

EXXON COMPANY, U.S.A.

90 DEC 12 PM 11: 02

POST OFFICE BOX 4032 . CONCORD, CA 94524-2032

REAL ESTATE & ENGINEERING

JO BETH FOLGER
C&M SENIOR ENGINEER
(415) 246-8770

December 10, 1990

Mr. Gil Wistar
Alameda County Health Agency
Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Exxon Station 7-0237
500 Grand Avenue
Oakland, CA

Dear Mr. Wistar:

Attached for your review and comment is the report detailing the removal of the waste oil tank at the above Exxon service station.

Texaco USA has ongoing cleanup operations at the site and will remain responsible for those activities. Please feel free, of course, to contact me if you have any questions.

Sincerely,



Jo Beth Folger

c: Mr. Steve LuQuire
California Regional Water Quality Control Board

2014E



November 8, 1990

HLA Job No. 04167,352.03
Exxon Job No. 90112204

Exxon Company, USA
2300 Clayton Road, Suite 1250
Concord, California 94542-2032

Attention: Ms. Jo Beth Folger

Dear Ms. Folger:

Soil and Groundwater Sampling
During Waste Oil Tank Removal
Exxon Service Station
500 Grand Avenue
Oakland, California

Harding Lawson Associates (HLA) is pleased to present this summary of work performed for Exxon Company USA (Exxon) at the Exxon Service Station, 500 Grand Avenue, Oakland, California. HLA was retained by Exxon on August 15, 1990 to provide soil and water sampling in association with the removal of the waste oil tank at the site. HLA is providing residual engineering services at this service station for Texaco Refining and Marketing Inc., previous lessee of the site.

In June 1990, free product was discovered in the backfill around the waste oil tank as workers prepared to install overfill containment devices. Mr. Gil Wistar, of the Alameda County Department of Environmental Health, recommended on July 17, 1990, that the waste oil tank be removed and that the contaminated soil around the tank be excavated.

Exxon arranged for a general contractor to pull the tank on September 25, 1990. Representatives of Exxon, HLA, the Alameda County Department of Environmental Health, and the Oakland Fire Department were present. The single wall fiberglass tank, approximately 6.5 feet long and 4.5 feet in diameter, had no apparent cracks or points of leakage when it was removed from the excavation. Exxon arranged for the off-hauling of the tank, as well as for the disposal of soil and water as hazardous

November 8, 1990
HLA Job No. 04167,352.03
Exxon Job No. 90112204
Ms. Jo Beth Folger
Exxon Company, USA
Page 2

materials. Exxon provided the Hazardous Waste Manifest for the disposal.

The excavated area was approximately 8 feet deep, 7.5 feet wide, and 9.5 feet long (Plates 1 and 2). The excavation contained about 6.5 feet of liquids consisting of a 1/8 inch layer of waste oil floating on discolored water. One water sample, W.O.T. #1, was collected prior to pumping the liquids out of the excavation. The water was analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH) as gasoline, TPH as diesel fuel, oil and grease, and chlorinated hydrocarbons (Table 1). The number of soil and water samples taken and the analyses performed on each sample were approved by Mr. Wistar prior to sample collection. The chemical analyses were performed by Mobile Chem Labs, Inc. in Martinez, California.

Four soil samples (W.O. #2 through W.O. #5) were collected and analyzed for the compounds mentioned above (Table 2). The four samples were taken from approximately 1.5 feet below grade on the walls of the excavation (W.O. #2 and W.O. #5 from the south wall, W.O. #4 from the east wall, and W.O. #3 from the west wall, Plate 2).

The excavation was secured until laboratory analyses of soil samples could be obtained. Oil and grease content of the soil samples ranged from 100 parts per million (ppm) in W.O. #5 to 2,600 ppm in W.O. #3. Mr. Wistar requested additional excavation on the west wall where the soil sample with the highest oil and grease content was collected (Plate 2).

On October 3, 1990 overexcavation of the west wall was conducted while keeping a safe distance from known utilities. The upper three feet of the west wall were excavated three feet further westward. Three additional soil samples were collected at that time. Sample W.O. #7 was collected at 1.5 feet below grade on the west wall and W.O. #6 was collected approximately 0.5 foot below W.O. #7. Sample W.O. #8 was collected from the bottom of the excavation on the south side. Samples W.O. #6 and W.O. #7 contained 100 ppm and 850 ppm oil and grease, respectively. Sample W.O. #8 was analyzed for BTEX, TPH as gasoline, TPH as diesel fuel, and oil and grease. Only 0.016 ppm toluene were detected. According the Exxon, the excavation was backfilled and compacted on October 8, 1990.

November 8, 1990
HLA Job No. 04167,352.03
Exxon Job No. 90112204
Ms. Jo Beth Folger
Exxon Company, USA
Page 3

On September 25, 1990 two clay pipes were discovered approximately 1.5 feet below grade in the northwest and northeast corners of the excavation. Mr. Gil Wistar, of the Alameda County Department of Environmental Health, verbally requested that the clay pipes be excavated in the near future. HLA is currently arranging the excavation of the pipes, and overexcavation and disposal of soil containing oil and grease.

Please contact us if you have questions regarding the work described in this summary. We appreciate the opportunity to be of service to Exxon.

Yours very truly,

HARDING LAWSON ASSOCIATES



Jeanna S. Hudson
Senior Geologist



Randolph Stone
Associate Hydrogeologist

JSH/RS/bb 031348D/L27

Attachments: Tables 1 and 2
Plates 1 and 2
Laboratory Reports

Table 1. Results of Analyses on Water Sample W.O.T. # 1
(in $\mu\text{g/liter}$)

<u>Sample</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Xylenes</u>	<u>TPH(g)</u>	<u>TPH(d)</u>	<u>Oil and Grease</u>	<u>Chlorinated Hydrocarbons</u>
W.O.#1	320	180	2.1	300	1,900	1,400	70	All <1 ppb

NA Compounds not analyzed

Chlorinated hydrocarbon analysis detects 26 compounds.

All were below detection limits on the water sample submitted.

BTEX	EPA Test Method 8020
TPH(g)	EPA Test Method 5030
TPH(d)	EPA Test Method 3550
Oil and Grease	EPA Test Method 5520 D + F
Chlorinated Hydrocarbons	EPA Test Method 8010

Table 2. Results of Soil Analyses
(in mg/kg)

<u>Sample</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Xylenes</u>	<u>TPH(g)</u>	<u>TPH(d)</u>	<u>Oil and Grease</u>	<u>Chlorinated Hydrocarbons</u>
W.O.#2	0.048	<0.005	0.007	0.013	<1.0	<5.0	200	All <0.005
W.O.#3	0.53	0.06	0.75	1.5	15	220	2,600	All <0.005
W.O.#4	0.054	0.012	0.062	0.29	1.9	17	500	All <0.005
W.O.#5	<0.005	0.017	<0.005	<0.005	<1.0	21	100	All <0.005
W.O.#6	NA	NA	NA	NA	NA	NA	100	NA
W.O.#7	NA	NA	NA	NA	NA	NA	850	NA
W.O.#8	<0.005	0.016	<0.005	<0.005	<1.0	<5.0	<50	NA

NA Compounds not analyzed

Chlorinated hydrocarbon analysis detects 26 compounds.

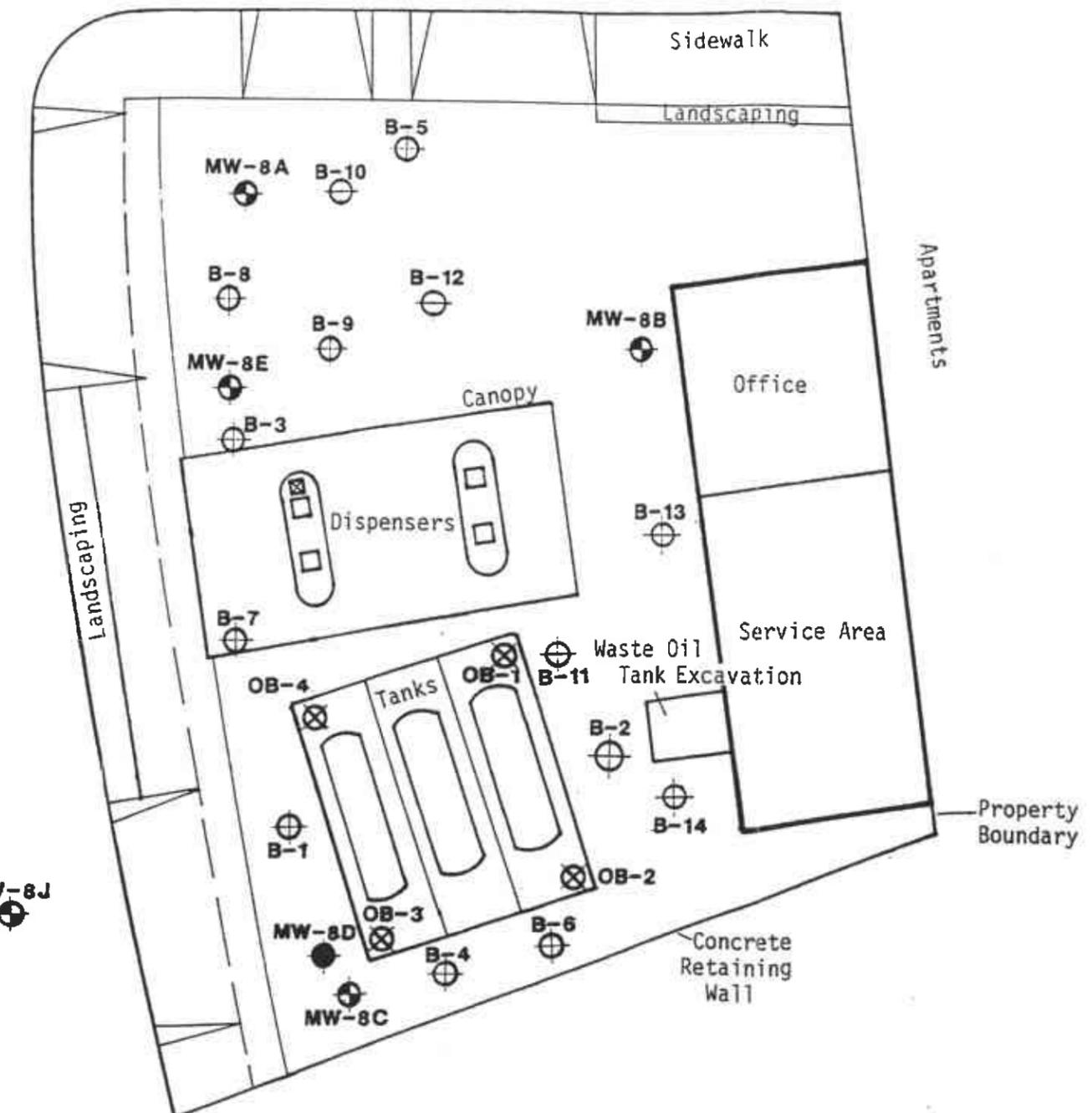
All were below detection limits on the soil samples submitted.

BTEX	EPA Test Method 8020
TPH(g)	EPA Test Method 5030
TPH(d)	EPA Test Method 3550
Oil and Grease	EPA Test Method 5520 D + F
Chlorinated Hydrocarbons	EPA Test Method 8010

EUCLID AVENUE

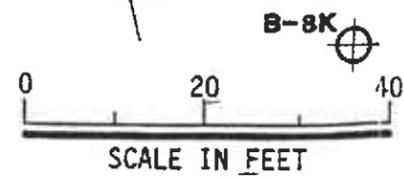


GRAND AVENUE



LEGEND

- Monitoring well
- Observation well
- Soil boring
- Decommissioned monitoring well
- Bench mark (HLA datum el.=100 feet)



Harding Lawson Associates
 Engineering and
 Environmental Services

DRAWN: YC
 JOB NUMBER: 4167,352.03

Site Plan
 Exxon Service Station
 500 Grand Avenue
 Oakland, California

APPROVED: *RS*

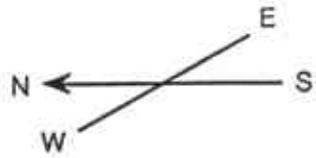
DATE: 10/90

REVISED DATE

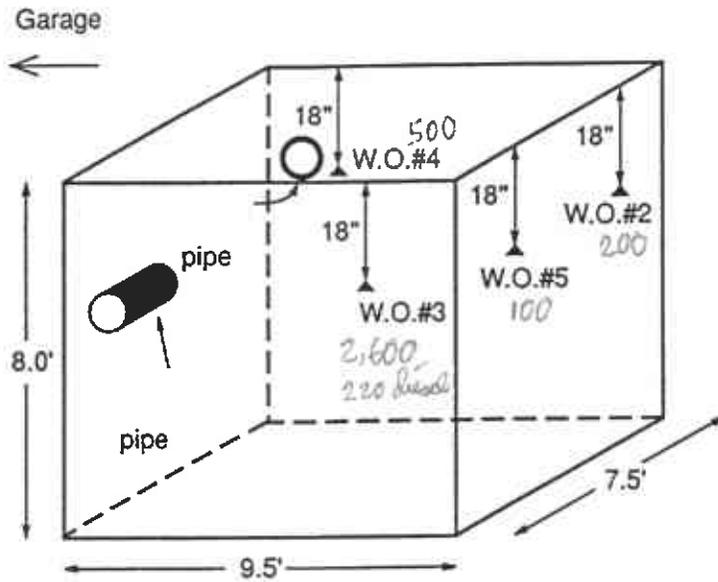
PLATE

1

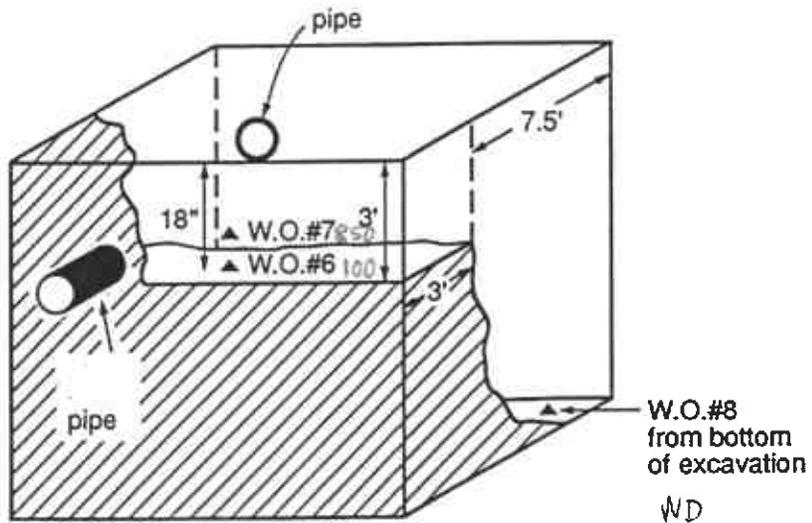
O & G, ppm



September 25, 1990
Excavation



October 3, 1990
Excavation



LEGEND

▲ approximate soil sample location
diagram not drawn to scale

West wall



Harding Lawson Associates
Engineering and
Environmental Services

Excavation Diagram & Sample Locations

Exxon Tank Pull
500 Grand Avenue
Oakland, California

PLATE

2

DRAWN
S. Patel

JOB NUMBER
4167,352.03

APPROVED
[Signature]

DATE
10/90

REVISED DATE



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

HARDING ASSOC.
JSH
OCT 16 1990

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

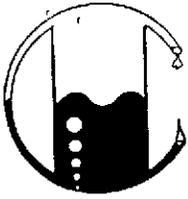
Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number	Sample Description	Detection Limit	WATER
			Total Petroleum Hydrocarbons as Diesel
		ppb	ppb
	Project No: 4167352.03 EXXON - 500 Grand Ave.		
J090191	W.O.#1	50	1,400

Note: Analysis was performed using EPA methods 3550 and
TPH LUFT

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

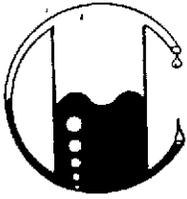
Sample Number	Sample Description	Detection Limit	WATER
			Gravimetric Waste Oil as Petroleum Oil
		ppb	ppb
	EXXON - 500 Grand Ave. Project No: 4167352.03		
J090191	W.O.T.#1	50	70

QA/QC: Freon Blank is none detected.

Note: 5520 D & F

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled : 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090191

Sample Description

Project # 4167352.03
EXXON - 500 Grand Ave.
W.O.T.#1 WATER

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

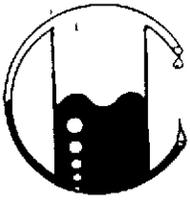
results in ppb

Benzene.....	--	trans-1,2-Dichloroethane....	<1
Bromomethane.....	<1	1,2-Dichloropropane.....	<1
Bromodichloromethane.....	<1	1,3-Dichloropropene.....	<1
Bromoform.....	<1	Ethylbenzene.....	--
Carbon tetrachloride.....	<1	Methylene chloride.....	<1
Chlorobenzene.....	<1	1,1,2,2-Tetrachloroethane...	<1
Chloroethane.....	<1	Tetrachloroethane.....	<1
2-Chloroethylvinyl ether.....	<1	1,1,1-Trichloroethane.....	<1
Chloroform.....	<1	1,1,2-Trichloroethane.....	<1
Chloromethane.....	<1	Trichloroethene.....	<1
Dibromochloromethane.....	<1	Toluene.....	--
1,1-Dichloroethane.....	<1	Vinyl chloride.....	<1
1,2-Dichloroethane.....	<1	1,2-Dichlorobenzene.....	<1
1,1-Dichloroethene.....	<1	1,3-Dichlorobenzene.....	<1
		1,4-Dichlorobenzene.....	<1
		Total Xylenes.....	--

MOBILE CHEM LABS

Ronald G. Evans
Ronald G. Evans
Lab Director

NOTE: Analysis was performed using
method 8010



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

HARDING ASSOC.
JSH
OCT 2 1990

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090191

Sample Description

Job # 4167352.03
EXXON - 500 Grand Ave.
W.O.T.#1 WATER

ANALYSIS

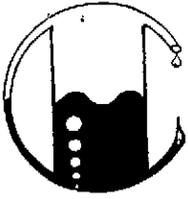
	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	1,900
Benzene	0.5	320
Toluene	0.5	180
Xylenes	0.5	300
Ethylbenzene	0.5	2.1

QA/QC: Sample blank is none detected.
Duplicate Deviation is 2.6%.

Note: Analysis was performed using EPA methods 5030 and TPH
LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS


Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090192

Sample Description

Job # 4167352.03
EXXON - 500 Grand Ave.
W.O.#2 SOIL

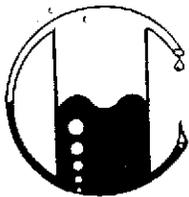
ANALYSIS

	<u>Detection Limit</u>	<u>Sample Results</u>
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.048
Toluene	0.005	<0.005
Xylenes	0.005	0.013
Ethylbenzene	0.005	0.007

Note: Analysis was performed using EPA methods 5030 and TPH
LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS


Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090193

Sample Description

Job # 4167352.03
EXXON - 500 Grand Ave.
W.O.#3 SOIL

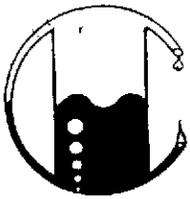
ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	15
Benzene	0.005	0.53
Toluene	0.005	0.06
Xylenes	0.005	1.5
Ethylbenzene	0.005	0.75

Note: Analysis was performed using EPA methods 5030 and TPH
LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090194

Sample Description

Job # 4167352.03
EXXON - 500 Grand Ave.
W.O.#4 SOIL

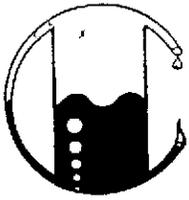
ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	1.9
Benzene	0.005	0.054
Toluene	0.005	0.012
Xylenes	0.005	0.29
Ethylbenzene	0.005	0.062

Note: Analysis was performed using EPA methods 5030 and TPH
LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090195

Sample Description

Job # 4167352.03
EXXON - 500 Grand Ave.
W.O.#5 SOIL

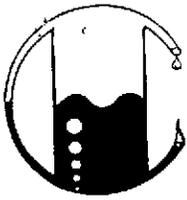
ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	0.017
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Note: Analysis was performed using EPA methods 5030 and TPH
LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS


Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number	Sample Description	Detection Limit	SOIL
			Gravimetric Waste Oil as Petroleum Oil
		ppm	ppm
EXXON - 500 Grand Ave. Project No: 4167352.03			
J090192	W.O.#2	50	200
J090193	W.O.#3	50	2,600
J090194	W.O.#4	50	500
J090195	W.O.#5	50	100
J090196	S.P.#1	50	2,000

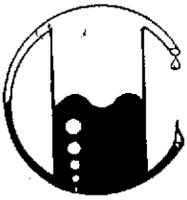
QA/QC: Freon Blank is none detected.
Blank Spike #1 Recovery is 94%.
Blank Spike Deviation is 3%.
Duplicate Deviation for J090193 is 23%

Note: 5520 D & F

MOBILE CHEM LABS

Joyce A. Dishman

JG Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

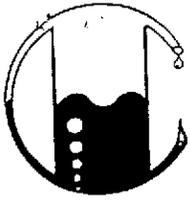
Sample Number	Sample Description	Detection Limit	SOIL
			Total Petroleum Hydrocarbons as Diesel
		ppm	ppm
Project No: 4167352.03 EXXON - 500 Grand Ave.			
J090192	W.O.#2	5.0	<5.0
J090193	W.O.#3	5.0	220
J090194	W.O.#4	5.0	17
J090195	W.O.#5	5.0	21
J090196	S.P.#1	5.0	34

QA/QC: Sample blank is none detected.
Duplicate Deviation on J090193 is 5.0%.

Note: Analysis was performed using EPA methods 3550 and
TPH LUFT

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled : 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090192

Sample Description

Project # 4167352.03
EXXON - 500 Grand Ave.
W.O.#2 SOIL

PRIORITY POLLUTANTS

----- VOLATILE ORGANIC COMPOUNDS -----

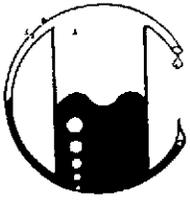
results in ppb

Benzene.....	--	trans-1,2-Dichloroethane....	<5
Bromomethane.....	<5	1,2-Dichloropropane.....	<5
Bromodichloromethane.....	<5	1,3-Dichloropropene.....	<5
Bromoform.....	<5	Ethylbenzene.....	--
Carbon tetrachloride.....	<5	Methylene chloride.....	<5
Chlorobenzene.....	<5	1,1,2,2-Tetrachloroethane...	<5
Chloroethane.....	<5	Tetrachloroethane.....	<5
2-Chloroethylvinyl ether.....	<5	1,1,1-Trichloroethane.....	<5
Chloroform.....	<5	1,1,2-Trichloroethane.....	<5
Chloromethane.....	<5	Trichloroethene.....	<5
Dibromochloromethane.....	<5	Toluene.....	--
1,1-Dichloroethane.....	<5	Vinyl chloride.....	<5
1,2-Dichloroethane.....	<5	1,2-Dichlorobenzene.....	<5
1,1-Dichloroethene.....	<5	1,3-Dichlorobenzene.....	<5
		1,4-Dichlorobenzene.....	<5
		Total Xylenes.....	--

MOBILE CHEM LABS

Ronald G. Evans
Ronald G. Evans
Lab Director

NOTE: Analysis was performed using
method 8010



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled : 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090193

Sample Description

Project # 4167352.03
EXXON - 500 Grand Ave.
W.O.#3 SOIL

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

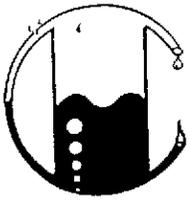
results in ppb

Benzene.....	--	trans-1,2-Dichloroethane....	<5
Bromomethane.....	<5	1,2-Dichloropropane.....	<5
Bromodichloromethane.....	<5	1,3-Dichloropropene.....	<5
Bromoform.....	<5	Ethylbenzene.....	--
Carbon tetrachloride.....	<5	Methylene chloride.....	<5
Chlorobenzene.....	<5	1,1,2,2-Tetrachloroethane...	<5
Chloroethane.....	<5	Tetrachloroethane.....	<5
2-Chloroethylvinyl ether.....	<5	1,1,1-Trichloroethane.....	<5
Chloroform.....	<5	1,1,2-Trichloroethane.....	<5
Chloromethane.....	<5	Trichloroethene.....	<5
Dibromochloromethane.....	<5	Toluene.....	--
1,1-Dichloroethane.....	<5	Vinyl chloride.....	<5
1,2-Dichloroethane.....	<5	1,2-Dichlorobenzene.....	<5
1,1-Dichloroethene.....	<5	1,3-Dichlorobenzene.....	<5
		1,4-Dichlorobenzene.....	<5
		Total Xylenes.....	--

MOBILE CHEM LABS

Ronald G. Evans
Ronald G. Evans
Lab Director

NOTE: Analysis was performed using
method 8010



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled : 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090194

Sample Description

Project # 4167352.03
EXXON - 500 Grand Ave.
W.O.#4 SOIL

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

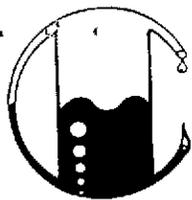
results in ppb

Benzene.....	--	trans-1,2-Dichloroethane....	<5
Bromomethane.....	<5	1,2-Dichloropropane.....	<5
Bromodichloromethane.....	<5	1,3-Dichloropropene.....	<5
Bromoform.....	<5	Ethylbenzene.....	--
Carbon tetrachloride.....	<5	Methylene chloride.....	<5
Chlorobenzene.....	<5	1,1,2,2-Tetrachloroethane...	<5
Chloroethane.....	<5	Tetrachloroethane.....	<5
2-Chloroethylvinyl ether.....	<5	1,1,1-Trichloroethane.....	<5
Chloroform.....	<5	1,1,2-Trichloroethane.....	<5
Chloromethane.....	<5	Trichloroethene.....	<5
Dibromochloromethane.....	<5	Toluene.....	--
1,1-Dichloroethane.....	<5	Vinyl chloride.....	<5
1,2-Dichloroethane.....	<5	1,2-Dichlorobenzene.....	<5
1,1-Dichloroethene.....	<5	1,3-Dichlorobenzene.....	<5
		1,4-Dichlorobenzene.....	<5
		Total Xylenes.....	--

MOBILE CHEM LABS


Ronald G. Evans
Lab Director

NOTE: Analysis was performed using
method 8010



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled : 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090195

Sample Description

Project # 4167352.03
EXXON - 500 Grand Ave.
W.O.#5 SOIL

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

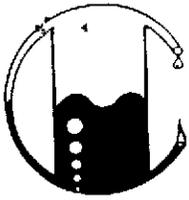
results in ppb

Benzene.....	--	trans-1,2-Dichloroethane....	<5
Bromomethane.....	<5	1,2-Dichloropropane.....	<5
Bromodichloromethane.....	<5	1,3-Dichloropropene.....	<5
Bromoform.....	<5	Ethylbenzene.....	--
Carbon tetrachloride.....	<5	Methylene chloride.....	<5
Chlorobenzene.....	<5	1,1,2,2-Tetrachloroethane...	<5
Chloroethane.....	<5	Tetrachloroethane.....	<5
2-Chloroethylvinyl ether.....	<5	1,1,1-Trichloroethane.....	<5
Chloroform.....	<5	1,1,2-Trichloroethane.....	<5
Chloromethane.....	<5	Trichloroethene.....	<5
Dibromochloromethane.....	<5	Toluene.....	--
1,1-Dichloroethane.....	<5	Vinyl chloride.....	<5
1,2-Dichloroethane.....	<5	1,2-Dichlorobenzene.....	<5
1,1-Dichloroethene.....	<5	1,3-Dichlorobenzene.....	<5
		1,4-Dichlorobenzene.....	<5
		Total Xylenes.....	--

MOBILE CHEM LABS

Ronald G. Evans
Ronald G. Evans
Lab Director

NOTE: Analysis was performed using
method 8010



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

Sample Number

J090196

Sample Description

Job # 4167352.03
EXXON - 500 Grand Ave.
S.P.#1 SOIL

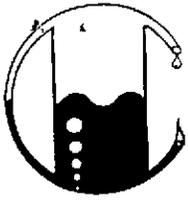
ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	3.4
Benzene	0.005	0.038
Toluene	0.005	0.025
Xylenes	0.005	0.34
Ethylbenzene	0.005	0.11

Note: Analysis was performed using EPA methods 5030 and TPH
LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 09-25-90
Date Received: 09-25-90
Date Reported: 09-25-90

TOTAL LEAD ANALYSIS

Sample Number	Sample Description	Detection Limit	SOIL
			RESULTS
		ppm	ppm
	Project # 4167352.03 EXXON - 500 Grand Ave.		
J090196	S.P.#1	0.1	66.5

Note: Analysis - EPA 7240

MOBILE CHEM LABS


Ronald G. Evans
Lab Director



Harding Lawson Associates
 1355 Willow Way, Suite 109
 Concord, California 94520
 415/687-9660
 Telecopy: 415/687-9673

24 HR
TURNAROUND

CHAIN OF CUSTODY FORM

Lab: Mobile Chem Lab

Samplers: Mike Brink

Job Number: 4167352.03

Name/Location: 500 Grand Ave (Exxon)

Project Manager: JS Hudson

Recorder: _____
 (Signature Required)

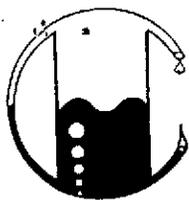
SOURCE CODE	MATRIX					#CONTAINERS & PRESERV.			SAMPLE NUMBER OR LAB NUMBER			DATE			
	Water	Sediment	Soil	Oil		Unpres.	H ₂ SO ₄	HNO ₃	Yr	Wk	Seq	Yr	Mo	Dy	Time
	UA	X					X (4 Vials)			W.O.T. #1			9	0	9
	X					X (2 liter)			W.O.T. #1						
			X						W.O. #2						
			X						W.O. #3						
			X						W.O. #4						
			X						W.O. #5						
			X						S.P. #1						

STATION DESCRIPTION/NOTES
water from tank area
soil, 18"
soil, 18"
soil, 18"
soil, 18"
Stockpile - PLEASE HOMOGENIZE

ANALYSIS REQUESTED									
EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	TPH (g) BTEX	TPH diesel + TPH waste oil	Oil + Grease (5520)	
X						X	X	X	
X						X	X	X	
						X	X	X	
						X	X	X	
						X	X	X	
						X	X	X	

Yr	LAB NUMBER		DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
	Wk	Seq				
						WOT #1 → W.O. #5
						BTEX + TPH (g)
						TPH (d) + TPH (w.o.)
						Char #C's (8010)
						Oil + Grease (5520)
						SP-1 TPH (g)
						TPH d + w.o.
						lead

CHAIN OF CUSTODY RECORD		
RELINQUISHED BY: (Signature) <i>Jeanne Steinhilber</i>	RECEIVED BY: (Signature) <i>Johnny McCord</i>	DATE/TIME 9/25 5:35 PM
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)
METHOD OF SHIPMENT		



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 10-03-90
Date Received: 10-03-90
Date Reported: 10-08-90

Sample Number

J100003

Sample Description

Job # 4167,352.03
500 Grand Avenue
WO-8 SOIL

ANALYSIS

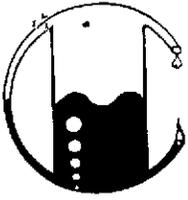
	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	0.016
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC: Blank is none detected
Duplicate Deviation is 6.7%
Spike Recovery is 90%

Note: Analysis was performed using EPA methods 5030 and TPH
LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 10-03-90
Date Received: 10-03-90
Date Reported: 10-03-90

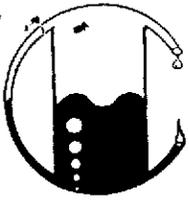
Sample Number	Sample Description	Detection Limit	SOIL
			Gravimetric Waste Oil as Petroleum Oil
		ppm	ppm
500 Grand Avenue Project No: 4167352.03			
J100001	W.O.-7	50	850
J100002	W.O.-6	50	100
J100003	W.O.-8	50	<50

QA/QC: Freon Blank is none detected.
Blank Spike Recovery is 99%.
Duplicate Deviation for J100001 is 17.6%

Note: 5520 D & F

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

HARDING ASSOC.
JSH
OCT 18 1990

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: J.S. Hudson
Project Manager

Date Sampled: 10-03-90
Date Received: 10-03-90
Date Reported: 10-08-90

Sample Number	Sample Description	Detection Limit	SOIL Total Petroleum Hydrocarbons as Diesel
		ppm	ppm

Project No: 4167352.03
500 Grand Ave.

J100003	W.O.#1 8	5.0	<5.0
---------	-------------	-----	------

QA/QC: Sample blank was none detected
Spike Recovery was 102%
Duplicate Deviation was 0.0%

Note: Analysis was performed using EPA methods 3550 and
TPH LUFT

MOBILE CHEM LABS

Ronald G. Evans
Lab Director