



DAMES & MOORE A PROFESSIONAL LIMITED PARTNERSHIP

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

March 29, 1991

Thrifty Oil Company
10000 Lakewood Boulevard
Downey, CA 90240

Attention: Peter D'Amico

LETTER REPORT
Quarterly Groundwater Monitoring
First Quarter, 1991
Thrifty Oil Co. #054
2504 Castro Valley Boulevard
Castro Valley, California

Dear Mr. D'Amico:

In accordance with the authorization of Thrifty Oil Company, Dames & Moore has prepared the following letter report summarizing the methods and results of the groundwater monitoring 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 features are illustrated on the Site Map, Plate 2.

SITE HISTORY

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 also understand that a groundwater remedial system has been installed. We have not been provided with information on monitoring-well construction and soil stratigraphy or on the design and construction of the remedial system.

Station #054, Castro Valley
21161-002-044/1st Quarter, 1991

PURPOSE AND SCOPE OF SERVICES

The purpose of our work at this site is to monitor concentrations of hydrocarbons in groundwater and to monitor groundwater elevations. The scope of Dames & Moore's services was limited to obtaining representative groundwater samples and depth to groundwater measurements from each of the nine monitoring wells at the subject property. The groundwater samples were submitted to a State-approved laboratory for chemical analysis for concentrations of petroleum hydrocarbons.

To accomplish the scope of services the following tasks were completed:

- o Visual observation of existing site conditions;
- o Measurement of the depth to groundwater in the nine groundwater-monitoring wells;
- o Purging and sampling the monitoring wells;
- o Chemical analysis of groundwater samples for the presence and concentration of petroleum hydrocarbons as referenced to gasoline;
- o Evaluation of the lateral distributions of concentrations of hydrocarbons in groundwater beneath the site;
- o Evaluation of the configuration of the groundwater potentiometric surface beneath the site; and,
- o Preparation of a quarterly report which summarizes the details of our findings.

SAMPLING AND FIELD OBSERVATIONS

A geologist from Dames & Moore visited the site on January 17, 1991, February 11, 1991 and March 19, 1991 to measure depths to groundwater, purge existing monitoring wells and obtain groundwater sample for chemical analyses. Water levels were measured in each well from the top of the well vault to the nearest 0.01 foot with an electric water-level indicator.

The well vaults were observed to be generally in fair to poor condition. Perturbation of the pavement in the vicinity of some well vaults appears to have caused discontinuities around vault rims, possibly from the high traffic volume at the site. ~~The disturbed conditions of the existing well vaults~~ casts some doubt upon the accuracy of the surface elevations data.

Field observations included a groundwater remedial system which appeared to be operating at the time of our first quarter site visits. Groundwater was being pumped from wells RE-4 and RE-7 and vapors were being extracted from wells RE-1, RE-2, and RE-5. Initially, during the January and February sampling events, depths to groundwater in each well were measured after the remedial apparatus had been removed from the wells and after the groundwater was allowed to recover for approximately one hour. This methodology was abandoned after observation of slow well recoveries, which in Dames & Moore's opinion did not accurately reflect site conditions.

Groundwater from each well was subjectively analyzed for visible evidence of petroleum product. Subjective analysis of groundwater from each well was accomplished by collecting a water sample in each well from the air-fluid interface by lowering approximate half the length of a disposal bailer through the interface. The bailer was retrieved and the water was examined for floating product and product sheen. ~~Approximately 2-inches of floating product was observed on water collected from well RE-7 in January.~~ An oily film left as a residual on a disposable bailer was observed in the March sampling.

Before groundwater sample collection for chemical analysis, groundwater was purged from wells RE-1, RE-2, RE-3, RE-5, RE-6, PW-1, and PW-2 by bailing with disposal bailers. A separate bailer was used for each well. Approximate 20 to 30 gallons of groundwater was purged from each well. This volume was sufficient to completely excavated water from the wells. Wells RE-4 and RE-7 were pumping continuously and therefore were not purged prior to sampling (when floating product was not evident).

The monitoring wells at this site recover slowly. The wells were sampled after approximately three to five hours of recovery, though the groundwater had not completely returned to static levels. Concentrations of hydrocarbons in samples collected by this procedure from slow to recover monitor wells should be representative of formation groundwater (Herzog, Chou, Valkenburb, and Griffin, 1988). In January and February, a sample was collected from well RE-4 approximately four hours after the pump was removed from the well. Well RE-7 was not sampled because of the observed floating product during January and February.

Samples were collected with disposal bailers; a new bailer was used for each well. Samples were maintained and transported in 40 milliliter volatile-organics-analysis vials placed in a chilled cooler. Samples were delivered under chain of custody protocol to a State-approved laboratory for chemical analysis.

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.

RESULTS OF CHEMICAL ANALYSES

The groundwater samples were submitted to Alpha Analytical Laboratories Inc. in Ukiah, 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 are attached. The cumulative results of the chemical analyses of groundwater samples collected by Dames & Moore at the subject site are summarized in Table I. For more detailed information regarding chemical analyses, please refer to the certified analytical reports included at the end of the text.

TABLE I

Summary of Laboratory Analyses of Groundwater Samples
(Results reported in parts per billion)

<u>Well No.</u>	<u>Date</u>	<u>TPH</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Xylenes</u>
RE-1	10/30/90	72000	7700	5300	1800	8900
	01/18/91	150000	11000	14000	1800	4300
	02/12/91	140000	11000	12000	1600	13000
	03/20/91	53000	3100	4200	400	5500
RE-2	10/30/90	440	2.8	0.91	13	3.14
	01/18/91	1100	8.4	3.1	N/D	10
	02/12/91	1100	5.9	n/d	0.77	n/d
	03/20/91	550	4.3	n/d	n/d	n/d
RE-3	10/30/90	13000	860	660	220	2210
	01/17/91	42000	4700	4500	21	7700
	02/12/91	72000	3600	4500	n/d	7600
	03/20/91	65000	2400	9400	50	9800
RE-4	10/30/90	87000	7200	10000	1600	12900
	01/17/91	70000	5000	5400	790	9900
	02/12/91	87000	5200	2800	240	11000
	03/20/91	6500	370	230	17	670
RE-5	10/30/90	3400	910	48	87	249
	01/17/91	1400	180	8.6	0.52	48
	02/12/91	1000	n/d	n/d	0.65	n/d
	03/20/91	3000	250	53	n/d	110

TABLE I, Cont'd.

Summary of Laboratory Analyses of Groundwater Samples
(Results reported in parts per billion)

<u>Well No.</u>	<u>Date</u>	<u>TPH</u>	<u>Benzene</u>	<u>Toluene</u>	<u>benzene</u>	<u>Xylenes</u>
RE-6	10/30/90	3400	1000	28	N/D	N/D
	01/17/91	6300	1200	N/D	3	15
	02/12/91	5200	850	8.4	4.9	41
	03/20/91	5800	680	12	8	16
RE-7	10/30/90	31000	14000	N/D	N/D	N/D
	01/17/91	not sampled	- floating product			
	02/12/91	not sampled	- floating product			
	03/20/91	120000	12000	2800	490	6600
PW-1	10/29/90	35000	240	970	240	3580
	01/17/91	37000	43	140	42	1600
	02/12/91	45000	99	130	25	700
	03/20/91	1900	0.43	n/d	n/d	2.8
PW-2	10/29/90	48000	310	2100	500	8200
	01/18/91	86000	230	1400	350	8300
	02/12/91	160000	680	1300	250	7000
	03/20/91	17000	34	50	n/d	1100

Legend:

N/D - Not detected

TPH - Total Petroleum Hydrocarbons as referenced to gasoline

Petroleum hydrocarbons were detected in all of the samples analyzed. The lateral distribution of the concentrations as TPH across the site were interpreted to construct the TPH Isocontour Maps, included as Plates 3, 4 and 5 at the end of the text.

TABLE II

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

<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
	11/09/90		5.80	161.28
	01/17/91		5.17	161.91
	02/11/91		4.16	162.92
	03/19/91		4.75	162.33
RE-2	10/29/90	167.21	5.34	161.87
	11/09/90		5.24	161.97
	01/17/91		4.90	162.31
	02/11/91		4.94	162.27
	03/19/91		4.32	162.89
RE-3	10/29/90	167.47	7.84	159.63
	11/09/90		7.75	159.72
	01/17/91		6.90	160.57
	02/11/91		6.62	160.85
	03/19/91		5.87	161.60
RE-4	10/29/90	167.00	7.04	159.96
	11/09/90		6.99	160.01
	01/17/91		11.62	155.38
	02/11/91		11.63	155.37
	03/19/91		11.61	155.39
RE-5	10/29/90	167.13	5.86	161.27
	11/09/90		5.68	161.45
	01/17/91		5.08	162.05
	02/11/91		4.52	162.61
	03/19/91		4.39	162.74

TABLE II, Cont'd.

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

<u>Well No.</u>	<u>Date</u>	<u>Well Head Elevation</u>	<u>Depth to Groundwater</u>	<u>Groundwater Elevation</u>
RE-6	10/29/90	166.75	6.68	160.07
	11/09/90		6.48	160.27
	01/17/91		6.61	160.14
	02/11/91		6.20	160.55
	03/19/91		5.62	161.13
RE-7	10/29/90	166.10	8.21	157.89
	11/09/90		8.20	157.90
	01/17/91		11.75	154.35
	02/11/91		10.75	155.35
	03/19/91		9.96	156.14
PW-1	10/29/90	166.58	6.17	160.41
	11/09/90		6.50	160.08
	01/17/91		6.28	160.30
	02/11/91		5.88	160.70
	03/19/91		4.75	161.83
PW-2	10/29/90	166.28	6.95	159.33
	11/09/90		6.90	159.38
	01/17/91		6.92	159.36
	02/11/91		6.78	159.50
	03/19/91		5.54	160.74

The groundwater elevations were used to interpret configurations of the potentiometric surface. Plates 6, 7 and 8 represent the January, February and March 1991 interpretations, respectively. On November 9, 1990, the average direction of groundwater flow was towards the east with an average gradient of 0.05 ft/ft. The configurations of January, February and March 1991 groundwater potentiometric surface illustrate the effects of remedial pumping and vapor-extraction. Groundwater mounding is evident beneath the northwest ~~area~~ and the pumping of RE-4 and RE-7 has created localized groundwater depressions. The direction and gradient of groundwater flow varies across the site.

We will continue to monitor groundwater at the site on a monthly basis and we will continue to report the results on a quarterly basis. 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, 01/17/91
- Plate 4 TPH Isocontour Map, 02/11/91
- Plate 5 TPH Isocontour Map, 03-19-91
- Plate 6 Potentiometric Surface Map, 01/17/91
- Plate 7 Potentiometric Surface Map, 02/11/91
- Plate 8 Potentiometric Surface Map, 03/19/91
- Appendix Laboratory Analysis Results with Chain of Custody Records

Respectfully submitted,
DAMES & MOORE



Jeffrey S. Palmer, REP
Senior Environmental Engineer



Michael R. Erwin, RCE
Senior Engineer

JSP/MRE/fso
21161002.003

Station #054, Castro Valley
21161-002-044/1st Quarter, 1991



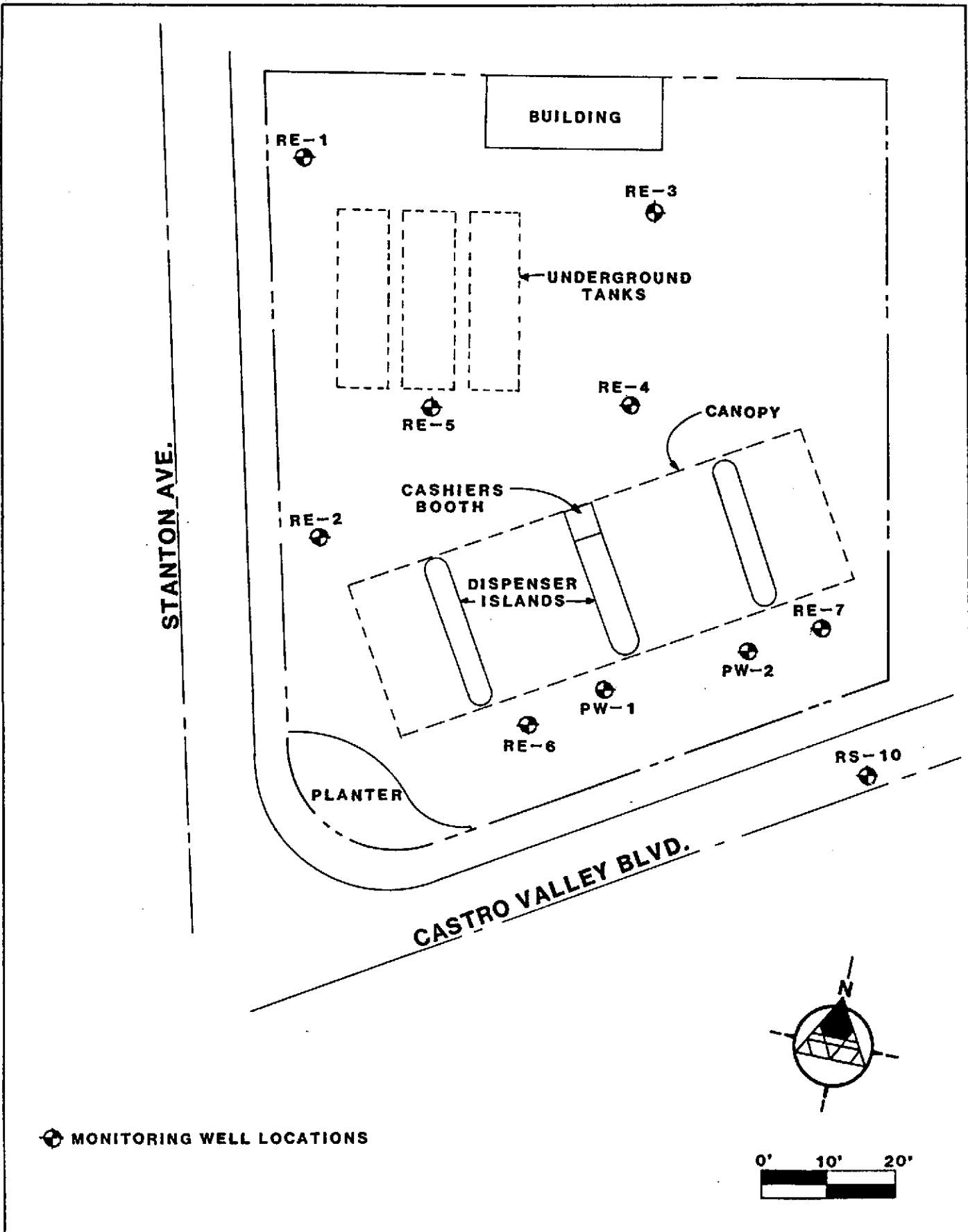
21161-002-044

**THRIFTY OIL
STORE #054**

DAMES & MOORE

**2504 CASTRO VALLEY BLVD.
CASTRO VALLEY, CA**

VICINITY MAP



21161-002-044

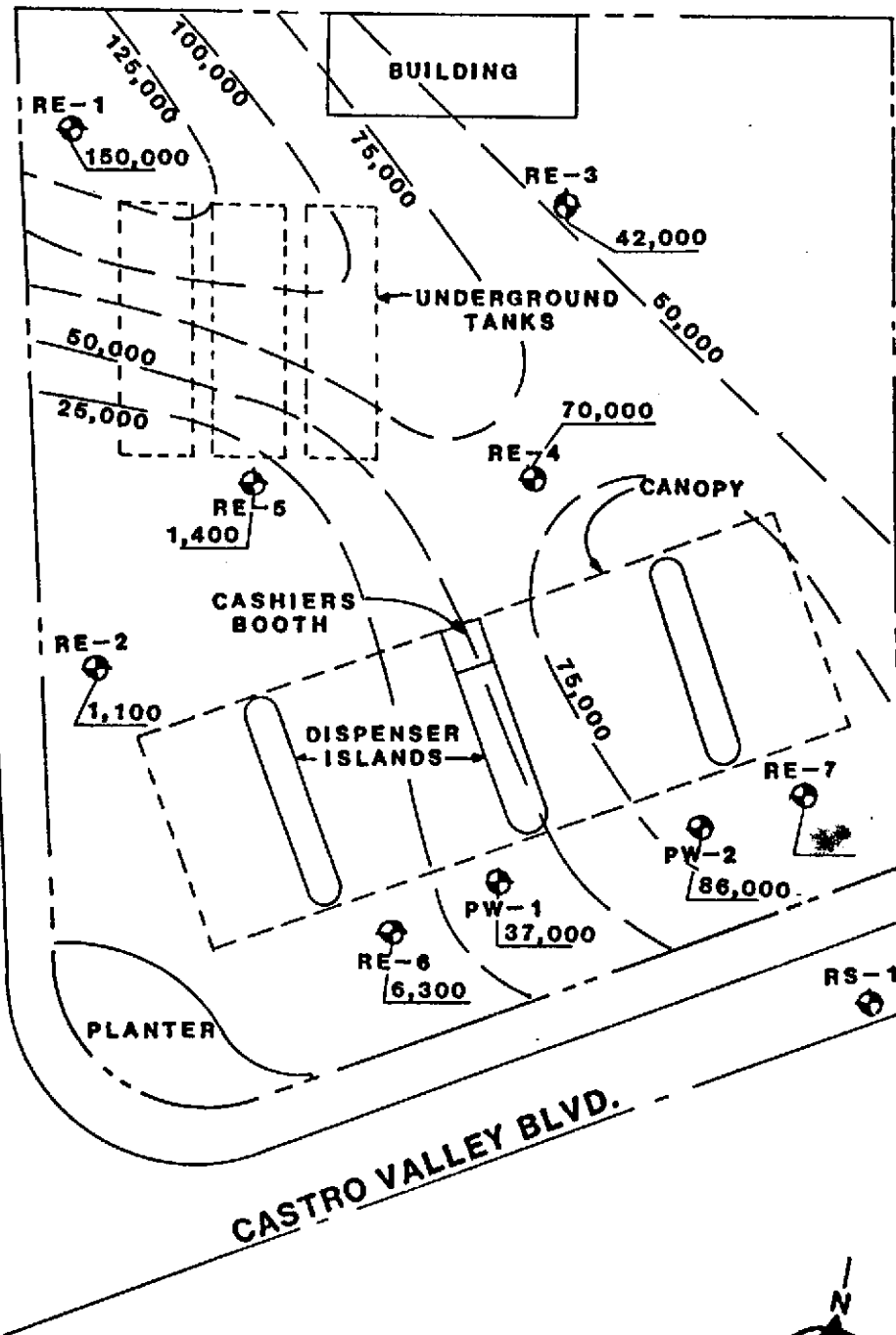
**THRIFTY OIL
STORE #054**

DAMES & MOORE

2504 CASTRO VALLEY BLVD.
CASTRO VALLEY, CA

SITE MAP

STANTON AVE.

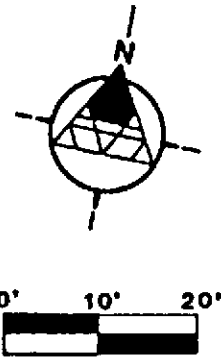


TPH CONCENTRATIONS

MONITORING WELL LOCATIONS

— LINES OF EQUAL CONCENTRATIONS OF TPH IN PPB

* DENOTES FLOATING GASOLINE



21161-002-044

THRIFTY OIL
STORE #054

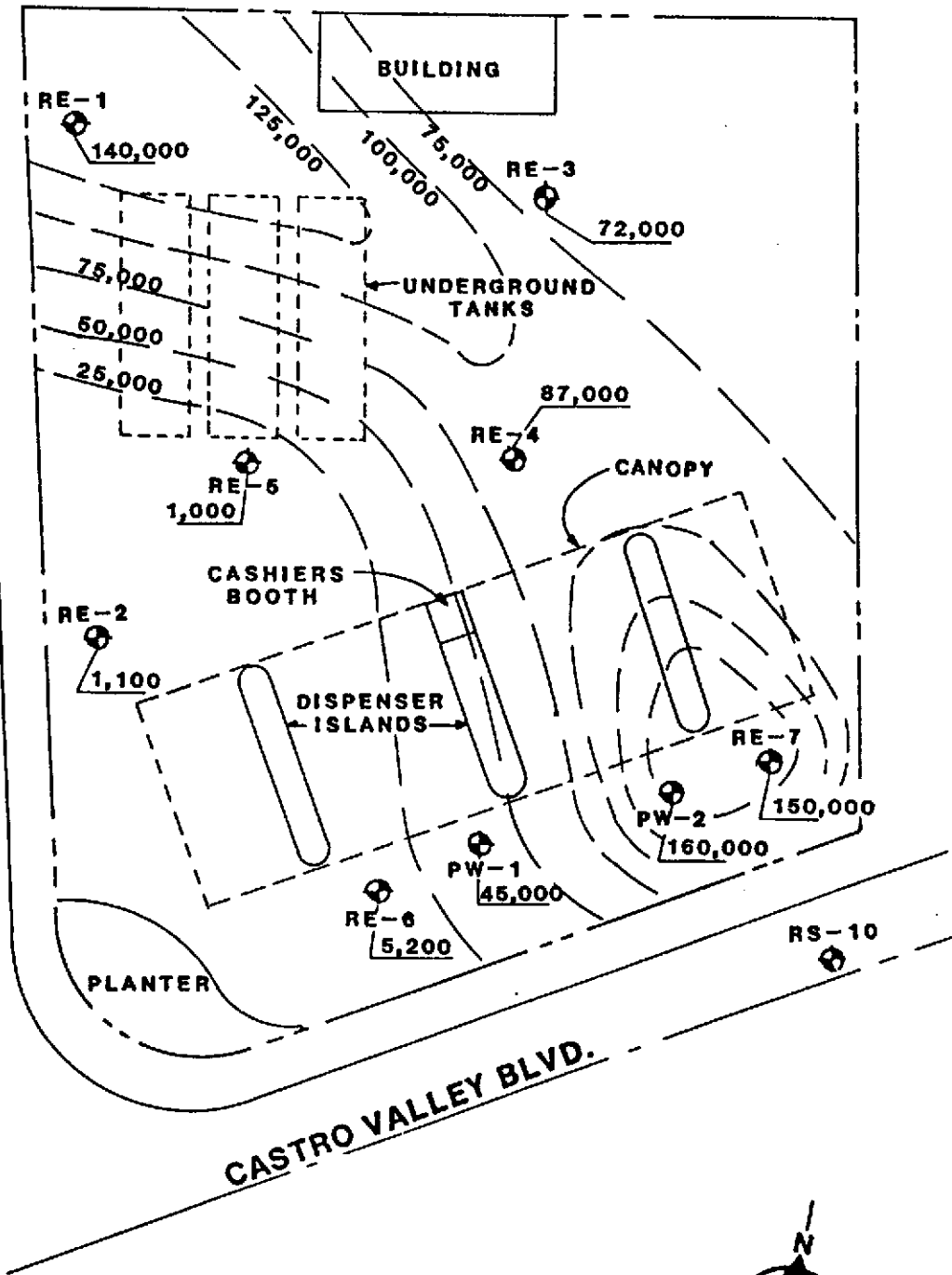
ISOCONTOUR MAP OF TPH IN GROUNDWATER

DAMES & MOORE

2604 CASTRO VALLEY BLVD
CASTRO VALLEY, CA

DATE: JAN., 1991

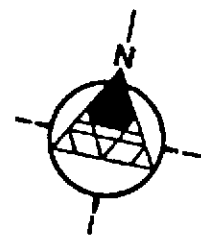
STANTON AVE.



TPH CONCENTRATIONS

MONITORING WELL LOCATIONS

— LINES OF EQUAL CONCENTRATIONS OF TPH IN PPB



21161-002-044

THRIFTY OIL
STORE #054

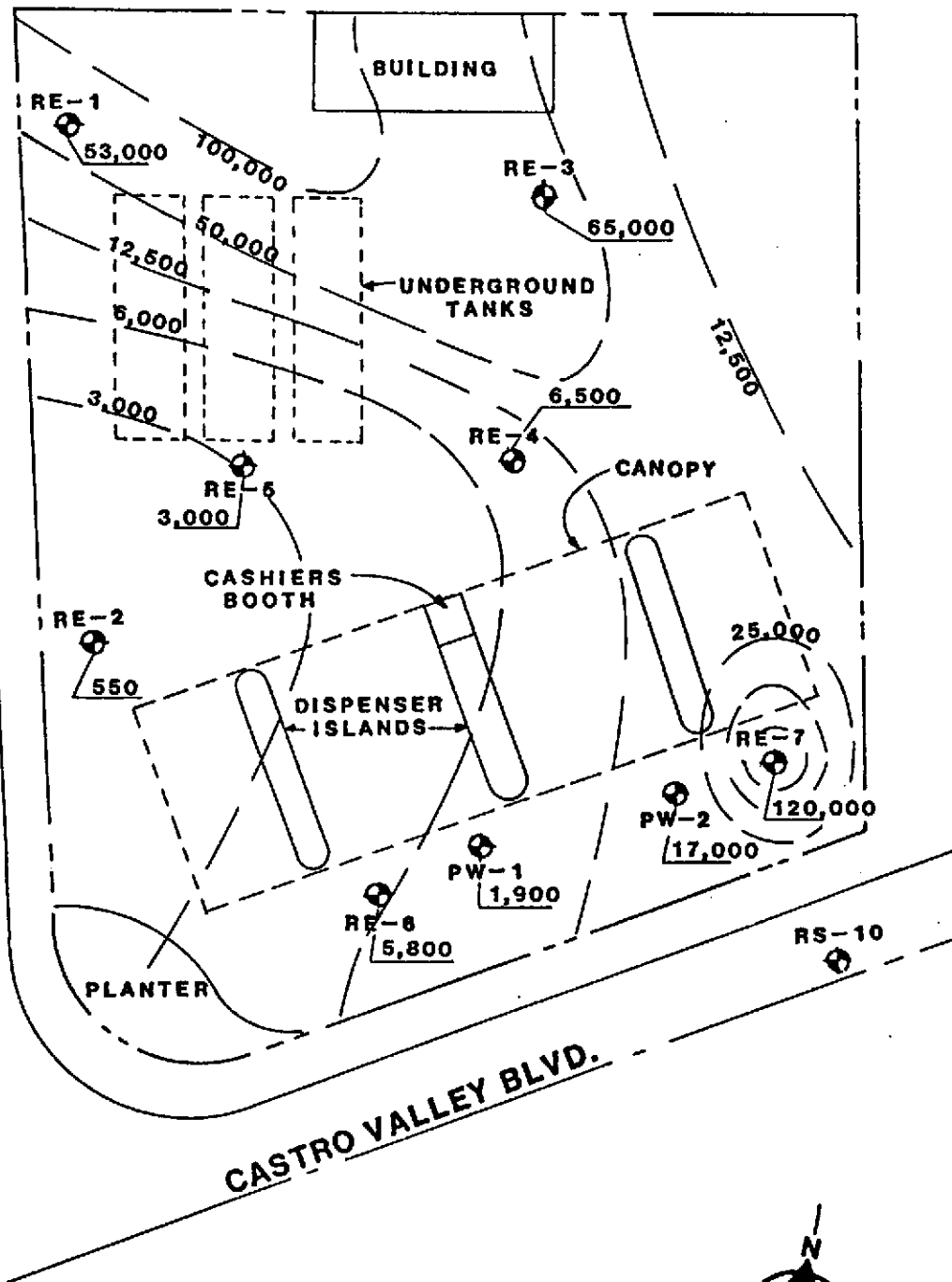
DAMES & MOORE

2504 CASTRO VALLEY BLVD.
CASTRO VALLEY, CA

ISOCONTOUR MAP OF TPH IN GROUNDWATER

DATE: FEB. , 1991

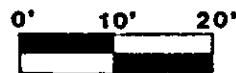
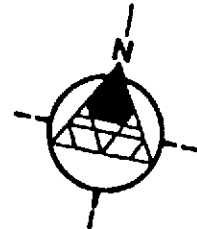
STANTON AVE.



TPH CONCENTRATIONS

MONITORING WELL LOCATIONS

LINES OF EQUAL CONCENTRATIONS OF TPH IN PPB



21181-002-044

THRIFTY OIL
STORE #054

ISOCONTOUR MAP OF TPH IN GROUNDWATER

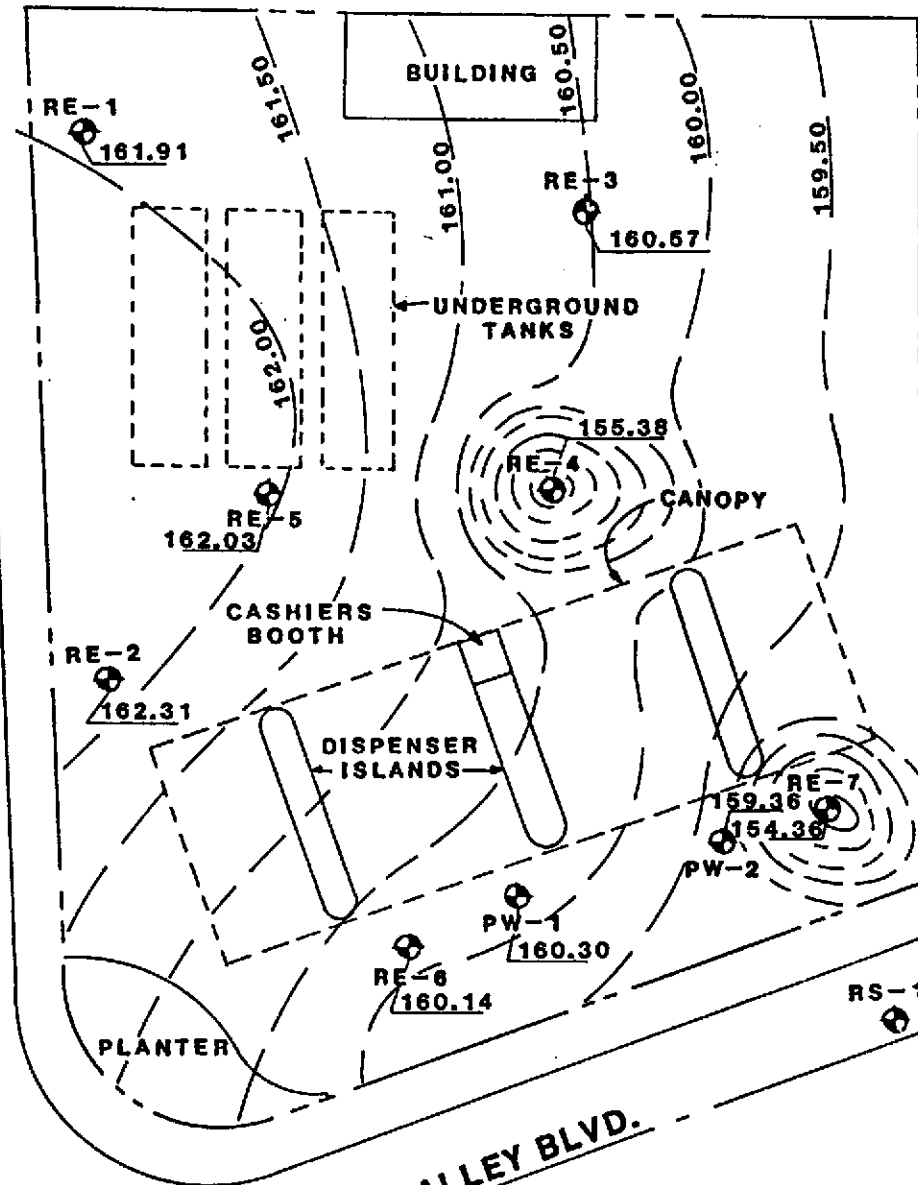
DAMES & MOORE

2804 CASTRO VALLEY BLVD.
CASTRO VALLEY, CA

DATE: MARCH, 1991

PLATE 5

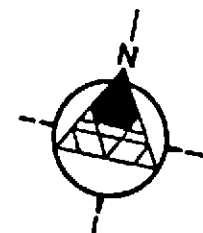
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GROUNDWATER ELEVATION

MONITORING WELL LOCATIONS

LINE OF EQUAL GROUNDWATER ELEVATION



21161-002-044

THRIFTY OIL
STORE #054

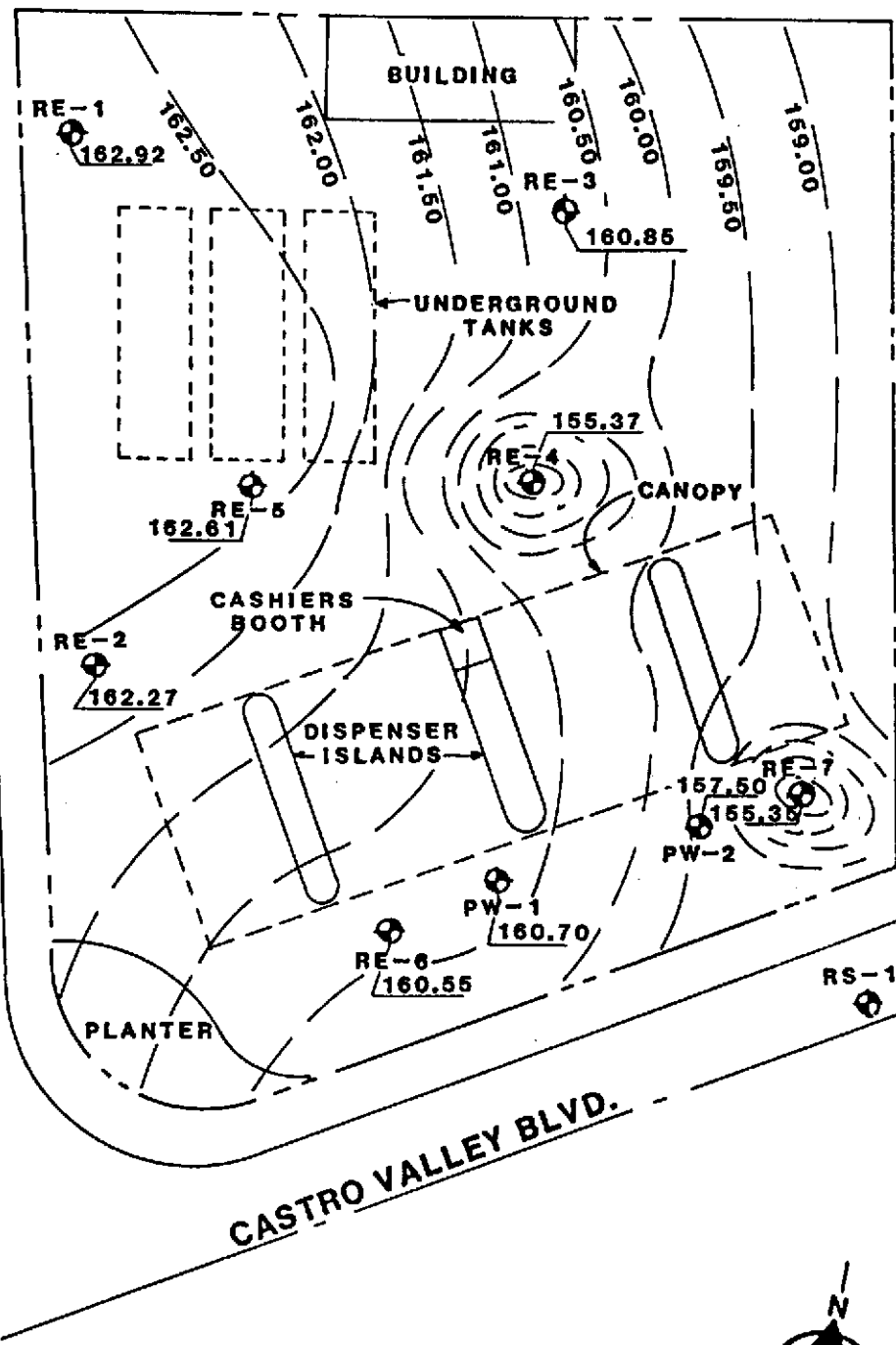
POTENTIOMETRIC SURFACE MAP

DAMES & MOORE

2504 CASTRO VALLEY BLVD
CASTRO VALLEY, CA

DATE: JAN., 1991

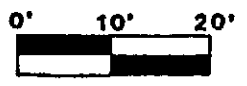
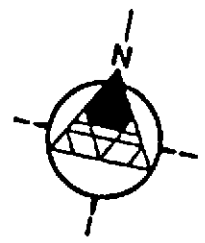
STANTON AVE.



GROUNDWATER ELEVATION

MONITORING WELL LOCATIONS

LINES OF EQUAL GROUNDWATER ELEVATION



21161-002-044

THRIFTY OIL STORE #054

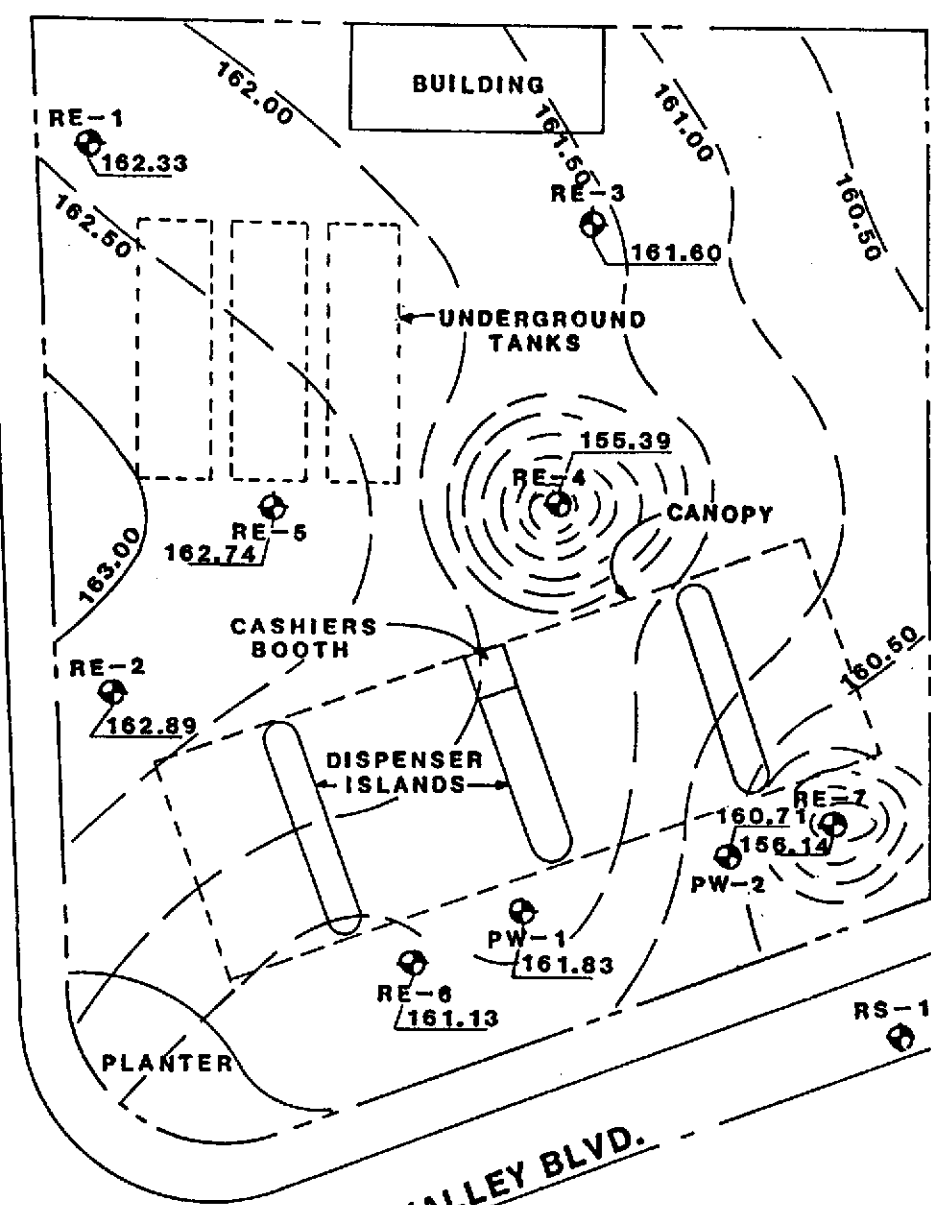
POTENTIOMETRIC SURFACE MAP

DAMES & MOORE

2604 CASTRO VALLEY BLVD.
CASTRO VALLEY, CA

DATE: FEB., 1991

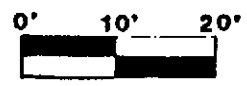
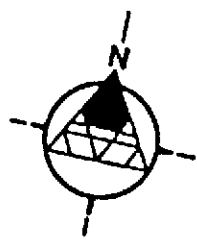
STANTON AVE.



GROUNDWATER ELEVATION

MONITORING WELL LOCATIONS

LINE OF EQUAL GROUNDWATER ELEVATION



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

DATE: MARCH, 1991



Alpha

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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 19:40
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Page
1

Batch 91-0121-001 consisted of 8 Samples and 40 Tests

Sample 1 Thrifty Castro Valley JOB# 21161-002-44
Sample PW-1

	Method	Results	Units	MDL
Benzene	602	43	ug/L	.3
Toluene	602	140	ug/L	.3
Ethylbenzene	602	42	ug/L	.5
Xylenes	602	1600	ug/L	.5
TPH - Gasoline	LUFT	37000	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 01/28/91
(B.F.)



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860 Waugh Lane, H-1, Ukiah, California 95482

(707) 468-0401

CHEMICAL EXAMINATION REPORT

Page 2

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 19:50
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Batch 91-0121-001 consisted of 8 Samples and 40 Tests

Sample 2 Thrifty Castro Valley JOB# 21161-002-44
Sample PW-2

Table with 5 columns: Compound, Method, Results, Units, MDL. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, and TPH - Gasoline.

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce Gove
Date Printed: 01/28/91



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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 20:00
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Page
3

Batch 91-0121-001 consisted of 8 Samples and 40 Tests

Sample 3 Thrifty Castro Valley JOB# 21161-002-44
Sample RE-3

	Method	Results	Units	MDL
Benzene	602	4700	ug/L	.3
Toluene	602	4500	ug/L	.3
Ethylbenzene	602	21	ug/L	.5
Xylenes	602	7700	ug/L	.5
TPH - Gasoline	LUFT	42000	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce Gove
Date Printed: 01/28/91
(JF)



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CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 20:10
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Page
4

Batch 91-0121-001 consisted of 8 Samples and 40 Tests

Sample 4 Thrifty Castro Valley JOB# 21161-002-44
Sample RE-4

	Method	Results	Units	MDL
Benzene	602	5000	ug/L	.3
Toluene	602	5400	ug/L	.3
Ethylbenzene	602	790	ug/L	.5
Xylenes	602	9900	ug/L	.5
TPH - Gasoline	LUFT	70000	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce Gove
Date Printed: 01/28/91
(33)



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CHEMICAL EXAMINATION REPORT

Page
5

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 20:20
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Batch 91-0121-001 consisted of 8 Samples and 40 Tests

Sample 5 Thrifty Castro Valley JOB# 21161-002-44
Sample RE-5

	Method	Results	Units	MDL
Benzene	602	180	ug/L	.3
Toluene	602	8.6	ug/L	.3
Ethylbenzene	602	.52	ug/L	.5
Xylenes	602	48	ug/L	.5
TPH - Gasoline	LUFT	1400	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce Gove
Date Printed: 01/28/91
(J.F.)



Alpha

Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482

(707) 468-0401

CHEMICAL EXAMINATION REPORT

Page 6

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 19:30
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Batch 91-0121-001 consisted of 8 Samples and 40 Tests

Sample 6 Thrifty Castro Valley JOB# 21161-002-44
Sample RE-6

Table with 5 columns: Component, Method, Results, Units, MDL. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, and TPH - Gasoline.

MDL - Minimum Detection Limit ND - None Detected

NOTES: The BTX & E detection limits are 5 times higher than usual due to matrix interferences.

Bruce L. Gove
Laboratory Director

Signature of Bruce L. Gove
Date Printed: 01/28/91



Alpha

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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Page
7

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 12:10
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Batch 91-0121-001 consisted of 8 Samples and 40 Tests

Sample 7 Thrifty Castro Valley JOB# 21161-002-44
Sample RE-1

	Method	Results	Units	MDL
Benzene	602	11000	ug/L	.3
Toluene	602	14000	ug/L	.3
Ethylbenzene	602	1800	ug/L	.5
Xylenes	602	4300	ug/L	.5
TPH - Gasoline	LUFT	150000	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce Gove
Date Printed: 01/28/91
(J.F.)



Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 01/17/91
Time Sampled: 12:00
Sampled By: Marc H. Selover
Date Received: 01/18/91 17:00
Sample Type: Water

Page
8

Batch 91-0121-001 consisted of 8 Samples and 40 Tests


Sample 8 Thrifty Castro Valley JOB# 21161-002-44
Sample RE-2

	Method	Results	Units	MDL
Benzene	602	8.4	ug/L	.9
Toluene	602	3.1	ug/L	.9
Ethylbenzene	602	ND	ug/L	1.5
Xylenes	602	10	ug/L	1.5
TPH - Gasoline	LUFT	1100	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES: The BTX & E detection limits are 3 times higher than usual due to matrix interferences.

Bruce L. Gove
Laboratory Director


Date Printed: 01/28/91
(J.F.)



Alpha

Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

January 28, 1991

Dames & Moore
1320 E. Shaw Ave. Suite 110
Fresno, CA 93710

Attn: Jeff Palmer

Subject: Quality Control Report

QC BATCH NUMBER - CWH 7152 & 7156

MATRIX - WATER

	<u>Method Blank Recovery</u> %	<u>Matrix Spike Recovery</u> %	<u>Duplicate Spike Recovery</u> %	<u>RPD</u> %
Benzene	ND	108	112	3.6
Toluene	ND	108	111	2.7
Xylenes	ND	97.5	101	3.5
Ethlybenzene	ND	108	112	3.6
Gasoline	ND	101	99.2	1.8

Note: This batch passes method quality control acceptance criteria.

ND = none detected

ALPHA ANALYTICAL LABORATORIES, INC.

Bruce L. Gove
Laboratory Director

DAMES & MOORE

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

CHAIN OF CUSTODY RECORD

DAM CONTACT: Marc Selover
 PHONE: (209) 222-7892

JOB NO. <u>21161-02-014</u>		PROJECT NAME: <u>Thrifty Oil</u> LOCATION: <u>Castro Valley</u>				NUMBER OF CONTAINERS	ANALYSES REQUESTED				ANALYTICAL LABORATORY: <u>Alpha Lab</u>	
SAMPLERS: NAME (Print) <u>Marc H. Selover</u> (Signature) <u>Marc H. Selover</u>							TPH BTEX				ADDRESS: <u>UKiah, CA</u>	
DATE	TIME	SOIL OR WATER	COMP.	SINGLE	SAMPLE NO.	SOIL SAMPLES DEPTH (feet)	BORING NO.					REMARKS
<u>1/17/91</u>	<u>1940</u>	<u>water</u>		<u>X</u>	<u>PW-1</u>			<u>2</u>	<u>X</u>	<u>X</u>		
	<u>1950</u>			<u>X</u>	<u>PW-2</u>			<u>2</u>	<u>X</u>	<u>X</u>		
	<u>2000</u>			<u>X</u>	<u>RE-3</u>			<u>2</u>	<u>X</u>	<u>X</u>		
	<u>2010</u>			<u>X</u>	<u>RE-4</u>			<u>2</u>	<u>X</u>	<u>X</u>		
	<u>2020</u>			<u>X</u>	<u>RE-5</u>			<u>2</u>	<u>X</u>	<u>X</u>		
<u>1/17/91</u>	<u>1930</u>			<u>X</u>	<u>RE-6</u>			<u>2</u>	<u>X</u>	<u>X</u>		
<u>1/18/91</u>	<u>1210</u>			<u>X</u>	<u>RE-1</u>			<u>2</u>	<u>X</u>	<u>X</u>		
<u>1/18/91</u>	<u>1200</u>	<u>water</u>		<u>X</u>	<u>RE-2</u>			<u>2</u>	<u>X</u>	<u>X</u>		
1. Relinquished by: (Signature) <u>Marc H. Selover</u>		Company: <u>Dames & Moore</u>		Date / Time: <u>1/18/91 10:30</u>		Received by: (Signature) <u>Bruce J. [unclear]</u>		Company: <u>Alpha Labs</u>		Date / Time: <u>1-18-91 1430</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:		

CHAIN OF CUSTODY RECORD

Dames & Moore



Alpha

Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

February 28, 1991

Dames & Moore
1320 E. Shaw Ave. Suite 110
Fresno, CA 93710

Attn: Jeff Palmer

Subject: Quality Control Report

QC BATCH NUMBER - CWH 8013

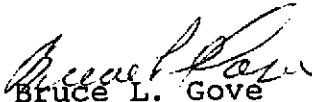
MATRIX - WATER

	<u>Method Blank Recovery</u> %	<u>Matrix Spike Recovery</u> %	<u>Duplicate Spike Recovery</u> %	<u>RPD</u> %
Benzene	ND	115	118	2.6
Toluene	ND	102	104	1.9
Xylenes	ND	96.2	98.7	2.6
Ethlybenzene	ND	97.6	100	2.4
Gasoline	ND	104	102	1.9

Note: This batch passes method quality control acceptance criteria.

ND = none detected

ALPHA ANALYTICAL LABORATORIES, INC.


Bruce L. Gove
Laboratory Director

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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 08:30
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Page
1

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

Sample 1 Thrifty Oil/Castro Valley JOB#
21161-002-044 RE-1

	Method	Results	Units	MDL
Benzene	602	11000	ug/L	.3
Toluene	602	12000	ug/L	.3
Ethylbenzene	602	1600	ug/L	.5
Xylenes	602	13000	ug/L	.5
TPH - Gasoline	LUFT	140000	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 02/28/91



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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 08:40
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Page
2

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

Sample 2 Thrifty Oil/Castro Valley JOB#
21161-002-044 RE-2

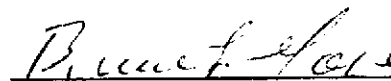
	Method	Results	Units	MDL
Benzene	602	5.9	ug/L	.3
Toluene	602	ND	ug/L	.3
Ethylbenzene	602	.77	ug/L	.5
Xylenes	602	ND	ug/L	.5
TPH - Gasoline	LUFT	1100	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director


Date Printed: 02/28/91



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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 08:50
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Page
3

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

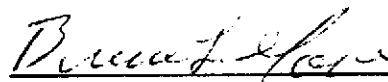
Sample 3 Thrifty Oil/Castro Valley JOB#
21161-002-044 RE-3

	Method	Results	Units	MDL
Benzene	602	3600	ug/L	4.02
Toluene	602	4500	ug/L	4.02
Ethylbenzene	602	ND	ug/L	6.7
Xylenes	602	7600	ug/L	6.7
TPH - Gasoline	LUFT	72000	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES: The BTX & E detection limits are 13.4 times higher than usual due to matrix interferences.

Bruce L. Gove
Laboratory Director


Date Printed: 02/28/91



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CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 09:00
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Page
4

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

Sample 4 Thrifty Oil/Castro Valley JOB#
21161-002-044 RE-4

	Method	Results	Units	MDL
Benzene	602	5200	ug/L	.3
Toluene	602	2800	ug/L	.3
Ethylbenzene	602	240	ug/L	.5
Xylenes	602	11000	ug/L	.5
TPH - Gasoline	LUFT	87000	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 02/28/91



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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 09:10
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Page
5

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

Sample 5 Thrifty Oil/Castro Valley JOB#
21161-002-044 RE-5

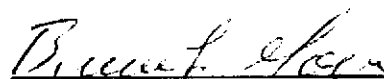
	Method	Results	Units	MDL
Benzene	602	ND	ug/L	.3
Toluene	602	ND	ug/L	.3
Ethylbenzene	602	.65	ug/L	.5
Xylenes	602	ND	ug/L	.5
TPH - Gasoline	LUFT	1000	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director


Date Printed: 02/28/91



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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 09:20
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Page
6

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

Sample 6 Thrifty Oil/Castro Valley JOB#
21161-002-044 RE-6

	Method	Results	Units	MDL
Benzene	602	850	ug/L	.3
Toluene	602	8.4	ug/L	.3
Ethylbenzene	602	4.9	ug/L	.5
Xylenes	602	41	ug/L	.5
TPH - Gasoline	LUFT	5200	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 02/28/91



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Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482

(707) 468-0401

CHEMICAL EXAMINATION REPORT

Page 7

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 09:30
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

Sample 7 Thrifty Oil/Castro Valley JOB#
21161-002-044 PW-1

Table with 5 columns: Component, Method, Results, Units, MDL. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, and TPH - Gasoline.

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Signature of Bruce L. Gove
Date Printed: 02/28/91



Alpha

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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Page
8

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 09:40
Sampled By: Marc Selover
Date Received: 02/14/91 10:00
Sample Type: Water

Batch 91-0214-008 consisted of 8 Samples and 40 Tests

Sample 8 Thrifty Oil/Castro Valley JOB#
21161-002-044 PW-2

	Method	Results	Units	MDL
Benzene	602	680	ug/L	.3
Toluene	602	1300	ug/L	.3
Ethylbenzene	602	250	ug/L	.5
Xylenes	602	7000	ug/L	.5
TPH - Gasoline	LUFT	160000	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 02/28/91

Alpha Analytical Laboratories
 860 Waugh Lane, H-1
 Ukiah CA 95482

(707) 468-0401

I N V O I C E
 =====

BILL TO:

Dames & Moore
 1320 E. Shaw Avenue, Suite 110
 Fresno, CA 93710

Attn: Jeff Palmer

RESULTS TO:

Dames & Moore
 1320 E. Shaw Avenue, Suite 110
 Fresno, CA 93710

Attn: Jeff Palmer

 Batch Number Receipt Date Client Client P.O. Send Via Results Sent Terms
 91-0225-001 02/13/91 10:00 DAMMOR Mail 02/28/91 Net 30 days
 =====

Batch 91-0225-001 consisted of 1 Sample and 5 Tests

Sample 1 Thrifty Oil - Castro Valley Rinse Blank Sampled by: Marc Selover 02/12/91 09:50 Water
 Job # 21161-002-044
 Tests Performed: OU-TPGBTXE-W TPH Gasoline W/BTXE Water \$85.00

 PLEASE PRINT INVOICE NUMBER ON CHECK!

THANK YOU!

 Net Total \$85.00

 Misc. Charges
 Sales Tax
 Sending Charges

 INVOICE TOTAL \$85.00
 =====



Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 02/12/91
Time Sampled: 09:50
Sampled By: Marc Selover
Date Received: 02/13/91 10:00
Sample Type: Water

Page
1

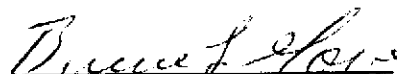
	Method	Results	Units	MDL
Batch 91-0225-001 consisted of 1 Sample and 5 Tests				
Sample 1	Thrifty Oil - Castro Valley Rinse Blank Job # 21161-002-044			
Benzene	602	ND	ug/L	.3
Toluene	602	ND	ug/L	.3
Ethylbenzene	602	ND	ug/L	.5
Xylenes	602	ND	ug/L	.5
TPH - Gasoline	LUFT	12	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director


Date Printed: 02/28/91

DAMES & MOORE

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

CHAIN OF CUSTODY RECORD

*Dve
 2-28-91*

D&M CONTACT: Marc Selover
 PHONE: (209) 222-7892

JOB NO. 21117-002-044		PROJECT NAME: LOCATION: Thrifty Oil / Castro Valley				NUMBER OF CONTAINERS	ANALYSES REQUESTED						REMARKS	
SAMPLERS: NAME (Print) (Signature)		NAME (Print) Marc Selover	(Signature) Marc Selover				TPH, 9, 9BTEX							
DATE	TIME	SOIL OR WATER	COMP.	SINGLE	SAMPLE NO.	SOIL SAMPLES DEPTH (ft)	BORING NO.							
2/12/91	830	W		X	RE-1			2	X					Normal turn-around 91-0214-8-1 91-0214-8-2 91-0214-8-3 91-0214-8-4 91-0214-8-5 91-0214-8-6 91-0214-8-7 91-0214-8-8
	840			X	RE-2			2	X					
	850			X	RE-3			2	X					
	900			X	RE-4			2	X					
	910			Y	RE-5			2	X					
	920			X	RE-6			2	X					
	930			X	PW-1			2	X					
2/12/91	940			X	PW-2			2	X					
2/12/91	0950			X	Rinse Blank*			2	X				91-0225-1-1	

- Relinquished by: (Signature) Marc H. Selover
 Company: Dames & Moore
 Date / Time: 2/13/91/1500
 Received by: (Signature) [Signature]
 Company: CONSIG 1000 HES
 Date / Time: 2-14-91
- Relinquished by: (Signature) _____
 Company: _____
 Date / Time: _____
 Received by: (Signature) _____
 Company: _____
 Date / Time: _____
- Relinquished by: (Signature) _____
 Company: _____
 Date / Time: _____
 Received by: (Signature) _____
 Company: _____
 Date / Time: _____

* Rinse blank added to coc and is to be analyzed as indicated, as per phone conversation with Jeff palmer - 0900 2-25-91. Bruce Selover - Arata Labs



Alpha

Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482

(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

Page
1

Batch 91-0321-010 consisted of 10 Samples and 50 Tests

Sample 1 Thrifty/Castro JOB# 21161-002 RE-1A

	Method	Results	Units	MDL
Benzene	602	3100	ug/L	.3
Toluene	602	4200	ug/L	.3
Ethylbenzene	602	400	ug/L	.5
Xylenes	602	5500	ug/L	.5
TPH - Gasoline	LUFT	53000	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91

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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

Page
2

Batch 91-0321-010 consisted of 10 Samples and 50 Tests

	Method	Results	Units	MDL
Sample 2 Thrifty/Castro JOB# 21161-002 RE-2A				
Benzene	602	4.3	ug/L	.3
Toluene	602	ND	ug/L	.3
Ethylbenzene	602	ND	ug/L	.5
Xylenes	602	ND	ug/L	.5
TPH - Gasoline	LUFT	550	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



Alpha

Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482

(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

Page
3

Batch 91-0321-010 consisted of 10 Samples and 50 Tests

Sample 3 Thrifty/Castro JOB# 21161-002 RE-3A

	Method	Results	Units	MDL
Benzene	602	2400	ug/L	.3
Toluene	602	9400	ug/L	.3
Ethylbenzene	602	50	ug/L	.5
Xylenes	602	9800	ug/L	.5
TPH - Gasoline	LUFT	65000	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



Alpha

Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482

(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

Page
4

Batch 91-0321-010 consisted of 10 Samples and 50 Tests

Method Results Units MDL

Sample 4 Thrifty/Castro JOB# 21161-002 RE-4A

	Method	Results	Units	MDL
Benzene	602	370	ug/L	.3
Toluene	602	230	ug/L	.3
Ethylbenzene	602	17	ug/L	.5
Xylenes	602	670	ug/L	.5
TPH - Gasoline	LUFT	6500	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

Page
5

	Method	Results	Units	MDL
Batch 91-0321-010 consisted of 10 Samples and 50 Tests				
Sample 5	Thrifty/Castro JOB# 21161-002 RE-5A			
Benzene	602	250	ug/L	.45
Toluene	602	53	ug/L	.45
Ethylbenzene	602	ND	ug/L	.75
Xylenes	602	110	ug/L	.75
TPH - Gasoline	LUFT	3000	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES: The BTX & E detection limits are 1.5 times higher than usual due to matrix interferences.

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



Alpha

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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Page
6

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

	Method	Results	Units	MDL
Batch 91-0321-010 consisted of 10 Samples and 50 Tests				
Sample 6	Thrifty/Castro JOB# 21161-002 RE-6A			
Benzene	602	680	ug/L	.3
Toluene	602	12	ug/L	.3
Ethylbenzene	602	8	ug/L	.5
Xylenes	602	16	ug/L	.5
TPH - Gasoline	LUFT	5800	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



Alpha

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

Page
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Batch 91-0321-010 consisted of 10 Samples and 50 Tests

Sample 7 Thrifty/Castro JOB# 21161-002 RE-7A

	Method	Results	Units	MDL
Benzene	602	12000	ug/L	.3
Toluene	602	2800	ug/L	.3
Ethylbenzene	602	490	ug/L	.5
Xylenes	602	6600	ug/L	.5
TPH - Gasoline	LUFT	120000	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Date Printed: 03/25/91



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CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

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	Method	Results	Units	MDL
Batch 91-0321-010 consisted of 10 Samples and 50 Tests				
Sample 8	Thrifty/Castro JOB# 21161-002 PW-1A			
Benzene	602	.43	ug/L	.3
Toluene	602	ND	ug/L	.3
Ethylbenzene	602	ND	ug/L	.5
Xylenes	602	2.8	ug/L	.5
TPH - Gasoline	LUFT	1900	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



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CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

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Batch 91-0321-010 consisted of 10 Samples and 50 Tests

Sample 9 Thrifty/Castro JOB# 21161-002 PW-2A

	Method	Results	Units	MDL
Benzene	602	34	ug/L	1.08
Toluene	602	50	ug/L	1.08
Ethylbenzene	602	ND	ug/L	1.80
Xylenes	602	1100	ug/L	1.80
TPH - Gasoline	LUFT	17000	ug/L	5

MDL - Minimum Detection Limit ND - None Detected

NOTES: The BTX & E detection limits are 3.6 times higher than usual due to matrix interferences.

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



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CHEMICAL EXAMINATION REPORT

Dames & Moore
1320 E. Shaw Avenue, Suite 110
Fresno, CA 93710
Attn: Jeff Palmer

Date Sampled: 03/20/91
Time Sampled:
Sampled By: Mike Padgett
Date Received: 03/21/91 10:30
Sample Type: Water

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Batch 91-0321-010 consisted of 10 Samples and 50 Tests

Sample 10 Thrifty/Castro JOB# 21161-002 Rinsate
Blank A

	Method	Results	Units	MDL
Benzene	602	ND	ug/L	.3
Toluene	602	.41	ug/L	.3
Ethylbenzene	602	ND	ug/L	.5
Xylenes	602	ND	ug/L	.5
TPH - Gasoline	LUFT	5.9	ug/L	5

MDL - Minimum Detection Limit

ND - None Detected

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 03/25/91



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Alpha Analytical Laboratories Inc.

860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

March 25, 1991

Dames & Moore
1320 E. Shaw Ave. Suite 110
Fresno, CA 93710

Attn: Jeff Palmer

Subject: Quality Control Report

QC BATCH NUMBER - CWH 8024

MATRIX - WATER

	<u>Method</u> <u>Blank</u> <u>Recovery</u> %	<u>Matrix</u> <u>Spike</u> <u>Recovery</u> %	<u>Duplicate</u> <u>Spike</u> <u>Recovery</u> %	<u>RPD</u> %
Benzene	ND	101	98.0	3.0
Toluene	ND	101	98.2	2.8
Xylenes	ND	102	98.6	3.4
Ethlybenzene	ND	102	98.9	3.1
Gasoline	ND	101	97.0	3.0

Note: This batch passes method quality control acceptance criteria.

ND = none detected

ALPHA ANALYTICAL LABORATORIES, INC.


Bruce L. Gove
Laboratory Director