

S710/683

January 15, 1998

Ms. Susan Hugo Alameda County Health Services 1131 Harbor Bay Parkway Alameda, California 94502-6700 Alton Project No. 41-0123

RE:

FORMER MOBIL STATION 99-105 6301 SAN PABLO AVENUE OAKLAND, CALIFORNIA

Dear Ms. Hugo:

Please find enclosed the Fourth Quarter 1997 Progress Report for the subject location prepared for Mobil Oil Corporation by Alton Geoscience. The contents of this report include:

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Quarterly Progress Report Summary Sheet

Exhibit 1: S

Sampling Schedule

Exhibit 2:

Groundwater Levels and Chemical Analysis Table

Exhibit 3:

Figures 1 through 3 (Vicinity Map, Groundwater Elevation Contour Map, Dissolved-

Phase Benzene Concentrations)

Exhibit 4:

Benzene vs. Groundwater Elevation Graphs

Exhibit 5:

Well Purging and Groundwater Sampling Protocol

Exhibit 6:

Monitoring Well Sampling Forms

Exhibit 7:

Analytical Laboratory Data Sheets

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Wester Dieneral Manifort

Exhibit 8:

Waste Disposal Manifest

If you have any questions regarding this report, please call Ms. Cherine Foutch, Mobil Engineer, at (510) 625-1173, or Mr. Ron Scheele, Alton Geoscience Geologist, at (510) 606-9150.

Sincerely,

**ALTON GEOSCIENCE** 

Kon Telul

Ron Scheele

Project Geologist

cc:

Ms. Cherine Foutch, Mobil Oil Corporation

Mr. Kevin Graves, California Regional Water Quality Control Board, San Francisco Bay Region

M:\...\99-105R06.QMS

#### **ALTON GEOSCIENCE**

### Quarterly Progress Report Summary Report Fourth Quarter 1997

#### Former Mobil Statio 99-105 6301 San Pablo Avenue Oakland, California

LOP: Alameda County Health Services

Number of ground water wells on-site:  Number of ground water wells off-site:  0 Ground Water Wells sampled: Ground Water Wells with Free Product:  Phase of Investigation: Vadose Zone:  N/A Ground Water Phase:  Monitor & Sai  HTE HYDROGEOLOGY:  Approximate depth to ground water below ground surface: Approximate elevation of potentiometric surface above Mean Sea Level: Average Increase/Decrease in ground water elevations since last sampling episode: Approximate flow direction and hydraulic gradient:  BROUND WATER CONTAMINATION (BENZENE MCL=1.0 ppb):  Wells containing free product: Number of wells with concentrations below MCL: Number of wells with concentrations at or above MCL: Number of wells with concentrations at or above MCL:  Nature of contamination:  Gasoline  ADDITIONAL INFORMATION:			This Page	1
Number of ground water wells off-site:    O   Ground Water Wells sampled: Ground Water Wells sampled: Ground Water Wells with Free Product:   Phase of Investigation: Vadose Zone: N/A Ground Water Phase: Monitor & Sail Monitor & Sai	ELD ACTIVITY:		Date Sampled:	9-Oct-97
Phase of Investigation: Vadose Zone:  N/A Ground Water Wells with Free Product:  Ground Water Phase:  Monitor & Sai  TTE HYDROGEOLOGY:  Approximate depth to ground water below ground surface:  Approximate elevation of potentiometric surface above Mean Sca Level:  Average Increase/Decrease in ground water elevations since last sampling episode:  Approximate flow direction and hydraulic gradient:  BROUND WATER CONTAMINATION (BENZENE MCL=1.0 ppb):  Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:  Number of wells with concentrations at or above MCL:  Nature of contamination:  Gasoline  Gasoline  Ground Water Wells with Free Product:  Monitor & Sai  Monitor & Sai  Monitor & Sai  Monitor & Sai  It also  Question and water Phase:  In the Sai  It also  Approximate flow attention and hydraulic gradient:  Southwest at 0.02  Output of Free Product Recovered This Period:  8.12 ga  Range in Concentrations:  Benzene: ND to  TPH-G: ND to  TPH-G: ND to  TPH-D: 56 ppb to 2	Number of ground water wells on-site:	4	Ground Water Wells monitored:	4
Phase of Investigation: Vadose Zone:  N/A Ground Water Phase:  Monitor & San Monitor &	Number of ground water wells off-site:	0	Ground Water Wells sampled:	3
Approximate depth to ground water below ground surface:  Approximate elevation of potentiometric surface above Mean Sea Level:  Average Increase/Decrease in ground water elevations since last sampling episode:  Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0 ppb):  Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:  Nature of contamination:  Gasoline  DDITIONAL INFORMATION:			Ground Water Wells with Free Product:	1
Approximate depth to ground water below ground surface:  Approximate elevation of potentiometric surface above Mean Sea Level:  Average Increase/Decrease in ground water elevations since last sampling episode:  Approximate flow direction and hydraulic gradient:  BOUND WATER CONTAMINATION (BENZENE MCL=1.0 ppb):  Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:  Number of wells with concentrations at or above MCL:  Nature of contamination:  Gasoline  1 Range in Thickness of Free Product:  1 Volume of Free Product Recovered This Period:  8.12 ga Range in Concentrations:  Benzene: ND to TPH-G: ND to TPH-G: ND to TPH-D: 56 ppb to 2	Phase of Investigation: Vadose Zone:	N/A	Ground Water Phase:	Monitor & Sample
Approximate elevation of potentiometric surface above Mean Sca Level:  Average Increase/Decrease in ground water elevations since last sampling episode:  Approximate flow direction and hydraulic gradient:   Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:  Number of contamination:  Gasoline  DDITIONAL INFORMATION:	TE HYDROGEOLOGY:			
Approximate elevation of potentiometric surface above Mean Sca Level:  Average Increase/Decrease in ground water elevations since last sampling episode:  Approximate flow direction and hydraulic gradient:   Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:  Number of contamination:  Gasoline  DDITIONAL INFORMATION:	Approvimate death to around water helpsy ground surface:			10.8 feet
Average Increase/Decrease in ground water elevations since last sampling episode: Approximate flow direction and hydraulic gradient:  Southwest at 0.02  ROUND WATER CONTAMINATION (BENZENE MCL=1.0 ppb):  Wells containing free product: 1 Range in Thickness of Free Product: 0.0 to 0.3  Number of wells with concentrations below MCL: 1 Volume of Free Product Recovered This Period: 0.2 ga  Number of wells with concentrations at or above MCL: 3 Volume of Free Product Recovered To Date: 8.12 ga  Range in Concentrations: Benzene: ND to  TPH-G: ND to  TPH-D: 56 ppb to 2		es I evel-		21.75
Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0 ppb):  Wells containing free product:  1 Range in Thickness of Free Product:  0.0 to 0.3  Number of wells with concentrations below MCL:  1 Volume of Free Product Recovered This Period:  0.2 ga  Number of wells with concentrations at or above MCL:  3 Volume of Free Product Recovered To Date:  8.12 ga  Range in Concentrations:  Benzene: ND to  TPH-G: ND to  TPH-D: 56 ppb to 2				0.25 foot decrease
Wells containing free product:  Number of wells with concentrations at or above MCL:  Number of wells with concentrations at or above MCL:  Nature of contamination:  Gasoline  1 Range in Thickness of Free Product:  1 Volume of Free Product Recovered This Period:  9.2 ga  Noumber of wells with concentrations at or above MCL:  1 Volume of Free Product Recovered To Date:  8.12 ga  Range in Concentrations:  Benzene: ND to  TPH-G: ND to  TPH-D: 56 ppb to 2				
Number of wells with concentrations at or above MCL:  Number of wells with concentrations at or above MCL:  Range in Concentrations:  Benzene: ND to TPH-G: ND to TPH-D: 56 ppb to 2	-	t sampling episode:		Southwest at 0.02 ft/ft
Number of wells with concentrations at or above MCL:  3 Volume of Free Product Recovered To Date:  Range in Concentrations:  Benzene: ND to TPH-G: ND to TPH-D: 56 ppb to 2	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)	ppb):	Range in Thickness of Free Product:	
Nature of contamination:  Gasoline  TPH-G: ND to TPH-D: 56 ppb to 2  DDITIONAL INFORMATION:	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:	ppb):	•	Southwest at 0.02 ft/ft
Nature of contamination:  Gasoline  TPH-G: ND to  TPH-D: 56 ppb to 2  DDITIONAL INFORMATION:	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:  Number of wells with concentrations below MCL;	ppb): 1 1	Volume of Free Product Recovered This Period:	Southwest at 0.02 ft/ft 0.0 to 0.30 ft.
DDITIONAL INFORMATION:	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:  Number of wells with concentrations below MCL;	ppb): 1 1	Volume of Free Product Recovered This Period: Volume of Free Product Recovered To Date:	Southwest at 0.02 ft/ft  0.0 to 0.30 ft. 0.2 gallons
	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:	ppb): 1 1 3	Volume of Free Product Recovered This Period: Volume of Free Product Recovered To Date:	Southwest at 0.02 ft/ft  0.0 to 0.30 ft.  0.2 gallons 8.12 gallons
	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:	ppb): 1 1 3	Volume of Free Product Recovered This Period: Volume of Free Product Recovered To Date:	Southwest at 0.02 ft/ft  0.0 to 0.30 ft.  0.2 gallons 8.12 gallons Benzene: ND to 300
	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:  Number of wells with concentrations below MCL:  Number of wells with concentrations at or above MCL:	ppb): 1 1 3	Volume of Free Product Recovered This Period: Volume of Free Product Recovered To Date:	Southwest at 0.02 ft/ft  0.0 to 0.30 ft. 0.2 gallons 8.12 gallons Benzene: ND to 300 TPH-G: ND to F.P.
Groundwater sampled by no purge method. Approximately 0.2 gallons of freeproduct and 20 gallons of groundwater	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:  Number of wells with concentrations below MCL;  Number of wells with concentrations at or above MCL;  Nature of contamination:  DDITIONAL INFORMATION:	ppb):  1 1 3 Gasoline	Volume of Free Product Recovered This Period: Volume of Free Product Recovered To Date: Range in Concentrations:	Southwest at 0.02 ft/ft  0.0 to 0.30 ft. 0.2 gallons 8.12 gallons Benzene: ND to 300 TPH-G: ND to F.P.
were purged from monitoring well MW-4 and stored on site pending disposal.	Approximate flow direction and hydraulic gradient:  ROUND WATER CONTAMINATION (BENZENE MCL=1.0)  Wells containing free product:  Number of wells with concentrations below MCL;  Number of wells with concentrations at or above MCL;  Nature of contamination:  DDITIONAL INFORMATION:	ppb):  1 1 3 Gasoline	Volume of Free Product Recovered This Period: Volume of Free Product Recovered To Date: Range in Concentrations:	Southwest at 0.02 ft/ft  0.0 to 0.30 ft. 0.2 gallons 8.12 gallons Benzene: ND to 300 TPH-G: ND to F.P.

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\_Chris K. Smiga

Staff Environmental Scientist

Alton Project No: 41-0123

Submittal date: 1/15/98

Approved by:

California RG# 5167

Matthew W. Katen, RG, CHG

Senior Associate

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# EXHIBIT 1 SAMPLING SCHEDULE

### MONITORING WELL SAMPLING SCHEDULE 1997-1998 Former Mobil Station 99-105

Well Number	Fourth Quarter	First Quarter	Second Quarter	Third Quarter
MW-1	X	X	X	X
MW-2	X	X	X	X
MW-3	X	Х	X	X
MW-4	X	X	X	X

NOTES:

X

well scheduled for sampling

# EXHIBIT 2 GROUNDWATER LEVELS AND CHEMICAL ANALYSIS TABLE

### **Groundwater Levels and Chemical Analysis**

Former Mobil Station 99-105

		Top of Casing	Depth to	Groundwater	Product		Otation 55	100		Ethyl-	Total	MTBE	MTBE	TOG	Lead
		Elevation	Water	Elevation	Thickness	TPH-G	TPH-D	Benzene	Toluene	benzene	Xylenes	8020	8240 or 8260		(ppb)
Well ID	Date	(feet)	(feet)	(feet)	(feet)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppo)	(ppc)
		(1001)	(1001)	(1.000)	(1000)	(1-1-7	(1-1-1	\PP-)	\FF-1	<u> </u>	\FF-)	177	(		
TW-1	01/04/96	_	6.00		0.00	ND	700	ND	ND	ND	ND	_		_	
WW-1	01/04/96	_	3.00	_	0.00	ND	_	ND	ND	ND	ND	_	_	ND	_
MVV-1	03/14/96	32.79	4.50	28.29	0.00	610	450	0.75	0.54	1.5	59	_	_		ND
MW-1	05/21/96	32.79	5.64	27.15	0.00	ND	ND	ND	ND	ND	ND	_	_	_	_
MVV-1	08/13/96	32.79	9.76	23.03	0.00	ND	ND	ND	ND	ND	ND	_			. —
MW-1	11/08/96	32.79	10.24	22.55	0.00	ND	ND	ND	0.92	ND	2.1	ND	_	_	_
MVV-1	01/31/97	32.79	3.83	28.96	0.00	ND	ND	ND	0.85	ND	ND	2.6	ND	_	
MVV-1	04/22/97	32.79	9.14	23.65	0.00	ND	ND	ND	ND	ND	ND	ND		_	_
MW-1†	07/29/97	32.79	10.18	22.61	0.00	ND	60****	0.84	0.95	ND	1.6	36	_	_	
MW-1†	10/09/97	32.79	10.46	22.33	0.00	ND	56****	ND	ND	ND	ND	ND		_	
MW-2	03/14/96	32.80	4.51	28.29	0.00	560	250	2.0	0.96	4.3	11			_	ND
MW-2	05/21/96	32.80	5.65	27.15	0.00	730	560	5.1	1.4	6.7	5.9	.—	<del>-</del>	_	
MW-2	08/13/96	32.80	10.14	22.66	0.00	490	380*	25	3.5	7.2	13		_	_	_
MW-2	11/08/96	32.80	10.70	22.10	0.00	520	160***	80	2.7	14	66	— 6.1	_	_	
MW-2	01/31/97	32.80	3.84	28.96	0.00	74	130*	ND	ND	ND	ND	ND			
MW-2	04/22/97	32.80	9.61	23.19	0.00	260	430	2.7	ND	2.5	ND	ND	_		_
		32.80		22.27			430 150*****			2.5 10			_	_	_
MW-2†	07/29/97		10.53		0.00	320 460	160*	28	1.2		ND	ND		_	_
MW-2†	10/09/97	32.80	10.87	21.93	0.00	460	"טטוי	43	2.8	2.0	2.6	2.6	_	_	_
MW-3	03/14/96	32.80	9.55	23.25	0.00	4,200	1,200	220	30	140	520		_	ND	ND
MW-3	05/21/96	32.80	10.16	22.64	0.00	8,500	2,800	710	110	440	1,700			_	_
MW-3	08/13/96	32.80	11.18	21.62	0.00	5,000	2,300**	430	ND	200	360	_	· <u> </u>		_
MW-3	11/08/96	32.80	11.51	21.29	0.00	8,400	2,900*	890	82	790	1,700	73	ND	_	_
MW-3	01/31/97	32.80	7.90	24.90	0.00	16,000	7,500*	660	85	960	1,800	ND	_	_	_
MW-3	04/22/97	32.80	10.64	22.16	0.00	8,000	2,700	340	33	400	490	200	ND	_	_
MW-3†	07/29/97	32.80	11.36	21.44	0.00	9,800	2,300*	330	ND	530	530	ND		_	_
MW-3†	10/09/97	32.80	11.52	21.28	0.00	7,300	2,600*	300	ND	430	460	270	ND	_	_
MW-4	03/14/96	31.50	4.92	26.58	0.00	12,000	3,500	2,200	140	880	2,000	!			ND
													_		ND
MW-4	05/21/96	31.50	8.60	22.90	0.00	11,000	4,200	1,700	ND	930	470		_	_	_
MW-4	08/13/96	31.50	10.02	21.50	0.02	_		_	_	_	_	_	<del>-</del> ·	-	_
MW-4	11/08/96	31.50	10.28	21.33	0.15	_	_	_	_		_	_	_	_	_
MW-4	01/31/97	31.50	7.88	23.62	0.00	23,000	8,200*	980	68	1,100	1,400	ND	_	_	_
MW-4	04/22/97	31.50	7.40	24.10	0.00	8,800	4,500	950	ND	610	130	ŅD	_		
MW-4	07/29/97	31.50	9.85	21.74	0.12	_	. —	_	_		_	_	_	_	_
MW-4	10/09/97	31.50	10.35	21.38	0.30			_	_	_		_	_	_	_

#### **Groundwater Levels and Chemical Analysis**

Former Mobil Station 99-105

·	Top of Casing	Depth to	Groundwater	Product					Ethyl-	Total	MTBE	MTBE	TOG	Lead
	Elevation	Water	Elevation	Thickness	TPH-G	TPH-D	Benzene	Toluene	benzene	Xylenes	8020	8240 or 8260	(ppb)	(ppb)
Well ID Date	(feet)	(feet)	(feet)	(feet)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)		

NOTES:

ppb = parts per billion

TPH-G = total petroleum hydrocarbons as gasoline

TPH-D = total petroleum hydrocarbons as diesel

TOG = total oil and grease

MTBE = methyl-tert butyl ether

- = not measured/not analyzed

ND = not detected at or above method detection limit

\* = diesel and unidentified hydrocarbons <C15

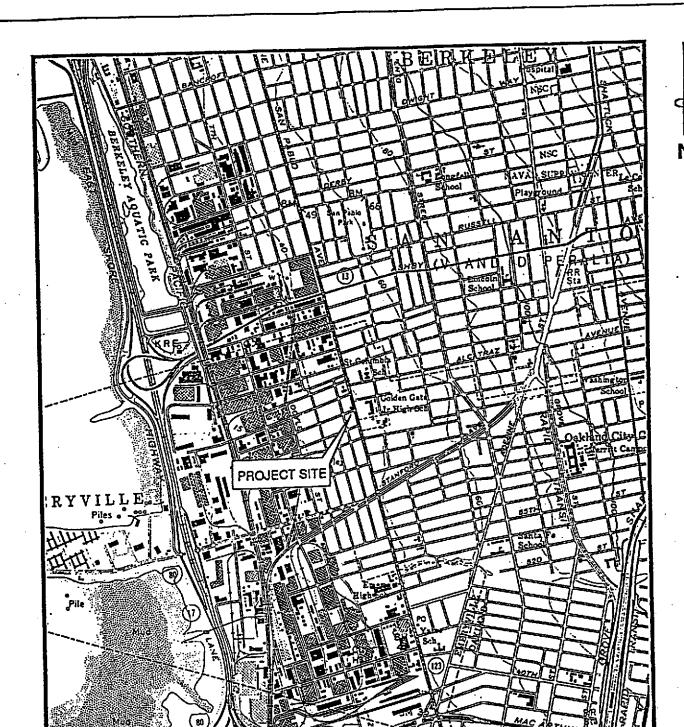
\*\* = diesel and unidentified hydrocarbons <C15>C25

\*\*\* = diesel and unidentified hydrocarbons <C20

\*\*\*\* = unidentified hydrocarbons >C18

\*\*\*\*\* = diesel and unidentified hydrocarbons >C20

† = well sampled using no-purge method



SCALE 1:24,000

0

1/4

1/2

3/4

Source: U.S.G.S. Map Oakland West Quadrangle California 7.5 Minute Series

1 MILE



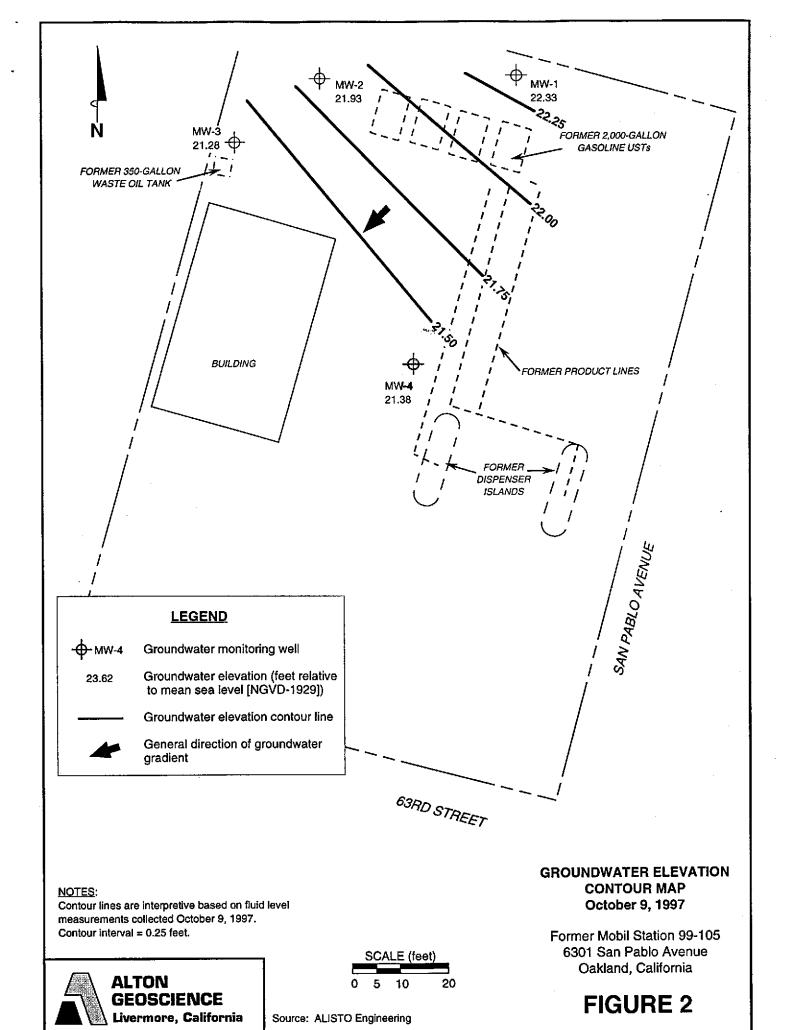
VICINITY MAP

1 MILE

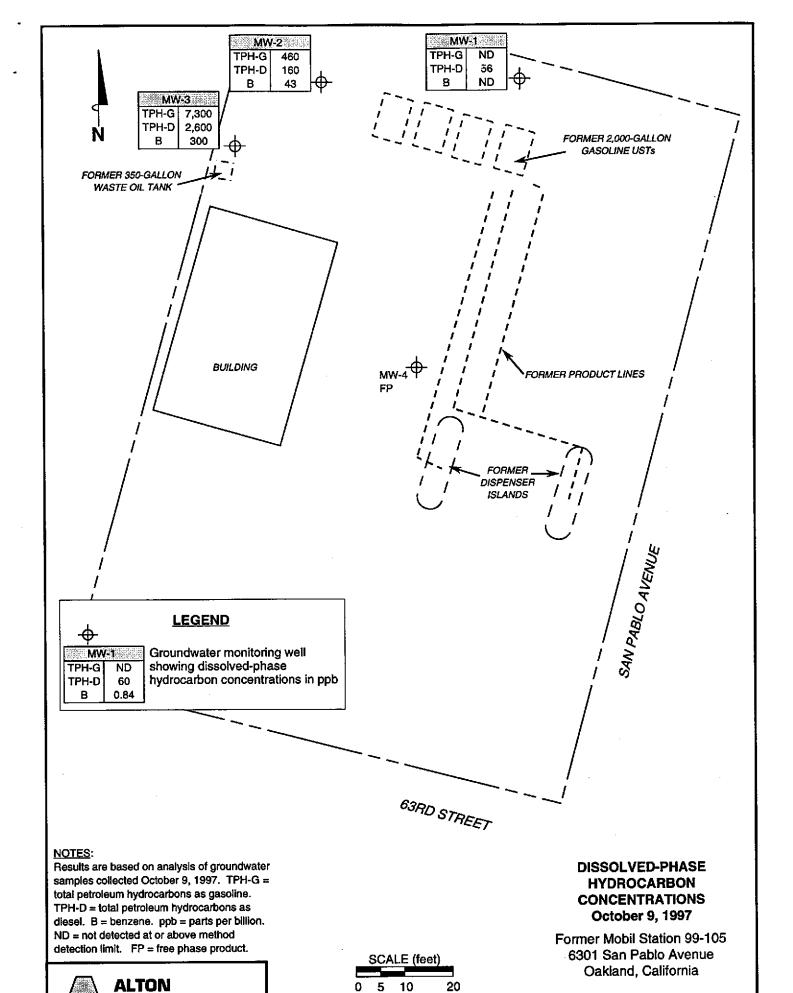
Former Mobil Station 99-105 6301 San Pablo Avenue Oakland, California

FIGURE 1





99-105/Site plan



Source: ALISTO Engineering

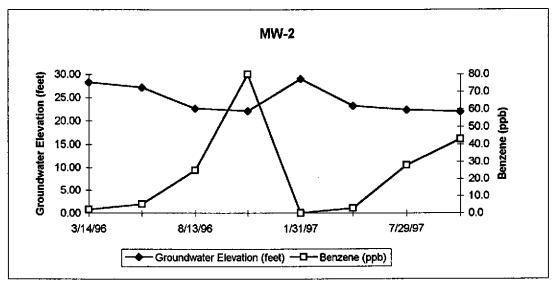
**GEOSCIENCE** 

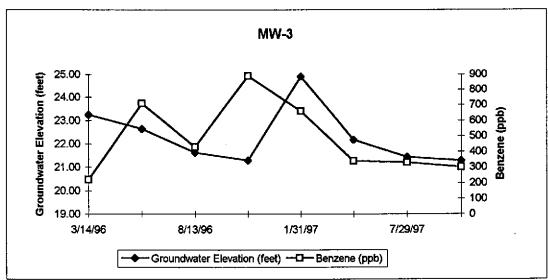
Livermore, California

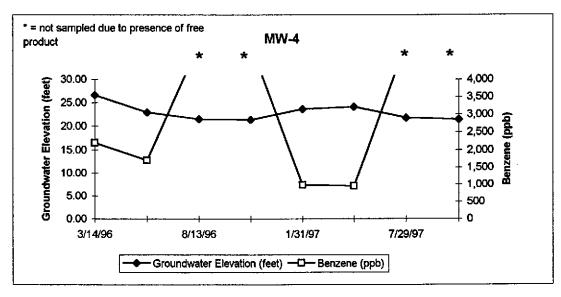
FIGURE 3

# EXHIBIT 4 BENZENE VS. GROUNDWATER ELEVATION GRAPHS

### Benzene vs. Groundwater Elevation Graphs







NOTE: ND values are plotted as zero.

## EXHIBIT 5 WELL PURGING AND GROUNDWATER SAMPLING PROTOCOL

#### WELL PURGING AND GROUNDWATER SAMPLING PROTOCOL

#### FLUID-LEVEL MONITORING

Fluid-levels are monitored in the wells using an electronic interface probe with conductance sensors. The presence of liquid-phase hydrocarbons is verified using a hydrocarbon-reactive paste. The depth to liquid-phase hydrocarbons and water is measured to the nearest 0.01 foot relative to the well box top or top of casing. Well box or casing elevations are surveyed to within 0.02 foot relative to a county or city bench mark.

#### GROUNDWATER SAMPLING

Currently, 'pre-purge' and 'non-purge' methods of sampling both comply with regulatory standards.

#### NON-PURGE METHOD:

Alton Geoscience utilizes the 'non-purge' method of sampling for all qualifying groundwater monitoring wells. Groundwater samples are collected by lowering a 1.5-inch-diameter, bottom-fill, disposable polyethylene bailer just below the static water level in the well. The samples are carefully transferred from the check-valve-equipped bailer to 1-liter and 40-milliliter glass containers. The sample containers are filled to zero headspace and fitted with Teflon-sealed caps. Each sample is labeled with the project number, well number, sample date, and sampler's initials. Samples remain chilled at approximately 4°C prior to analysis by a state-certified laboratory.

The following criteria necessary for a well to qualify for 'non-purge' sampling are taken from a letter issued by San Francisco Bay Regional Water Quality Control Board on January 31, 1997:

- 1. The non-purging approach shall be used only for monitoring wells where groundwater has been impacted by petroleum hydrocarbons, BTEX, and MTBE.
- 2. Non-purge sampling shall be utilized for unconfined aquifers only.
- 3. The monitoring well shall be properly permitted, constructed (in this case, screened across the water table), and developed.
- 4. The well is presently in use for groundwater or soil vapor extraction.
- 5. The well does not contain free product.
- 6. For new wells or wells brought into monitoring for the first time, the first round of groundwater sampling performed at a site shall be with both non-purged and purged samples. The purging and sampling method used shall be documented. This shall include the rate of purge and sampling

details. For these wells we require measurements of dissolved oxygen, specific conductance, pH, and temperature whether purged or not purged. Also, if biodegradation is being tracked at the well, our requirements do not preclude the measurement of other parameters.

- Existing wells which have already been routinely purged in previous sampling events immediate to being switched to a non-purging mode do not require an initial duplicate non-purged and purged sample.
- 8. Monitoring data frequency shall be as required by the appropriate regulatory oversight agency.
- 9. Should site closure be requested where the non-purged approach has been used, the <u>final</u> confirmation sampling event shall include both non-purged and purged samples from each well or as agreed upon with the appropriate regulatory oversight agency.

#### PURGE METHOD:

Groundwater monitoring wells that do not qualify for the 'non-purge' method are purged and sampled in accordance with standard regulatory protocol. Typically, monitoring wells that contain no liquid-phase hydrocarbons are purged of groundwater prior to sampling so that fluids sampled are representative of fluids within the formation. Temperature, pH, and specific conductance are typically measured after each well casing volume has been removed. Purging is considered complete when these parameters vary less than 10% from the previous readings, or when four casing volumes of fluid have been removed. Samples are collected without further purging if the well does not recharge within 2 hours to 80% of its volume before purging.

The purged water is either pumped directly into a licensed vacuum truck or temporarily stored in labeled drums prior to transport to an appropriate treatment or recycling facility. If an automatic recovery system (ARS) is operating at the site, purged water may be pumped into the ARS for treatment.

Groundwater samples are collected by lowering a 1.5-inch-diameter, bottom-fill, disposable polyethylene bailer just below the static water level in the well. The samples are carefully transferred from the check-valve-equipped bailer to 1-liter and 40-milliliter glass containers. The sample containers are filled to zero headspace and fitted with Teflon-sealed caps. Each sample is labeled with the project number, well number, sample date, and sampler's initials. Samples remain chilled at approximately 4°C prior to analysis by a state-certified laboratory.

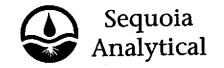
# EXHIBIT 6 MONITORING WELL SAMPLING FORMS

### Alton Geoscience, Northern California Operations

### GROUND WATER SAMPLING FIELD NOTES

Site: 99-65 Project	No 111-9173 Sample	ed By: 5M	Date: 10-9-97
		Well No. MW-Z  Total Depth (feet) 79-47	Purge Method: NO
Well No. Mw-1 Total Depth (feet) 9.89	Purge Method: US	Well No	Depth to Product (feet):
Total Depth (feet) 19.87	Depth to Product (feet):	Depth to Water (feet): 6-87	Product Recovered (gellons):
Depth to Water (feet) 20, 46	Product Recovered (gallons):	Depth to Water (teat):	Casing Diameter (Inches):
Water Column (feet): 9.38	Casing Diameter (Inches):	Water Column (feet):	1 Well Volume (gallons):
80% Recharge Depth (feet):	1 Well Volume (gellona):	80% Recharge Depth (feet):	
Time Time Depth Volume Start Stop To Water Purged (feet) (gallons)	Conduct Temper- tivity sture pH (us/cm) (F,C)  1.06 70.6 7.28	Time Time Depth Volume Start Stop To-Water Purged (feet) (gellons)	Conductor Temper- tivity ature pH (us/cm) (FrC)  (.36 7/.2 7.//
	<del> </del>		
		- I -	
	Time Sampled	Total Purged	Time Sampled
Total Purged	fille Sambleo ::: Sweets	Comments:	
Comments:		Turbidity =	
Turbidity=		Mess- U	
Well No. MW-3- Total Depth (feet) 20,04	Purge Method: NO	Well No. MW-4	Purge Method:
Total Depth (feet) 20,0	Depth to Product (feet):	Total Depth (feet)	Depth to Product (feet): 10
Depth to Water (feet):11. 52	Product Recovered (gallons):	Depth to Water (feet): 10-25	Product Recovered (gallons):
Water Column (feet):	Casing Diameter (Inches):	Water Column (feet):	Casing Diameter (Inches): 2
80% Recharge Depth (feet):	1 Well Volume (gallons):	80% Recharge Depth (feet):	1 Well Volume (gallons):
Time Tims Depth Volume Start Stop To Water Purged ((set) (gallons	Conduct Temper- tivity eture pH (us/cm) (F,C)	Time Time Depth Volume Start Stop To Water Purged (feet) (gallons	tivity ature pH
	1.12 70.6 1.10	2 500	of FreePour
		. D	
	<del>                                     </del>		
<u> </u>	<del>                                     </del>		
	Time Sampled	Total Purged	Time Sampled
Total Purged	Itme sampled wit like co.	Comments:	
Comments:		Turbidity =	
Turbidity=			B. B. S.
. Well No.	Purge Method:	Well No	Purge Method: Depth to Product (feet):
Total Depth (feet)	Depth to Product (feet):	Total Depth (feet)	Product Recovered (gallons)
Depth to Water (feet):	Product Recovered (gallons):		Casing Diameter (Inches):
Water Column (feet):	Casing Diameter (Inches):	Water Column (feet):	1 Well Volume (gallons):
80% Recharge Depth (feet):	1 Well Volume (gallons):	80% Recharge Depth (feet):	
Time Time Depth Volum Start Stop To Water Purge (feet) (gallon	d tivity ature pH	Time Time Depth Volum Stan Stop To Water Purget (feet) (gallons	tivity sture pH
		<del></del>	+
	<u> </u>		
			+
		<u> </u>	+
Total Purged	Time Sampled	Total Purged	Time Sampled
Comments:		Comments:	
Turbidity =		Turbidity =	

# EXHIBIT 7 ANALYTICAL LABORATORY DATA SHEETS



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Tom Seeliger Client Project ID: Sample Matrix:

Analysis Method:

First Sample #:

Mobil #99-105

Sampled:

Water EPA 5030/8015 Mod./8020 Received: Reported:

Oct 9, 1997 Oct 14, 1997 Oct 22, 1997

QC Batch Number:

GC101697

GC101697

GC101697

#### 802004A 802004A TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

710-0916

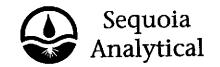
Analyte	Reporting Limit μg/L	Sample I.D. 710-0916 MW-1	Sample I.D. 710-0917 MW-2	Sample I.D. 710-0918 MW-3		
Purgeable Hydrocarbons	50	N.D.	460	7,300		
Benzene	0.50	N.D.	43	300		·
Toluene	0.50	N.D.	2.8	N.D.		
Ethyl Benzene	0.50	N.D.	2.0	430		-
Total Xylenes	0.50	N.D.	2.6	460	•	
MTBE	2.5	N.D.	2.6	270		
Chromatogram Pa	ttern:	'	Gasoline	Gasoline	. *	
Quality Control D	ata					
Report Limit Multip	olication Factor:	1.0	2.0	100		
Date Analyzed:		10/16/97	10/16/97	10/16/97		
Instrument Identifi	cation:	HP-4	HP-4	HP-4		
Surrogate Recove (QC Limits = 70-1		89	106	113		

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Project Manager

7100916.ALT <1>



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550

Client Project ID: Sample Matrix:

Mobil #99-105 Water

Sampled: Received:

Oct 9, 1997 Oct 14, 1997

Attention: Tom Seeliger

Analysis Method: First Sample #:

EPA 3510/8015 Mod. 710-0916

Reported:

Oct 22, 1997

QC Batch Number:

SP101697

SP101697

SP101697

8015EXA 8015EXA 8015EXA TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 710-0916 MW-1	Sample I.D. 710-0917 MW-2	Sample I.D. 710-0918 MW-3		
Extractable Hydrocarbons	50	56	160	2,600		·
Chromatogram Pa	uttern:	Unidentified Hydrocarbons >C18	Diesel & Unidentified Hydrocarbons < C15	Diesel & Unidentified Hydrocarbons < C15	·	

**Quality Control Data** 

1.0 1.0 1.0 Report Limit Multiplication Factor: 10/16/97 10/16/97 Date Extracted: 10/16/97 10/18/97 10/18/97 10/18/97 Date Analyzed: HP-3A HP-3A Instrument Identification: HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

ct Manager

7100916.ALT <2>



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Client Project ID: Sample Descript: Mobil #99-105 Water

Sampled: Received: Analyzed:

Oct 9, 1997 Oct 14, 1997

Attention: Tom Seeliger

Analysis Method: Lab Number:

**EPA 8260** 710-0918

Oct 21, 1997 Oct 22, 1997 Reported:

QC Batch Number:

MS102197MTBES2A

Instrument ID:

GC/MS-2

### **VOLATILE ORGANIC COMPOUNDS (EPA 8260)**

Sample Results **Detection Limit Analyte** μg/L μg/L N.D. 100 % Recovery **Control Limit %** Surrogates 90 Dibromofluoromethane...... 50

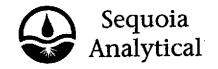
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1271

Project Manager

7100916.ALT <3>





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Tom Seeliger

Client Project ID: Mobil #99-105

Matrix:

Liquid

QC Sample Group: 7100916-918

Reported:

Oct 22, 1997

#### **QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl	Xylenes	Diesel	MTBE
,			Benzene	-		
QC Batch#:	GC101697	GC101697	GC101697	GC101697	SP101697	MS102197
QO DUIOII,, I	802004A	802004A	802004A	802004A	8015EXA	MTBES2A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M	EPA 8260
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 3510	EPA 5030
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	A. Kemp	•
MS/MSD#:	7100484	7100484	7100484	7100484	B101697	•
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	•
Prepared Date:	10/16/97	10/16/97	10/16/97	10/16/97	10/16/97	-
Analyzed Date:	10/16/97	10/16/97	10/16/97	10/16/97	10/18/97	-
nstrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A	-
Conc. Spiked:	20 μg/L	20 μg/L	20 μg/L	60 µg/∟	500 μg/L	•
Result:	18	18	18	56	540	
MS % Recovery:	90	90	90	93	108	•
Dup. Result:	16	17	16	50	400	± •
MSD % Recov.:	80	85	80	83	80	-
RPD:	12	5.7	12	11	30	•
RPD Limit:	0-20	0-20	0-20	0-20	0-50	•
LCS #:	4LCS101697	4LCS101697	4LCS101697	4LC\$101697	-	LCS102197
Prepared Date:	10/16/97	10/16/97	10/16/97	10/16/97	-	10/21/97
Analyzed Date:	10/16/97	10/16/97	10/16/97	10/16/97	•	10/21/97
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	•	GC/MS-2
Conc. Spiked:	20 μg/L	20 μg/L	20 μg/L	60 μg/ <b>L</b>	-	50 μg/L
LCS Result:	19	. 19	18	58	•	55
LCS % Recov.:	95	95	90	97	•	111
				<u>.</u>		
MS/MSD					60.140	65 125

SEQUOIA ANALYTICAL, #1271

70-130

Jim Bavat Project Manager

LCS

**Control Limits** 

Please Note:

70-130

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

70-130

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

70-130

65-135

60-140



- □ 680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233
- 819 Striker Ave., Suite 8 Sacramento, CA 95834 (916) 921-9600. FAX (916) 921-0100
- □ 404 North Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673

Mobil Oil Consulting	il Oil Consulting Firm: Alton Geoscience									Station No./Site Address: 99-105															
Address: 36	A	1:-	ndbe	rali		lve.						F	roje	ct C	ontac	t:			-	Pa	7	5.	polizer	<del> </del>	
City: LiverMo	re				tate:	CA		Zip:	a40	19			/lobi	Oil	Engin	eer:			"he	^; 4¢	2 .	Fout	ch		
Tel: (5/0) 606	-91	50		Fax.:	(510	>) (	606	,	776	<u>.</u>			Sam	jer(	s) (sig	nature	∍):	1	1	_ <	2_				
								(GAS)	₹X	3.2					6010/7000		4		ız. Waste			:			DING ck one)
				:	tainers	ers	2/8020	5/8020	fied 80 esel	EPA 41	=				[준 일		- EPA 504		9 22 Ha	uent	* =		Code 1		Emergency Response
Sample I.D.		Date Sampled		Preservation	Number of Containers	Type of Containers	BTEX - EPA 602/8020	BTEX -TPH EPA M602/801	TPH EPA Modified 8015 Gas Diesel	Oil & Grease - EPA 413.2	TPH - EPA 418.1	EPA 601/8010	EPA 624/8240	EPA 625/8270	Title 22 Metals EPA	Lead Org /DHS Lead Total	EDB/DBCD - E		Bioassay - Title 22 Haz. Waste	Bioassay - Effluent	BIW		Code 2 [		Site Assessment
Samp	Matrix	Date	Time		Num	J NOTA	вте	BTE	TPH Gas	ö	ТРН	EPA					EDB	Ŧ	Bioa	Bioa	-	-	Code 3		Remediation (Plan Devipmt.)
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MW-2		$\coprod$	1520		3			X	X				7	λU	091	· · ·					X	ļ			(Install./Start-up)
MW-Z MW-3	d	V	1520	1	3	<u> </u>		X	X				7	10	091	8					X		Code 5		Active Remed. (O & M)
: 																							Code 6	X)	Passive Remed/ Monitoring
																							Code 7		Closure
																						-	Code 8		Construction
				!	<u> </u>		-				_									_			Code 9		Litigation/Claims Fines
Relinquished by:		l	<u></u>	سب.	1/2	Date/Tir	ne:	<u> </u>	Receiv	ect by	T/K	W.	17					داره	<i>}[</i> 27	Date/	Time:	5	Turnaround Normal	Time:	(check one): Same day
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Relinquished by:	1 '					Date/Tir	ne:		Receiv	rea in	Lab L	v 	W	w	em	<u>a_</u>	10	14	97	Date	/Time: 7 <u>45</u>	<u> </u>	Sample Inte		
Remarks: Run	h	ا,مار،	F	/	{	326	5	( c	n Fic	Ma	Line							!					' Intact		On Ice

# EXHIBIT 8 WASTE DISPOSAL MANIFEST

**Monitoring Well Purge Water Transport Form** 

C):	nerator l	nforma	tion	=					
Nan	ne:	Mobil Oil	Corporation		Attı	n: Steve Pao			
Add	ress:	3700 Wes	t 190th Stree	et, TPT-2					
City	, State, Zip:	Torrance,	CA 90509-29	929			Phone:	(310) 212-18	377
Des	cription of W	ater:	Monitoring w	eli purge wa	ter				· · · · · · · · · · · · · · · · · · ·
The	generator certifie	s that this wat	ter .	Mark Fritz		2.1 / /	[// ,	1	1,-1-7
as de	scribed is non-h	azardous.		for Mobil:		MW 7	S/M/	T 10/	13/9/
							-	-	(Date)
Si	te Inform	ation							
3333333	Date	Mobil	Amount	Sampler's	]	Date	Mobil	Amount	Sampler's
	Generated	Site No.		Initials		Generated	Site No.	Generated	Initials
•1	9/23/97	04 FR4	50	CS	16				
82	9/25/97	DYMSIZ	1	<b>ر</b> ح	17				
<i>,</i> 3	9/26/97	10 K5E	425	TR+CS	18				
٠4	in1, 97	10 fmg	37	CS	19				
<b>7</b> 5	1613 47	OH HTR	51	76	20				
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Na			er Environme	ntai Manage	mei	nt			
	iress:	P.O. Box		<u> </u>			Dhone:	(800) 499-36	376
City	, State, Zip:	Fremont,	CA 94555	·			- Liloue.	(000) 490-00	7
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3000000	********	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	k Waste Trea	tmant Cita	*****				
	me: Iress:		ghway 58 We						
	y, State, Zip:			)-JL			Phone:	(805) 762-76	307
OIL)	y, Glate, Zip:	INIONICUIO	N, OA BOZOT			<u> </u>		122-7	
An:	oroval No.:	1296-136	7-PS				•		
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				/.1L+, L.m.			•		

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	NONE WASTE WANTEST		Page 1 of	3. Document	9 436	92
1	4. Generator's Name and Malling Address  Moti L OIL COTEP  3700 W. 190+6 Street Tot-2		Pro	4/1/20	14/9	<i>,</i>
	TORRANCE 49 90509-2929 Generator's Phone 310-212-1877		129	76-	1367	-13
	5. Transporter Company Name US EPA ID Number		Transporter I		~ C~	,
	Cleaninter Environmental CAR USOODO  8. Designated Facility Name and Site Address  M. H. H. R. L. WASTE TREATMENT SITE	1013	). Facility's Pr	none	/ 83	//_
	56533 HWY 58, WEST				 1 - 1 -	·
رود	MCKiHRICK, CN 93251, CAD 98063	36831			627	366
nm ett	11. Waste Shipping Name and Description		12. Co	Type	13. Total Quantity	14, Unit Wt/Voi
A O	NON HAZARDOUS WASTE L	10011	3 00	1111	591	G
	<b>b.</b>	•				
	15. Special Handling Instructions and Additional Information  Well PPE	Н	andling Code 11a.	s for Wastes I	isted Above	
Service Services	Emergency Contact		·			
	STO-797 85/1 ATTA KIRK Hay Ward	site	ALH	יא מני	eoscu eberz ure, L	irsc
A STATE OF			211	ienn	me, l	D
A Party	Mesaeneratores e estuaceano na reguisone gantische capitatis en propositione de la company de la com	ON TENNER PER		ay had		ijis Vesitis
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SZ/OP	Printed/Typed Name Signature				1 - L	
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			Control of the contro	esperador y procesa, como		
in second	Printed/Typed Name Signature			et.	Month	Day Year
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Jo Jon, I don't have Alis Case. Susan

**4** 9 3