



**DAMES & MOORE**

A PROFESSIONAL LIMITED PARTNERSHIP

1320 EAST SHAW AVENUE, SUITE 110, FRESNO, CALIFORNIA 93710 (209) 222-7892  
FAX (209) 222-1937

December 3, 1990

Thrifty Oil Company  
10000 Lakewood Boulevard  
Downey, CA 90240

Attention: Peter D'Amico

**LETTER REPORT**  
Quarterly Groundwater Monitoring  
Thrifty Oil Co. #054  
2504 Castro Valley Boulevard  
Castro Valley, California

Dear Mr. D'Amico:

At the request of Thrifty Oil Company, Dames & Moore is presenting this letter report summarizing the methods and results of the groundwater monitoring we performed at the subject site. The site is located at the northeast corner of Castro Valley Boulevard and Stanton Avenue as shown on the Vicinity Map, Plate 1. The approximate configuration of nine groundwater monitoring wells and of selected site structures is depicted on the Site Map, Plate 2.

According to information supplied by Thrifty Oil Company, petroleum hydrocarbons were detected in water samples collected from the nine monitoring wells (RE-1 through RE-7, PW-1, and PW-2) before our involvement at this site. We have not been provided with information on well construction and soil stratigraphy.

A geologist from Dames & Moore visited the site on October 29 and October 30, 1990, to collect groundwater samples from the nine monitoring wells for laboratory

# THRIFTY OIL CO.

September 7, 1990

Mr. Scott Seery  
Alameda County Health Care Services  
80 Swan Way, Rm. 200  
Oakland, CA 94621

RE Thrifty Oil Co. Station #054  
2504 Castro Valley Blvd.  
Castro Valley, California

Dear Mr. Seery,

Regarding your letter of August 9, 1990, we have contracted with Remediation Services Int'l. (RSI) to install groundwater recovery pumps at the subject station. We anticipate that groundwater extraction will begin on or before October 9, 1990 as requested. Prior to the installation of recovery pumps, RSI will redevelop all existing wells in order to insure that all wells are free of silt and sand debris that may prove detrimental to pump operation.

In addition, RSI will be performing the off-site investigation which includes the permitting and installation of wells on public property. As you know, RSI has submitted permit applications to the local and state regulatory agencies that are involved in this site. At this time, RSI is following up the permit status and will take an active role in securing these permits in a timely manner.

We will keep you informed of the status of groundwater extraction start-up and permit procurement as information becomes available. If you have any questions, please contact me or Mr. Karl Kerner at (213) 932-9876.

Very truly yours,



Peter D'Amico  
Manager  
Environmental Affairs

PD/KK

cc: Mr. Lester Feldman, RWQCB-San Francisco Bay Region



analysis. Our methods for field work are described in the attached "Field Procedures". Depths to groundwater were measured and water from each well was analyzed subjectively. A gasoline product sheen was observed on water collected from wells RE-3 and RE-4. The results of the subjective analyses and the depths to groundwater are summarized in Table I.

**TABLE I**

Depths to groundwater and Subjective Analyses  
(Depths in feet below well head)

Thrifty Oil Co. #054  
Castro Valley, California

<u>Well No.</u>	<u>Date</u>	<u>Depth to Groundwater</u>	<u>Floating Product</u>
RE-1	10/29/90	5.95	none
RE-2	10/29/90	5.34	none
RE-3	10/29/90	7.84	sheen
RE-4	10/29/90	7.04	sheen
RE-5	10/29/90	5.86	none
RE-6	10/29/90	6.68	none
RE-7	10/29/90	8.21	none
PW-1	10/29/90	6.17	none
PW-2	10/29/90	6.95	none

Water purged from the wells was stored temporarily on-site in properly labeled 55-gallon, 17-H steel drums approved for that use by the Department of Transportation. Disposal of the water and drums are the responsibility of Thrifty Oil Company.

The groundwater samples were submitted to BC Laboratories Inc. in Bakersfield, California. Samples were analyzed for total petroleum hydrocarbons as referenced to gasoline (TPH) and for benzene, toluene, ethylbenzene, and total xylene isomers

(BTEX). Copies of the laboratory analysis reports and the chain of custody record are attached. The results are summarized in Table II.

TABLE II  
Summary of Laboratory Analyses of Groundwater Samples  
(Results reported in parts per Billion)

Thrifty Oil Co. #054  
Castro Valley, California

<u>Well No.</u>	<u>Date</u>	<u>TPH</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Total Xylenes</u>
RE-1	10/30/90	72000	7700	5300	1800	2000
RE-2	10/30/90	.440	2.8	0.91	13	3.14
RE-3	10/30/90	13000	860	660	220	2210
RE-4	10/30/90	87000	7200	10000	1600	12900
RE-5	10/30/90	3400	910	48	87	249
RE-6	10/30/90	3400	1000	28	N/D	N/D
RE-7	10/30/90	31000	14900	N/D	N/D	N/D
PW-1	10/29/90	35000	240	970	240	2500
PW-2	10/29/90	48000	310	2100	500	2900

Legend:

N/D - Not detected

TPH - Total Petroleum Hydrocarbons as referenced to gasoline

Petroleum hydrocarbons were detected in each of the samples as indicated in Table II. Concentrations of TPH across the site were interpreted to construct the TPH Isocontour Map included as Plate 3 at the end of the text.

The groundwater gradient across the site on October 29, 1990 has been evaluated based upon the data obtained from our field measurements, and well head survey data provided to Dames & Moore by Thrifty Oil Company. These elevations were compared with

depth to water measurements to calculate the elevations of the groundwater surface.

This data is summarized in Table III.

TABLE III  
Summary of Groundwater Elevations  
(Elevations in feet above mean sea level)

Thrifty Oil Co. #054  
Castro Valley, California

<u>Well No.</u>	<u>Date</u>	<u>Well Head Elevation</u>	<u>Depth to Groundwater</u>	<u>Groundwater Elevation</u>
RE-1	10/29/90	167.08	5.95	161.13
RE-2	10/29/90	167.21	5.34	161.87
RE-3	10/29/90	167.47	7.84	159.63
RE-4	10/29/90	167.00	7.04	159.96
RE-5	10/29/90	167.13	5.86	161.27
RE-6	10/29/90	166.75	6.68	160.07
RE-7	10/29/90	166.10	8.21	157.89
PW-1	10/29/90	166.58	6.17	160.41
PW-2	10/29/90	166.28	6.95	159.33

The groundwater elevations were used to interpret the Potentiometric Surface Map, Plate 4. The groundwater gradient varies across the site and shows a general direction of flow towards the east. The average groundwater gradient was calculated to be approximately 0.03 ft/ft.

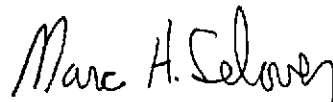
We will continue to monitor groundwater at the site on a quarterly basis and we will measure depths to groundwater on a monthly basis. Our next quarterly sampling event is tentatively scheduled for the week of January 7, 1991.

We recommend that you forward a copy of this report to Mr. Scott O. Seary,  
Alameda County Department of Environmental Health, Hazardous Materials Program,  
80 Swan Way, Room 200, Oakland, California, 94621.

Please do not hesitate to call if you have any questions regarding this project  
or if we may be of further service. The following are attached and complete this  
report.

Plate 1 Vicinity Map  
Plate 2 Site Map  
Plate 3 TPH Isocontour Map  
Plate 4 Potentiometric Surface Map  
Field Procedures  
Laboratory Analysis Results with Chain of Custody Record

Respectfully submitted,  
DAMES & MOORE



Marc H. Selover,  
Staff Geologist



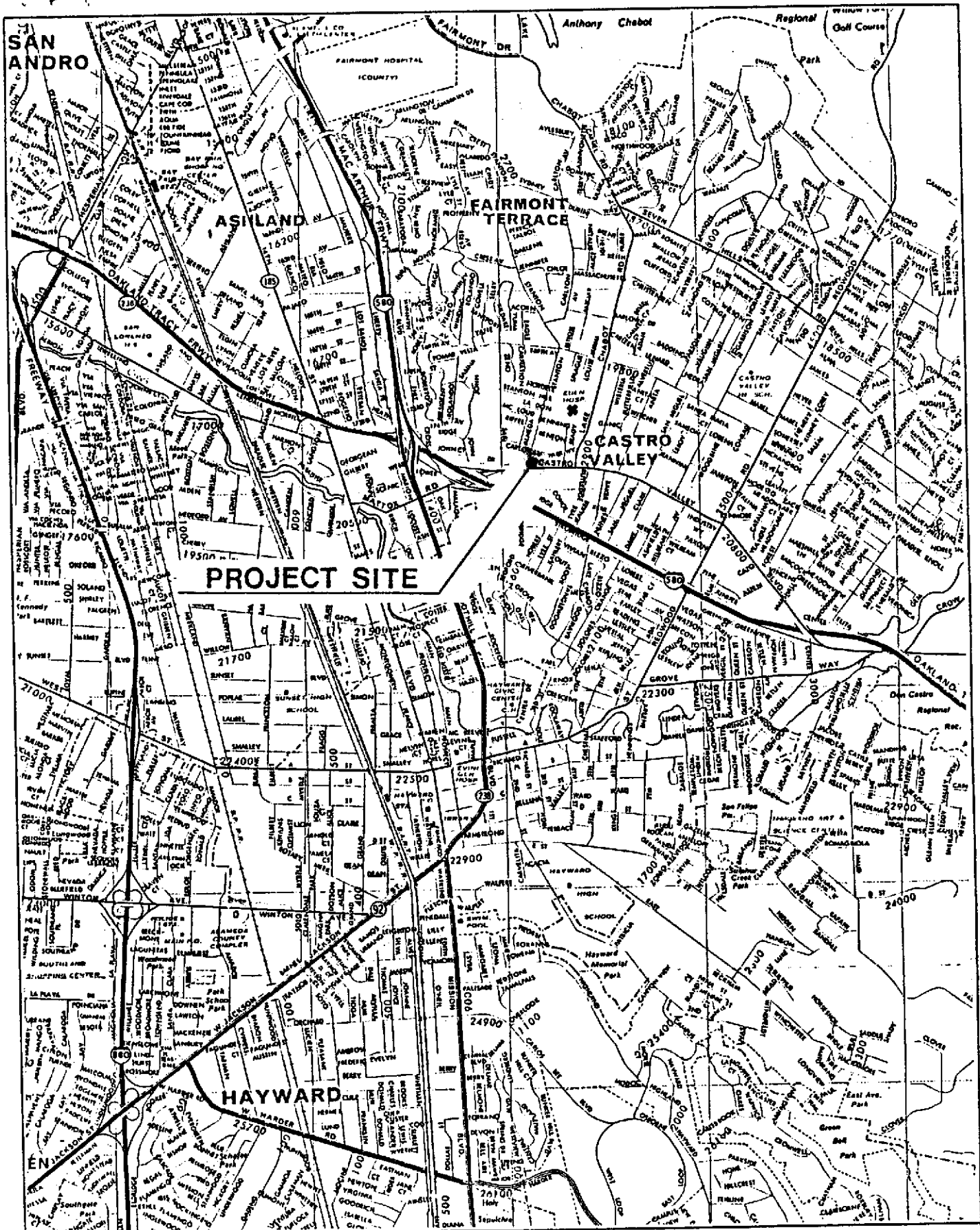
Jeffrey S. Palmer, REA  
Senior Environmental Scientist



Michael R. Erwin, RCE  
Senior Engineer



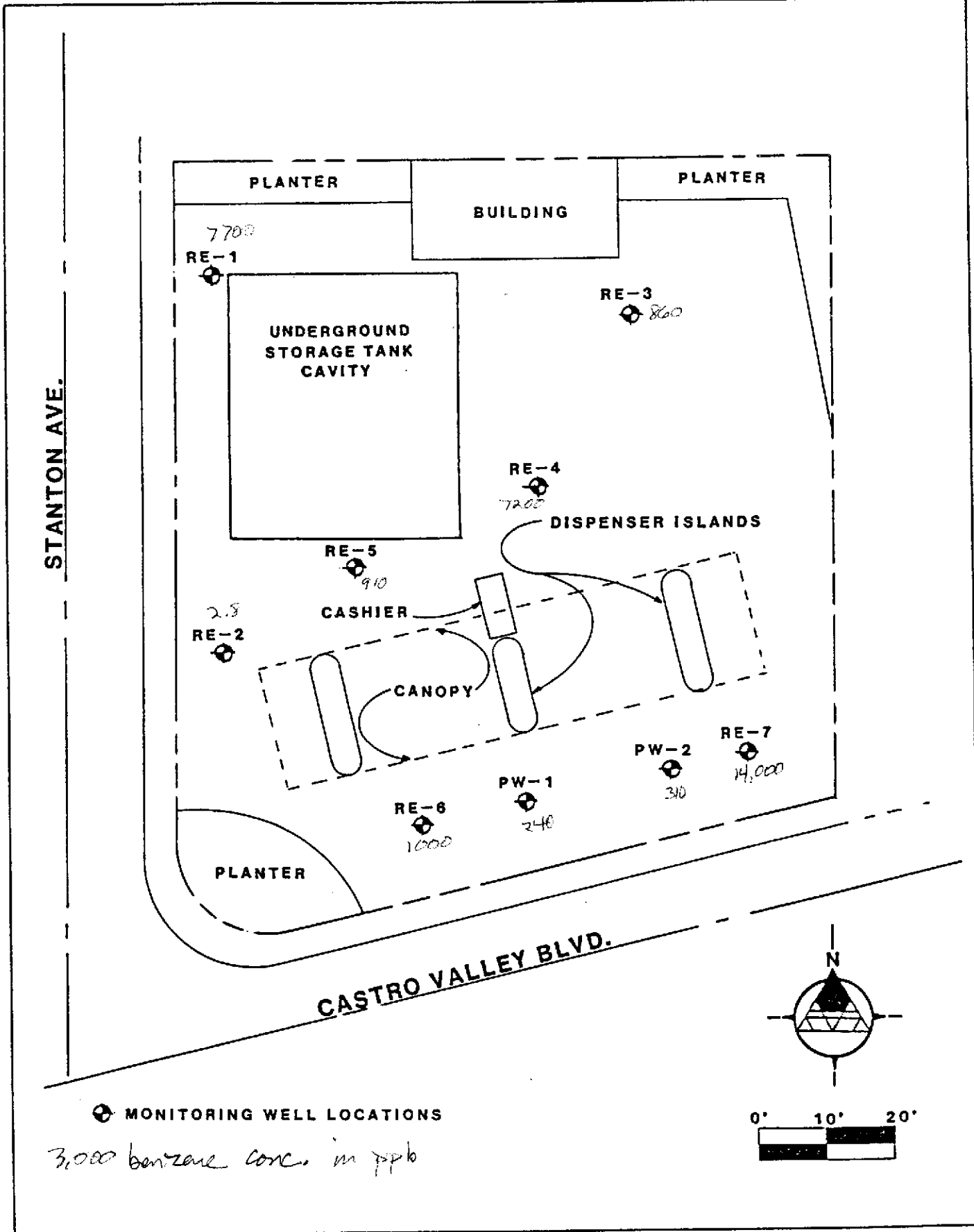
MHS/JSP/MRE/fso  
21161002.RPT



21161-002-044  
 DAMES & MOORE

**THRIFTY OIL  
 STORE #054**  
 2504 CASTRO VALLEYBLVD.  
 CASTRO VALLEY, CA

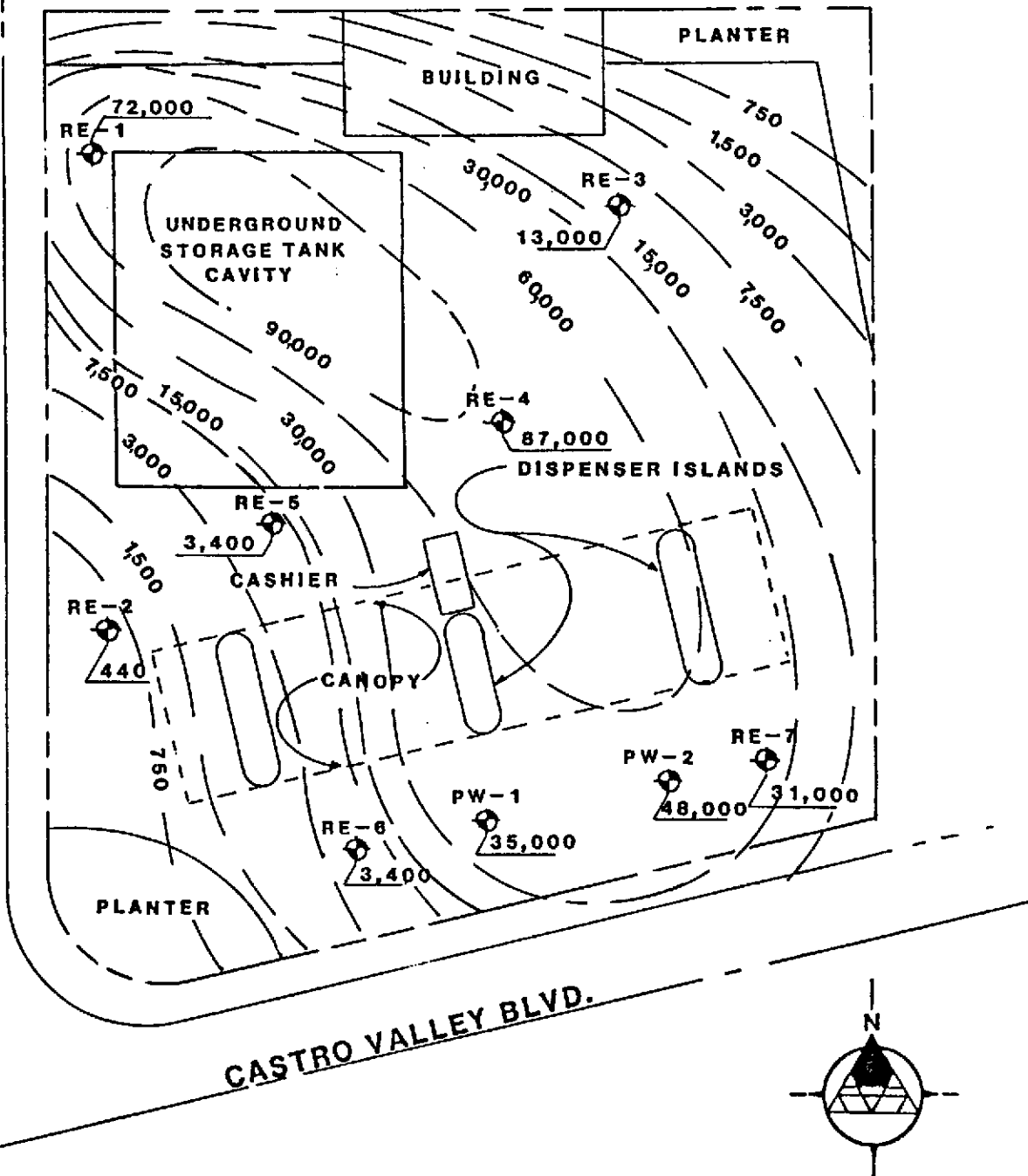
**VICINITY MAP**



21161-002-044	THRIFTY OIL STORE #054	<b>SITE MAP</b>
DAMES & MOORE	2504 CASTRO VALLEY BLVD. CASTRO VALLEY, CA	

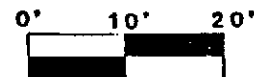
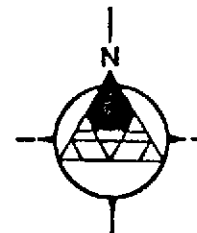


STANTON AVE.



☉ MONITORING WELL LOCATIONS

— 1,000 — LINES OF EQUAL CONCENTRATIONS OF TPH IN GWS



21161-002-044

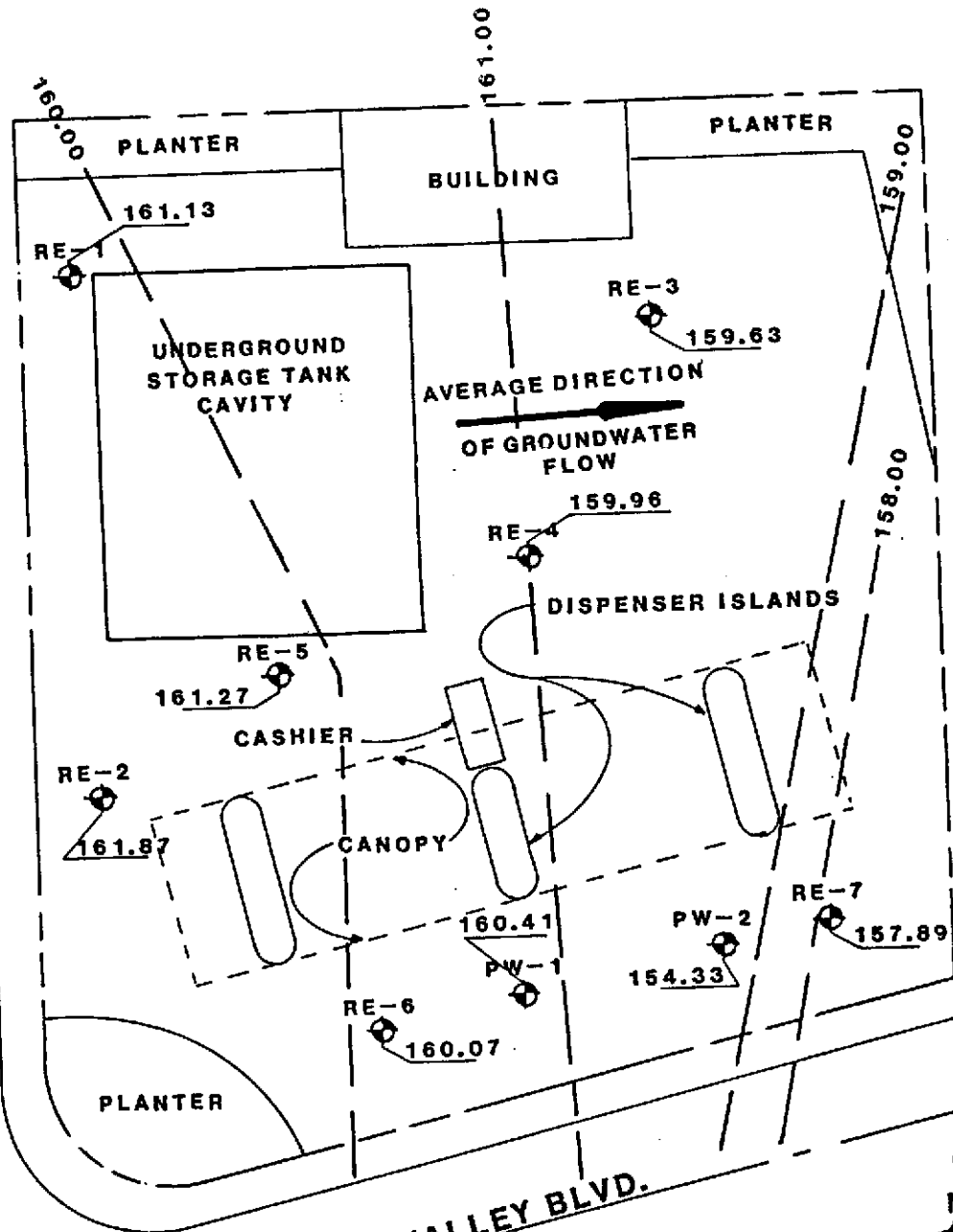
THRIFTY OIL  
STORE #054

DAMES & MOORE

2504 CASTRO VALLEY BLVD.  
CASTRO VALLEY, CA

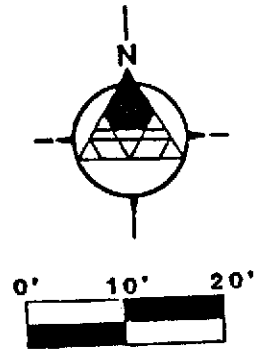
# ISOCONTOUR MAP OF TPH IN GROUNDWATER

STANTON AVE.



AVERAGE DIRECTION OF GROUNDWATER FLOW

GROUNDWATER ELEVATION  
MONITORING WELL LOCATIONS  
LINES OF EQUAL GROUNDWATER ELEVATION



21161-002-044  
DAMES & MOORE  
THRIFTY OIL STORE #054  
2504 CASTRO VALLEY BLVD.  
CASTRO VALLEY, CA

# POTENTIOMETRIC SURFACE MAP

## **FIELD PROCEDURES**

### **Measurement of the Depth to Groundwater in Monitoring Wells**

The depth of the groundwater surface in a monitoring well was measured from the top of the well head to the nearest 0.01 foot with a Solinst water-level indicator.

### **Subjective Analysis of Monitoring Wells**

Groundwater samples are collected for subjective analysis from the air-fluid interface in a monitoring well by lowering approximately half the length of a clean bailer through the interface. The bailer is retrieved and the water sample is visually examined for floating product, sheen, and other subjective evidence of hydrocarbon contamination.

### **Purging and Sampling of Monitoring Wells**

Before sample collection, a minimum of 3 casing volumes of ground water is purged from each monitoring well using a bailer. The volume should be sufficient to produce stable temperature, pH, and conductivity measurements on field instruments. After the well is allowed to recover to near static levels, a groundwater sample is collected by lowering a clean bailer past the air-water interface. The bailer is retrieved and the sample is slowly transferred to laboratory-cleaned, 40-milliliter glass vials. The vials are filled so as to prevent headspace. Labels which show the site identification number, the date and time of sample collection, and the sample identification number are affixed to the vials. The samples are promptly stored in an ice chest with ice. The field geologist initiates a Chain of Custody Record listing each sample number, the site identification number, and the date sampled. This record will accompany the samples to the analytical laboratory.

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# LABORATORIES, INC.

J. J. EGLIN, REG. CHEM. ENGR.

4100 ATLAS CT., BAKERSFIELD, CALIFORNIA 93308 PHONE (805) 327-4911 FAX (805) 327-1918

Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-4  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #RE1  
10-30-90 @ 2:50pm

Date Sample  
Collected:  
30-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	7,700	200
Toluene	ug/L	5,300	200
Ethyl Benzene	ug/L	1,800	200
p-Xylene	ug/L	2,100	200
m-Xylene	ug/L	4,300	200
o-Xylene	ug/L	2,500	200
Total Petroleum Hydrocarbons (Gasoline)	ug/L	72,000	20,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

California D.O.H.S. Cert. #1186

By J. J. Eglin  
J. J. Eglin

Joseph Ballo  
Analyst

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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-5  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #RE2  
10-30-90 @ 1:10pm

Date Sample  
Collected:  
30-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	2.8	0.5
Toluene	ug/L	0.91	0.5
Ethyl Benzene	ug/L	13	0.5
p-Xylene	ug/L	1.2	0.5
m-Xylene	ug/L	0.99	0.5
o-Xylene	ug/L	0.95	0.5
Total Petroleum Hydrocarbons (Gasoline)	ug/L	440	50

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

California D.O.H.S. Cert. #1186

By J. J. Eglin  
J. J. Eglin

Joseph Ballo  
Analyst

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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-6  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #RE3  
10-30-90 @ 3:20pm

Date Sample  
Collected:  
30-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	860	20
Toluene	ug/L	660	20
Ethyl Benzene	ug/L	220	20
p-Xylene	ug/L	550	20
m-Xylene	ug/L	930	20
o-Xylene	ug/L	730	20
Total Petroleum Hydrocarbons (Gasoline)	ug/L	13,000	2,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

California D.O.H.S. Cert. #1186

By J. J. Eglin  
J. J. Eglin

Joseph Balla  
Analyst

**DAMES & MOORE**

1320 E. Shaw Ave., Suite 110  
 Fresno, CA 93710  
 (209) 222-7892

**CHAIN OF CUSTODY RECORD**

48 HOURS TAT  
 Due 3-25-91  
 by noon

D&M CONTACT: Mike Padgett  
 PHONE: \_\_\_\_\_

JOB NO. 21161-002		PROJECT NAME: LOCATION: Thrifty / CASTRO				NUMBER OF CONTAINERS	ANALYSES REQUESTED				ANALYTICAL LABORATORY: <u>Alpha</u>
SAMPLERS: NAME (Print) <u>Mike Padgett</u> (Signature) <u>Mike Padgett</u>		DATE	TIME	SOIL OR WATER	COMP. SINGLE		SAMPLE NO.	SOIL SAMPLES DEPTH (ft)	BORING NO.	TPH (g)	
						3/20/91					
				C		✓			✓	✓	91-0321-10-2
						✓			✓	✓	91-0321-10-3
						✓			✓	✓	91-0321-10-4
						✓			✓	✓	91-0321-10-5
						✓			✓	✓	91-0321-10-6
						✓			✓	✓	91-0321-10-7
						✓			✓	✓	91-0321-10-8
						✓			✓	✓	91-0321-10-9
						✓			✓	✓	91-0321-10-10
1. Relinquished by: (Signature) <u>Mike Padgett</u>		Company: <u>Dames &amp; Moore</u>		Date / Time: <u>3/22/91 3:00</u>		Received by: (Signature) <u>[Signature]</u>		Company: <u>Via FedEx</u>		Date / Time: <u>3/21/91 10:30</u>	
2. Relinquished by: (Signature)		Company:		Date / Time:		Received by: (Signature)		Company:		Date / Time:	
3. Relinquished by: (Signature)		Company:		Date / Time:		Received by: (Signature)		Company:		Date / Time:	

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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-7  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #RE4  
10-30-90 @ 1:00pm

Date Sample  
Collected:  
30-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	7,200	200
Toluene	ug/L	10,000	200
Ethyl Benzene	ug/L	1,600	200
p-Xylene	ug/L	2,600	200
m-Xylene	ug/L	6,200	200
o-Xylene	ug/L	4,100	200
Total Petroleum Hydrocarbons (Gasoline)	ug/L	87,000	20,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

California D.O.H.S. Cert. #1186

By J. J. Eglin  
J. J. Eglin

Joseph Balbo  
Analyst



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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-3  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #W-RE5  
10-29-90 @ 5:20pm

Date Sample  
Collected:  
29-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	910	10
Toluene	ug/L	48	10
Ethyl Benzene	ug/L	87	10
p-Xylene	ug/L	140	10
m-Xylene	ug/L	95	10
o-Xylene	ug/L	14	10
Total Petroleum Hydrocarbons (Gasoline)	ug/L	3,400	1,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

California D.O.H.S. Cert. #1186

By J. J. Eglin  
J. J. Eglin

Joseph Balbo  
Analyst

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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-8  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #RE6  
10-30-90 @ 2:00pm

Date Sample  
Collected:  
30-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	1,000	10
Toluene	ug/L	28	10
Ethyl Benzene	ug/L	none detected	10
p-Xylene	ug/L	none detected	10
m-Xylene	ug/L	none detected	10
o-Xylene	ug/L	none detected	10
Total Petroleum Hydrocarbons (Gasoline)	ug/L	3,400	1,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

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BY J. J. Eglin  
J. J. Eglin

Joseph Ballo  
Analyst

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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of Report: 09-Nov-90

Lab No.: 9512-9  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #RE7  
10-30-90 @ 2:05pm

Date Sample Collected:  
30-Oct-90

Date Sample Received @ Lab:  
31-Oct-90

Date Analysis Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	14,000	200
Toluene	ug/L	none detected	200
Ethyl Benzene	ug/L	none detected	200
p-Xylene	ug/L	none detected	200
m-Xylene	ug/L	none detected	200
o-Xylene	ug/L	none detected	200
Total Petroleum Hydrocarbons (Gasoline)	ug/L	31,000	20,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

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By J. J. Eglin  
J. J. Eglin

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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-1  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #W-PW1  
10-29-90 @ 4:20pm

Date Sample  
Collected:  
29-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	240	200
Toluene	ug/L	970	200
Ethyl Benzene	ug/L	240	200
p-Xylene	ug/L	680	200
m-Xylene	ug/L	1,500	200
o-Xylene	ug/L	1,400	200
Total Petroleum Hydrocarbons (Gasoline)	ug/L	35,000	20,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

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By J. J. Eglin  
J. J. Eglin

Joseph Ballo  
Analyst

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CHEMICAL ANALYSIS  
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Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-2  
Sample Desc: Job #21161-002-044, Thrifty Oil, Sample #W-PW2  
10-29-90 @ 3:40pm

Date Sample  
Collected:  
29-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	310	200
Toluene	ug/L	2,100	200
Ethyl Benzene	ug/L	500	200
p-Xylene	ug/L	1,500	200
m-Xylene	ug/L	3,700	200
o-Xylene	ug/L	3,000	200
Total Petroleum Hydrocarbons (Gasoline)	ug/L	48,000	20,000

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

California D.O.H.S. Cert. #1186

By J. J. Eglin  
J. J. Eglin

Joseph Balla  
Analyst

ENVIRONMENTAL  
CHEMICAL ANALYSIS  
PETROLEUM



# LABORATORIES, INC.

J. J. EGLIN, REG. CHEM. ENGR.

4100 ATLAS CT., BAKERSFIELD, CALIFORNIA 93308 PHONE (805) 327-4911 FAX (805) 327-1918

Purgeable Aromatics  
(WATER)

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Date of  
Report: 09-Nov-90

Lab No.: 9512-TB  
Sample Desc: Job #21161-002-044, Thrifty Oil, Travel Blank

Date Sample  
Collected:  
30-Oct-90

Date Sample  
Received @ Lab:  
31-Oct-90

Date Analysis  
Completed:  
05-Nov-90

Constituent	Reporting Units	Analysis Results	Minimum Reporting Level
Benzene	ug/L	none detected	0.5
Toluene	ug/L	none detected	0.5
Ethyl Benzene	ug/L	none detected	0.5
p-Xylene	ug/L	none detected	0.5
m-Xylene	ug/L	none detected	0.5
o-Xylene	ug/L	none detected	0.5
Total Petroleum Hydrocarbons (Gasoline)	ug/L	none detected	50

TEST METHOD: TPH by Modified EPA 8015.  
Individual constituents by EPA method 5030/8020.

As Received Basis

Comments:

California D.O.H.S. Cert. #1186

By J. J. Eglin  
J. J. Eglin

Joseph Ballo  
Analyst

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BTXE/TPH GASOLINE  
Quality Control Data

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Spike ID: 9524-1  
Analysis Date: 05-Nov-90  
Sample Matrix: Water

## Quality Control

for Lab Nos: 9512-1, 9512-2, 9512-4, 9512-7, 9512-9  
9512-TB

Constituent	Spike % Rec	Dup Spike % Rec	Spike RPD
Benzene	80.99	83.02	2.48
Toluene	85.82	86.75	1.08
Ethyl Benzene	78.13	78.95	1.04

QC Comments:

ENVIRONMENTAL  
CHEMICAL ANALYSIS  
PETROLEUM



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## BTXE/TPH GASOLINE Quality Control Data

Dames and Moore  
1320 E. Shaw, #110  
Fresno, CA 93710  
Attention: Jeff Palmer

Spike ID: 9524-2  
Analysis Date: 05-Nov-90  
Sample Matrix: Water

Quality Control  
for Lab Nos: 9512-3, 9512-5, 9512-6, 9512-8

Constituent	Spike % Rec	Dup Spike % Rec	Spike RPD
Benzene	111.25	111.11	0.13
Toluene	110.24	108.22	1.85
Ethyl Benzene	99.19	101.65	2.45

QC Comments:



# CHAIN OF CUSTODY RECORD

Dames - Moore  
221 Main Street, Suite 600  
San Francisco, CA 94105

Field ~~Lab~~

(415) 896-5858  
Nancy Vomerio  
D&M CONTACT: or Jeff Palmer  
(309) 222-7892  
PHONE (415) 896-5858

D&M PO No. \_\_\_\_\_

JOB NO. 21161-002-044		PROJECT NAME: Matty Oil		NUMBER OF CONTAINERS	ANALYSES REQUESTED				ANALYTICAL LABORATORY:	
SAMPLERS: NAME (Print) Nancy Vomerio		LOCATION: Castro Valley, CA			BTEX P71-920				BC Laboratories Bakersfield CA	
(Signature) Nancy Vomerio										
DATE	TIME	Source Code	Sample Point ID							
9512-1	10/29/90	4:20	W-PIW1	2	X	X				PIS send results to
-2	↓	3:40	W-PIW2	1						Jeff Palmer
-3	↓	5:20	W-RIE1	1						Dames & Moore 1320 East Shaw Ave Suite 110 Fresno CA 93710
-4	10/30/90	2:50	L-RIE1	1						
-5		1:10	L-RIE2	1						PIS include copy of COC
-6		3:20	L-RIE3	1						Standard turnaround
-7		1:00	L-RIE4	1						
-8		2:00	L-RIE6	1						
9	✓	2:05	L-RIE7	1						
10			L-TIP1	2						
1. Relinquished by: (Signature) Nancy Vomerio		Company: Dames & Moore		Date / Time 10/30/90 5:10	Received by: (Signature) Rhonda Hayes		Company: BC Labo.		Date / Time 10/31/90 9:35 AM	
2. Relinquished by: (Signature)		Company:		Date / Time	Received by: (Signature)		Company:		Date / Time	
3. Relinquished by: (Signature)		Company:		Date / Time	Received by: (Signature)		Company:		Date / Time	

Source Codes:  
 Well ... (W)    Outfall ..... (O)    Bottom Sediment .... (B)    Surface Impoundment .... (I)    Leachate Collection Sys. .... (C)    Other ..... (X)  
 Soil ... (S)    River/Stream ... (R)    Generation Point .... (G)    Treatment Facility ..... (T)    Lake/Ocean ..... (L)    Specify \_\_\_\_\_