Mobil Oil Corporation

3225 GALLOWS ROAD
FAIRFAX, VIRGINIA 22037-0001

April 14, 1992

Mr. Paul Smith
Alameda County Environmental Health Dept.
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

FORMER MOBIL STATION 04-E6A
100 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Dear Mr. Smith:

Attached for your information and review is the Quarterly Groundwater Monitoring and Sampling Report, prepared by Alton Geoscience for the above location.

As indicated by the lab results, benzene ranges from non-detect (MW-2) to 3.9 ppb (MW-1). TPH-G ranges from non-detect (MW-1 and MW-2) to 140 ppb (MW-1).

Groundwater sample analysis suggests that TPH-G and benzene concentrations detected in MW-1, which is upgradient from any potential on-site source, may be reflective of an offsite source. If this trend continues, research into historical releases upgradient from MW-1 may be necessary.

To date, Mobil has spent $39,650 for environmental activities.

Should you have any questions, please call me at 1-800-227-0707 extension 5316.

Sincerely,

Michele A. Fear

Michele A. Fear
Environmental Monitoring
Analyst

enclosure:

cc: Mr. Donald Dalke - RWQCB- San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

D. J. Hill - Mobil Environmental Field Supervisor
J. G. Schoepf - Mobil Environmental Monitoring Supervisor

Environmental Awareness

QUARTERLY GROUND WATER MONITORING AND SAMPLING REPORT

for

Former Mobil Station 04-ESA
100 MacArthur Boulevard
Oakland, California

Project No. 30- 0063-02

Prepared for:

Mobil Oil Corporation
3800 West Alameda Avenue, Suite 2000
Burbank, California 91505-4331

Prepared by:

Alton Geoscience
5870 Stoneridge Drive, Suite 6
Pleasanton, California 94588

April 9, 1992

QUARTERLY GROUND WATER MONITORING AND SAMPLING REPORT

Former Mobil Station 04-E6A
100 MacArthur Boulevard
Oakland, California

April 9, 1992

INTRODUCTION

This report presents the results of February 1992 quarterly ground water monitoring and sampling performed by Alton Geoscience at former Mobil Station 04-E6A, 100 MacArthur Boulevard, Oakland, California. A site vicinity map is shown in Figure 1.

PROJECT ACTIVITIES

In September 1988, a 280-gallon steel waste oil tank was removed and replaced with a 1,000-gallon double-wall fiberglass waste oil tank. Sheen was observed on the ground water in the tank cavity and total oil and grease (TOG) was detected in a soil sample collected from the tank backfill material. Based on these findings, the Alameda County Department of Environmental Health (ACDEH) requested that a site assessment be performed.

Mobil Oil Corporation retained Alton Geoscience to complete a site investigation to assess the lateral and vertical extent of hydrocarbon-affected soil and/or ground water at the site. The investigation included drilling of three soil borings and installation of three ground water monitoring wells (MW-1, MW-2, MW-3). Soil samples collected from the borings did not contain total petroleum hydrocarbons as gasoline (TPH-G), TOG, or HVOCs above analytical detection limits. A ground water sample collected from MW-1 detected concentrations of benzene, toluene, and 1,2-Dichloroethane. Ground water samples from MW-2 contained concentrations of benzene (for details, refer to the Alton Geoscience report dated December 20, 1989). Based on the findings of this investigation, a quarterly ground water monitoring and sampling program was initiated.

FIELD PROCEDURES

On February 24, 1992, Alton Geoscience monitored and sampled MW-1, MW-2, and MW-3. Alton Geoscience ground water monitoring and sampling protocol is presented in Appendix A. The ground water field survey forms presenting field measurements and observations are in Appendix B.

Ground water samples were analyzed for TPH-G; benzene, toluene, ethylbenzene, and total xylenes (BTEX); and HVOCs. Ground water samples obtained from MW-1 were also analyzed for total petroleum hydrocarbons as diesel (TPH-D), and TOG. The official laboratory reports and chain of custody record are included in Appendix C.

DISCUSSION OF RESULTS

Results of the ground water monitoring and laboratory analysis of water samples are summarized in Table 1. A ground water elevation contour map, based on depth to ground water measurements collected on February 24, 1992, is presented in Figure 2. Concentrations of petroleum hydrocarbons detected in the ground water samples are shown in Figure 3.

Results of this ground water monitoring and sampling event and laboratory analysis indicated the following:

- The average depth to ground water is 14.2 feet with an average hydraulic gradient of 0.063 foot/foot to the southwest.
- Measurable or trace free product was not observed in ground water during this or previous monitoring events.
- TPH-G and benzene were not detected in ground water from MW-2 during this sampling event at or above reported limits stipulated by the RWQCB (50 ppb TPH and 0.5 ppb benzene). These results are consistent with historical trends (See Table 1).
- THP-G was not detected in MW-3; however, 0.65 ppb benzene was reported during this sampling event.
- The only HVOC detected in the ground water samples was 1,2-Dichloroethane in MW-1 (1.7 ppb) and MW-2 (16 ppb).
- MW-1, upgradient well, remains the only well with ground water containing detectable TPH-G (140 ppb), with 3.9 ppb benzene.
- The laboratory reported that the presence of TPH in MW-1 (100 ppb) was not identified as diesel.
- TOG was not present in the ground water sample from MW-1.

CONCLUSIONS

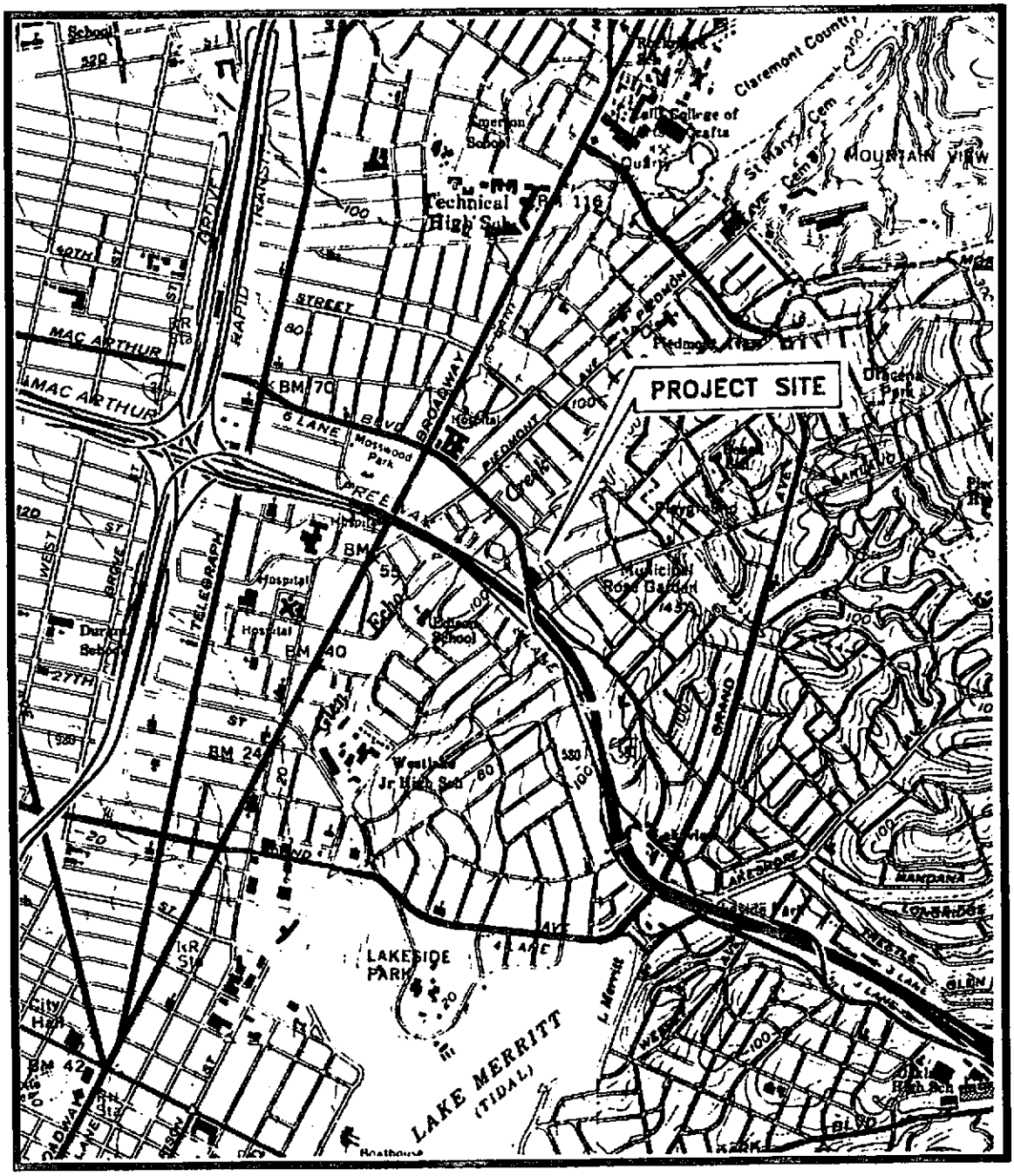
- The hydraulic gradient at the site is relatively steep to the southwest toward Lake Merritt.

- Dissolved-phase hydrocarbons in the ground water onsite appear to be limited to the northeast corner of the property, upgradient from the underground tank area and pump islands. This suggests that the contaminant plume may have originated from an offsite source, assuming tidal effects do not substantially alter the relatively consistent gradient.

ALTON GEOSCIENCE

Peter C. Lange, R.G. 5089
Associate, Northern California Operations

CL/PCL
063Q3.WP



Source: U.S.G.S. Map,
Oakland East & West
Quadrangles, California
7.5 Minute Series (Topographic)

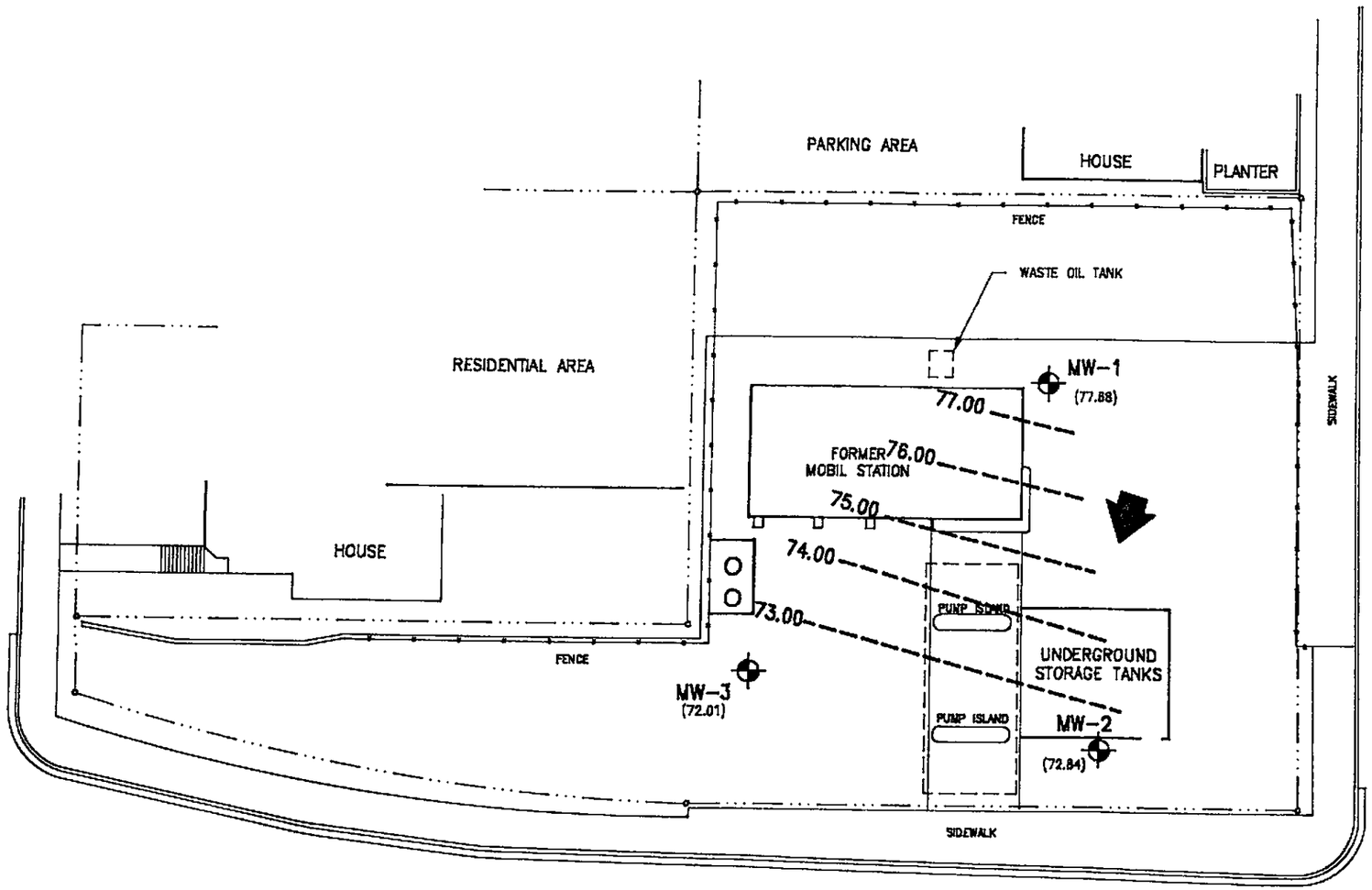
SITE VICINITY MAP

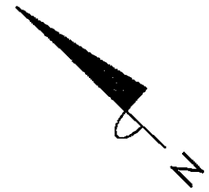
MOBIL STATION 04-E6A
100 MacARTHUR BOULEVARD
OAKLAND, CALIFORNIA

ALTON GEOSCIENCE
Pleasanton, California

PROJECT NO. 30-0063

FIGURE 1





0 15 30

APPROXIMATE SCALE IN FEET

LEGEND:

- MONITORING WELL
- (77.88) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 74.00 GROUND WATER ELEVATION CONTOUR LINE
- GENERAL DIRECTION OF GROUND WATER GRADIENT

NOTE:

1. DATA BASED ON GROUND WATER LEVEL MEASUREMENTS OBTAINED ON FEBRUARY 24, 1992.
2. CONTOUR INTERVAL = 1.0 FOOT.
3. GRADIENT = 0.083 FOOT/FOOT SOUTHWEST.

FIGURE 2: GROUND WATER ELEVATION CONTOUR MAP

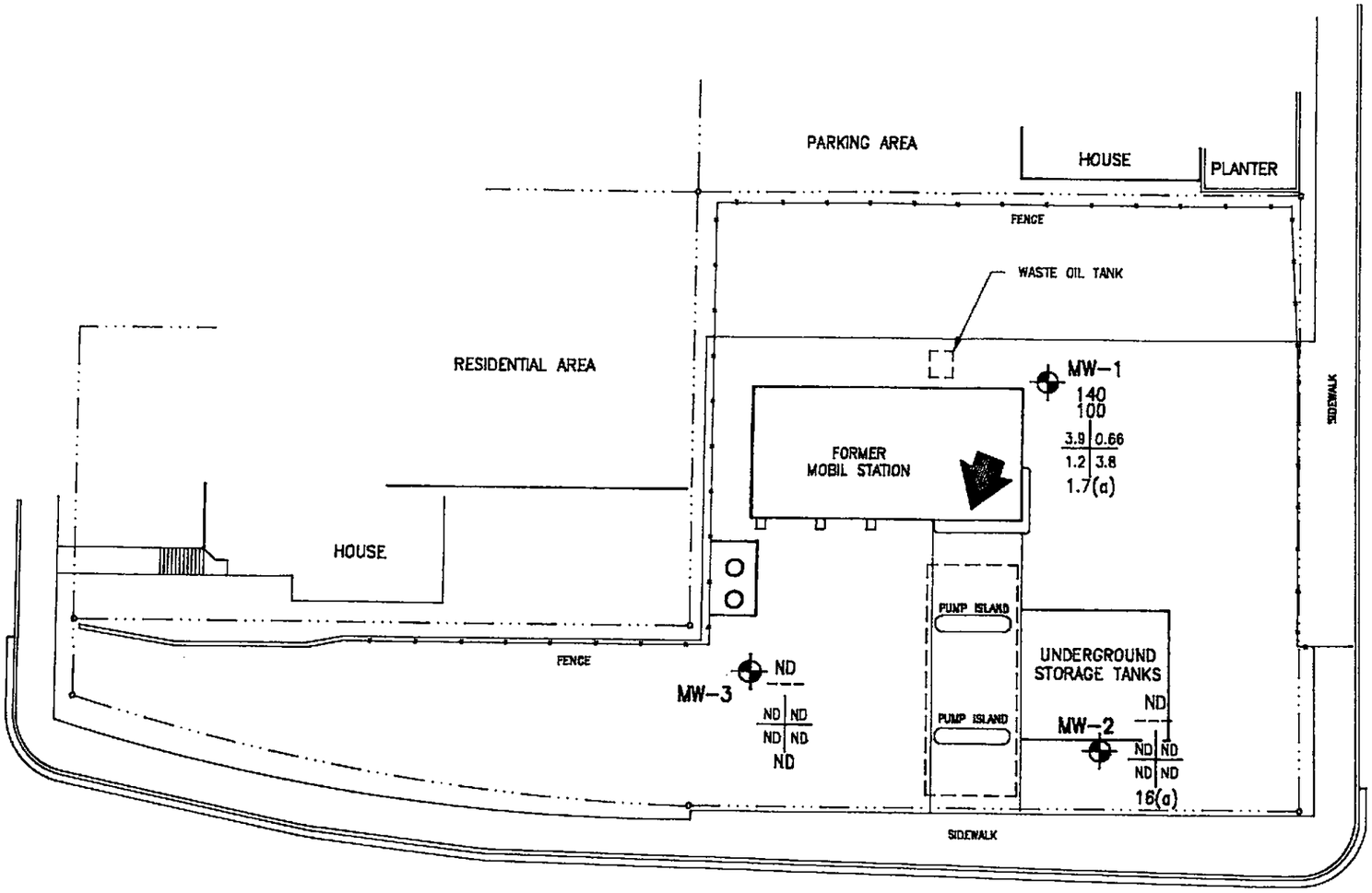
FORMER MOBIL STATION 04-E6A
100 MAC ARTHUR BLVD.
OAKLAND, CALIFORNIA

ALTON GEOSCIENCE
Pleasanton, California

PROJECT NO. 30-0063-02

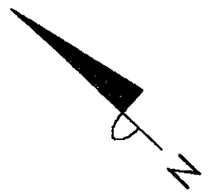
63-2Q

4/8/92



PROJECT NO. 30-0063-02

63-2Q



0 15 30

APPROXIMATE SCALE IN FEET

LEGEND:

MONITORING WELL

ND — NOT DETECTED AT OR ABOVE METHOD DETECTION LIMITS

TPH-G
TPH-D
B | T
E | X
HVOCs

TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE IN PARTS/BILLION (ppb)
TPH-D = TOTAL PETROLEUM HYDROCARBONS AS DIESEL IN PARTS/BILLION (ppb)
B = BENZENE IN ppb
T = TOLUENE IN ppb
E = ETHYLBENZENE IN ppb
X = TOTAL XYLENES IN ppb
HVOCs = (a)-1,2 DICHLOROETHANE

GENERAL DIRECTION OF GROUND WATER GRADIENT

FIGURE 3: CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUND WATER (ppb)
(FEBRUARY 24, 1992)

FORMER MOBIL STATION 04-E6A
100 MAC ARTHUR BLVD.
OAKLAND, CALIFORNIA

ALTON GEOSCIENCE
Pleasanton, California

4/8/92

Table 1
Summary of Results of Ground Water Sampling
Former Mobil Station 04-E6A
100 MacArthur Boulevard
Oakland, California

30-0063-02

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TPH-D	HVOC	TOG	B	T	E	X	LAB
MW-1	11/04/89	90.20	13.21	76.99	ND<500	ND<50	0.9(a)	ND<5000	3.4	0.6	ND<0.3	ND<0.3	SAL
MW-1	11/11/89	90.20	13.32	76.88	---	---	---	---	---	---	---	---	NA
MW-1	04/03/90	90.20	12.46	77.74	820	---	---	---	64	1.9	23	34	AI
MW-1	07/30/90	90.20	12.92	77.28	190	ND<50	ND*	ND<5000	11	ND<5.0	ND<5.0	ND<5.0	AI
MW-1	11/20/90	90.20	14.08	76.12	50	79	4.0(a)	ND<5000	2.4	ND<0.3	ND<0.3	ND<0.3	SAL
MW-1	03/01/91	90.20	13.61	76.59	ND<100	ND<1000	ND*	14000	0.9	ND<0.3	ND<0.3	0.3	SAL
MW-1	08/19/91	90.20	15.74	74.46	370	ND<50	1.4(a)	ND<5000	35	0.73	6.4	5.6	SA
MW-1	11/13/91	90.20	14.08	76.12	60	ND<50	1.0(a)	ND<5000	0.68	ND<0.3	ND<0.3	ND<0.3	SA
MW-1	02/24/92	90.20	12.52	77.68	140	100+	1.7(a)	ND<5000	3.9	0.66	1.2	3.8	SA
MW-2	11/04/89	87.91	15.84	72.07	ND<500	---	---	---	6.5	ND<0.3	ND<0.3	ND<0.3	SAL
MW-2	11/11/89	87.91	14.75	73.16	---	---	---	---	---	---	---	---	NA
MW-2	04/03/90	87.91	15.25	72.66	ND<100	---	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	AI
MW-2	07/30/90	87.91	15.59	72.32	61	---	---	---	6.5	ND<0.5	ND<0.5	ND<0.5	AI
MW-2	11/20/90	87.91	17.81	70.10	ND<50	---	---	---	0.3	ND<0.3	ND<0.3	ND<0.3	SAL
MW-2	03/01/91	87.91	17.11	70.80	ND<100	---	4.0(a)	---	0.4	ND<0.3	ND<0.3	ND<0.3	SAL
MW-2	08/19/91	87.91	17.97	69.94	ND<30	---	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	SA
MW-2	11/13/91	87.91	16.76	71.15	38	---	---	---	0.32	ND<0.3	ND<0.3	ND<0.3	SA
MW-2	02/24/92	87.91	15.07	72.84	ND<50	---	16(a)	---	ND<0.50	ND<0.50	ND<0.50	0.58	SA
MW-3	11/04/89	87.02	15.40	71.62	ND<500	---	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	SAL
MW-3	11/11/89	87.02	14.10	72.92	---	---	---	---	---	---	---	---	NA
MW-3	04/03/90	87.02	13.9	73.12	ND<100	---	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	AI
MW-3	07/30/90	87.02	13.77	73.25	ND<50	---	---	ND<5000	ND<0.5	ND<0.5	ND<0.5	ND<0.5	AI
MW-3	11/20/90	87.02	14.67	72.35	ND<50	---	---	---	0.3	0.8	0.4	1.5	SAL
MW-3	03/01/91	87.02	15.22	71.80	ND<100	---	ND*	---	0.4	ND<0.3	ND<0.3	ND<0.3	SAL
MW-3	08/19/91	87.02	13.15	73.87	ND<30	---	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	SA
MW-3	11/13/91	87.02	15.66	71.36	ND<30	---	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	SA
MW-3	02/24/92	87.02	15.01	72.01	ND<50	---	ND*	---	0.65	1.4	0.66	4.4	SA

Table 1
Summary of Results of Ground Water Sampling
Former Mobil Station 04-E6A
100 MacArthur Boulevard
Oakland, California

30-0063-02

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	TPH-D	HVOC	TOG	B	T	E	X	LAB

EXPLANATION OF ABBREVIATIONS:

TPH-G	:Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)
TPH-D	:Total Petroleum Hydrocarbons as Diesel (EPA method 8015 modified)
TOG	:Total Oil & Grease (EPA modified 5520 B&F)
HVOCs	:Halogenated Volatile Organic Compounds (EPA method 8010)
B	:Benzene (EPA method 8020)
T	:Toluene (EPA method 8020)
E	:Ethylbenzene (EPA method 8020)
X	:Xylenes (EPA method 8020)

ND<	:Not Detected at method detection limit shown
ND*	:Not Detected at various detection limits.
NA	:Not Applicable/Not Available
---	:Not Analyzed
AI	:Anametrix Inc.
SAL	:Superior Analytical Laboratroy
SA	:Sequoia Analytical Laboratory
a:	:1, 2-Dichloroethane

Note:

1. Top of casing and ground water elevations, since November 4, 1989, are measured from top of well casing in feet above mean sea level (NGVD-1929).

+ = Ground water sample does not appear to contain gasoline.

APPENDIX A

GENERAL PROCEDURES FOR GROUND WATER MONITORING WELL SAMPLING

ALTON GEOSCIENCE

GENERAL FIELD PROCEDURES
FOR
GROUND WATER MONITORING WELL SAMPLING

Ground water monitoring and sampling were performed in accordance with the requirements and procedures of the Regional Water Quality Control Board (RWQCB). Prior to purging and sampling each well, total well depth and depth to ground water was measured to the nearest 0.01 foot from a reference mark at the top of each well casing using an electronic sounder.

Before sample collection, the well was purged of the required well casing volumes or until stabilization of pH, temperature, and conductivity was achieved. Purging was accomplished using either a clean bailer or pump.

Ground water samples were collected using a disposable bailer, and then carefully transferred into the appropriate clean, laboratory supplied glass containers. The sampler wore nitrile gloves at all times during purging and well sampling.

Ground water samples were handled and preserved in accordance with Regional Water Quality Control Board guidelines. The samples were clearly labeled with the well number, site identification, date and time of sample collection, sampler's initials, and transported to a California-certified laboratory following proper preservation and chain of custody protocol.

The water generated from the development process was placed into labeled 55-gallon drums, pending laboratory results of the ground water samples, to determine the appropriate disposal method. Disposal of purged water was in accordance with applicable regulatory requirements.

APPENDIX B

GROUND WATER MONITORING AND SAMPLING FIELD FORMS

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # MW-1 PROJECT# 30-0063-02 LOCATION Oakland DATE 2-24-92

SAMPLING TEAM JON VAIL SAMPLING METHOD: BAILER ___ PUMP ✓

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER ✓
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 12.52 ft

TOTAL DEPTH 32.42 ft

HT. WATER COL 19.9 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 12.9 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 39.0 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
78.0	1.69	6.5	15:00	Clear	0-12
76.7	1.60	7.3	15:08	Clear	12-29

ACTUAL VOLUME PURGED 29 /gal

Purge 1500
Sample 1615

COMMENTS: Pumped well dry at 15:10 after 29 gallons.
DTW = 13.72 at 16:03 over 80% recharge so I sampled at this time.

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # MW-2 PROJECT# 30-0063-02 LOCATION Oakland DATE 2-24-92

SAMPLING TEAM JON VAIL SAMPLING METHOD: BAILER ___ PUMP ✓

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER ___
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 15.07 ft

TOTAL DEPTH 32.36 ft

HT. WATER COL 17.29 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 11.2 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 33.75 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
72.3	1.46	6.8	1438	Clear	0-11
73.2	1.39	7.5	1440	Clear	11-15
				ACTUAL VOLUME PURGED	15 /gal

Purge 1436
Sample 1639

COMMENTS: Pumped well dry at 1440 after 15 gallons
DTW = 19.66 at 16:00 ~73% recharge
DTW = 18.63 at 16:36 over 80% - Ready to sample

ALTON GEOSCIENCE, INC.
Water Sampling Field Survey

WELL # MW-3 PROJECT# 30-0063-02 LOCATION Oakland DATE 2-24-92

SAMPLING TEAM JON VAIL SAMPLING METHOD: BAILER___ PUMP ✓

DECONTAMINATION METHOD: TRIPLE RINSE W/TSP AND DEIONIZED WATER ✓
STEAM CLEAN ___

WELL DATA:

DEPTH TO WATER 15.01 ft

TOTAL DEPTH 32.05 ft

HT. WATER COL 17.04 ft

CONVERSION	
diam	gal/ft
2 in	X0.16
3 in	X0.36
4 in	X0.65
6 in	X1.44

Volume of Water Column 11.1 gal

Volumes to Purge X 3 Vol

Total Volume to Purge 33.5 gal

CHEMICAL DATA:

T (F)	SC/umhos	pH	Time	Comments	Volume (gal)
75.0	.81	6.8	14:08	Clear	0-11
72.3	.86	8.0	14:15	Clear	11-20
73.8	1.05	8.0	14:25	Hazy to Clear	20-22
			15:25	Hazy	22-26
				ACTUAL VOLUME PURGED	26 /gal

Purge 1400
Sample 1630

COMMENTS: Pumped well dry at 14:25 after 22 gallons.
Came back after going to pump the other wells at
15:25 and pumped another 4 gallons.
Then remembered to use 2 hour/80% recharge rule.
DTW = 30.86 at 15:55 ~40% recharge
DTW = 30.30 at 16:25 less than 50% recharge ∴ sampled after
2 hours.

APPENDIX C

OFFICIAL LABORATORY RESULTS
AND
CHAIN OF CUSTODY RECORD

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Alton Geoscience	Client Project ID:	Mobil #04-E6A/ 30-0063-02	Sampled: Feb 24, 1992
5870 Stoneridge Drive, Suite 6	Matrix Descript:	Water	Received: Feb 25, 1992
Pleasanton, CA 94588	Analysis Method:	EPA 5030/8015/8020	Analyzed: Feb 26, 1992
Attention: Tim Quane	First Sample #:	202-0936	Reported: Mar 2, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
202-0936	MW-3	N.D.	0.65	1.4	0.66	4.4
202-0937	MW-2	N.D.	N.D.	N.D.	N.D.	0.58
202-0938	MW-1	140	3.9	0.66	1.2	3.8
Detection Limits:		**50**	**0.50**	**0.50**	**0.50**	**0.50**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Alton Geoscience	Client Project ID:	Mobil #04-E6A/ 30-0063-02	Sampled:	Feb 24, 1992
5870 Stoneridge Drive, Suite 6	Matrix Descript:	Water	Received:	Feb 25, 1992
Pleasanton, CA 94588	Analysis Method:	EPA 3510/8015	Extracted:	Feb 28, 1992
Attention: Tim Quane	First Sample #:	202-0938	Analyzed:	Feb 28, 1992
			Reported:	Mar 2, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons µg/L (ppb)
202-0938	MW-1*	100

Detection Limits:	50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

Please Note: * The above sample does not appear to contain diesel.

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Alton Geoscience	Client Project ID:	Mobil #04-E6A/ 30-0063-02	Sampled: Feb 24, 1992
5870 Stoneridge Drive, Suite 6	Matrix Descript:	Water	Received: Feb 25, 1992
Pleasanton, CA 94588	Analysis Method:	SM 5520 B&F (Gravimetric)	Extracted: Feb 25, 1992
Attention: Tim Quane	First Sample #:	202-0938	Analyzed: Feb 27, 1992
			Reported: Mar 2, 1992

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
202-0938	MW-1	N.D.

Detection Limits:	5.0

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Alton Geoscience	Client Project ID:	Mobil #04-E6A/ 30-0063-02	Sampled:	Feb 24, 1992
5870 Stoneridge Drive, Suite 6	Sample Descript:	Water, MW-3	Received:	Feb 25, 1992
Pleasanton, CA 94588	Analysis Method:	EPA 5030/8010	Analyzed:	Feb 26, 1992
Attention: Tim Quane	Lab Number:	202-0936	Reported:	Mar 2, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	0.50	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	0.50	N.D.
2-Chloroethylvinyl ether	0.50	N.D.
Chloroform	0.50	N.D.
Chloromethane	0.50	N.D.
Dibromochloromethane	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Alton Geoscience	Client Project ID:	Mobil #04-E6A/ 30-0063-02	Sampled:	Feb 24, 1992
5870 Stoneridge Drive, Suite 6	Sample Descript:	Water, MW-2	Received:	Feb 25, 1992
Pleasanton, CA 94588	Analysis Method:	EPA 5030/8010	Analyzed:	Feb 26, 1992
Attention: Tim Quane	Lab Number:	202-0937	Reported:	Mar 2, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	0.50	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	0.50	N.D.
2-Chloroethylvinyl ether	0.50	N.D.
Chloroform	0.50	N.D.
Chloromethane	0.50	N.D.
Dibromochloromethane	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	16
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

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Alton Geoscience	Client Project ID:	Mobil #04-E6A/ 30-0063-02	Sampled:	Feb 24, 1992
5870 Stoneridge Drive, Suite 6	Sample Descript:	Water, MW-1	Received:	Feb 25, 1992
Pleasanton, CA 94588	Analysis Method:	EPA 5030/8010	Analyzed:	Feb 27, 1992
Attention: Tim Quane	Lab Number:	202-0938	Reported:	Mar 2, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	0.50	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	0.50	N.D.
2-Chloroethylvinyl ether	0.50	N.D.
Chloroform	0.50	N.D.
Chloromethane	0.50	N.D.
Dibromochloromethane	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	1.7
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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Alton Geoscience
5870 Stoneridge Drive, Suite 6
Pleasanton, CA 94588
Attention: Tim Quane

Client Project ID: Mobil #04-E6A/ 30-0063-02

QC Sample Group: 2020936-938

Reported: Mar 2, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Diesel	Oil and Grease
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA8015	SM5520
Analyst:	J.F.	J.F.	J.F.	J.F.	A. Tuzon	D. Newcomb
Reporting Units:	ppm	ppm	ppm	ppm	ppm	mg/L
Date Analyzed:	Feb 26, 1992	Feb 26, 1992	Feb 26, 1992	Feb 26, 1992	Feb 28, 1992	Feb 25, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.40	0.40	0.40	1.2	10	100
Conc. Matrix Spike:	0.42	0.44	0.46	1.2	6.4	96
Matrix Spike % Recovery:	105	110	115	100	64	96
Conc. Matrix Spike Dup.:	0.41	0.45	0.46	1.2	6.1	95
Matrix Spike Duplicate % Recovery:	102	112	115	100	61	95
Relative % Difference:	2.4	2.2	0.0	0.0	5.4	1.0

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

% Recovery: $\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$

SEQUOIA ANALYTICAL

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Alton Geoscience
5870 Stoneridge Drive, Suite 6
Pleasanton, CA 94588
Attention: Tim Quane

Client Project ID: Mobil #04-E6A/ 30-0063-02

QC Sample Group: 2020936-938

Reported: Mar 2, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	M. Nguyen	M. Nguyen	M. Nguyen
Reporting Units:	ug/L	ug/L	ug/L
Date Analyzed:	Feb 26, 1992	Feb 26, 1992	Feb 26, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10
Conc. Matrix Spike:	8.0	9.5	10
Matrix Spike % Recovery:	80	95	100
Conc. Matrix Spike Dup.:	9.1	10	10
Matrix Spike Duplicate % Recovery:	91	100	100
Relative % Difference:	13	5.1	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}}$	x 100
Relative % Difference:	$\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}}$	x 100

ALTON GEOSCIENCE
1000 BURNETT ST., #140
CONCORD, CA 94520 (415) 682-1582

CHAIN of CUSTODY RECORD

PAGE 1 of 1

DATE: 2-24-92
RESULTS DUE BY: 2-28-92

PROJECT NUMBER: 30-0063-02
PROJECT NAME AND ADDRESS: Former Mobil, 100 MacArthur Blvd, Oakland
~~10-SS~~ 10-EGA
PROJECT MANAGER: Tim Quane
SAMPLER'S SIGNATURE:
LABORATORY: Sequoia

REMARKS OR SPECIAL INSTRUCTIONS:

NOTE: PLEASE INDICATE VERBAL REQUESTS FOR ADDITIONAL ANALYSES IN THIS BOX.

SAMPLE NUMBER	SAMPLE DATE/TIME	LOCATION/ DESCRIPTION	SAMPLE MATERIAL	SAMPLE TYPE: GRAB	SAMPLE TYPE: COMP.	NUMBER OF CONTAINERS	SAMPLE PREP. 3510: SOLV. EXTR.	SAMPLE PREP. 3810: HEAD SPACE	SAMPLE PREP. 5030: PURGE & TRAP	SOIL ANALYSIS 418.1: TPHC (IR)	SOIL ANALYSIS 8010: HALOCARBONS	SOIL ANALYSIS 8020: BTXE	SOIL ANALYSIS DHS METHOD: TPHC (GC)	SOIL ANALYSIS 7420: TOTAL Pb	WATER ANALYSIS ~~418.1: TPHC (IR)~~ HVOC	WATER ANALYSIS 601: HALOCARBONS	WATER ANALYSIS ~~602~~: BTXE/TPH-Gas	WATER ANALYSIS DHS METHOD: TPHC (GC)	WATER ANALYSIS ~~7421: TOTAL Pb~~ TPH-D	WATER ANALYSIS Tot Oil & Grease
MW-3	2-24-92 16:30		Water	G		4		2020936AD							X		X			
MW-2	2-24-92 16:39		Water	G		4			↓	937AD					X		X			
MW-1	2-24-92 16:15		Water	G		6			↓	938AF					X		X		X	X

TOTAL NO. OF CONTAINERS: 14

5520 B+F

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME: 2-25-92/12:30	METHOD OF SHIPMENT:
RELINQUISHED BY:	RECEIVED BY:	DATE/TIME:	SHIPPED BY:
RELINQUISHED BY:	RECEIVED BY:	DATE/TIME:	COURIER: