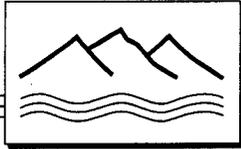


AP - 001

**STAGE 1 & 2
REPORTS**

DATE:

MAR. 6, 1997



DANIEL B. STEPHENS & ASSOCIATES, INC.

ENVIRONMENTAL SCIENTISTS AND ENGINEERS

**Closure of Service Pit and Flow
Through Process Tank
Brickland Refinery
Sunland Park, New Mexico**

RECEIVED

MAR 07 1997

Environmental Bureau
Oil Conservation Division

**Prepared for
Rexene Corporation
Odessa, Texas 79760**

March 6, 1997



Table of Contents

Section

1. Introduction	1
2. Summary of Previous Site Activities	1
3. Service Pit and Flow Through Process Tank Closure	2
3.1 Service Pit Closure	2
3.2 Flow Through Process Tank Removal	2
3.3 Soil Sampling and Analysis	4
3.4 Laboratory analyses	5
4. Analytical Results	6
4.1 Tank Contents	6
4.2 Tankhold Soil Samples	6
5. Waste Disposition and Disposal	7
6. Conclusions	7

List of Figures

Figure

1. Site Map
2. Distribution of Total Petroleum Hydrocarbon Concentrations in Soil
3. Distribution of Benzene Concentrations in Soil

List of Tables

Table

1. Summary of Tank Contents Waste Characterization
2. Summary of Tankhold Analytical Organic Chemistry Data - Soil
3. Summary of Tankhold Analytical Inorganic Chemistry Data - Soil



Table of Contents (Continued)

List of Appendices

Appendix

A. Photographic Documentation

B. Analytical Reports

C. Waste Manifests



1. Introduction

The Brickland Refinery is currently owned by Rexene Corporation (Rexene) and consists of 35-acres located in Sunland Park, Dona Ana County, New Mexico. The former petroleum refinery operated from 1933 to 1958 and was subsequently dismantled. A service pit and a flow-through process tank used during refinery operations was located in the central portion of the facility. It was determined, given the past usage of the flow-through process tank, that the New Mexico Oil Conservation Division (NMOCD) had regulatory jurisdiction with respect to the removal and disposal of the tank. A work plan was submitted to the NMOCD on December 26, 1996 for closing the service pit and the flow through process tank. Approval was received from the NMOCD on January 2, 1997. The following report provides a brief description of previous site activities, a description of the work performed, a summary of the analytical results, disposition of all wastes generated, and conclusions.

2. Summary of Previous Site Activities

To date, two environmental investigations have been performed to evaluate soil and groundwater chemistry at the Brickland Refinery. These studies included extensive soil sampling, monitor well construction, and groundwater sampling and analysis. The studies by Geoscience Consultants, Ltd. (GCL) in 1994 and Eder in 1990 demonstrated that petroleum hydrocarbon impacts to soil and groundwater on site are restricted to the southern two-thirds of the facility. A correlation was established between the constituents of concern found in the groundwater and those found in the soil, suggesting migration of hydrocarbons from soil to groundwater (GCL, 1994).

Phase-separated hydrocarbons (PSH) were observed in several wells in the southern portion of the site. PSH appears to be restricted to on site and the narrow strip of land that separates



the site from the Rio Grande. The heterogeneous clays and silts at the site appear to have retarded the migration of these constituents of concern such that restoration of the soil and groundwater is currently taking place through natural attenuation (GCL, 1994). A complete discussion of the site hydrogeology and distribution of contaminants is provided in "The Final Site Investigation Report for the Former Brickland Refinery", (GCL 1994).

3. Service Pit and Flow Through Process Tank Closure

3.1 Service Pit Closure

A service pit for servicing trucks was located in the central portion of the property (Figure 1). The service pit is constructed of concrete and has approximate dimensions of three-feet by 30-feet by six-feet. The pit was clean and free of debris and wastes. In accordance with the approved work plan, the service pit was abandoned in place by backfilling with clean fill material on December 18, 1996. The fill was compacted by wheel rolling to finished grade (Appendix A, Pictures 1 and 2).

3.2 Flow-Through Process Tank Removal

A flow-through process tank was located in the central portion of the Brickland facility (Figure 1). The tank is estimated to have had a capacity of approximately 1,000 gallons. This tank was originally used as a flow-through process tank during refinery operations. However, during the course of operational changes at the site, the tank was used to accumulate waste oil, oil filters, and debris. Based on the exposed portion of the sump, it was assumed that the tank was constructed of metal.

On December 14, 1996, the tank contents were sampled and analyzed to determine if the contents were characteristically hazardous. Based on the analytical results, the contents of the tank were classified as non-hazardous (Table 1).



On December 26, 1996, the top and sidewalls of the tank were excavated, and it appeared that the tank was constructed of concrete (Picture 3). The exterior dimensions of the concrete sump were approximately 12-feet by four-feet by four-feet.

Groundwater was encountered in the tank pit approximately four-feet below the ground surface. This was anticipated due to the close proximity of the Rio Grande and observed water levels in site monitor wells. On December 26, 1996, visual inspection of the groundwater in the tankhold revealed a very slight sheen on the water table. However, on January 28, 1997, when the sump was removed from the tankhold, no visual product or sheen was observed (Picture 4).

An attempt was made on December 27, 1996 to purge the liquids from the sump. However, no product was recovered due to the discovery that the sump contained debris and oil filters which filled the sump to an approximate depth of two-thirds the tank height.

Due to the potential for spillage, it was decided not to remove the oil filters and debris with the sump in-place. On January 28, 1997, a containment structure was constructed by placing a 30-mil high density polyethylene (HDPE) liner on the concrete pad adjacent to the sump. The four sides of the containment structure were bermed (Picture 5). A chain was carefully placed under the base of the sump and a backhoe was used to lift the sump from the excavation (Pictures 6 and 7). The sump was then carefully placed within the containment structure (Picture 8).

An attempt was made to remove the lid of the tank in order to evacuate the debris. However, while jack-hammering the lid of the sump, the concrete crumbled away to reveal a steel tank (Picture 9). It was later determined that due to the presence of the high water table, it was necessary to entomb the steel tank in concrete in order to prevent the tank from floating. The concrete which surrounded the tank was clean and free from any hydrocarbon contamination.



Therefore, the concrete was removed and segregated in order to prevent it from coming in contact with the tank contents (Picture 10).

The oil filters and debris were then removed from the tank and placed in Department of Transportation (DOT) approved drums (Picture 11). A total of 220 gallons of waste oil was collected and drummed for recycling. A small amount of waste oil was spilled while removing the tank from the excavation, transporting it to the containment structure, and removing the remaining contents. The affected soil was removed with the backhoe and placed in DOT approved drums. Additionally, the HDPE used for the containment structure was drummed. In total, four drums of waste oil, five drums of debris, oil filters, and HDPE and one drum of soil were generated in association with the sump removal.

Following soil sample collection, (discussed below), the excavation was backfilled by placing the excavated soil and approximately seven-yards of clean fill material in the excavation. The backfill was then wheel rolled and soil was left mounded in anticipation of the soil settling (Picture 12).

3.3 Soil Sampling and Analysis

Prior to backfilling the excavation, soil samples were collected from each of the four sidewalls of the tankhold and a composite sample was collected from the base of the tankhold. The sidewall samples were collected with the bucket of the backhoe. The surface material was removed from the soil in the backhoe bucket in order to collect the most representative native soil sample. The soil sample was collected from the center portion of the soil in the bucket. The soil samples collected for TPH and metals analysis were placed in two 250-ml jars with teflon lids (no preservative) and the soil samples collected for aromatic and halogenated volatile organic compounds were placed in two 20-ml vials with Teflon lids (preserved with methanol). These procedures were performed for each of the



four sidewall samples. Upon collection, samples were placed in a cooler and packed with ice for shipment.

The bottom sample was a composite collected from the north, center, and south portion of the bottom of the tankhold. Since the bottom of the tankhold was below the water table, it was important to ensure that the soil samples be as representative of the native material as possible. The backhoe reached through the water and collected a full bucket of soil from the bottom of the tankhold on the north side. A representative portion from the center of the soil in the backhoe bucket was collected and placed in a one-gallon plastic bag. This procedure was repeated for the center and southern sample locations at the bottom of the tankhold. The combined soil in the plastic bag was homogenized. Representative samples from the plastic bag were collected for TPH and metals analysis and placed in two 250-ml jars with teflon lids (no preservative) and representative samples collected for aromatic and halogenated volatile organic compounds analysis were placed in two 20-ml vials with Teflon lids (preserved with methanol). The soil samples were placed in a cooler and packed with ice for shipment.

3.4 Laboratory analyses

Soil samples were delivered to Hall Environmental Analysis Laboratories on January 29, 1997. The soil samples were analyzed for aromatic and halogenated volatile organic compounds using EPA Methods 8010/8020, total recoverable petroleum hydrocarbons using EPA Method 418.1, and total metals using EPA Method 6010. A summary of the analytical results are provided in Table 2.



4. Analytical Results

4.1 Tank Contents

The tank contents were analyzed to determine if they were characteristically hazardous. The tests included reactivity, ignitability, corrosivity, pH, sulfides, cyanides, toxicity characteristic leachate procedure (TCLP) volatiles, TCLP semi volatiles, and TCLP metals. None of the constituents of concern exceeded the EPA limits. A summary of the waste determination analytical results are provided in Table 1. Analytical laboratory reports are provided in Appendix B.

4.2 Tankhold Soil Samples

Analytical results from soil samples collected from the tankhold indicated total recoverable petroleum hydrocarbon (TRPH) concentrations ranging from 8,800 mg/Kg to 15,000 mg/Kg. Benzene concentrations ranged from 23 mg/Kg to 42 mg/Kg, ethylbenzene concentrations ranged from 1.5 mg/Kg to 11.0 mg/Kg, and total xylenes concentrations ranged from 4.3 mg/kg to 18.0 mg/kg. No other aromatic or halogenated organic compounds were present above detection limits.

Total metals analysis revealed lead concentrations ranging from 7 $\mu\text{g/g}$ to 14 $\mu\text{g/g}$, chromium levels ranging from 6 $\mu\text{g/g}$ to 9 $\mu\text{g/g}$ and barium concentrations ranging from 110 $\mu\text{g/g}$ to 140 $\mu\text{g/g}$. Cadmium was detected in one sample at a concentration of 1 $\mu\text{g/g}$. None of the five soil samples contained arsenic, mercury, selenium, or silver concentrations above the method detection limit. A complete summary of the tankhold analytical chemistry data is provided in Tables 2 and 3. Analytical laboratory reports are provided in Appendix B.



5. Waste Disposition and Disposal

As previously mentioned, the tank contents were classified as non-hazardous. The waste oil removed from the sump was collected in four DOT drums and transported to Mesa Environmental, Belen, New Mexico for recycling. The remaining six drums of debris, oil filters, soil, and HDPE were transported to Hydrocarbon Recyclers, Inc., San Antonio, Texas. Since the concrete, which surrounded the tank, was not contaminated with petroleum hydrocarbons, the concrete was removed from the containment structure and placed with the existing construction debris stockpile located in the southern portion of the site (Picture 13). The metal tank was transported to the Rhino Environmental Services' landfill in Newman, New Mexico, for destruction and disposal. Copies of the waste hauling manifests, waste disposal documentation, and tank demolition certificate are provided in Appendix C.

6. Conclusions

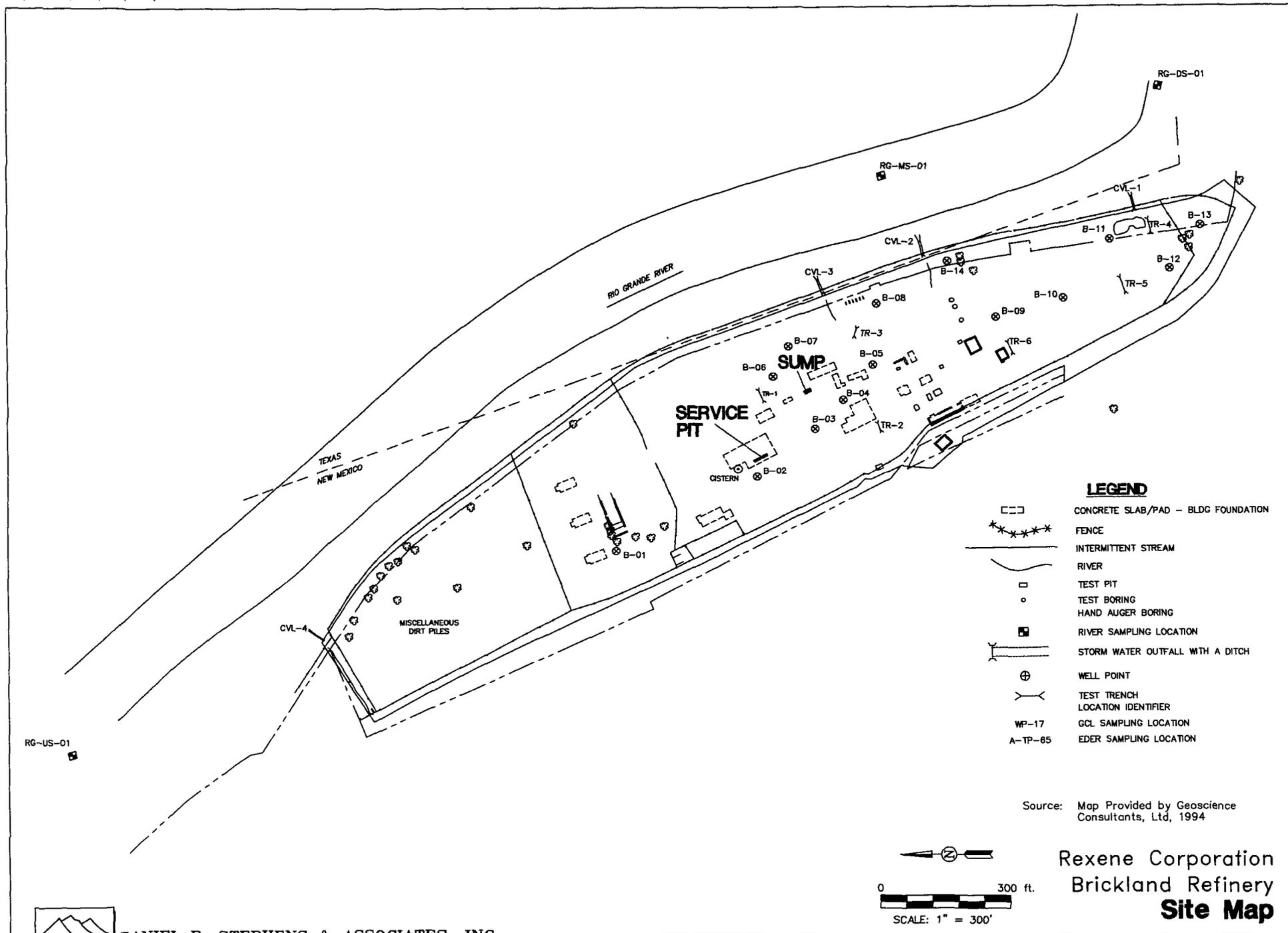
Extensive soil and groundwater sampling was performed at this site during previous studies. Greater than 1,000 mg/Kg soil TPH concentrations were discovered in the central and southern portions of the facility during these investigations (Figure 2). The flow-through process tank was located within this area of TPH contamination. Soil samples collected near the tank revealed TPH concentrations between 254 and 3,760 mg/Kg. The analytical results indicate that the tank is surrounded by soil TPH concentrations that are consistent with those previously identified within this portion of the facility. Likewise, benzene was also detected in soil matrix in this portion of the site during the previous studies. The historical benzene chemical analysis data collected in the vicinity of the sump ranged from 11,900 $\mu\text{g/Kg}$ to 56,600 $\mu\text{g/Kg}$. This further demonstrates that the tank is within an area of impacts to soil related to historical refinery operations. Finally, similar findings for lead in soil were noted.



The tank contents were sampled and analyzed prior to tank removal in order to determine if they were characteristically hazardous. The contents were found to be non-hazardous; therefore, all wastes generated during tank abandonment activities were disposed or recycled as non-hazardous in accordance with applicable code.

Based on the previous studies, groundwater at the site flows in a southerly direction, parallel to the Rio Grande. Groundwater analytical data collected during these studies indicated benzene concentrations decreasing in value both to the east (towards the Rio Grande) and to the south. Soil impacts related to historical operation of the flow-through process tank lie within previously identified areas of similarly impacted soil. As a result, it is unlikely that any past releases from the tank pose additional threat to groundwater at the site. Therefore, soil remediation related to releases from the tank should be consistent and concurrent with execution of the Stage 1 Abatement Plan proposed for the site-wide impacts.

Figures

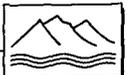


LEGEND

- CONCRETE SLAB/PAD - BLDG FOUNDATION
- FENCE
- INTERMITTENT STREAM
- RIVER
- TEST PIT
- TEST BORING
- HAND AUGER BORING
- RIVER SAMPLING LOCATION
- STORM WATER OUTFALL WITH A DITCH
- WELL POINT
- TEST TRENCH
- LOCATION IDENTIFIER
- WP-17 GCL SAMPLING LOCATION
- A-TP-65 EDER SAMPLING LOCATION

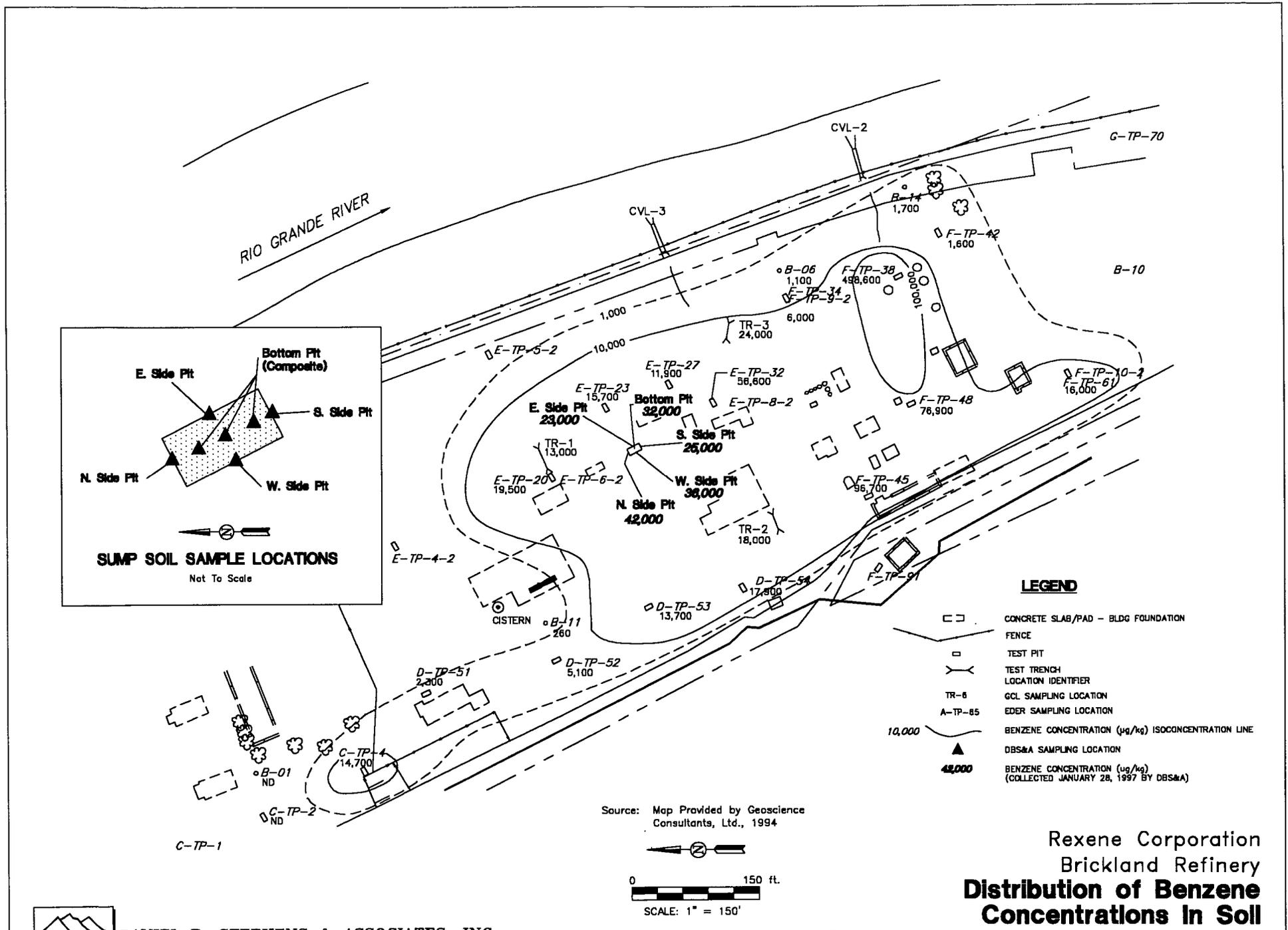
Source: Map Provided by Geoscience Consultants, Ltd, 1994

**Rexene Corporation
Brickland Refinery
Site Map**



DANIEL B. STEPHENS & ASSOCIATES, INC.
02-97 JN MIDREXBRI.001

Figure 1



Rexene Corporation
 Brickland Refinery
**Distribution of Benzene
 Concentrations in Soil**

Figure 3



Tables



**Table 1. Summary of Tank Contents Waste Characterization
Rexene Corporation - Brickland Refinery**

RCRA Characteristic

	EPA Limit	Tank Contents Results	Exceeds EPA Limit Yes/No
Reactivity	---	Non-Reactive	No
Sulfides	500 ppm	<10 ppm	No
Cyanides	250 ppm	<2.5 ppm	No
Corrosivity	>6.5 mm/yr	0.61 mm/yr	No
pH	<2, >12.5	8.1	No
Flashpoint	>140° F	>150° F	No

Analyzed by EPA Method 1010

Toxic Characteristic Leaching Procedure

TCLP Volatiles	EPA Limit (mg/L)	Tank Contents Results (mg/L)	Exceeds EPA Limit Yes/No
Vinyl Chloride	0.2	<0.05	No
1,1-Dichloroethene	0.7	0.06	No
Methyl Ethyl Ketone	200.0	<0.5	No
Chloroform	6.0	<0.05	No
1,2-Dichloroethane	0.5	<0.05	No
Benzene	0.5	0.08	No
Carbon Tetrachloride	0.5	<0.05	No
Trichloroethene	0.5	<0.05	No
Tetrachloroethene	0.7	<0.05	No
Chlorobenzene	100.0	<0.05	No
1,4-Dichlorobenzene	7.5	<0.05	No

TCLP Volatiles analyzed by EPA Method 8260



**Table 1 (continued). Summary of Tank Contents Waste Characterization
Rexene Corporation - Brickland Refinery**

Toxic Characteristic Leaching Procedure

TCLP Semi Volatiles	EPA Limit (mg/L)	Tank Contents Results (mg/L)	Exceeds EPA Limit Yes/No
Pyridine	5.0	<0.05	No
1,4-Dichlorobenzene	7.5	<0.05	No
o-Cresol	200.0	<0.05	No
m,p-Cresol	200.0	<0.05	No
Total Cresol	200.0	<0.05	No
Hexachlorethane	3.0	<0.05	No
Nitrobenzene	2.0	<0.05	No
Hexzchlorbutadiene	0.5	<0.05	No
2,4,6-Trichlorophenol	2.0	<0.05	No
2,4,5-Trichlorophenol	400.0	<0.05	No
2,4-Dinitrotoluene	0.13	<0.05	No
2,4-D	10.0	<0.05	No
Hexachlorobenzene	0.13	<0.05	No
2,4,5-TP	1.0	<0.05	No
Pentachlorophenol	100.0	<0.05	No
Chlordane	0.03	<0.001	No
Tozaphene	0.5	<0.05	No
Lindane	0.4	<0.001	No
Heptachlor	0.008	<0.001	No
Heptachlor epoxide	0.008	<0.001	No
Total Heptachlor	0.008	<0.001	No
Endrin	0.02	<0.001	No
Methoxychlor	10.0	<0.1	No

TCLP Semi Volatiles analyzed by EPA Method 8270, 8080

Tank Contents - TCLP Metals

TCLP Metals	EPA Limit (MG/L)	Tank Content Results (mg/L)	Exceeds EPA Limit Yes/No
Arsenic	5.0	<0.10	No
Selenium	1.0	<0.10	No
Cadmium	1.0	<0.02	No
Chromium	5.0	<0.05	No
Lead	5.0	<0.10	No
Mercury	0.20	<0.01	No
Barium	100.0	0.41	No
Silver	5.0	<0.05	No

mg/L = Milligrams per liter

Total metals analyzed by EPA Method 6010, 7470



DANIEL B. STEPHENS & ASSOCIATES, INC.

ENVIRONMENTAL SCIENTISTS AND ENGINEERS

**Table 3. Summary of Tankhold Analytical Inorganic Chemistry Data
Rexene Corporation - Brickland Refinery**

Tankhold Total Metals - Soil

Sample Designation	Date Sampled	Sample Depth (bgl)	Concentration (ug/g)							
			Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
N. Side Pit	1/28/97	3'	<5	130	<1	8	8	<1	<5	<5
E. Side Pit	1/28/97	3'	<5	130	1	7	7	<1	<5	<5
S. Side Pit	1/28/97	3'	<5	110	<1	7	9	<1	<5	<5
W. Side Pit	1/28/97	3'	<5	140	<1	9	14	<1	<5	<5
Bottom Pit	1/28/97	7'	<5	81	<1	6	8	<1	<5	<5

ug/g - Micro grams per gram or parts per million

Total metals analyzed by EPA Method 3050 and 7471

Appendix A

Photographic Documentation



1: View looking south; backfilling service pit.



2: Service pit backfilled to finished grade



3: Excavated top and sidewalls revealing concrete sump.



4: View looking northwest at groundwater in tankhold.



5: Constructing containment structure. Service pit located below backhoe.



6: View looking southwest; lifting sump from tankhold.



7: View looking northwest; sump removed from tankhold.



8: Sump placed in containment structure. View looking at base of sump.



9: Jackhammer on backhoe used to remove concrete from metal tank.



10: Concrete from sump is segregated to prevent coming in contact with the tank contents.



11: Waste is placed in DOT approved drums and sealed for transportation.



12: Sump tankhold is backfilled and wheel rolled.



13: Concrete from sump is placed with existing construction stockpile.

Appendix B

Analytical Chemistry Data

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue

Lubbock, Texas 79424

806•794•1296

FAX 806•794•1298

ANALYTICAL RESULTS FOR
 DANIEL B. STEPHENS
 Attention: Damian Reed
 6701 Aberdeen, Suite 10
 Lubbock, TX 79424

December 18, 1996
 Receiving Date: 12/16/96
 Sample Type: Water
 Project No: LTXREX001
 Project Location: Brickland Facility
 COC# 101

Prep Date: 12/16/96
 Analysis Date: 12/16/96
 Sampling Date: 12/14/96
 Sample Condition: Intact & Cool
 Sample Received by: ML
 Project Name: Brickland Site

TA#	Field Code	REACTIVITY	SULFIDES (ppm)	CYANIDES (ppm)	CORROSIVITY (mm/yr)	pH (s.u.)	FLASHPOINT (° F)
	EPA LIMIT =	---	500	250	>6.5 mm/yr	<2 >12.5	>140° F
T64567	0 - Tank	Non-reactive	<10	<2.5	Non-corrosive 0.61	8.1	>150
QC	Quality Control	---	---	---	---	7.0	---
RPD		0	0	0	0	0	0
% Extraction Accuracy		---	---	---	---	---	---
% Instrument Accuracy		---	---	---	---	100	---

METHODS: EPA SW 846-2.1.3, 2.1.2, 1010.

CHEMIST: JT



Director, Dr. Blair Leftwich
 Director, Dr. Bruce McDonell

12-18-96

DATE

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

ANALYTICAL RESULTS FOR
DANIEL B. STEPHENS
Attention: Damian Reed
6701 Aberdeen Avenue, Suite 10
Lubbock, TX 79424

December 18, 1996
Receiving Date: 12/16/96
Sample Type: Water
Project No: LTXREX001
Project Location: Brickland Facility
COC# 101

Extraction Date: 12/17/96
Analysis Date: 12/17/96
Sampling Date: 12/14/96
Sample Condition: I & C
Sample Received by: ML
Project Name: Brickland Site

TCLP VOLATILES (mg/L)	EPA LIMIT	Reporting Limit*	T64567 0 - Tank	QC	RPD	%EA	%IA
Vinyl chloride	0.2	0.05	ND	0.101	1	92	101
1,1-Dichloroethene	0.7	0.05	0.06	0.097	2	105	97
Methyl Ethyl Ketone	200.0	0.5	ND	0.084	2	110	84
Chloroform	6.0	0.05	ND	0.093	2	99	93
1,2-Dichloroethane	0.5	0.05	ND	0.089	2	93	89
Benzene	0.5	0.05	0.08	0.092	1	98	92
Carbon Tetrachloride	0.5	0.05	ND	0.093	2	107	93
Trichloroethene	0.5	0.05	ND	0.096	0	100	96
Tetrachloroethene	0.7	0.05	ND	0.094	1	105	94
Chlorobenzene	100.0	0.05	ND	0.093	2	97	93
1,4-Dichlorobenzene	7.5	0.05	ND	0.092	0	93	92

SURROGATES	% Recovery
Dibromofluoromethane	95
Toluene-d8	98
4-Bromofluorobenzene	94

ND = Not Detected

*NOTE: Elevated Reporting Limits due to matrix interference.

METHODS: EPA SW 846-1311, 8260.
CHEMIST: RP



Director, Dr. Blair Leftwich
Director, Dr. Bruce McDonell

12-18-96

DATE


TRACE ANALYSIS, INC.

A Laboratory for Advanced Environmental Research and Analysis

6701 Aberdeen Avenue

Lubbock, Texas 79424

806•794•1296

FAX 806•794•1298

ANALYTICAL RESULTS FOR
DANIEL B. STEPHENS
Attention: Damian Reed
6701 Aberdeen Avenue, Suite 10
Lubbock, TX 79424

December 20, 1996

Receiving Date: 12/16/96

Sample Type: Water

Project No: LTXREX001

Project Location: Brickland Facility

COC# 101

Extraction Date: 12/16/96

Analysis Date: 12/17/96

Sampling Date: 12/14/96

Sample Condition: I & C

Sample Received by: ML

Project Name: Brickland Site

TCLP Semi-Volatiles (mg/L)	EPA Limit	Reporting Limit	T64567 0 - Tank	QC	RPD	%EA	%IA
Pyridine	5.0	0.05	ND	82	11	18	103
1,4-Dichlorobenzene	7.5	0.05	ND	87	3	29	109
o-Cresol	200.0	0.05	ND	77	1	32	96
m,p-Cresol	200.0	0.05	ND	83	0	29	104
Total Cresol	200.0	0.05	ND	---	---	---	---
Hexachloroethane	3.0	0.05	ND	86	3	43	108
Nitrobenzene	2.0	0.05	ND	86	0	38	108
Hexachlorobutadiene	0.5	0.05	ND	85	2	34	106
2,4,6-Trichlorophenol	2.0	0.05	ND	83	4	37	104
2,4,5-Trichlorophenol	400.0	0.05	ND	85	3	40	106
2,4-Dinitrotoluene	0.13	0.05	ND	81	1	53	101
2,4-D	10.0	0.05	ND	88	2	60	110
Hexachlorobenzene	0.13	0.05	ND	88	1	85	110
2,4,5-TP	1.0	0.05	ND	86	5	69	108
Pentachlorophenol	100.0	0.05	ND	76	3	60	95
Chlordane	0.03	0.001	ND	---	4	94	105
Toxaphene	0.5	0.05	ND	---	3	110	100
Lindane	0.4	0.001	ND	---	4	118	96
Heptachlor	0.008	0.001	ND	---	4	90	98
Heptachlor epoxide	0.008	0.001	ND	---	4	114	108
Total Heptachlor	0.008	0.001	ND	---	---	---	---
Endrin	0.02	0.001	ND	---	2	99	105
Methoxychlor	10.0	0.1	ND	---	10	118	106
Surrogates	% RECOVERY						
2-Fluorophenol	44						
Phenol-d6	29						
Nitrobenzene-d5	81						
2-Fluorobiphenyl	84						
2,4,6-Tribromophenol	118						
Terphenyl-d14	134						

Methods: EPA SW 846-1311, 8270, 8080.

CHEMIST: RD/CC/MB

ND - Not Detected



Director, Dr. Blair Leftwich
Director, Dr. Bruce McDonell

12/23/96
DATE

TRACEANALYSIS, INC.

A Laboratory for Advanced Environmental Research and Analysis

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue

Lubbock, Texas 79424

806•794•1296

FAX 806•794•1298

ANALYTICAL RESULTS FOR

DANIEL B. STEPHENS

Attention: Damian Reed

6701 Aberdeen, Suite 10

Lubbock, TX 79424

Extraction Date: 12/16/96

Analysis Date: 12/18/96

Sampling Date: 12/14/96

Sample Condition: I & C

Sample Received by: ML

Project Name: Brickland Site

December 18, 1996

Receiving Date: 12/16/96

Sample Type: Water

Project No: LTXREX001

Project Location: Brickland Facility

COC# 101

TCLP METALS (mg/L)

TA#	Field Code	As	Se	Cd	Cr	Pb	Ag	Ba	Hg
	EPA LIMIT =	5.0	1.0	1.0	5.0	5.0	5.0	100.0	0.20
T64567	0 - Tank	<0.10	<0.10	<0.02	<0.05	<0.10	<0.05	0.41	<0.01
QC	Quality Control	4.95	4.82	4.95	4.84	5.24	2.6	4.91	0.0048
Reporting Limit		0.10	0.10	0.02	0.05	0.10	0.05	0.20	0.01
RPD		3	10	3	1	8	3	4	10
% Extraction Accuracy		105	93	106	102	98	95	115	96
% Instrument Accuracy		99	97	99	97	105	104	98	99

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: CB

METHODS: EPA SW 846-1311, 6010, 7470.

TCLP METALS SPIKE: 1.0 mg/L As, Se, Cd, Cr, Pb, Ag, Ba; 0.05 mg/L Hg.

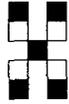
TCLP METALS QC: 5.0 mg/L As, Se, Cd, Cr, Pb, Ba; 2.5 mg/L Ag; 0.005 mg/L Hg.



Director, Dr. Blair Leftwich
Director, Dr. Bruce McDonell

12-18-96

Date



**Hall Environmental
Analysis Laboratory**

Hall Environmental Analysis Laboratory
4901 Hawkins, NE Suite A
Albuquerque, NM 87109
(505)345-3975

2/10/97

Daniel B. Stephens and Associates, Inc.
6701 Aberdeen Ave., Suite 10
Lubbock, TX 79424

Dear Mr. Damian Reed,

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or the equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these levels (denoted by the < sign) has been made.

Please don't hesitate to contact me for any additional information or clarifications.

Sincerely,

Scott Hallenbeck, Lab Manager

Project: 9701039/Rexene Brickland

Results for sample: N. Side Pit

Date collected: 1/28/97	Date received: 1/29/97
Date extracted: 1/28/97	Date analyzed: 1/29/97
Client: Daniel B. Stephens and Associates, Inc..	
Project Name: Rexene Brickland	HEAL #: 9701039-1
Project Manager: Damian Reed	Sampled by: C. Pigman
Matrix: Non- Aqueous	

Test: EPA 8010/8020

Analyte:	Results	Detection Limit	Units
Benzene	42	1.0	PPM (mg/kg)
Bromodichloromethane	nd	0.2	PPM (mg/kg)
Bromoform	nd	1.0	PPM (mg/kg)
Bromomethane	nd	1.0	PPM (mg/kg)
Carbon Tetrachloride	nd	0.2	PPM (mg/kg)
Chlorobenzene	nd	0.2	PPM (mg/kg)
Chloroethane	nd	0.2	PPM (mg/kg)
Chloroform	nd	0.2	PPM (mg/kg)
Chloromethane	nd	0.2	PPM (mg/kg)
2-Chloroethylvinyl Ether	nd	1.0	PPM (mg/kg)
Dibromochloromethane	nd	0.2	PPM (mg/kg)
1,3-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,2-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,4-Dichlorobenzene	nd	0.2	PPM (mg/kg)
Dichlorodifluoromethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethane	nd	0.2	PPM (mg/kg)
1,2-Dichloroethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethene	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Cis)	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Trans)	nd	0.2	PPM (mg/kg)
1,2-Dichloropropane	nd	0.2	PPM (mg/kg)
cis-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
trans-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
Ethylbenzene	2.3	1.0	PPM (mg/kg)
Dichloromethane	nd	2.0	PPM (mg/kg)
1,1,2,2-Tetrachloroethane	nd	0.2	PPM (mg/kg)
Tetrachloroethene (PCE)	nd	0.2	PPM (mg/kg)
Toluene	nd	1.0	PPM (mg/kg)
1,1,1-Trichloroethane	nd	0.2	PPM (mg/kg)
1,1,2-Trichloroethane	nd	0.2	PPM (mg/kg)
Trichloroethene (TCE)	nd	0.2	PPM (mg/kg)
Vinyl Chloride	nd	0.2	PPM (mg/kg)
Xylenes (Total)	6.2	1.0	PPM (mg/kg)
Trichlorofluoromethane	nd	0.2	PPM (mg/kg)
MTBE	nd	2.0	PPM (mg/kg)

BFB (Surrogate) Recovery = 93 %
Dilution Factor = 20

BCM (Surrogate) Recovery = 99 %

Results for sample: E. Side Pit

Date collected: 1/28/97	Date received: 1/29/97
Date extracted: 1/28/97	Date analyzed: 1/29/97
Client: Daniel B. Stephens and Associates, Inc..	
Project Name: Rexene Brickland	HEAL #: 9701039-2
Project Manager: Damian Reed	Sampled by: C. Pigman
Matrix: Non- Aqueous	

Test: EPA 8010/8020

Analyte:	Results	Detection Limit	Units
Benzene	23	1.0	PPM (mg/kg)
Bromodichloromethane	nd	0.2	PPM (mg/kg)
Bromoform	nd	1.0	PPM (mg/kg)
Bromomethane	nd	1.0	PPM (mg/kg)
Carbon Tetrachloride	nd	0.2	PPM (mg/kg)
Chlorobenzene	nd	0.2	PPM (mg/kg)
Chloroethane	nd	0.2	PPM (mg/kg)
Chloroform	nd	0.2	PPM (mg/kg)
Chloromethane	nd	0.2	PPM (mg/kg)
2-Chloroethylvinyl Ether	nd	1.0	PPM (mg/kg)
Dibromochloromethane	nd	0.2	PPM (mg/kg)
1,3-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,2-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,4-Dichlorobenzene	nd	0.2	PPM (mg/kg)
Dichlorodifluoromethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethane	nd	0.2	PPM (mg/kg)
1,2-Dichloroethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethene	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Cis)	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Trans)	nd	0.2	PPM (mg/kg)
1,2-Dichloropropane	nd	0.2	PPM (mg/kg)
cis-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
trans-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
Ethylbenzene	1.5	1.0	PPM (mg/kg)
Dichloromethane	nd	2.0	PPM (mg/kg)
1,1,2,2-Tetrachloroethane	nd	0.2	PPM (mg/kg)
Tetrachloroethene (PCE)	nd	0.2	PPM (mg/kg)
Toluene	nd	1.0	PPM (mg/kg)
1,1,1-Trichloroethane	nd	0.2	PPM (mg/kg)
1,1,2-Trichloroethane	nd	0.2	PPM (mg/kg)
Trichloroethene (TCE)	nd	0.2	PPM (mg/kg)
Vinyl Chloride	nd	0.2	PPM (mg/kg)
Xylenes (Total)	4.3	1.0	PPM (mg/kg)
Trichlorofluoromethane	nd	0.2	PPM (mg/kg)
MTBE	nd	2.0	PPM (mg/kg)

BFB (Surrogate) Recovery = 92 %
Dilution Factor = 20

BCM (Surrogate) Recovery = 97 %

Results for sample: S. Side Pit

Date collected: 1/28/97	Date received: 1/29/97
Date extracted: 1/28/97	Date analyzed: 1/29/97
Client: Daniel B. Stephens and Associates, Inc..	
Project Name: Rexene Brickland	HEAL #: 9701039-3
Project Manager: Damian Reed	Sampled by: C. Pigman
Matrix: Non- Aqueous	

Test: EPA 8010/8020

Analyte:	Results	Detection Limit	Units
Benzene	25	1.0	PPM (mg/kg)
Bromodichloromethane	nd	0.2	PPM (mg/kg)
Bromoform	nd	1.0	PPM (mg/kg)
Bromomethane	nd	1.0	PPM (mg/kg)
Carbon Tetrachloride	nd	0.2	PPM (mg/kg)
Chlorobenzene	nd	0.2	PPM (mg/kg)
Chloroethane	nd	0.2	PPM (mg/kg)
Chloroform	nd	0.2	PPM (mg/kg)
Chloromethane	nd	0.2	PPM (mg/kg)
2-Chloroethylvinyl Ether	nd	1.0	PPM (mg/kg)
Dibromochloromethane	nd	0.2	PPM (mg/kg)
1,3-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,2-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,4-Dichlorobenzene	nd	0.2	PPM (mg/kg)
Dichlorodifluoromethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethane	nd	0.2	PPM (mg/kg)
1,2-Dichloroethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethene	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Cis)	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Trans)	nd	0.2	PPM (mg/kg)
1,2-Dichloropropane	nd	0.2	PPM (mg/kg)
cis-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
trans-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
Ethylbenzene	1.6	1.0	PPM (mg/kg)
Dichloromethane	nd	2.0	PPM (mg/kg)
1,1,2,2-Tetrachloroethane	nd	0.2	PPM (mg/kg)
Tetrachloroethene (PCE)	nd	0.2	PPM (mg/kg)
Toluene	nd	1.0	PPM (mg/kg)
1,1,1-Trichloroethane	nd	0.2	PPM (mg/kg)
1,1,2-Trichloroethane	nd	0.2	PPM (mg/kg)
Trichloroethene (TCE)	nd	0.2	PPM (mg/kg)
Vinyl Chloride	nd	0.2	PPM (mg/kg)
Xylenes (Total)	5.0	1.0	PPM (mg/kg)
Trichlorofluoromethane	nd	0.2	PPM (mg/kg)
MTBE	nd	2.0	PPM (mg/kg)

BFB (Surrogate) Recovery = 90 %
 Dilution Factor = 20

BCM (Surrogate) Recovery = 96 %

Results for sample: W. Side Pit

Date collected: 1/28/97	Date received: 1/29/97
Date extracted: 1/28/97	Date analyzed: 1/29/97
Client: Daniel B. Stephens and Associates, Inc..	
Project Name: Rexene Brickland	HEAL #: 9701039-4
Project Manager: Damian Reed	Sampled by: C. Pigman
Matrix: Non- Aqueous	

Test: EPA 8010/8020

Analyte:	Results	Detection Limit	Units
Benzene	36	1.0	PPM (mg/kg)
Bromodichloromethane	nd	0.2	PPM (mg/kg)
Bromoform	nd	1.0	PPM (mg/kg)
Bromomethane	nd	1.0	PPM (mg/kg)
Carbon Tetrachloride	nd	0.2	PPM (mg/kg)
Chlorobenzene	nd	0.2	PPM (mg/kg)
Chloroethane	nd	0.2	PPM (mg/kg)
Chloroform	nd	0.2	PPM (mg/kg)
Chloromethane	nd	0.2	PPM (mg/kg)
2-Chloroethylvinyl Ether	nd	1.0	PPM (mg/kg)
Dibromochloromethane	nd	0.2	PPM (mg/kg)
1,3-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,2-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,4-Dichlorobenzene	nd	0.2	PPM (mg/kg)
Dichlorodifluoromethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethane	nd	0.2	PPM (mg/kg)
1,2-Dichloroethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethene	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Cis)	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Trans)	nd	0.2	PPM (mg/kg)
1,2-Dichloropropane	nd	0.2	PPM (mg/kg)
cis-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
trans-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
Ethylbenzene	11	1.0	PPM (mg/kg)
Dichloromethane	nd	2.0	PPM (mg/kg)
1,1,2,2-Tetrachloroethane	nd	0.2	PPM (mg/kg)
Tetrachloroethene (PCE)	nd	0.2	PPM (mg/kg)
Toluene	nd	1.0	PPM (mg/kg)
1,1,1-Trichloroethane	nd	0.2	PPM (mg/kg)
1,1,2-Trichloroethane	nd	0.2	PPM (mg/kg)
Trichloroethene (TCE)	nd	0.2	PPM (mg/kg)
Vinyl Chloride	nd	0.2	PPM (mg/kg)
Xylenes (Total)	18	1.0	PPM (mg/kg)
Trichlorofluoromethane	nd	0.2	PPM (mg/kg)
MTBE	nd	2.0	PPM (mg/kg)

BFB (Surrogate) Recovery = 94 %
Dilution Factor = 20

BCM (Surrogate) Recovery = 96 %

Results for sample: Bottom Pit

Date collected: 1/28/97	Date received: 1/29/97
Date extracted: 1/28/97	Date analyzed: 1/29/97
Client: Daniel B. Stephens and Associates, Inc..	
Project Name: Rexene Brickland	HEAL #: 9701039-5
Project Manager: Damian Reed	Sampled by: C. Pigman
Matrix: Non- Aqueous	

Test: EPA 8010/8020

Analyte:	Results	Detection Limit	Units
Benzene	32	1.0	PPM (mg/kg)
Bromodichloromethane	nd	0.2	PPM (mg/kg)
Bromoform	nd	1.0	PPM (mg/kg)
Bromomethane	nd	1.0	PPM (mg/kg)
Carbon Tetrachloride	nd	0.2	PPM (mg/kg)
Chlorobenzene	nd	0.2	PPM (mg/kg)
Chloroethane	nd	0.2	PPM (mg/kg)
Chloroform	nd	0.2	PPM (mg/kg)
Chloromethane	nd	0.2	PPM (mg/kg)
2-Chloroethylvinyl Ether	nd	1.0	PPM (mg/kg)
Dibromochloromethane	nd	0.2	PPM (mg/kg)
1,3-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,2-Dichlorobenzene	nd	0.2	PPM (mg/kg)
1,4-Dichlorobenzene	nd	0.2	PPM (mg/kg)
Dichlorodifluoromethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethane	nd	0.2	PPM (mg/kg)
1,2-Dichloroethane	nd	0.2	PPM (mg/kg)
1,1-Dichloroethene	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Cis)	nd	0.2	PPM (mg/kg)
1,2-Dichloroethene (Trans)	nd	0.2	PPM (mg/kg)
1,2-Dichloropropane	nd	0.2	PPM (mg/kg)
cis-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
trans-1,3-Dichloropropene	nd	0.2	PPM (mg/kg)
Ethylbenzene	2.6	1.0	PPM (mg/kg)
Dichloromethane	nd	2.0	PPM (mg/kg)
1,1,2,2-Tetrachloroethane	nd	0.2	PPM (mg/kg)
Tetrachloroethene (PCE)	nd	0.2	PPM (mg/kg)
Toluene	nd	1.0	PPM (mg/kg)
1,1,1-Trichloroethane	nd	0.2	PPM (mg/kg)
1,1,2-Trichloroethane	nd	0.2	PPM (mg/kg)
Trichloroethene (TCE)	nd	0.2	PPM (mg/kg)
Vinyl Chloride	nd	0.2	PPM (mg/kg)
Xylenes (Total)	4.8	1.0	PPM (mg/kg)
Trichlorofluoromethane	nd	0.2	PPM (mg/kg)
MTBE	nd	2.0	PPM (mg/kg)

BFB (Surrogate) Recovery = 89 %
Dilution Factor = 20

BCM (Surrogate) Recovery = 94 %

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489**LABORATORY REPORT****TO:** Scott Hallenbeck
ADDRESS: Hall Environmental Analysis Laboratory
4901 Hawkins NE, Suite C
Albuquerque, NM 87109**LAB NO.:** 97-14937
DATE: 02/07/97 krSOIL ANALYSISProj. #6090.001
9701039-1, N. Side Pit
Sampled 01/28/97 @ 1410
Submitted 01/31/97
Digested 02/03/97

<u>Total Metals⁽¹⁾</u>	<u>Detection Limit, $\mu\text{g/g}$ (ppm)</u>	<u>$\mu\text{g/g}$ (ppm)</u>	<u>Date Analyzed</u>
Arsenic	5	< 5	02/04/97
Barium	5	130	02/04/97
Cadmium	1	< 1	02/05/97
Chromium	5	8	02/04/97
Lead	5	8	02/04/97
Mercury ⁽²⁾	1	< 1	02/05/97
Selenium	5	< 5	02/04/97
Silver	5	< 5	02/04/97

⁽¹⁾ Sample was digested by EPA Method 3050.⁽²⁾ Sample was digested by EPA Method 7471.

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489**LABORATORY REPORT****TO:** Scott Hallenbeck
ADDRESS: Hall Environmental Analysis Laboratory
4901 Hawkins NE, Suite C
Albuquerque, NM 87109**LAB NO.:** 97-14938
DATE: 02/07/97 krSOIL ANALYSISProj. #6090.001
9701039-2, E. Side Pit
Sampled 01/28/97 @ 1425
Submitted 01/31/97
Digested 02/03/97

<u>Total Metals⁽¹⁾</u>	<u>Detection Limit, $\mu\text{g/g}$ (ppm)</u>	<u>$\mu\text{g/g}$ (ppm)</u>	<u>Date Analyzed</u>
Arsenic	5	< 5	02/04/97
Barium	5	130	02/04/97
Cadmium	1	1	02/04/97
Chromium	5	7	02/04/97
Lead	5	7	02/04/97
Mercury ⁽²⁾	1	< 1	02/05/97
Selenium	5	< 5	02/04/97
Silver	5	< 5	02/04/97

⁽¹⁾ Sample was digested by EPA Method 3050.⁽²⁾ Sample was digested by EPA Method 7471.

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489**LABORATORY REPORT****TO:** Scott Hallenbeck
ADDRESS: Hall Environmental Analysis Laboratory
4901 Hawkins NE, Suite C
Albuquerque, NM 87109**LAB NO.:** 97-14939
DATE: 02/07/97 krSOIL ANALYSISProj. #6090.001
9701039-3, S. Side Pit
Sampled 01/28/97 @ 1335
Submitted 01/31/97
Digested 02/03/97

<u>Total Metals⁽¹⁾</u>	<u>Detection Limit, $\mu\text{g/g}$ (ppm)</u>	<u>$\mu\text{g/g}$ (ppm)</u>	<u>Date Analyzed</u>
Arsenic	5	<5	02/04/97
Barium	5	110	02/04/97
Cadmium	1	<1	02/04/97
Chromium	5	7	02/04/97
Lead	5	9	02/04/97
Mercury ⁽²⁾	1	<1	02/05/97
Selenium	5	<5	02/04/97
Silver	5	<5	02/04/97

⁽¹⁾ Sample was digested by EPA Method 3050.⁽²⁾ Sample was digested by EPA Method 7471.

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489**LABORATORY REPORT****TO:** Scott Hallenbeck
ADDRESS: Hall Environmental Analysis Laboratory
4901 Hawkins NE, Suite C
Albuquerque, NM 87109**LAB NO.:** 97-14940
DATE: 02/07/97 krSOIL ANALYSISProj. #6090.001
9701039-4, W. Side Pit
Sampled 01/28/97 @ 1350
Submitted 01/31/97
Digested 02/03/97

<u>Total Metals⁽¹⁾</u>	<u>Detection Limit, $\mu\text{g/g}$ (ppm)</u>	<u>$\mu\text{g/g}$ (ppm)</u>	<u>Date Analyzed</u>
Arsenic	5	< 5	02/04/97
Barium	5	140	02/04/97
Cadmium	1	< 1	02/04/97
Chromium	5	9	02/04/97
Lead	5	14	02/04/97
Mercury ⁽²⁾	1	< 1	02/05/97
Selenium	5	< 5	02/04/97
Silver	5	< 5	02/04/97

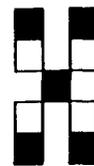
⁽¹⁾ Sample was digested by EPA Method 3050.⁽²⁾ Sample was digested by EPA Method 7471.

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489**LABORATORY REPORT****TO:** Scott Hallenbeck
ADDRESS: Hall Environmental Analysis Laboratory
4901 Hawkins NE, Suite C
Albuquerque, NM 87109**LAB NO.:** 97-14940 dup
DATE: 02/07/97 krQUALITY ASSURANCE DUPLICATE ANALYSISProj. #6090.001
9701039-4, W. Side Pit
Sampled 01/28/97 @ 1350
Submitted 01/31/97
Digested 02/03/97

<u>Total Metals⁽¹⁾</u>	<u>Detection Limit, $\mu\text{g/g}$ (ppm)</u>	<u>$\mu\text{g/g}$ (ppm)</u>	<u>Date Analyzed</u>
Arsenic	5	<5	02/04/97
Barium	5	140	02/04/97
Cadmium	1	<1	02/04/97
Chromium	5	8	02/04/97
Lead	5	12	02/04/97
Mercury ⁽²⁾	1	<1	02/05/97
Selenium	5	<5	02/04/97
Silver	5	<5	02/04/97

⁽¹⁾ Sample was digested by EPA Method 3050.⁽²⁾ Sample was digested by EPA Method 7471.

CHAIN-OF-CUSTODY RECORD



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite C
 Albuquerque, New Mexico 87109
 505.345.3975
 Fax 505.345.4107

Client: DANIEL B. STEPHENS FASOC	Project Name: REMENE BRICKLAND
Address: 6701 ABERDEEN SUITE 10 LUBBOCK TEXAS 79424	Project #: 6090,001
Phone #: 806-798-8969	Project Manager: DAMIAN REED
Fax #: 806-798-5542	Sampler: CLARENCE PIGMAN
Samples Cold? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.	BTEX + MTBE (602/8020)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015 MOD (Gas/Diesel)	TPH (Method 418.1)	8010/8020 Volatiles	EDB (Method 504)	EDC	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	Basic Soil Test (PH, EC, SAR, PSA)	8080 Pesticides / PCB's	Air Bubbles or Headspace (Y or N)	
					HgCl ₂	HCl	Other																
1/28/97	1410	SOIL	N. SIDE PIT	2/20ml 2/250ml			METH NONE	9701039-1				X	X										
1/28/97	1425	SOIL	E. SIDE PIT	"			"	-2				X	X										
1/28/97	1325	SOIL	S. SIDE PIT	"			"	-3				X	X										
1/28/97	1350	SOIL	W. SIDE PIT	"			"	-4				X	X										
1/28/97	1440	SOIL	BOTTOM PIT	2/20ml 2/250ml			METH NONE	-5				X	X										
1/17/96	1200	METH	MeOH BLANK	1/20ml			METH	-6					X										

Date: 1/29/97	Time: 1430	Relinquished By: (Signature) <i>Chene Payne</i>	Received By: (Signature) <i>Andreas</i> 1/29
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: IF ANY METALS
 20 TIMES EPA STANDARD
 CONTACT DBS & A ABOUT
 TCLP METHOD

Appendix C

Waste Manifests

MESA

RECYCLING MANIFEST / RECEIPT

ENVIRONMENTAL

A DIVISION OF MESA OIL, INC.

Service Order # 103727

75

Mailing Address

Rhino Environmental - Albuq
P.O. Box 25547
Accts Payable - Teresa Saloga
Albuquerque NM 87125
Andy Landoll

(505) 242-6464 Ext. 000

Service Address

~~Rhino Environmental Services~~
Sunland Park
Sunland Park NM 87102

(505) 252-8023 Ext. 0000

Contact: Otis O'Neil

5220
Sub other

Mile
505 644 0930

Account Number
RHIN003

P.O. Number

Order Date
02/06/97

Terms
Net 30 days

Description	Ordered	Unit	Price
Used Oil Removal	1	Gal-Drum	0.7200
Used Oil Removal Min. Charge	1	Drum	100.0000
Oily Water Removal	1	Gal-Drum	0.7200
Oily Water Removal Min. Charge	1	Drum	100.0000

Quantity	Total
4167	336.24
220	158.40
OP 2-26-97	

Call Jerry Dunlop 505-526-6634
Thursday 6:30 Am

1800-762-0241

SPECIAL INSTRUCTIONS SERVICE ADDRESS 3000 MICHOIT,
SUNLAND PARK, NM 87102 (505-644-0930)
mobile

SALES TAX 19.13
TOTAL DUE 158.40
MESA OIL. \$ 155.37
OP 2-26-97

FORM OF PAYMENT

PAID CASH: _____ CREDIT APP.# _____ MC / VISA _____
PAID CHECK: _____ APPROVED BY _____ P.O.# _____

GENERATORS CERTIFICATION: This material is described to the best of my ability. This material has not been mixed with PCB's or hazardous waste identified in 40 CFR Part 261. Used oil filters meet the exclusion requirements of 40 CFR Part 261.4. I acknowledge the accuracy of the total due on this receipt. If to be charged on account I understand that an invoice will follow with terms of NET 30 DAYS.

Mesa Oil Services Printed / Typed Name
Andy Landoll Signature
02/13/97 Date

TRANSPORTER, STORER AND RECYCLER

MESA OIL, INC. - PLANT
Belen, NM
EPA# NMD 0000096024
TEXAS TWC ID# 40849

Mailing Address:
Mesa Oil, Inc.
7239 Bradburn Blvd.
Denver, CO 80030
(303) 426-4777

IN CASE OF SPILL CONTACT:
MESA OIL, INC.
1-800-USED-OIL

MESA OIL, INC. - PLANT
Golden, CO
EPA# COD 983772955

TRANSPORTER ACKNOWLEDGMENT OF RECEIPT OF MATERIALS:
I certify materials have been tested and are below 1,000 PPM halogens.

D.O.T. REQUIREMENT - MAXIMUM LOAD 7000 GALLONS
USED PETROLEUM OIL N.O.S.

DARRIN BRITTON Printed / Typed Name
Andy Landoll Signature
FEB 13-97 Date

TREATMENT FACILITY OPERATOR:

The described materials were handled by me, the treatment facility named above, and were accepted.

Carlos Ewell Printed / Typed Name
Carlos Ewell Signature
2-17-97 Date

Mesa Oil Inc.
7239 Bradburn Blvd.
Westminster, CO 80030

123727

RECEIVED FEB 28 1997

5000

Rhino Environmental - Albuq
P.O. Box 25547
Accts Payable - Teresa Saloga
Albuquerque NM 87125
Andy Landoll

Rhino Environmental Services
Sunland Park
3000 Merrill
Sunland Park NM 87122

RHIN023

13

Mesa Oil Truck

Net 30 days

02/26/97 1

***** RETURN *****

247

10

Used Oil Removal
Adjustment Per Bambi 02/26/97

3.7200

\$177.84-

DA 2-26-97

COMMENTS:

\$177.84-

1.82
\$18.12-

\$187.95-

Customer Notification And Certification

Generator Name/Location: REVINE CORP., 3010 McNUTT RD, SUNLAND PARK, NM 87068
EPA I.D. Number: NMCE506
Waste Profile or ARF Designation: S997-0001
Manifest Number: 01276113
EPA Waste Number(s): ---

Waste Analysis Available? Yes (attached) --- No --- On file at receiving facility X

Unrestricted Waste Notification (Category 1)

Mark the statement below if you generate a waste that is not a land disposal restricted waste (the waste has no applicable treatment standards).

I notify that I am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste is not restricted as specified in 40 CFR §268, Subpart D or any applicable prohibitions set forth in 40 CFR §268.32 or RCRA Section 3004(d).

Restricted Waste/Debris Notification (Category 2)

Mark statement (2a) below if you generate a waste that is restricted from land disposal (the waste has applicable treatment standards).
NOTE-1: A waste may pass one or more standards and require treatment or be varianced for others. In this case, all applicable categories must be checked. NOTE-2: D001, D002 and D012 - D043 wastes must be evaluated for underlying constituents found in 40 CFR §268. 48 (Table UTS), that are reasonably expected to be present. A list of these constituents must be included on FORM B, or attached to and accompany this notification with each waste shipment. Mark statement (2b) if you generate a debris waste that will be treated to the alternate debris standards located in 40 CFR §268.45.

(2a) Restricted Waste Notification
I notify that I am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste is subject to the treatment standards specified in 40 CFR §268 Subpart D. The waste: (a) must be treated to the appropriate regulatory treatment standard, by the appropriate regulatory treatment method; (b) qualifies for a variance as described in category 3 below; or (c) meets some or all of the standards as described in Category 4 below.

(2b) Alternate Debris Treatment Notification: This hazardous debris is subject to the alternate treatment standards of 40 CFR §268.45. The waste contains the following contaminants subject to treatment [check all that apply]:
--- §268.45(b)(1)- Toxicity characteristic debris;
--- §268.45(b)(2)- Debris contaminated with listed waste;
--- §268.45(b)(3)- Cyanide reactive debris.

Restricted Waste Variance Notification (Category 3)

Mark the statement below and list the applicable variance date on Form B, if you generate a waste which does not require treatment prior to land disposal because of a variance (including a case-by-case extension under 40 CFR §268.5, a nationwide variance under 40 CFR §268 Subpart C, a no migration petition under 40 CFR §268.6, or other applicable variance).

I notify pursuant to 40 CFR §268.7(a)(3) that I am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that this waste is subject to a national capacity variance under 40 CFR §268 Subpart C, or a case-by-case extension under 40 CFR §268.5, or an exemption under 40 CFR §268.6.

Restricted Waste Certification (Treatment Standards Met) (Category 4)

Mark the certification statement below if you generate a waste that is restricted from land disposal (the waste has applicable treatment standards), and the waste meets the standards as generated. Note: All applicable constituent standards must be accounted for. A waste may pass one or more standards and require treatment or be variance for other constituents. In this case, all applicable categories must be checked.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA § 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

SIGNATURE: [Signature] DATE: 10/27/94
PRINT NAME: [Name] TITLE: [Title]

SWO# 4002

CUSTOMER NO. EPREX	BILLING ID 970530	SALESPERSON DC	DATE 2/25/97
PICKUP DATE 2/25/97	CLIENT P.O. #10002	DISP. SITE SWO -	COUNTY DONA ANA

BILLING CUSTOMER CONSTRUCTIVE SOLUTIONS, INC. PO BOX 25547 ALBUQUERQUE, NM 87125 ACCOUNTS PAYABLE 505-242-6464	PICK-UP CUSTOMER AND ADDRESS REXENE CORPORATION 3010 MC NUTT RD. SUNLAND PARK, NM 88063 DAMIAN REED 915-520-6615
--	--

TRANSPORTATION (04000)		UNIT/PRICE 30/55/3-5	UNIT/PRICE 85	EXTENSION	CHEMIST/DRIVER TAVARES / MONTES	MATERIALS (04040)	QUANTITY	PRICE
0-50 MILES						85-G Salvage Drum-New		
51-100 MILES						55-G 17C, 17H, 17E Recon.		
101-200 MILES						55-G 37M - New		
200-500 MILES						30-G 17H - New		
▶ 500 MILES						30-G, 20-G Fiber New		
TOTAL						5-G Pail - 37E, 37A-New, 34-5, 35-50		
LABOR (04045)		HOUBS	PRICE			Dot Spec. Wooden Box		
Chemist TAVARES		.5				Drum Thief		
OTHER MONTES		.5				Disposal Coliwassa		
Project Manager						Absorbant, Clay, Vermiculite, CornCob - Bag		
PROFESSIONAL SERVICES (04035)		QUANTITY	PRICE			Drum Pump-Use & Decon.		
SAMPLE ANALYSIS						4 Mil Liners		
WASTE STREAM EVALUATION						Reactive Bags		
EQUIPMENT (04065)		QUANTITY	PRICE			Dot Labels		
DISPOSAL (04060)						EPA Labels		
						Sample Bottles		
						Protective Gear - Level I		
						Protective Gear - Level II		
						Packing Materials 5G		
						Packing Materials 20G		
						Packing Materials 30G, 55G		
						OTHER (04055)	QUANTITY	PRICE
						Minimum Charge		

PROFILE/LABPACK	DESCRIPTION	QTY.	UM	UNIT PRICE
597-0181	oily debris	6	S	
		6		

Remarks

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

P.O. Box 13087 Austin, Texas 78711-3087



Please print or type (Form designed for use on elite (12 pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09/30/96

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N M C E S O G		Manifest Document No. 76113	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address REXENE CORPORATION 3010 MC NUTT ROAD SUNLAND PARK, NEW MEXICO					A. State Manifest Document Number 01276113				
4. Generator's Phone (915) 520-6615 DAMIAN REED					B. State Generator ID 99935				
5. Transporter 1 Company Name US POLLUTION CONTROL, INC			6. US EPA ID Number U T D 9 8 0 6 3 5 8 9 0		C. State Transporter ID 84570				
7. Transporter 2 Company Name LAIDLAW ENVIRONMENTAL SVCS. (FS)			8. US EPA ID Number T X D 9 8 8 0 2 3 3 0 5		D. Transporter's Phone 210-304-3000				
9. Designated Facility Name and Site Address HYDROCARBON RECYCLERS, INC 4303 PROFIT DRIVE SAN ANTONIO, TEXAS 78219					10. US EPA ID Number T X D 0 5 2 5 4 9 0 2 7		E. State Facility ID 81905		
					F. Facility's Phone 210-304-3000				
11A HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	a. NON RCRA/DOT REGULATED MATERIAL (OILY DEBRIS)				0 0 6	DM	EST. 03600	P	OUTS3191 N/R
	b.								
	c.								
	d.								
J. Additional Descriptions for Materials Listed Above a. SA 97-0181					K. Handling Codes for Wastes Listed Above				
15. Special Handling instructions and Additional Information EMERGENCY CONTACT: WALT STRINGER 210-304-3000 EMERGENCY CONTACT*** 1-800-535-5053 (730-700)					BILLING ADDRESS: CONSTRUCTIVE SOLUTIONS, INC. P.O. BOX 25547 ALBUQUERQUE, N.M. 87125 ACCOUNTS PAYABLE (505) 242-6464				
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name Michael Solorzano					Signature <i>Michael Solorzano</i>			Month Day Year 02/25/97	
17. Transporter 1 Acknowledgement of Receipt of Materials					Date				
Printed/Typed Name FERNANDO MONTE					Signature <i>Fernando Montes</i>			Month Day Year 02/25/97	
18. Transporter 2 Acknowledgement of Receipt of Materials					Date				
Printed/Typed Name LEONARD FRAZIER					Signature <i>Leonard Frazier</i>			Month Day Year 03/13/97	
19. Discrepancy Indication Space COLLECTING IN SECTION 4 per. DAMIAN REED 3/17/97 - AG CALLER # 4 (915) 529-7200									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name Alvin Guerrero					Signature <i>Alvin Guerrero</i>			Date Month Day Year 03/04/97	



RHINO

Environmental Services, Inc.

300 Broadway NE • Albuquerque, New Mexico 87102
(505) 242-6464 • Fax (505) 247-4941

CERTIFICATE OF DESTRUCTION BILL OF SALE

February 24, 1997

Seller of Tanks
Rexene Corp.
P.O. Box 3986
Odessa, TX 79760
(915) 333-7200

Tank Facility
Brickland Refinery
3210 McNutt Road
Sunland Park, NM

Buyer of Tanks
Rhino Environmental Services, Inc.
P.O. Box 25547
Albuquerque, NM 87125

Tank Identification: (1) - 1,000 gallon Underground Storage Tank

The ownership of the above referenced tank was transferred to Rhino Environmental Services, Inc. (Rhino). Upon transfer of ownership to Rhino, all future liabilities connected with the tanks from the date of the destruction was relieved from the former tank owner.

I certify that the above described tanks have been cut into scrap and disposed of in accordance with all applicable local, state and federal regulations.

Steve Dyer
President
Rhino Environmental Services, Inc.