

**RECEIVED**

11:42 am, Sep 15, 2010

Alameda County  
Environmental Health

**LIMITED SUBSURFACE INVESTIGATION**

**THRIFTY OIL STATION #063**

**6125 TELEGRAPH ROAD**

**OAKLAND, CALIFORNIA**

**PREPARED FOR:**

**Thrifty Oil Co.  
10000 Lakewood Boulevard  
Downey, California 90240**

**PREPARED BY:**

**Hydrotech Consultants, Inc.  
5 Mason  
Irvine, California 92718**

**JOB NO: 13-6782-018-00-00  
LOG NO: H7-2005**

**SEPTEMBER 21, 1987**

LIMITED SUBSURFACE INVESTIGATION  
THRIFTY OIL STATION #063

TABLE OF CONTENTS

	<u>Page</u>
<b>1.0 INTRODUCTION</b>	1
1.1 Site Description	1
1.2 Scope of Investigation	2
<b>2.0 GEOLOGY</b>	2
2.1 Regional Geology	2
2.2 Local Subsurface Conditions	3
<b>3.0 INVESTIGATION PROCEDURES</b>	3
3.1 General	3
3.2 Drilling and Soil Sampling	4
3.3 Laboratory Analysis	5
<b>4.0 FINDINGS</b>	6
<b>5.0 LIMITATIONS OF INVESTIGATION</b>	7

ATTACHMENTS

TABLES

I	Depth of Soil Sample Collection
II	Results of Laboratory Analyses

FIGURES

1	Location Map
B-1	Plot Plan

APPENDICES

A	References
B	Field Investigation Description of Sampling, Handling and Preparation Procedures Key to Logs, Figure B-2 Boring Logs, Figures B-3 through B-6
C	Laboratory Results
D	Chain-of-Custody Documents
E	Thrifty Oil Co. - Scope of Work

LIMITED SUBSURFACE INVESTIGATION  
THRIFTY OIL STATION #063  
OAKLAND, CALIFORNIA

1.0 INTRODUCTION

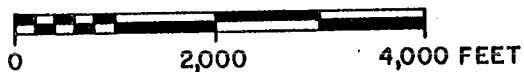
This report presents the results of a subsurface investigation performed at the subject site located at 6125 Telegraph Avenue in the City of Oakland, California (see Figure 1, Location Map). The site is currently occupied by an operating Thrifty Oil Co. (Thrifty) Service Station for the retail sale of various gasoline and petroleum products. This investigation was performed in response to a request from Thrifty to evaluate the site for the presence of any subsurface petroleum hydrocarbon contamination. The investigation was confined to the subsurface soil materials surrounding the underground storage tanks located at the south-central section of the site. The purpose of this report is to document the specific procedures and equipment utilized during the investigation and to describe the observations, findings and results of our investigation.

1.1 Site Description

The subject site is located at the southwest corner of the intersection of Telegraph Avenue and 62nd Street in the City of Oakland, California. An operating Thrifty Oil Co. service station currently exists on-site. The Thrifty facilities consist of two pump islands, a service station building, and three



APPROXIMATE SCALE.



ADAPTED FROM U.S.G.S. 7.5' OAKLAND WEST (1980) QUADRANGLE

LOCATION MAP

JOB NO.: 13-6782-018-00-00

DATE: SEPTEMBER, 1987

FIGURE: 1

HYDROTECH CONSULTANTS, INC.

Thrifty Oil Co.  
September 21, 1987

JOB NO: 13-6782-018-00-00  
LOG NO: H7-2005  
Page 2

underground petroleum storage tanks. The location of the site with respect to structures and topography is shown on Figure 1, Location Map.

The storage tanks contain regular unleaded, regular leaded, and unleaded premium gasoline. The storage capacity of the individual tanks ranges from 12,000 to 15,000 gallons. Locations of the tanks are shown relative to existing structures on Figure B-1, Plot Plan.

### 1.2 Scope of Investigation

The scope of work for this investigation is in direct response to parameters established by Thrifty Oil Company. Four soil borings were excavated around the underground storage tank cluster. Each boring was drilled to a depth of 20 feet and soil samples were collected every 5 feet. Laboratory analysis for total petroleum hydrocarbons was performed on selected soil samples where warranted by field observations. Appendix E contains the original scope of work for this investigation as presented by Thrifty.

## 2.0 GEOLOGY

### 2.1 Regional Geology

The site is located within the San Francisco Bay structural depression of the Coast Ranges Physiographic Province in north-central Alameda County, California. Bedrock in the area consists of sedimentary, metasedimentary, volcanic, and intrusive rocks of

Jurassic through Tertiary geologic age. Quaternary-age marine and alluvial sediments blanket the downwarped bedrock within the basin in which the site is located. Shallow groundwater is locally present within these Quaternary sediments.

## 2.2 Local Subsurface Conditions

Artificial fill materials were observed in all borings during our investigation and consisted of clay with silt and fine sand. Native earth materials observed underlying the fill consisted of brown to black clay and grey-green siltstone. Detailed lithologic descriptions of each borings are included in Appendix B, Figures B-3 through B-6. Groundwater was observed in Boring B-2 at a depth of 19 feet below ground surface.

## 3.0 INVESTIGATION PROCEDURES

### 3.1 General

The investigation was conducted according to the planned scope of work. Four vertical borings were excavated around the tank cluster to a depth of 20 feet. Soil samples were collected at five-foot depth intervals in each boring. All borings were backfilled with a mixture of clean native soil and concrete then capped with three to six inches of asphalt or concrete. Apparently contaminated soil from Boring B-1 was placed in a single hazardous waste drum (17-H), sealed, labeled and stored on the site for future disposal.

### 3.2 Drilling and Soil Sampling

The borings were completed on September 11, 1987 by Interstate Soils Sampling under the observation of an engineering geologist from Hydrotech. Drilling was conducted using a truck-mounted hollow-stem auger rig. Standard care and practice relating to sample collection and handling was employed. Details of sample collection and handling are described in Appendix C. Table I lists the borings with the corresponding depths at which soil samples were collected.

TABLE I  
Depth of Soil Sample Collection

<u>Boring Number</u>	<u>Sample Depth (feet)</u>
B-1	5
B-1	10
B-1	15
B-1	20
B-2	5
B-2	10
B-2	15
B-2	20
B-3	5
B-3	10
B-3	15
B-3	20
B-4	5
B-4	10
B-4	15
B-4	20

Thrifty Oil Co.  
September 21, 1987

JOB NO: 13-6782-018-00-00  
LOG NO: H7-2005  
Page 5

### 3.3 Laboratory Analysis

Chemical analyses were performed on selected soil samples by Truesdail Laboratories, Inc., an independent testing laboratory located in Tustin, California. Soil samples were analyzed for total petroleum hydrocarbons, the constituent stored in the underground tanks, using Modified EPA Method 8015. Official laboratory results are included in Appendix C. Chain-of-custody procedures were followed and copies of these documents are included in Appendix D.



#### 4.0 FINDINGS

##### 4.1 Subsurface Soil Conditions

Petroleum hydrocarbon odors were noted from soil samples collected from Boring B-1 at depths of 10, 15 and 20 feet below ground surface. Organic vapor meter readings were correspondingly high for these samples. Staining or discoloration of soil materials was observed only in samples recovered from Boring B-1 where petroleum hydrocarbon odors were detected.

Laboratory analysis was performed on soil samples recovered from Boring B-1 and the results are listed in Table II. Both soil samples analyzed contained less than 10 mg/kg total petroleum hydrocarbons.

TABLE II  
Results of Laboratory Analysis

<u>Boring Number</u>	<u>Sample Depth (feet)</u>	<u>Petroleum Hydrocarbon Concentration mg/kg</u>	<u>Sample Type</u>
B-1	10	ND<10	Soil
B-1	20	ND<10	Soil

ND<10 = Not detected less than 10 parts per million.

*Added later*

Thrifty Oil Co.  
September 21, 1987

Job No: 13-6782-018-00-00  
Log No: H-7-2005

Page 6A

#### 4.2 Groundwater Conditions

As mentioned in Section 2.2, groundwater was observed in Boring B-2 at a depth of 19 feet below ground surface. Samples of groundwater collected with a hand bailer through the auger flights showed a thin film of free product hence groundwater samples were not submitted for analytical testing.

A check of existing groundwater monitoring wells on-site (performed 11-23-87) confirmed the presence of floating product. Approximately 2 inches of product was observed in a monitoring well located approximately fifteen feet west of the tank cluster near Boring B-3.

Thrifty Oil Co.  
September 21, 1987

JOB NO: 13-6782-018-00-00  
LOG NO: H7-2005  
Page 7

## 5.0 LIMITATIONS OF INVESTIGATION

Our investigation was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable Soils Engineers and Geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

The samples taken and used for testing and the observations made are believed representative of the entire project; however, soil and geologic conditions as well as groundwater conditions can vary significantly between borings, test pits, and surface outcrops.

As in most projects, conditions revealed by excavation may be at variance with preliminary findings. If this occurs, the changed conditions must be evaluated by the Project Soils Engineer and Geologist and designs adjusted as required or alternate designs recommended.

This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the regulatory agencies.

The interpretations and recommendations of this report are based on the data collected and our present working knowledge of underground tank storage investigation. As such, this report is valid as of the date shown and we cannot be responsible for subsequent changes in physical conditions and/or legislation over which we have no control.

Thrifty Oil Co.  
September 21, 1987

JOB NO: 13-6782-018-00-00  
LOG NO: H7-2005  
Page 8

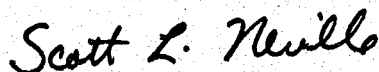
The opportunity to be of service is appreciated. If you have any questions, please call.

Very truly yours,

HYDROTECH CONSULTANTS, INC.

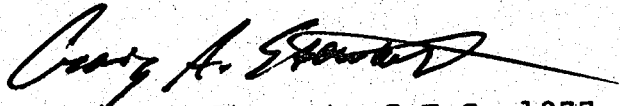


Scott Warren  
Staff Geologist



Scott L. Neville, R.G. 4252  
Project Geologist  
Registration expires 6/30/88

REVIEWED BY:



Craig A. Stewart, C.E.G. 1277  
Senior Hydrogeologist  
Registration expires 6/30/88

SW:SLN:CAS/jm

Distribution: (3) Addressee

**APPENDIX A**

**REFERENCES**

## REFERENCES

1. Davis, S.N., 1966, Hydrogeology Field Trip East Bay Area and Northern Santa Clara Valley in Bailey, E.H., Geology of Northern California: Calif. Div. Mines and Geology. Bull. 190, p. 465-471.
2. Page, B.M., 1966, GEOLOGY OF THE COAST RANGES IN CALIFORNIA, in Bailey, E.H., Geology of Northern California: Calif. Div. Mines and Geology, Bull. 190, p. 255-276.
3. Jennings, C.W., Burnett, J.L., 1961, Geologic Map Of California, San Francisco Sheet: California Division of Mines..

APPENDIX B

FIELD INVESTIGATION

## DESCRIPTION OF SAMPLING, HANDLING AND PREPARATION PROCEDURES

Auger flights were hollow-stem types with an inside diameter of 3.25 inches and an outside diameter of 8.0 inches. Individual auger flights were five feet in length. Soil samples were collected at five foot intervals. A retractable plug prevented soil from entering into the auger flights during the boring process. The plug, which is inserted or retrieved by a wireline, is at the end of a 140 pound drive hammer. When a target depth is reached, a Modified California Sampler is placed at the bottom of the hammer and lowered by wireline to the bottom of the boring. The sampler is then driven into the soil by repeatedly raising and dropping the hammer 30 inches until the sampler has been advanced 12 inches. This driving action forces relatively undisturbed soil into the sampler barrel. Details of the components of the Modified California Sampler are described below. Following the driving operation, the hammer and sampler are retrieved from the boring and separated; soil is removed from the sampler and prepared for shipment to an analytical laboratory.

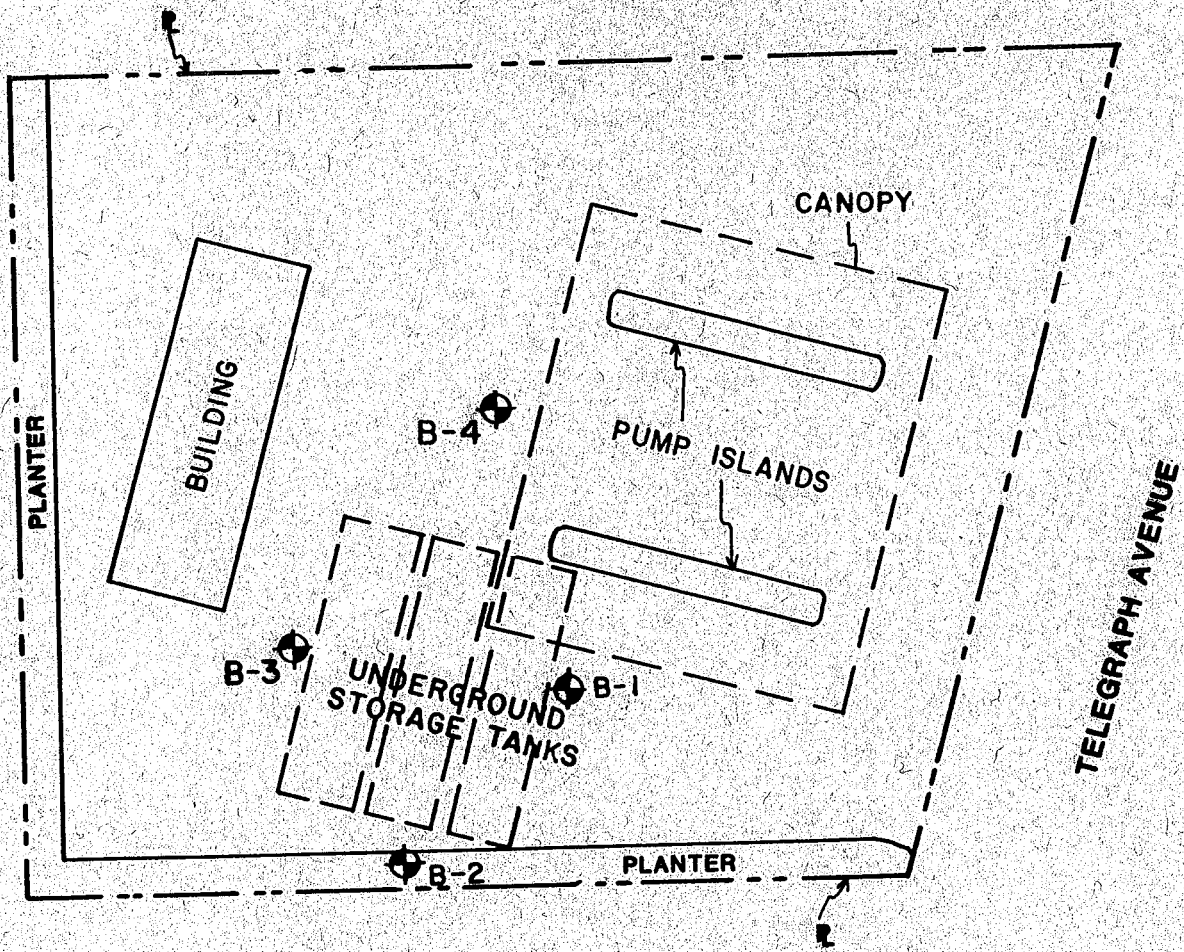
The Modified California Sampler consists of an outer sampler barrel and an inner, thin-walled set of rings. As soil is forced into the sample barrel by the driving action described above, a soil sample is collected in the inner rings. For this application, two 6-inch long by 2.5-inch diameter brass rings were used. After retrieval from the boring and subsequent detachment from the hammer, the sampler was dismantled and the inner rings containing the soil sampler were removed. The lower ring was sealed by covering the ends with aluminum foil, placing plastic caps on each tube end, and securing the caps with duct tape. Each sample was then labeled and placed in an ice chest for cold storage for shipment to an analytical laboratory.

To avoid cross-contamination between samples and boreholes, the Modified California Sampler and the brass ring inserts were cleaned before each use. The sampling equipment was washed with an aqueous solution of trisodium phosphate, rinsed twice with tap water and allowed to air dry.


Each soil sample collected was analyzed for possible hydrocarbon contamination by use of an organic vapor meter (Gastechtor model 1314). A portion of the sample was placed in a sealable (ziplock) plastic bag. After the bag had been sealed for a minimum of 5 minutes the sample was "sniffed" and the meter readings (parts per million) recorded on the boring log. The model 1314 Gastechtor-Hydrocarbon Surveyor is a battery-powered instrument that can detect and indicate concentrations of combustible gas or vapor in air, in the explosibility and parts per million ranges. Samples under test are drawn continuously by means of a built-in pump and analyzed for combustible gas on a heated catalytic platinum element. This instrument will respond to at least 23 different gases including various petroleum products. Results of the Gastechtor are given in parts per million and are used only as a qualitative field measure of potential soil contamination.



62nd STREET




**EXPLANATION:**

 EXPLORATORY BORING

B-4

**SCALE:**



0 10 20 30 40 FEET

# PLOT PLAN OF THRIFTY OIL STATION #63

JOB NO.: 13-6782-018-00-00

DATE: SEPTEMBER, 1987

FIGURE: B-1

HYDROTECH CONSULTANTS, INC.

## DEFINITION OF TERMS

PRIMARY DIVISIONS		SYMBOLS		SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
		SANDS WITH FINES	SW	Well graded sands, gravelly sands, little or no fines.
		SANDS WITH FINES	SP	Poorly graded sands or gravelly sands, little or no fines.
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50%	SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
		SANDS WITH FINES	SC	Clayey sands, sand-clay mixtures, plastic fines.
		SANDS WITH FINES	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50%	SANDS WITH FINES	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays.
		SANDS WITH FINES	OL	Organic silts and organic silty clays of low plasticity.
		SANDS WITH FINES	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
HIGHLY ORGANIC SOILS	SANDS WITH FINES	CH	Inorganic clays of high plasticity, fat clays.	
	SANDS WITH FINES	OH	Organic clays of medium to high plasticity, organic silts.	
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils.	

### GRAIN SIZES

SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		
	200	40	10	4	3/4"	3"	12"
	U.S. STANDARD SERIES SIEVE			CLEAR SQUARE SIEVE OPENINGS			

### RELATIVE DENSITY

SANDS, GRAVELS AND NON-PLASTIC SILTS	BLOWS/FOOT*
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

### CONSISTENCY

CLAYS AND PLASTIC SILTS	STRENGTH**	BLOWS/FOOT*
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

\*NUMBER OF BLOWS OF 140 POUND HAMMER FALLING 30-INCHES TO DRIVE A 2-INCH O.D. (1-3/8-INCH I.D.) SPLIT SPOON (ASTM D-1586).

\*\*UNCONFINED COMPRESSIVE STRENGTH IN TONS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST (ASTM D-1586), POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION

#### TYPE OF SAMPLES:

RING SAMPLE     STANDARD PENETRATION TEST     GEOCHEMICAL SAMPLE

#### DRILLING NOTES:

1. SAMPLING AND BLOW COUNTS
  - RING SAMPLER - NUMBER OF BLOWS PER FOOT OF A 140 POUND HAMMER FALLING 30 INCHES
  - STANDARD PENETRATION TEST - NUMBER OF BLOWS PER 12 INCHES SHOWN
  - GEOCHEMICAL SAMPLER - 2.5 I.D. TUBE DRIVEN BY 140 POUND HAMMER FALLING 30 INCHES
2. P.P. - POCKET PENETROMETER (TONS/SQUARE FOOT)

### KEY TO LOGS

JOB NO.: 13-6782-018-00-00	DATE: SEPTEMBER 1987	FIGURE: B-2
----------------------------	----------------------	-------------

DATE OBSERVED: 9-11-87

METHOD OF DRILLING: HOLLOW STEM AUGER

LOGGED BY: SAW

GROUND ELEVATION: 145'

LOCATION: SEE PLOT PLAN FIGURE B-1

DEPTH (FEET)	CLASSIFICATION	BLOWS/FOOT	UNDISTURBED SAMPLE	BULK SAMPLE	MOISTURE CONTENT (%)	IN PLACE DRY DENSITY (PCF)	BORING NO. <u>B-1</u>	SOIL TEST
							DESCRIPTION	GASTECHTOR READING in ppm
0							ASPHALT COVER	
0-5							FILL: Brown, fine SAND, damp, No petroleum odor	
5-10	SP	12	█				@ 5' color change to green-gray, becomes medium dense	70 ppm
10-15		5	█				@ 10' strong petroleum odor noted	500 ppm
15-20	Ss	29	█				NATURAL GROUND: BEDROCK: Green, weathered SILTSTONE with Reddish brown siltstone fragments wet, very stiff, strong petroleum odor noted	500 ppm
20-21		14	█				@ 20' strong petroleum odor noted	500 ppm
21-25							TOTAL DEPTH: 21 FEET NO GROUNDWATER	
25-30								
30-35								
35-40								

JOB NO: 13-6782-018-00-00

LOG OF BORING

FIGURE: B-3

DATE OBSERVED: 9-11-87 METHOD OF DRILLING: HOLLOW STEM AUGER

LOGGED BY: SAW GROUND ELEVATION: 150' LOCATION: SEE PLOT PLAN FIGURE B-1

DEPTH (FEET)	CLASSIFICATION	BLOWS/FOOT	UNDISTURBED SAMPLE	BULK SAMPLE	MOISTURE CONTENT (%)	IN PLACE DRY DENSITY (PCF)	BORING NO. B-2	SOIL TEST
							DESCRIPTION	GASTECHTOR READING in ppm
0							ASPHALT COVER	
5	CL	13					FILL: Brown CLAY with silt, damp stiff, no petroleum odor  @ 5' drive sample not recovered	250 ppm
10		28					NATURAL GROUND: BEDROCK: Green-gray weathered SILTSTONE with reddish brown siltstone fragments, damp to moist, very stiff, slight petroleum odor	220 ppm
15	Ss	32					@ 15' slight petroleum odor noted	200 ppm
20		38					@ 19' Groundwater noted	-
25							TOTAL DEPTH: 21 FEET GROUNDWATER @ 19'	
30								
35								
40								

JOB NO.: 13-6782-018-00-00

LOG OF BORING

FIGURE: B-4

DATE OBSERVED: 9-11-87 METHOD OF DRILLING: HOLLOW STEM AUGER

LOGGED BY: SAW GROUND ELEVATION: 150' LOCATION: SEE PLOT PLAN FIGURE B-1

DEPTH (FEET)	CLASSIFICATION	BLOWS/FOOT	UNDISTURBED SAMPLE	BULK SAMPLE	MOISTURE CONTENT (%)	IN PLACE DRY DENSITY (PCF)	BORING NO. <u>B-3</u>	DESCRIPTION	SOIL TEST GASTECHTOR READING in ppm
0								ASPHALT COVER	
0 - 5	CL							FILL: Dark brown to black CLAY with silt, damp, stiff, no petroleum odor	
5 - 10		13						NATURAL GROUND: WEATHERED BEDROCK Brown CLAY with silt, damp, stiff slight petroleum odor	40 ppm
10 - 15	CL	14						@ 10' becomes moist, slight petroleum odor noted	60 ppm
15 - 20		10						@ 15' drive sample not recovered slight petroleum odor noted	160 ppm
20 - 21		15						@ 20' drive sample not recovered slight petroleum odor noted	170 ppm
21 - 40								TOTAL DEPTH: 21 FEET NO GROUNDWATER	

JOB NO.: 13-6782-018-00-00

LOG OF BORING

FIGURE: B-5

DATE OBSERVED: 9-11-87 METHOD OF DRILLING: HOLLOW STEM AUGER  
 LOGGED BY: SAW GROUND ELEVATION: 150 LOCATION: SEE PLOT PLAN FIGURE B-1

DEPTH (FEET)	CLASSIFICATION	BLOWS/FOOT	UNDISTURBED SAMPLE	BULK SAMPLE	MOISTURE CONTENT (%)	IN PLACE DRY DENSITY (PCF)	BORING NO. B-4	SOIL TEST
							DESCRIPTION	GASTECHTOR READING in ppm
0							ASPHALT COVER	
0 - 5	CL	12					FILL: Dark brown-black CLAY with SILT, damp, stiff, construction debris. Noted, no petroleum odor	50 ppm
5 - 10		15					NATURAL GROUND: WEATHERED BEDROCK Grey mottled Red-Brown, silty CLAY, damp, stiff, no petroleum odor	100 ppm
10 - 15		12						150 ppm
15 - 20		36					BEDROCK: Reddish brown weathered SILTSTONE wet, hard, no petroleum odor	50 ppm
20 - 21							TOTAL DEPTH: 21 FEET NO GROUNDWATER	
21 - 40								

JOB NO.: 13-6782-018-00-00

LOG OF BORING

FIGURE: B-6

APPENDIX C

LABORATORY RESULTS

PRESENTED BY TRUESDAIL LABORATORIES, INC.

REPORT

TRUESDAIL LABORATORIES, INC.



14201 FRANKLIN AVENUE  
TUSTIN, CALIFORNIA 92680  
AREA CODE 714 • 730-6239  
AREA CODE 213 • 225-1564  
CABLE: TRU ELA B'S

CHEMISTS - MICROBIOLOGISTS - ENGINEERS  
RESEARCH - DEVELOPMENT - TESTING

CLIENT Hydretech Consultants, Inc.  
15 Mason  
Irvine, CA 92718  
Attention: Scott Warren

DATE September 17, 1987

RECEIVED September 14, 1987

LABORATORY NO. 21819

SAMPLE Soils from Thrifty Oil - Oakland - Telegraph  
Project #T.O. 063

INVESTIGATION

Total Petroleum Hydrocarbons (EPA 8015)

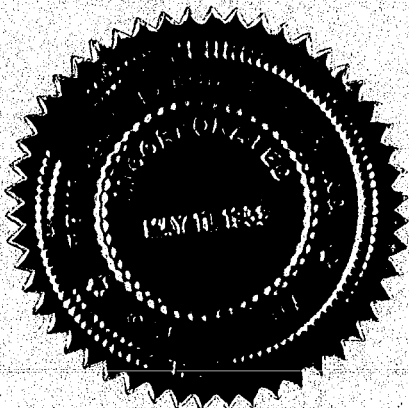
RESULTS

<u>Parameter</u>	<u>Milligrams per Kilogram</u>	
	<u>B1-10'</u>	<u>B1-20'</u>
Total Petroleum Hydrocarbons	<10	<10

**Total Petroleum Hydrocarbons (Modified EPA 8015):** The petroleum hydrocarbons analysis for this sample was analyzed by GC-FID (Modified EPA 8015) using the procedure listed in the revised analytical method (11/5/85), Attachment 2. The limit of detection is 10 mg/kg.

Respectfully submitted,  
TRUESDAIL LABORATORIES, INC.

*Julia Nayberg*  
Julia Nayberg, Manager  
Inorganic Chemistry



This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these Laboratories.



APPENDIX D

CHAIN-OF-CUSTODY DOCUMENTS

HYDROTECH CONSULTANTS, INC.  
 15 MASON  
 IRVINE, CALIFORNIA 92718  
 (714) 951-8686

# CHAIN OF CUSTODY RECORD

PROJECT NO.		PROJECT NAME		SAMPLE TYPE										OTHER	NUMBER OF CONTAINERS	REMARKS
SAMPLERS: (Signature)		GENERAL INORGANIC	METALS	NUTRIENTS	OIL & GREASE	CYANIDE	ORGANICS	SOLIDS-INORGANICS	VOLATILE ORGANICS	FUEL	OIL	INDUSTRIAL HYGIENE				
STATION NUMBER	DATE	TIME	DESCRIPTION													
B4-10	9/1/87	2:30													1	Hold
15		2:45													1	↓
20	↓	3:00													1	↓

TOTAL NUMBER OF CONTAINERS **3**

RELINQUISHED BY: (Signature) <i>Scott W...</i>	DATE/TIME 9/1/87 3pm	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
METHOD OF SHIPMENT:	SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature) <i>Reynolds</i>	DATE/TIME Sep 4 3:05	
new lts to Scott neville/Hydrotech	Bill Hydrotech	Lab Truesdail			
JOB NO.: V3-6782-018-00-00	DATE: 9/11/87	FIGURE: SHT 2 of 2			

HYDROTECH CONSULTANTS, INC.  
 15 MASON  
 IRVINE, CALIFORNIA 92718  
 (714) 651-8886

# CHAIN OF CUSTODY RECORD

PROJECT NO. **063**  
 PROJECT NAME **Thrift oil - Oakland - Telegraph**

SAMPLERS: (Signature)  
*Scott W*

SAMPLE TYPE											OTHER
GENERAL INORGANIC	METALS	NUTRIENTS	OIL & GREASE	CYANIDE	ORGANICS	SOLIDS - INORGANICS	VOLATILE ORGANICS	FUEL	OIL	INDUSTRIAL HYGIENE	SPH 8015

NUMBER OF CONTAINERS  
 REMARKS

STATION NUMBER	DATE	TIME	DESCRIPTION	
B1 - 5	9/1/87	12:15	6" Brass Pins	
10		12:25	↓	
15		12:35		
20		12:55		
B2 - 10		1:25		
15		1:35		
B3 - 5		1:50		
10		2:15		
B2 - 10		2:05		2 vials - H <sub>2</sub> O

TOTAL NUMBER OF CONTAINERS **10**

RELINQUISHED BY: (Signature) <i>Scott W</i>	DATE/TIME 9/1/87 12:00 PM	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
METHOD OF SHIPMENT:	SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature) <i>[Signature]</i>	DATE/TIME 9/1/87 3:05	

results to *Scott Neville / Hydrotech*  
 BILL - Hydrotech  
 DATE: **9/1/87**  
 FIGURE: **Shot 1 of 2**

APPENDIX E

THRIFTY OIL CO.

SCOPE OF WORK

SCOPE OF WORK  
SUBSURFACE SITE ASSESSMENT

PURPOSE

The purpose of work as outlined is to provide a subsurface assessment of the presence of petroleum hydrocarbon contamination in the soil and/or groundwater at the Thrifty Oil Co. ("Thrifty") properties referenced on the attached lists.

SOIL BORINGS

Four soil borings will be installed in the area adjacent to the underground gasoline/diesel storage tanks. The location of these borings shall be subject to Thrifty's approval. The borings will be a minimum of 2" in diameter and to a depth of twenty feet or groundwater, whichever first occurs.

Borings will be installed with a truck mounted hollow stem auger drill rig equipped with a continuous core sampler.

Soil cuttings shall be placed in 55 gallon drums pending results of laboratory analysis. If the soil is free of contamination, the disposition shall be the responsibility of the contractor. If contamination exists, disposition shall be Thrifty's responsibility.

The borings shall be backfilled to a depth of five feet with a mixture of bentonite and clean native soil. The remaining five

feet will be backfilled with a bentonite cement mixture.

Prior to drilling, underground utilities, gasoline/diesel tanks and piping will be verified in the field.

Drilling permits for boring installations will be obtained where required by local agencies.

#### SOIL SAMPLES

Soil samples shall be taken every 5 feet and evaluated in the field with an organic vapor meter (OVM) and a head space analysis technique for the purpose of identifying the visible presence or odor of hydrocarbons.

In the event a material presence or odor of hydrocarbons is detected in the samples, the soil samples taken every ten feet shall be analyzed in a laboratory for the presence of hydrocarbons. Results shall be reported as total petroleum hydrocarbons (TPH) using E.P.A. method 8015.

#### WATER SAMPLES

If the groundwater table is encountered, it shall be characterized as to the presence or absence of free floating hydrocarbons. If free floating hydrocarbons are not encountered

at the groundwater table, a sample of the water shall be taken and analyzed for the presence of dissolved hydrocarbons. The results shall be reported as total petroleum hydrocarbons (TPH) using E.P.A. method 8015.

#### REPORT

Upon completion of the Subsurface Site Assessment and receipt of the laboratory results, a report will be prepared and submitted to Thrifty together with 2 additional copies for a total of 3 copies. The report will include a summary of activities conducted at the site, boring logs, laboratory results and a site plan outlining the locations of the borings.