Accounting: 415/898-1052

CHAIN OF CUSTODY FORM

Lab: _____

Samplers: SCOTT STEINMETZ

Job Number: 104965 [illegible]

Name/Location: EXXON ALAMEDA

Project Manager: MICHELLE SIMKINS

Recorder: [signature] (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES
	X				X			1	2	02	1	1	06	1410	BIO-INLET
															REPORT
															1. TOTAL COUNT (ASAP)
															2. HCV

ANALYSIS REQUESTED

EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	BIOLOGICAL EVALUATION
						X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) [signature]	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature) [signature]	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

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Novato, California 94948
415/892-0821
Telecopy General: 415/892-0831
Accounting: 415/898-1052

CHAIN OF CUSTODY FORM

Lab: ____

Samplers: SCOTT STEINMETZ

Job Number: [illegible]

Name/Location: [illegible]

Project Manager: [illegible]

Recorder: ____ (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES 93-4440
	X				X			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1535	BIO- ~~INLET~~ OUTLET
	~~X~~				~~X~~			~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~		~~BIO - OUTLET~~
															REPORT
															1. TOTAL COUNT
															2. HCU TOLUENE

ANALYSIS REQUESTED

EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	BIOLOGICAL EVALUATION
						X
						X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[signature]		

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

METHOD OF SHIPMENT

Laboratory Copy White · Project Office Copy Yellow · Field or Office Copy Pink

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200 Rush Landing Road
P.O. Box 6107
Novato, California 94948
415/892-0821
Telecopy: 415/892-1586

CHAIN OF CUSTODY FORM

Lab: _____

Samplers: SCOTT STEINMETZ

Job Number: 10495 Phase 576

Name/Location: EXXON ALAMEDA

Project Manager: MICHELLE BLEKMAN

Recorder: Scott H Steinmetz (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	BIOLOGICAL EVALUATION
	X				X			9	2	0	2	1	6	0	A	9	3	0	2	1	6	1	3	3	0	BIO - INLET							X
																REPEAT										
																1. TOTAL COUNT (ASAP)										
																2. HCU										

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Scott H Steinmetz	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White Project Office Copy Yellow Field or Office Copy Pink

6533

Harding Lawson Associates
200 Rush Landing Road
P.O. Box 6107
Novato, California 94948
415/892-0821
Telecopy: 415/892-1586

CHAIN OF CUSTODY FORM

Lab:

Samplers: SCOTT STEINMETZ

Job Number: [illegible]

Name/Location: [illegible]

Project Manager: [illegible]

Recorder: [signature] (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES
	X				X			[illegible]	[illegible]	1102	[illegible]	[illegible]	[illegible]	1615	BIO REACTOR CHAMBER #1
															REPORT:
															– TOTAL COUNT
															– HCU

ANALYSIS REQUESTED	
EPA 601/8010	
EPA 602/8020	
EPA 624/8240	
EPA 625/8270	
ICP METALS	
EPA 8015M/TPH	
[illegible]	X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[signature]		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

METHOD OF SHIPMENT

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

6533

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

February 18, 1993

FEB 19 '93 AM 9:20

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430217.508
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received February 17, 1993.

Footnotes are given at the end of the report.

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

Sincerely,

Carol E. Sontag

for Carol Reid
Project Manager

Enclosures

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

February 18, 1993
PACE Project Number: 430217508

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0011329	
Date Collected:			02/17/93	
Date Received:			02/17/93	
			93021702	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/17/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	140	02/17/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/17/93
Benzene	ug/L	0.5	23	02/17/93
Toluene	ug/L	0.5	5.3	02/17/93
Ethylbenzene	ug/L	0.5	2.8	02/17/93
Xylenes, Total	ug/L	0.5	9.3	02/17/93

These data have been reviewed and are approved for release.

Darrell Cain

Darrell C. Cain
Regional Director

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

Mr. Scott Steinmetz
Page 2

FOOTNOTES
for page 1

February 18, 1993
PACE Project Number: 430217508

Client Reference: Exxon 7-0104 (EE)

MDL Method Detection Limit

11 Digital Drive
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TEL: 415-883-6100
FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

February 18, 1993
PACE Project Number: 430217508

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 18807
Samples: 70 0011329

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	100%	107%	6%
Benzene	ug/L	0.5	40.0	99%	93%	6%
Toluene	ug/L	0.5	40.0	98%	93%	5%
Ethylbenzene	ug/L	0.5	40.0	99%	92%	7%
Xylenes, Total	ug/L	0.5	120	97%	91%	6%

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

Mr. Scott Steinmetz
Page 4

FOOTNOTES
for page 3

February 18, 1993
PACE Project Number: 430217508

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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FAX: 415-883-2673

pace INCORPORATED THE ASSURANCE OF QUALITY

EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

430217.508

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

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

Consultant's Name: HARDING LAWSON ASSOCIATES

Address: 7655 REDWOOD BLVD NOVATO, CA

Site Location: ALAMEDA

Project #:

Consultant Project #: 10495 576

Consultant Work Release #: 910 64698

Project Contact: SCOTT STEINMETZ

Phone #: (415) 899-8867 Fax #: 892-4989

Laboratory Work Release #:

EXXON Contact: MARLA G ☒ EE ☐ C&M

Phone #: Fax #:

EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ

Sampler's Signature: Scott W Steinmetz

Shipment Method: ICE CHEST

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
PACE Courier

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
93021702	2-17-93 1410	WATER	HCl	3	1132.9	✓												

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott W Steinmetz	2-17-93	1525	J. Dyl / Pace	2/17/93	1525

Additional Comments:

Distribution: 10/4 White - Original Yellow - Exxon Pink - Lab Goldenrod - Consultant Field Staff

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

February 19, 1993

FEB 22 '93 AM 9:47

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430218.507
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received February 18, 1993.

Footnotes are given at the end of the report.

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

Sincerely,

Caren E. Sontag

Carol Reid
for Project Manager

Enclosures

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

February 19, 1993
PACE Project Number: 430218507

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0011876	
Date Collected:			02/18/93	
Date Received:			02/18/93	
			93021803	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/18/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/18/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/18/93
Benzene	ug/L	0.5	ND	02/18/93
Toluene	ug/L	0.5	ND	02/18/93
Ethylbenzene	ug/L	0.5	ND	02/18/93
Xylenes, Total	ug/L	0.5	ND	02/18/93

These data have been reviewed and are approved for release.

Sylvia Berger for
Darrell C. Cain
Regional Director

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

Mr. Scott Steinmetz
Page 2

FOOTNOTES
for page 1

February 19, 1993
PACE Project Number: 430218507

Client Reference: Exxon 7-0104 (EE)

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

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

Mr. Scott Steinmetz
Page 3

QUALITY CONTROL DATA

February 19, 1993
PACE Project Number: 430218507

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 18849
Samples: 70 0011876

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND
Methyl tert-butyl ether	ug/L	5.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	96%	102%	6%
Benzene	ug/L	0.5	40.0	95%	90%	5%
Toluene	ug/L	0.5	40.0	95%	89%	6%
Ethylbenzene	ug/L	0.5	40.0	99%	93%	6%
Xylenes, Total	ug/L	0.5	120	100%	94%	6%
Methyl tert-butyl ether	ug/L	5.0	40.0	99%	102%	2%

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Mr. Scott Steinmetz
Page 4

FOOTNOTES
for page 3

February 19, 1993
PACE Project Number: 430218507

Client Reference: Exxon 7-0104 (EE)

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

11 Digital Drive
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FAX 415-883-2673

pace INCORPORATED THE ASSURANCE OF QUALITY

EXXON COMPANY, U.S.A.

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

430218.507

CHAIN OF CUSTODY

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

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

Consultant's Name: HARDING LAWSON ASSOCIATES

Page 1 of 1

Address: 7655 REDWOOD BLVD NOVATO

Site Location: ALAMEDA

Project #:

Consultant Project #: 10495 576

Consultant Work Release #: 910646 98

Project Contact: SCOTT STEINMETZ

Phone #: (415) 891-8867 Fax #: 892-4984

Laboratory Work Release #:

EXXON Contact: MARLA ☒ EE ☐ C&M

Phone #:

Fax #:

EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ

Sampler's Signature: Scott H. Steinmetz

Shipment Method: ICE CHEST

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
Client Courier

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
9302h203	2-18-93 1435	WATER	HCl	3	1187.6	✓											
5 1000r																	

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments
Scott H. Steinmetz	2-18-93	1600	J. Dyl / Pace	2/18/93	1603	

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

Harding Lawson Associates
7655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821
Telecopy: General: 415/892-0831
Accounting: 415/898-1052

CHAIN OF CUSTODY FORM

Lab: _____

Samplers: SCOTT STEINMETZ

Job Number: 10495.576

Name/Location: EXXON ALAMEDA

Project Manager: MICHELLE BEEKMAN

Recorder: Scott H. Steinmetz (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	BIOLOGICAL EVALUATION
	X				X			9 3	0 2	1 9 0 C	9 3	0 2	1 8	1 4 3 5	BIO - INLET							X
															REPORT							
															1. TOTAL COUNT (ASAP)							
															2. HCU							

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Scott H. Steinmetz	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

FEB 24 '93 AM 9:37

February 23, 1993

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430222.503
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received February 22, 1993.

Atypical chromatogram consisting of two unknown peaks between methyl tert butyl ether and benzene were present on your sample number 93022204 (PACE sample number 70 0013321).

Footnotes are given at the end of the report.

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

Sincerely,

Carol Reid

Carol Reid
Project Manager

Enclosures

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

February 23, 1993
PACE Project Number: 430222503

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0013321	
Date Collected:			02/22/93	
Date Received:			02/22/93	
			93022204	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/22/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/22/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/22/93
Benzene	ug/L	0.5	ND	02/22/93
Toluene	ug/L	0.5	ND	02/22/93
Ethylbenzene	ug/L	0.5	ND	02/22/93
Xylenes, Total	ug/L	0.5	ND	02/22/93

11 Digital Drive
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FAX: 415 883 2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 2

February 23, 1993
PACE Project Number: 430222503

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0013330	
Date Collected:			02/22/93	
Date Received:			02/22/93	
Client Sample ID:			93022205	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/22/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	150	02/22/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/22/93
Benzene	ug/L	0.5	16	02/22/93
Toluene	ug/L	0.5	11	02/22/93
Ethylbenzene	ug/L	0.5	3.7	02/22/93
Xylenes, Total	ug/L	0.5	15	02/22/93

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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

Mr. Scott Steinmetz
Page 3

FOOTNOTES
for pages 1 through 2

February 23, 1993
PACE Project Number: 430222503

Client Reference: Exxon 7-0104 (EE)

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

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Novato, CA 94949
TEL: 415-883-6100
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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 4

QUALITY CONTROL DATA

February 23, 1993
PACE Project Number: 430222503

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 18843
Samples: 70 0013321, 70 0013330

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	95%	107%	11%
Benzene	ug/L	0.5	40.0	94%	95%	1%
Toluene	ug/L	0.5	40.0	92%	93%	1%
Ethylbenzene	ug/L	0.5	40.0	94%	94%	0%
Xylenes, Total	ug/L	0.5	120	92%	93%	1%

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FAX: 415-883-2673

Mr. Scott Steinmetz
Page 5

FOOTNOTES
for page 4

February 23, 1993
PACE Project Number: 430222503

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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4302223.503

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

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

Consultant's Name: HARDING LAWSON ASSOCIATES

Address: 7655 REDWOOD BLVD NOVATO, CA

Site Location: ALAMEDA

Project #:

Consultant Project #: 10495 576

Consultant Work Release #: 910 646 98

Project Contact: SCOTT STEINMETZ

Phone #: (415) 899-8867 Fax #: 892-4989

Laboratory Work Release #:

EXXON Contact: MARLA ☒ EE ☐ C&M

Phone #: Fax #:

EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ

Sampler's Signature: Scott H. Steinmetz

Shipment Method: ICE CHEST

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 Client / Courier

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
93022204	2-22-93 1435	WATER	HCL	3	1332.1	✓			
93022205	2-22-93 1445	WATER	HCL	3	1333.0	✓			

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott H. Steinmetz	2-22-93	1625	J. Day / Pace	2/22/93	1625

Additional Comments:

Distribution: 5/2 White - Original Yellow - Exxon Pink - Lab Goldenrod - Consultant Field Staff

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REPORT OF LABORATORY ANALYSIS

February 24, 1993

FEB 25 '93 AM 9:26

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430223.522
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received February 23, 1993.

Footnotes are given at the end of the report.

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

Sincerely,

Carol Reid

Carol Reid
Project Manager

Enclosures

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Novato, CA 94949
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FAX: 415-883 2673

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REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

February 24, 1993
PACE Project Number: 430223522

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0014026	
Date Collected:			02/23/93	
Date Received:			02/23/93	
			93022306	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/23/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/23/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/23/93
Benzene	ug/L	0.5	ND	02/23/93
Toluene	ug/L	0.5	ND	02/23/93
Ethylbenzene	ug/L	0.5	ND	02/23/93
Xylenes, Total	ug/L	0.5	ND	02/23/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 2

February 24, 1993
PACE Project Number: 430223522

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0014034	
Date Collected:			02/23/93	
Date Received:			02/23/93	
Client Sample ID:			93022307	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/23/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	110	02/23/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/23/93
Benzene	ug/L	0.5	12	02/23/93
Toluene	ug/L	0.5	7.4	02/23/93
Ethylbenzene	ug/L	0.5	2.7	02/23/93
Xylenes, Total	ug/L	0.5	14	02/23/93

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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REPORT OF LABORATORY ANALYSIS

FOOTNOTES
for pages 1 through 2

February 24, 1993
PACE Project Number: 430223522

Client Reference: Exxon 7-0104 (EE)

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

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 4

QUALITY CONTROL DATA

February 24, 1993
PACE Project Number: 430223522

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 18973
Samples: 70 0014026, 70 0014034

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND
Methyl tert-butyl ether	ug/L	5.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	106%	107%	0%
Benzene	ug/L	0.5	40.0	100%	102%	1%
Toluene	ug/L	0.5	40.0	96%	98%	2%
Ethylbenzene	ug/L	0.5	40.0	97%	100%	3%
Xylenes, Total	ug/L	0.5	120	98%	101%	3%
Methyl tert-butyl ether	ug/L	5.0	40.0	105%	109%	3%

REPORT OF LABORATORY ANALYSIS

FOOTNOTES
for page 4

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

Page 1 of 1

Consultant's Name: HARDING LAWSON ASSOC.

Address: 7655 REDWOOD BLVD NOVATO CA

Site Location: ALAMEDA .

Project #:

Consultant Project #:

Consultant Work Release #: 910 646 98

Project Contact: SCOTT STEINMETZ

Phone #: (415) 899-8867 Fax #: 892-4989

Laboratory Work Release #:

EXXON Contact: MARLA [X] EE [ ] C&M

Phone #: Fax #:

EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ

Sampler's Signature: Scott H Steinmetz

Shipment Method: ICE CHEST

Air Bill #:

Shipment Date:

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

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											COMMENTS
93022306	2-23-93 1525	WATER	HCL	3	1402.6	✓													
93022307	2-23-93 1535	WATER	HCL	3	03.4	✓													
9/2																			

Sample Condition as Received
Temperature ° C:
Cooler #:
Inbound Seal Yes No
Outbound Seal Yes No
Courier, clear

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott H Steinmetz	2-23-93	1730	Lea Ashton PACE	2-23-93	1730

Additional Comments:

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

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REPORT OF LABORATORY ANALYSIS

February 25, 1993

FEB 26 '93 AM 9:34

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430224.513
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received February 24, 1993.

Footnotes are given at the end of the report.

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

Sincerely,

Carol Reid

Carol Reid
Project Manager

Enclosures

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

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REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

February 25, 1993
PACE Project Number: 430224513

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0015030	
Date Collected:			02/24/93	
Date Received:			02/24/93	
			93022408	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/24/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/24/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/24/93
Benzene	ug/L	0.5	ND	02/24/93
Toluene	ug/L	0.5	ND	02/24/93
Ethylbenzene	ug/L	0.5	ND	02/24/93
Xylenes, Total	ug/L	0.5	ND	02/24/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 2

February 25, 1993
PACE Project Number: 430224513

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0015049	
Date Collected:			02/24/93	
Date Received:			02/24/93	
Client Sample ID:			93022409	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/24/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	800	02/24/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/24/93
Benzene	ug/L	0.5	200	02/24/93
Toluene	ug/L	0.5	110	02/24/93
Ethylbenzene	ug/L	0.5	5.1	02/24/93
Xylenes, Total	ug/L	0.5	80	02/24/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 3

February 25, 1993
PACE Project Number: 430224513

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0015057	
Date Collected:			02/24/93	
Date Received:			02/24/93	
Client Sample ID:			93022410	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/25/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	2500	4800	02/25/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/25/93
Benzene	ug/L	25	1000	02/25/93
Toluene	ug/L	25	700	02/25/93
Ethylbenzene	ug/L	25	83	02/25/93
Xylenes, Total	ug/L	25	500	02/25/93

These data have been reviewed and are approved for release.

Darrell Cain

Darrell C. Cain
Regional Director

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

Mr. Scott Steinmetz
Page 4

FOOTNOTES
for pages 1 through 3

February 25, 1993
PACE Project Number: 430224513

Client Reference: Exxon 7-0104 (EE)

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

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Mr. Scott Steinmetz
Page 5

QUALITY CONTROL DATA

February 25, 1993
PACE Project Number: 430224513

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 18938
Samples: 70 0015030, 70 0015049, 70 0015057

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	110%	110%	0%
Benzene	ug/L	0.5	40.0	110%	108%	1%
Toluene	ug/L	0.5	40.0	107%	104%	2%
Ethylbenzene	ug/L	0.5	40.0	108%	106%	1%
Xylenes, Total	ug/L	0.5	120	108%	107%	0%

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

430224.513

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

Consultant's Name: HARDING LAWSON ASSOCIATES

Page 1 of 1

Address: 7655 REDWOOD BLVD NOVATO CA

Site Location: ALAMEDA

Project #:

Consultant Project #: 10495 5-76

Consultant Work Release #: 9106498

Project Contact: SCOTT STEINMETZ

Phone #: 899-8867 Fax #: 892-4989

Laboratory Work Release #:

EXXON Contact: MARLA ☒ EE ☐ C&M

Phone #: Fax #:

EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ

Sampler's Signature: Scott H Steinmetz

Shipment Method: ICE CHEST

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
Client Courier

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
93022408	2-24-93 1310	WATER	HCL	3	1503.0	✓												
93022409	2-24-93 1310	WATER	HCL	3	04.9	✓												
93022410	2-24-93 1310	WATER	HCL	3	05.7	✓												

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott H Steinmetz	2-24-93	1720	Ken Taffore	2/24/93	1720

Additional Comments:

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

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REPORT OF LABORATORY ANALYSIS

February 26, 1993

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430225.518
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received February 25, 1993.

Footnotes are given at the end of the report.

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

Sincerely,

Carol Reid

Carol Reid
Project Manager

Enclosures

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

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REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

February 26, 1993
PACE Project Number: 430225518

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0016045	
Date Collected:			02/25/93	
Date Received:			02/25/93	
			93022511	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/25/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	300	02/25/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/25/93
Benzene	ug/L	0.5	11	02/25/93
Toluene	ug/L	0.5	2.9	02/25/93
Ethylbenzene	ug/L	0.5	ND	02/25/93
Xylenes, Total	ug/L	0.5	33	02/25/93

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REPORT OF LABORATORY ANALYSIS

February 26, 1993
PACE Project Number: 430225518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0016053	
Date Collected:			02/25/93	
Date Received:			02/25/93	
Client Sample ID:			93022512	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/25/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	3800	02/25/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/25/93
Benzene	ug/L	0.5	930	02/25/93
Toluene	ug/L	0.5	820	02/25/93
Ethylbenzene	ug/L	0.5	130	02/25/93
Xylenes, Total	ug/L	0.5	740	02/25/93

These data have been reviewed and are approved for release.

Darrell Cain

Darrell C. Cain
Regional Director

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

Mr. Scott Steinmetz
Page 3

FOOTNOTES
for pages 1 through 2

February 26, 1993
PACE Project Number: 430225518

Client Reference: Exxon 7-0104 (EE)

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

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Mr. Scott Steinmetz
Page 4

QUALITY CONTROL DATA

February 26, 1993
PACE Project Number: 430225518

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 19027
Samples: 70 0016045, 70 0016053

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	103%	99%	3%
Benzene	ug/L	0.5	40.0	107%	114%	6%
Toluene	ug/L	0.5	40.0	103%	110%	6%
Ethylbenzene	ug/L	0.5	40.0	105%	113%	7%
Xylenes, Total	ug/L	0.5	120	106%	113%	6%

Mr. Scott Steinmetz
Page 5

FOOTNOTES
for page 4

February 26, 1993
PACE Project Number: 430225518

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

Page 1 of 1

Consultant's Name: HARDING LAWSON ASSOC.			
Address: 7655 REDWOOD BLVD NOVATO CA		Site Location: ALAMEDA	
Project #:	Consultant Project #: 10495 576	Consultant Work Release #: 910646 98	
Project Contact: SCOTT STEINMETZ	Phone #:	Fax #:	Laboratory Work Release #:
EXXON Contact: MARLA ☒ EE ☐ C&M	Phone #:	Fax #:	EXXON RAS #: 7-0104
Sampled by (print): SCOTT STEINMETZ	Sampler's Signature: Scott Steinmetz		
Shipment Method: ICE CHEST	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
Client Cooler

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
9302251l	2-25-93 ~~1745~~ 1300	WATER	HCL	3	16045	✓			
9302251l2	2-25-93 ~~1745~~ 1425	WATER	HCL	3	0513	✓			
9/1									

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott Steinmetz	2-25-93	1750	J Dep / Pace	2/25/93	1750

Additional Comments:

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

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REPORT OF LABORATORY ANALYSIS

March 05, 1993
MAR 8'93 AM 9:55

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430304.518
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received March 04, 1993.

An atypical chromatogram was noted. A chromatographic peak between toluene and ethylbenzene was present on your sample identitication 93030415 (70 0020204) and 93030416 (70 0020220). Tetrachloroethylene is suspected based upon the retention time and the positive PID response.

Footnotes are given at the end of the report.

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

Sincerely,

Carol Reid

Carol Reid
Project Manager

Enclosures

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

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REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

March 05, 1993
PACE Project Number: 430304518

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0020182	
Date Collected:			03/04/93	
Date Received:			03/04/93	
			93030413	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/04/93
Benzene	ug/L	0.5	ND	03/04/93
Toluene	ug/L	0.5	ND	03/04/93
Ethylbenzene	ug/L	0.5	ND	03/04/93
Xylenes, Total	ug/L	0.5	ND	03/04/93

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REPORT OF LABORATORY ANALYSIS

March 05, 1993
PACE Project Number: 430304518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0020190	
Date Collected:			03/04/93	
Date Received:			03/04/93	
Client Sample ID:			93030414	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/04/93
Benzene	ug/L	0.5	ND	03/04/93
Toluene	ug/L	0.5	ND	03/04/93
Ethylbenzene	ug/L	0.5	ND	03/04/93
Xylenes, Total	ug/L	0.5	ND	03/04/93

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REPORT OF LABORATORY ANALYSIS

March 05, 1993
PACE Project Number: 430304518

Client Reference: Exxon 7-0104 (EE)

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0020204	
Date Collected:			03/04/93	
Date Received:			03/04/93	
Client Sample ID:			93030415	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/05/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	170	03/05/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/05/93
Benzene	ug/L	0.5	5.1	03/05/93
Toluene	ug/L	0.5	2.1	03/05/93
Ethylbenzene	ug/L	0.5	ND	03/05/93
Xylenes, Total	ug/L	0.5	20	03/05/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 4

March 05, 1993
PACE Project Number: 430304518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0020220	
Date Collected:			03/04/93	
Date Received:			03/04/93	
Client Sample ID:			93030416	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	3600	03/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/04/93
Benzene	ug/L	2.5	760	03/04/93
Toluene	ug/L	2.5	430	03/04/93
Ethylbenzene	ug/L	2.5	45	03/04/93
Xylenes, Total	ug/L	2.5	600	03/04/93

These data have been reviewed and are approved for release.

Mark A. Valentini

Darrell C. Cain
Regional Director

11 Digital Drive
Novato, CA 94949
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Mr. Scott Steinmetz
Page 5

FOOTNOTES
for pages 1 through 4

March 05, 1993
PACE Project Number: 430304518

Client Reference: Exxon 7-0104 (EE)

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

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 6

QUALITY CONTROL DATA

March 05, 1993
PACE Project Number: 430304518

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 19145
Samples: 70 0020182, 70 0020190, 70 0020220

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	101%	100%	0%
Benzene	ug/L	0.5	40.0	102%	104%	1%
Toluene	ug/L	0.5	40.0	104%	106%	1%
Ethylbenzene	ug/L	0.5	40.0	103%	105%	1%
Xylenes, Total	ug/L	0.5	120	101%	102%	0%

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Mr. Scott Steinmetz
Page 7

QUALITY CONTROL DATA

March 05, 1993
PACE Project Number: 430304518

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 19185
Samples: 70 0020204

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	107%	104%	2%
Benzene	ug/L	0.5	40.0	95%	95%	0%
Toluene	ug/L	0.5	40.0	94%	93%	1%
Ethylbenzene	ug/L	0.5	40.0	96%	96%	0%
Xylenes, Total	ug/L	0.5	120	98%	98%	0%

Mr. Scott Steinmetz
Page 8

FOOTNOTES
for pages 6 through 7

March 05, 1993
PACE Project Number: 430304518

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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Consultant's Name: HARDING LAWSON ASSOCIATES — Page 1 of 1

Address: 7655 REDWOOD BLVD NOVATO CA — Site Location: ALAMEDA

Project #: — Consultant Project #: 104995 57B — Consultant Work Release #: 910 6-16 98

Project Contact: SCOTT STEINMETZ — Phone #: (415) 899-8867 Fax #: 892-4999 — Laboratory Work Release #:

EXXON Contact: MARLA ☒ EE ☐ C&M — Phone #: Fax #: — EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ — Sampler's Signature: Scott H Steinmetz

Shipment Method: ICE CHEST — Air Bill #: — Shipment Date:

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

ANALYSIS REQUIRED

Sample Condition as Received
Temperature ° C:
Cooler #: CLIENT
Inbound Seal Yes No COURIER
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
93030413	3-4-93 1400	WATER	HCL	3	2018.2	✓												
93030414	3-4-93 1400	WATER	HCL	3	19.0	✓												
93030415	3-4-93 1400	WATER	HCL	3	20.4	✓												
93030416	3-4-93 1430	WATER	HCL	3	22.0	✓												
1/1																		

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott H Steinmetz	3-4-93	1630	CR Cranta IPACE	3/4/93	16 30

Additional Comments:

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

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REPORT OF LABORATORY ANALYSIS

March 12, 1993

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430311.512
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received March 11, 1993.

Please note that when analyzing your sample 93031119 (PACE #70 0025125) a peak eluting earlier than Benzene and suspected to be Methyl Tert Butyl Ether was present.

Footnotes are given at the end of the report.

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

Sincerely,

Caron E. Sontag

for Carol Reid
Project Manager

Enclosures

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REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

March 12, 1993
PACE Project Number: 430311512
WPPLab Number: 2065

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0025109	
Date Collected:			03/11/93	
Date Received:			03/11/93	
			93031117	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/11/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/11/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/11/93
Benzene	ug/L	0.5	ND	03/11/93
Toluene	ug/L	0.5	ND	03/11/93
Ethylbenzene	ug/L	0.5	ND	03/11/93
Xylenes, Total	ug/L	0.5	ND	03/11/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 2

March 12, 1993
PACE Project Number: 430311512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0025117	
Date Collected:			03/11/93	
Date Received:			03/11/93	
Client Sample ID:			93031118	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/11/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/11/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/11/93
Benzene	ug/L	0.5	ND	03/11/93
Toluene	ug/L	0.5	ND	03/11/93
Ethylbenzene	ug/L	0.5	ND	03/11/93
Xylenes, Total	ug/L	0.5	ND	03/11/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 3

March 12, 1993
PACE Project Number: 430311512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0025125	
Date Collected:			03/11/93	
Date Received:			03/11/93	
Client Sample ID:			93031119	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/11/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	63	03/11/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/11/93
Benzene	ug/L	0.5	0.5	03/11/93
Toluene	ug/L	0.5	ND	03/11/93
Ethylbenzene	ug/L	0.5	ND	03/11/93
Xylenes, Total	ug/L	0.5	0.8	03/11/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 4

March 12, 1993
PACE Project Number: 430311512

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0025133	
Date Collected:			03/11/93	
Date Received:			03/11/93	
Client Sample ID:			93031120	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/11/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	3800	03/11/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/11/93
Benzene	ug/L	0.5	480	03/11/93
Toluene	ug/L	0.5	390	03/11/93
Ethylbenzene	ug/L	0.5	84	03/11/93
Xylenes, Total	ug/L	0.5	600	03/11/93

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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Mr. Scott Steinmetz
Page 5

FOOTNOTES
for pages 1 through 4

March 12, 1993
PACE Project Number: 430311512

Client Reference: Exxon 7-0104 (EE)

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

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Mr. Scott Steinmetz
Page 6

QUALITY CONTROL DATA

March 12, 1993
PACE Project Number: 430311512

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 19353
Samples: 70 0025109, 70 0025117, 70 0025125, 70 0025133

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	100%	103%	2%
Benzene	ug/L	0.5	40.0	110%	111%	0%
Toluene	ug/L	0.5	40.0	108%	110%	1%
Ethylbenzene	ug/L	0.5	40.0	102%	103%	0%
Xylenes, Total	ug/L	0.5	120	100%	102%	1%

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Mr. Scott Steinmetz
Page 7

FOOTNOTES
for page 6

March 12, 1993
PACE Project Number: 430311512

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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93031.572

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

Consultant's Name: HARDING LAWSON ~~ASSOC.~~

Address: 7655 REDWOOD BLVD

Site Location: ALAMEDA

Project #:

Consultant Project #: 10495 577

Consultant Work Release #:

Project Contact: SCOTT STEINMETZ

Phone #: (415) 899-8867 Fax #: 892-4989

Laboratory Work Release #:

EXXON Contact: MARLA ☒ EE ☐ C&M

Phone #: Fax #:

EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ

Sampler's Signature: Scott W. Steinmetz

Shipment Method: ICE CHEST

Air Bill #:

Shipment Date:

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

ANALYSIS REQUIRED

Sample Condition as Received
Temperature ° C: CLIENT
Cooler #: COURIER
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
9303117	3-11-93 1515	WATER	HCL	3	2510.9	✓												
9303118	"	"	"	"	11.7	✓												
9303119	"	"	"	"	12.5	✓												
9303120	3-11-93 1550	"	"	"	13.3	✓												

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments
Scott W. Steinmetz	3-11-93	1715	CR Courier/PACE	3-11-93	1715	

Distribution: 1/4/2 White - Original Yellow - Exxon Pink - Lab Goldenrod - Consultant Field Staff

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REPORT OF LABORATORY ANALYSIS

March 23, 1993

Mr. Scott Steinmetz
Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

RE: PACE Project No. 430319.507
Client Reference: Exxon 7-0104 (EE)

Dear Mr. Steinmetz:

Enclosed is the report of laboratory analyses for samples received March 19, 1993.

Footnotes are given at the end of the report.

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

Sincerely,

Carol Reid

Carol Reid
Project Manager

Enclosures

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

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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Harding Lawson Associates
7655 Redwood Blvd.
Novato, CA 94949

March 23, 1993
PACE Project Number: 430319507

Attn: Mr. Scott Steinmetz

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0029945	
Date Collected:			03/19/93	
Date Received:			03/19/93	
			93031921	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/23/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	4100	03/23/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/23/93
Benzene	ug/L	0.5	530	03/23/93
Toluene	ug/L	0.5	420	03/23/93
Ethylbenzene	ug/L	0.5	100	03/23/93
Xylenes, Total	ug/L	0.5	800	03/23/93

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REPORT OF LABORATORY ANALYSIS

Mr. Scott Steinmetz
Page 2

March 23, 1993
PACE Project Number: 430319507

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number:			70 0029953	
Date Collected:			03/19/93	
Date Received:			03/19/93	
Client Sample ID:			93031922	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/23/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	110	03/23/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/23/93
Benzene	ug/L	0.5	0.8	03/23/93
Toluene	ug/L	0.5	ND	03/23/93
Ethylbenzene	ug/L	0.5	ND	03/23/93
Xylenes, Total	ug/L	0.5	7.6	03/23/93

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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

Mr. Scott Steinmetz
Page 3

FOOTNOTES
for pages 1 through 2

March 23, 1993
PACE Project Number: 430319507

Client Reference: Exxon 7-0104 (EE)

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

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Mr. Scott Steinmetz
Page 4

QUALITY CONTROL DATA

March 23, 1993
PACE Project Number: 430319507

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS
Batch: 70 19602
Samples: 70 0029945, 70 0029953

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	100%	96%	4%
Benzene	ug/L	0.5	40.0	107%	93%	14%
Toluene	ug/L	0.5	40.0	106%	93%	13%
Ethylbenzene	ug/L	0.5	40.0	108%	94%	13%
Xylenes, Total	ug/L	0.5	120	108%	93%	14%

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

EXXON COMPANY, U.S.A. 430319.507

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

CHAIN OF CUSTODY

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

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

Consultant's Name: HARDING LAWSON ASSOCIATES — Page 1 of 1

Address: 7655 REDWOOD BLVD NOVATO CA — Site Location: ALAMEDA

Project #: — Consultant Project #: 10495 577 — Consultant Work Release #: 910644698 PER SCOTT 5/13/93

Project Contact: SCOTT STEINMETZ — Phone #: (415) 899-8867 Fax #: 892-4989 — Laboratory Work Release #:

EXXON Contact: MARLA ☒ EE ☐ C&M — Phone #: Fax #: — EXXON RAS #: 7-0104

Sampled by (print): SCOTT STEINMETZ — Sampler's Signature: Scott K Steinmetz

Shipment Method: ICE CHEST — 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
CLIENT COURIER

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
9303121	3-18-93 11:00	WATER	HCL	3	9914.5	✓												
9303122	3-18-93 10:30	"	"	"	9915.3	✓												

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Scott K Steinmetz	3-19-93	12:35	Shirley Hoover Pace	3/19	1235

Additional Comments:

Distribution: 5/1 White - Original Yellow - Exxon Pink - Lab Goldenrod - Consultant Field Staff

Harding Lawson Associates
7655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821
Telecopy: General: 415/892-0831
Accounting: 415/898-1052

CHAIN OF CUSTODY FORM

Lab: _____

Samplers: SCOTT GRIMES

Job Number: 10495 578

Name/Location: EXXON ALAMEDA

Project Manager: M. HERMAN

Recorder: Scott Grimes (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	BIOLOGICAL ANALYSIS
	X				X			1 3 0 3 2 6 5 F			1 3 0 3 2 6			1 0 4 5								X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Scott Grimes	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

Harding Lawson Associates
200 Rush Landing Road
P.O. Box 6107
Novato, California 94948
415/892-0821
Telecopy: 415/892-1586

CHAIN OF CUSTODY FORM

Lab: ______

Job Number: 10495 577

Name/Location: EXXON ALAMEDA

Project Manager: MICHELLE BEEKMAN

Samplers: SCOTT STEINMETZ

Recorder: [signature] (Signature Required)

SOURCE CODE	Matrix: Water	Matrix: Sediment	Matrix: Soil	Matrix: Oil	#Containers & Preserv.: Unpres.	H_2SO_4	HNO_3	Sample Number or Lab Number: Yr	Wk	Seq	Date: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	BIOLOGICAL ANALYSIS
	X				X			93	03	180F	93	03	18	1130								X

Analysis Requested

Lab Number: Yr	Wk	Seq	Depth in Feet	COL MTD CD	QA Code	Miscellaneous

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: *(Signature)*	RECEIVED BY: *(Signature)*	DATE/TIME
[signature]		

DISPATCHED BY: *(Signature)* DATE/TIME

RECEIVED FOR LAB BY: *(Signature)* DATE/TIME

METHOD OF SHIPMENT

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

6533

ATTACHMENT C

FACILITY INSPECTION LOGS

Mr. Scott Steinmetz
Page 5

FOOTNOTES
for page 4

March 23, 1993
PACE Project Number: 430319507

Client Reference: Exxon 7-0104 (EE)

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

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

910646 98
7-104

Sheet 1 of 1

Project: EXXON ALAMEDA Job No.: 10495 576
Subject: FIELD INVESTIGATION DAILY REPORT Date: 2-16-93
Equipment Rental: _____ Company: _____ To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1200 ARRIVE AT SITE (BOB + RED ON SITE)
INSPECT EQUIPMENT CONFIGURATION
NEED: VALVES TO ISOLATE AIR SPARGERS; PIPING FOR INLET WATER SAMPLE;
ONE MORE 55 GAL. DRUM;

1230 BEGIN CALIBRATION OF CONDUCTIVITY/TEMP/PH METER # 9203
TEMP: 54.3 °F (CAL.) 55.0 °F
PH: 6.99 (CAL.) 3.92 (CAL.) 6.40
CONDUCTIVITY: 2.70 (CAL. 1413 μmoks/cm) 0.68 ON 1000 SCALE
SAMPLE I.D. #: 92021601

1330 INSTALLED GATE VALVES IN AIR SPARGING LINES FOR THE LAST HALF OF THE TANK.

1530 TESTED AIR SPARGING DEVICES IN FIRST HALF OF TANK.

1550 POURED ≈ ½ GAL NUTRIENTS INTO EACH OF THE FIRST TWO QUARTERS.
SPARGING ≈ 1 SCFM AIR

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA — Job No.: 10495 576
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 2-17-93
Equipment Rental: _____ Company: _____ To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1100 ARRIVED AT SITE
RED BLEVINS (HCS) WORKING ON PH METER.
AIR LINE FROM COMPRESSOR WAS REPAIRED / FIXED LEAK.
SAMPLE PORT INSTALLED AT BIO INLET.
1200 LUNCH
1245 ADJUST LEVEL CONTROLS (NO ADJUSTMENT NEEDED).
SET AIR COMPRESSOR CONTROL PRESSURE AT 80 PSI.
FLOW / SPARGING AIR APPEARS TO BE MIXING THOROUGHLY. STRONG HYDROCARBON ODOR FROM BIO-TANK.
TRANSFER PUMP CHECKED - WORKS (DOESN'T OPERATE) IN "AUTO" POSITION.
PH METER READING "BAD CARD" "10.0" LOPREST WILL CALL BACK.
1345 BEGIN SAMPLING PROCEDURE (24 HR. SAMPLE) (BIO REACTOR INLET)
CONDUCTIVITY: 2.70 (CAL.) 0.71 (CAL. 1413 μ Moles/cm)
TEMP: 57.1°F (CAL.) 56.9°F
PH: 7.00 (CAL.) 3.85 (CAL.) 7.30 X 1000
SAMPLE #: 93021702 @ 1410
1420 SAMPLING COMPLETE
DROPPED SPARGING FLOW FROM ≈ 1 SCFM TO < 1 SCFM. ~~THRU~~ MIXING APPEARS SUFFICIENT.
RED (HCS) REPORTED ARRIVING AT 8:00 TO FIND AIR COMPRESSOR MANUAL RELIEF VALVE HAD VIBRATED OUT COMPLETELY. NO TELLING WHEN AIR STOPPED GOING TO SPARGING RINGS.

Attachments:

Initial

Sheet 1 of 1

Project: EXXON-ALAMEDA Job No.: 10495 576
Subject: FIELD INVESTIGATION DAILY REPORT Date: 2-18-93
Equipment Rental: _____ Company: _____ To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1400 ARRIVE AT SITE

BEGIN SAMPLING PROCEDURE (INLET TO BIO REACTOR) (48-HOUR SAMPLE)

CALIBRATION OF CONDUCTIVITY/TEMP/PH METER # 9203

	CALIBRATION	SAMPLE
TEMP:	60.5 °F	59.1 °F
PH:	7.00 / 3.85	2.50
CONDUCTIVITY:	1413 x [illegible] / cm, X 1000 SCALE	
	2.68	0.65

SAMPLE: 9302180B * SAMPLE WAS TAKEN FROM INLET SAMPLE PORT AFTER
BIO 9302180C PURGING 3 VOLUMES OF PIPE.

1500 ADDED ½ LB. OF TRYPTIC SOY BROTH TO EACH [illegible] SECTION (1 LB TOTAL)

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA — Job No.: 10495 576
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 2-22-93
Equipment Rental: _____ Company: _____ To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

3:30 ARRIVE ON SITE

	WATER (BELOW CASING)	TOP OF PUMP BELOW CASING	HEAD ABOVE PUMP
EW-1	4'	20'	16'
EW-2	4'	20'	16'
EW-3	4'	24'	20'
EW-4	4'	24'	20'
EW-5	4.2'	24'	20'

1015 CALIBRATED NUTRIENT PUMP @ 2 GPD ≈ 5.25 ml/min

STROKE = 50%

SPEED = 6%

AT STROKE = 60%

SPEED = 6% 10 MIN. TEST PRODUCED 61 ML

24 GPD × .50 × .06 = 0.72 GPD

1100 WATER LEVEL IN LAST COMPARTMENT IS 46" BELOW TOP

40 ft² × ½ ft =

1200 START PUMPING GW INTO STORAGE (SYSTEM START UP)

1400 EBMUD ARRIVED ON SITE

SAMPLING CALIBRATION (1413 micromhos/cm STANDARD)

TEMP: 57.0 °F pH: 7.00 / 3.88 ELEC. CONDUCTIVITY: 2.56 x1000

SAMPLE II: 9302220H @ 1435 EFFLUENT (C)

TEMP: 54.5 pH: 6.26 EC: 0.90 x1000

SAMPLE #: 9302220S @ 1445 INFLUENT (A)

TEMP: 54.6 pH: 7.32 EC: 0.67 x1000

Attachments:

Initial

Sheet 1 of 1

Project: EXXON/ALAMEDA — Job No.: 10495 576
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 2-23-93
Equipment Rental: _____ Company: _____ To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S.STEINMETZ

(outside service and expense record must be attached for any outside costs)

1330 ARRIVED AT SITE

FLOW TIGHTLIZER = 230 GAL

STARTED PUMPS/SYSTEM

SETTING PUMPS AT 10' BELOW WATER (1U' BELOW TOP OF CASING)

1500 BEGAN SAMPLING

	TEMP °F	PH	EC. X1000	
CALIBRATION	55.3	7.00/3.92	2.00	
93022306	55.0	6.50	0.81	1525
93022307	55.6	6.95	0.71	1535

1550 TEST WELL FLOWS AT MANIFOLD

4 CYCLES = ___ SEC.

EW1 = 74 SEC

EW2 = 126 SEC

EW3 = 105 SEC.

EW4 = 146 SEC. * THE LAST CYCLE WAS EVEN (126 SEC.) 2ND TIME

EW5 = 80 SEC.

THE DISCHARGE PUMP IS DISCHARGING AT ≈ 10 GPM W/ 11.5 PSI ON THE FIRST CARBON

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA Job No.: 10495 576
Subject: FIELD INVESTIGATION DAILY REPORT Date: 2-24-93
Equipment Rental: _____ Company: _____ To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1250 ARRIVED AT SITE METER READING

AT 1905 (2-23-93) 2165 GAL. TURNED WELLS #1 + #2 OFF

AT 0705 (2-24-93) 4165 GAL.

1255 BEGIN SAMPLE PROCEDURE

		TEMP	PH	EC x1000 (1413 mmhos/cm)
	CALIBRATION	57.5	6.99 / 3.81	2.55
EFFLUENT	SAMPLE 9302240 8	58.7	7.10	0.66
INLET	SAMPLE 9302240 9	58.4	6.88	0.69
	SAMPLE 9302241 0			

EW 3 122 SEC. 4 VOLUMES/CYCLES

EW 4 155 SEC. 4 CYCLES

EW 5 83 SEC. 4 CYCLES

1415 BEGAN DISASSEMBLING PIPE CONFIGURATION / FLOW TOTALIZER

AIR COMPRESSOR REPAIR MAN ON-SITE

1505 MARK FROM RESNA ON-SITE

EXPLAINED SYSTEM TO MARK

1545 GARY & KIN FROM RESNA ON-SITE

EXPLAINED SYSTEM TO THEM

1630 DEPART SITE

INSTRUCTED RED TO PLACE PUMPS 5' BELOW ORIGINAL HYDRAULIC SURFACE (9' BELOW T.O.C.)

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA Job No.: 10495 576

Subject: FIELD INVESTIGATION DAILY REPORT Date: 2-25-93

Equipment Rental: _____ Company: _____ To: FILE

Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1300 ARRIVED ON SITE

TOOK SAMPLE (# 930225 11) OF INLET TO CARBON

1315 FLOW TOTALIZER READS 10130 GAL

1325 TOOK FLOW RATES FROM WELLS. 4 VOLUMES / CYCLES (ASSUME 4 CYCLE = 1.95 GAL)

EW1 :	103 SEC.	1.82 GAL	1.062 GPM
EW2 :	175 SEC.	1.80 GAL	0.616 GPM
EW3 :	210 SEC.	1.74 GAL	0.498 GPM
EW4 :	260 SEC.	1.59 GAL	0.366 GPM
EW5 :	120 SEC	1.61 GAL	0.806 GPM

TOTAL FLOW ≈ 3.35 GPM

1340 ANDREW J. on SITE

TOOK OVM READINGS - 2ND HALF OF TANK → 30 PPMV

1ST HALF OF TANK (INLET) 80 PPMV

ALL READINGS FOR THE VAPOR PHASE CARBON WERE Ø

S-1 : Ø

A-1 : Ø

A-2 : Ø

1425 TOOK COMPOSIT SAMPLE OF WELL INLETS

1445 LOWERED PUMPS TO 7' BELOW ORIGINAL HYDRAULIC GRADIENT (11' BELOW TOC.)

NOTE: COMPOSIT SAMPLE WAS TAKEN BY OPENING ALL SAMPLE PORTS WHILE SIMULTANEOUSLY CLOSING BALL VALVES AND COMBINING SAMPLE WATER INTO A BUCKET (CLEAN). THE SAMPLE PORTS WERE LEFT OPEN IN ORDER TO ACHIEVE A TIME WEIGHTED AVERAGE.

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA — Job No.: 10495 576
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 2-26-93
Equipment Rental: _____ Company: _____ — To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ — By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1.85 GAL

1155 ARRIVED ON SITE

EVERYTHING APPEARS TO BE IN ORDER

BEGIN MEASURING FLOW RATES FROM WELLS (PUMPS AT 11' BELOW TOP OF CASING)

EW 1:	91 SEC.	6.9 Litres	1.82 GAL	1.20 GPM
EW 2:	147 SEC.	6.8 Litres	1.80 GAL	0.73 GPM
EW 3:	182 SEC.	6.6 Litres	1.74 GAL	0.57 GPM
EW 4:	220 SEC.	6 Litres	1.59 GAL	0.43 GPM
EW 5:	103 SEC.	6.1 Litres	1.61 GAL	0.94 GPM

COMBINED FLOW = 3.88 GPM

1300 FLOW TOTALIZER 15,440 GAL.

11.75 PSI ON CARBON 1 INLET

11.4 GPM

17 PSI UPSTREAM OF SAND FILTER

14 PSI UPSTREAM OF BAG FILTER

1315 LOWERED PUMPS 3' (TOTAL DEPTH 14' BELOW TOP OF CASING)

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA Job No.: 10495 S76

Subject: FIELD INVESTIGATION DAILY REPORT Date: 3-1-93

Equipment Rental: _____ Company: _____ To: FILE

Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1635 ARRIVED AT SITE (RED/HCS ON SITE)

HYDROCARBON VAPORS IN FIRST COMPARTMENT OF BIO-REACTOR ARE ≈ 80 ppmv (OVM-580B).

TOOK GRAB SAMPLE FOR BIO ANALYSIS.

AIR COMPRESSOR SHUT DOWN AT APPROX. 1335 2-26-93.

RED STARTED SYSTEM THIS MORNING AT 0930.

1700 TOOK SAMPLES FOR ANALYSIS - MAY NOT SUBMIT DUE TO BIO REACTOR DOWN TIME.

1745 DEPART SITE.

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA Job No.: 10495 578

Subject: FIELD INVESTIGATION DAILY REPORT Date: 3-4-93

Equipment Rental: _____ Company: _____ To: FILE

Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1345 ARRIVED AT SITE

SYSTEM OPERATING CORRECTLY

1355 PREPARED TO TAKE SAMPLES

		TEMP °F	PH	ELEC. COND	(1413 micromhos/cm STANDARD)
	CALIBRATION	67.8	7.02/3.90	2.56	
EFFLUENT	93030413	65.1	7.18	0.64	
INTERMED.	93030414	65.2	6.95	0.64	
INFLUENT	93030415	65.2	6.68	0.64	
	93030416	NT	NT	NT	1430

1420 TOOK FLOW RATE MEASUREMENTS BY TIMING 4 COMPLETE CYCLES

EW-1:	79 SEC.	1.82 GAL.	1.38 GPM
EW-2:	~~57 SEC.~~ 115 SEC.	1.00	0.94 GPM
EW-3:	125 SEC.	1.74	0.84 GPM
EW-4:	187 SEC.	1.59	0.51 GPM
EW-5:	86 SEC.	1.61	1.12 GPM

COMBINED FLOW = 4.79 GPM

TOOK OVM READINGS IN BIO TANK

1ST COMPARTMENT 66 PPM LOW BATTARY

1530 FLOW TOTALIZER READING 36,240 GAL.

AIR COMPRESSOR STILL MAKES RATTLING NOISE WHEN UNLOADED.

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA — Job No.: 10495 577
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 3-11-93
Equipment Rental: _____ Company: _____ To: FILE
Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

1500 14 SEC / 1 GAL DISCHARGE AFTER BACKWASH 7.5 SEC. / 1 GAL

1505 TAKE SAMPLES FOR LABORATORY ANALYSIS

		TEMP	PH	ELEC. COND.
1515	CALIBRATION	68.7	7.00/3.94	2.58 (1413 mMHOS/CM)
	9303111 7 (EFFLUENT)	67.2	7.13	0.68
	9303111 8 (INTERMEDIATE)	66.8	6.98	0.68
	9303111 9 (INLET)	66.5	6.35	0.68
	9303112 0 (WELLS)			

1545 BACKWASHED SAND FILTERS + CARBON DRUMS (AFTER)

PRESSURE AT CARBON INLET WAS ≈ 6 PSI / 10 PSI
" " SAND FILTER INLET ≈ 17 PSI / 16 PSI
" " BAG FILTER INLET ≈ 7 PSI / 13 PSI

1550 FLOWRATE EVALUATION

EW1	85 SEC.	1.82 GAL	1.28 GPM	
EW2	125 SEC.	1.80 GAL	0.86 GPM	
EW3	140 SEC.	1.74 GAL	0.75 GPM	COMBINED FLOW = 4.42 GPM
EW4	209 SEC.	1.59 GAL	0.46 GPM	
EW5	90 SEC	1.61 GAL	1.07 GPM	

1615 PH METER READS 6.13

FLOW TOTALIZER READS 80,000 GAL

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA Job No.: 10495 577

Subject: FIELD INVESTIGATION DAILY REPORT Date: 3-19-93

Equipment Rental: _____ Company: _____ To: FILE

Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

10:25 TAKE SAMPLES

930319 21 (INLET)

930319 22 (EFFLUENT)

10:50 EW1 79 SEC.

EW2 94 SEC.

EW3 142 SEC.

EW4 175 SEC.

EW5 96 SEC.

11:10 2 GAL. PER. 16 SEC. DISCHARGE TO SANITARY

Attachments:

Initial

Sheet 1 of 1

Project: EXXON/ALAMEDA Job No.: 10495 578

Subject: FIELD INVESTIGATION DAILY REPORT Date: 3-23-93

Equipment Rental: _____ Company: _____ To: FILE

Equipment Hours: _____ F.E. Time from: _____ to: _____ By: S STEINMETZ

(outside service and expense record must be attached for any outside costs)

1220 ARRIVED AT SITE

CHECKED PH @ 6.01

ATTEMPTED TO PRIME CAUSTIC PUMP - PRIMED FROM THE TOP

OPERATED PUMP AT 100% STROKE / 90% SPEED

PROGRAMMED CONTROLLER TO 6.50 PH LO SETPOINT

1330 BACKFLUSHED SAND FILTERS

2.5 MIN. EACH THEN 1 MIN. EACH

FLOW WAS APPROX. 8.25 GPM AFTER BACKFLUSHING (DISCHARGE)

1400 EVALUATED CONDITION OF CHECK VALVE #4 AT MANIFOLD

DOES APPEAR TO BE WORKING.

Attachments:

Initial

Sheet 1 of 1

Project: EXXON ALAMEDA Job No.: 10495 577

Subject: FIELD INVESTIGATION DAILY REPORT Date: 3-26-93

Equipment Rental: ______ Company: ______ To: FILE

Equipment Hours: ______ F.E. Time from: ______ to: ______ By: S. STEINMETZ

(outside service and expense record must be attached for any outside costs)

0700 ARRIVED AT SITE – MEETING W/ RESNA AT 0800

OPENED COMPOUND TO [illegible] SECONDARY CONTAINMENT HALF FULL, WATER WAS DRIBBLING

OUT OF THE TOP OF THE [illegible] SOUTHEAST CORNER.

I SHUT OFF AIR TO WELL PUMPS AT THE MANIFOLD.

THE [illegible] APPARENTLY DID NOT CLOSE.

0800 [illegible] & GARY FROM RESNA [illegible] AT SITE. WE WALKED THROUGH OPERATIONS OF THE SYSTEM.

0900 I CALLED [illegible] TO SERVICE EQUIPMENT

0945 MIKE FROM [illegible] ARRIVED

CARBON DRUM #1 (C1) BEGAN LEAKING FROM THE LID. THIS MAY INDICATE BIOFOULING ON [illegible] SURFACE.

RED (HARDING CONSTRUCTION) [illegible] SUMP PUMP TO PLACE THE WATER IN THE CONTAINMENT INTO THE BIOREACTOR.

[illegible] BACKFLUSHED SAND FILTERS – THEY APPEAR TO BE PLUGGING. BACKWASHING DOESN'T [illegible] RELIEVE [illegible] [illegible] IT HAS HISTORICALLY.

Attachments:

Initial