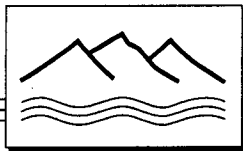


AP - 001

**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



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ENVIRONMENTAL SCIENTISTS AND ENGINEERS

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

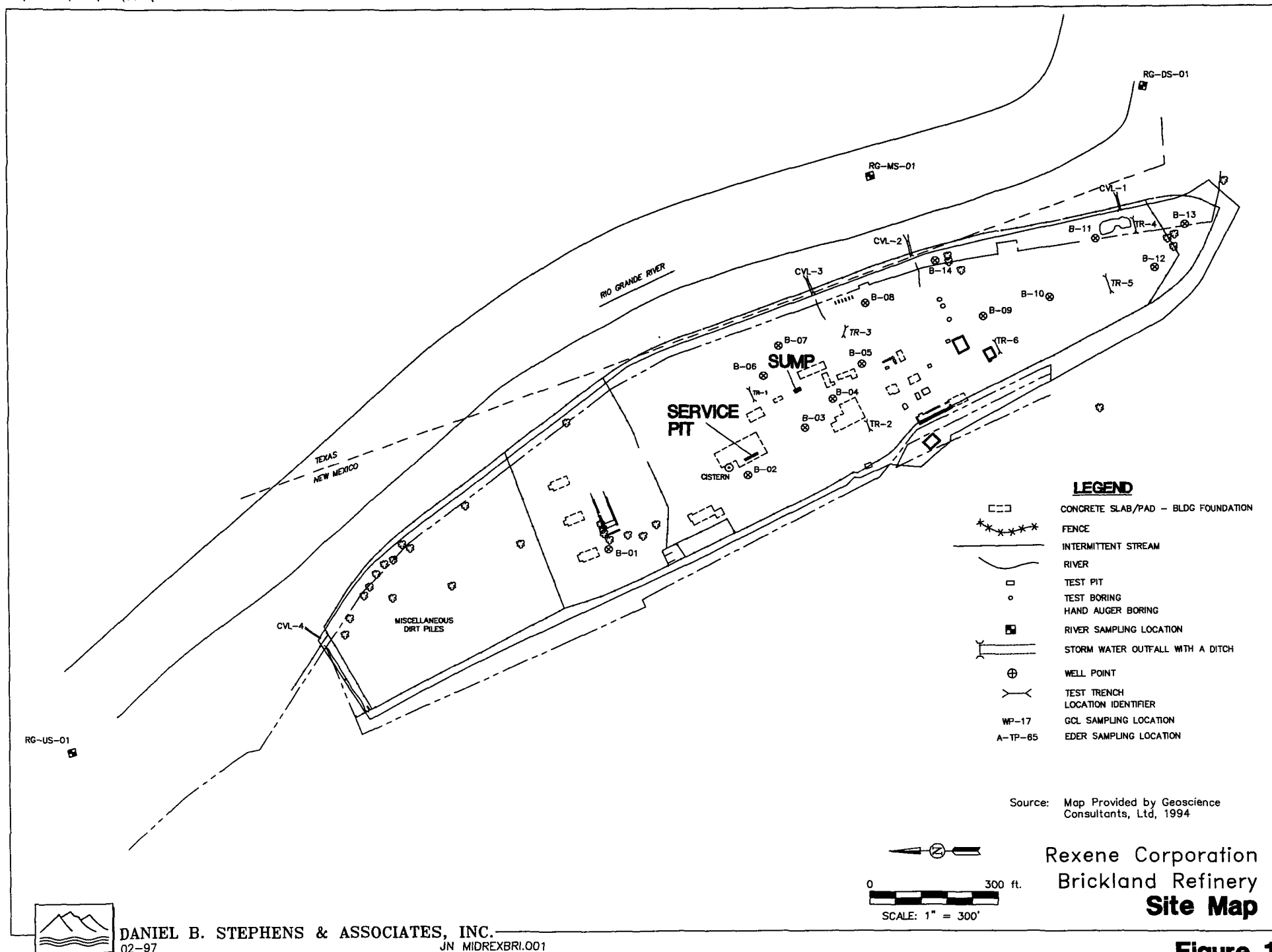
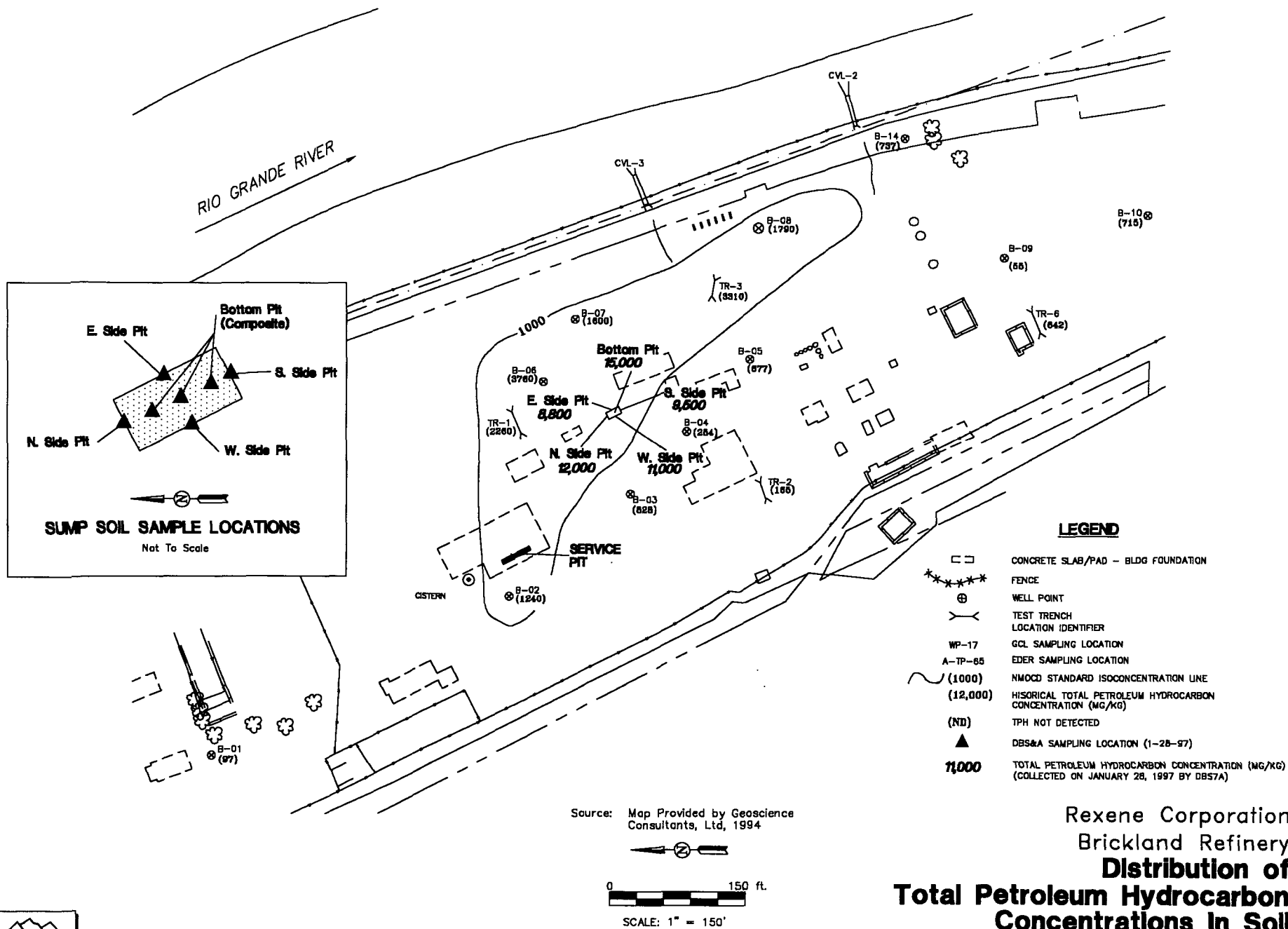


Figure 1



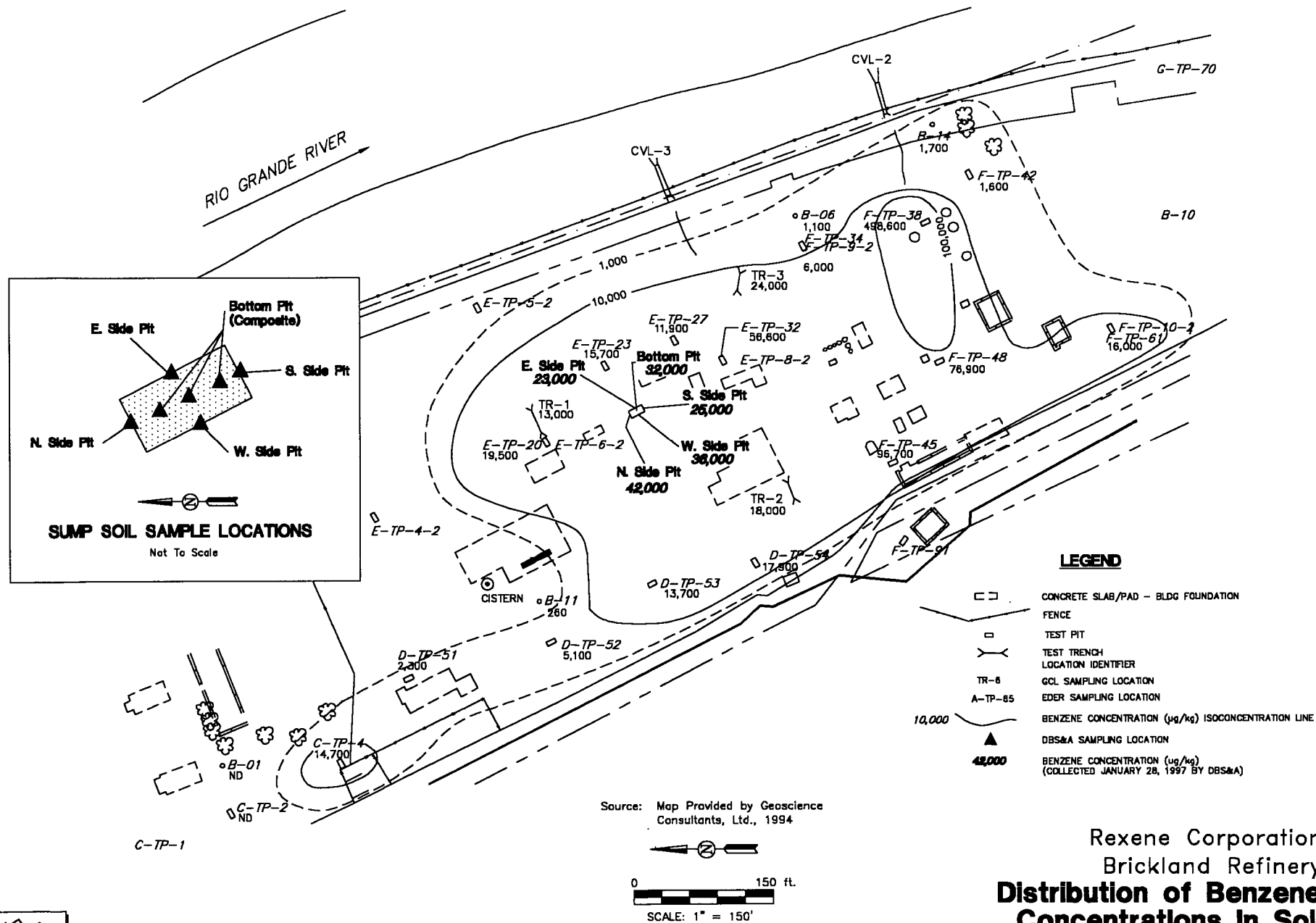
Rexene Corporation
Brickland Refinery
**Distribution of
Total Petroleum Hydrocarbon
Concentrations in Soil**

Figure 2



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02-97

JN MIDREXBRI.001



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
Hexachlorbutadiene	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



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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.

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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

DATE

12-18-96

6701 Aberdeen Avenue
Lubbock, Texas 79424
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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

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Lubbock, Texas 79424

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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

TRACE ANALYSIS, INC.

A Laboratory for Advanced Environmental Research and Analysis

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue

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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

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

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.

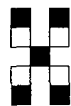


Director, Dr. Blair Leftwich
Director, Dr. Bruce McDonell

12-18-96

Date

351A⁷



**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

4901 Hawkins N.E. Suite A Albuquerque, NM 87109



Hall Environmental Analysis Laboratory

Client: Daniel B. Stephens & Assoc.
Address: 6701 Aberdeen Ave.
Suite 10
Lubbock, TX 79424

Project: Rexene Brickland
Project Number: 6090
Project Manager: Damian Reed
Date Collected: 1/28/97
Date Received: 1/29/97
Sample Matrix: Soil

Report Date: 2/10/97

Analysis Date: 1/31/97

Extraction Date: 1/30/97

EPA Method - 418.1

Final volume of Freon-113 used (ml)	20
Sample weight (g)	10

HEAL ID	Client ID	Absorbance	Dilution	T P H (mg/kg)
9701039-1	N. Side Pit	0.496	20	12,000
9701039-2	E. Side Pit	0.360	20	8,800
9701039-3	S. Side Pit	0.389	20	9,500
9701039-4	W. Side Pit	0.441	20	11,000
9701039-5	Bottom Pit	0.615	20	15,000


QA/QC


Ext Blk 1/30	N/A	0.003	1	<20
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<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
BS 1/30	<20	100	95	95

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
9701039-2	8,800	8,300	6

Sincerely:


Jerry Richardson
Semi-Volatiles Supervisor


Scott Hallenbeck
Laboratory Manager

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 kr

SOIL ANALYSIS

Proj. #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 kr

SOIL ANALYSIS

Proj. #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.**

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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 kr

SOIL ANALYSIS

Proj. #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.**

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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 kr

SOIL ANALYSIS

Proj. #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.**

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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 kr

QUALITY ASSURANCE DUPLICATE ANALYSIS

Proj. #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.

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

Black	White	Black
White	Black	White
Black	White	Black

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

[illegible][illegible]

Date: 1/29/97	Time: 1430	Relinquished By: (Signature) <i>Chene Payton</i>	Received By: (Signature) <i>Andy Freeman</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

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

Call Jerry Dunlop 505-526-6634

Thursday 6:30 Am

Quantity	Total
467	336.24
220	158.40
OD 2-26-97	

SPECIAL INSTRUCTIONS

SERVICE ADDRESS 3000 MC NUTT,
 SUNLAND PARK, NM 87102 (505-644-0930)
 mobile

SALES TAX

19.13

TOTAL DUE

158.40

MESA OIL.

\$ 155.37

02/2-26-97

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.

Michael Serrano
 Printed / Typed Name

Signature

Date

12/13/97

TRANSPORTER, STORER AND RECYCLER

MESA OIL, INC. - PLANT

Belen, NM

EPA# NMD 0000096024

TEXAS TWC ID# 40849

MESA OIL, INC. - PLANT

Golden, CO

EPA# COD 983772955

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**

TRANSPORTER ACKNOWLEDGMENT OF RECEIPT OF MATERIALS:

I certify materials have been tested and are below 1,000 PPM halogens.

Derek Britton
 Printed / Typed Name

Signature

Date

FEB 13-97

TREATMENT FACILITY OPERATOR:

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

Carlos Ebel
 Printed / Typed Name

Signature

Date

2-17-97

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
3200 Menault
Sunland Park NM 87122

RHIN023

13

Mesa Oil Truck

Net 30 days

02/26/97 1

***** RETURN *****

247

10

Used Oil Removal

0.7200

\$177.84-

Adjustment Per Bambi 02/26/97

DAH 2-26-97

COMMENTS:

\$177.84-

1.00
\$18.12-

\$187.95-

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 09/30/95

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NM0000000000		Manifest Document No. 10113		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address BRYANT CORPORATION 3010 MC KAY ROAD SCORLAND PARK, NEW MEXICO						A. State Manifest Document Number 01276113					
4. Generator's Phone (915) 520-6615 DANIAN ROAD						B. State Generator's ID 99935					
5. Transporter 1 Company Name DS POLLUTION CONTROL, INC			6. US EPA ID Number NM0000000000			C. State Transporter's ID 84570					
7. Transporter 2 Company Name LADLEW ENVIRONMENTAL SVCS. (PS)			8. US EPA ID Number NM0000000000			D. Transporter's Phone 210-304-3000					
9. Designated Facility Name and Site Address HYDROCARBON RECYCLERS, INC 1303 PROFIT DRIVE DALLAS, TEXAS 75210			10. US EPA ID Number TX0000000000			E. State Transporter's ID 75425					
						F. Transporter's Phone 210-304-3000					
						G. State Facility's ID 31905					
						H. Facility's Phone 210-304-3000					
11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)					12. No.	13. Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	
	a. NON HAZ/DT REGULATED MATERIAL (WILL BE RECYCLED)					006	DT	03600	2	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 (730-7000)						BILLING ADDRESS: CONSTRUCTIVE SOLUTIONS, INC. P.O. BOX 25547 ALBUQUERQUE, N.M. 87125 ACCOUNTS PAYABLE (505) 242-6454					
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 <i>[Signature]</i>						Signature <i>[Signature]</i>			Month Day Year 10 1 97		
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials						Date				
	Printed/Typed Name <i>[Signature]</i>						Signature <i>[Signature]</i>			Month Day Year 10 3 97	
	18. Transporter 2 Acknowledgement of Receipt of Materials						Date				
Printed/Typed Name						Signature			Month Day Year		
19. Discrepancy Indication Space											
FACILITY	20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.										
	Printed/Typed Name						Signature			Month Day Year	

Customer Notification And Certification**FORM A**Page 1 of 2Generator Name/Location: RYLINE CORP., 3010 McNUTT RD, SUNLAND PARK, NM 88068EPA I.D. Number: NMCE506Waste Profile or ARF Designation: SA97-281Manifest Number: 01276113EPA 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: 11-13-94PRINT NAME: [Name]TITLE: SA97

EPA I.D. Number : NMCCS06

Manifest : 01276113

[illegible]

F001 - F005 spent solvents

Legend #	Constituent Name
1	Acetone
2	Benzene
3	n-Butyl alcohol
*4	Carbon disulfide
5	Carbon tetrachloride
6	Chlorobenzene
7	Cresol (m-and p-isomers)
8	o-Cresol
*9	Cyclohexanone
10	1,2-Dichlorobenzene
11	Ethyl Acetate
12	Ethyl Benzene
13	Ethyl Ether
14	Isobutyl alcohol
*15	Methanol
16	Methylene Chloride
17	Methyl Ethyl Ketone
18	Methyl isobutyl ketone
19	Nitrobenzene
20	Pyridine
21	Tetrachloroethylene
22	Toluene
23	1,1,1-Trichloroethane
24	1,1,2-Trichloroethane
25	Trichloroethylene
26	1,1,2-Trichloro-1,2,2-trifluoroethane
27	Trichloromonofluoro-methane
28	Xylenes (total)

Legends 29-31 RESERVED

** If these constituents are present alone or in any combination of the three, then non waste water forms of these constituents must be treated to TCLP levels as indicated in §268.40.*

Legend #	Constituent Name
32	2-Ethoxyethanol
33	2-Nitropropane

CALIFORNIA LIST WASTES

Legend #	Constituent Name
44	Nickel
45	Thallium
46	Cyanide (Liquid)
47	Liquid Polychlorinated Biphenyls (PCB's)
48	Halogenated Organic compounds (HOC's)

**SEE BACK FOR THE UNIVERSAL
TREATMENT STANDARDS (UTS),
Legends 49 - 264**

BULK QC REPORT

Line Item

[illegible]

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 09/30/95

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N M C E S O G		Manifest Document No. 7 6 1 1 3		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						C. State Transporter ID 84570				
6. US EPA ID Number U T D 9 8 0 6 3 5 8 9 0						D. Transporter's Phone 210-304-3000				
7. Transporter 2 Company Name LAIDLAW ENVIRONMENTAL SVCS. (FS)						E. State Transporter ID 75425				
8. US EPA ID Number T X D 9 8 8 0 2 3 3 0 5						F. Transporter's Phone 210-304-3000				
9. Designated Facility Name and Site Address HYDROCARBON RECYCLERS, INC 4303 PROFIT DRIVE SAN ANTONIO, TEXAS 78219						G. State Facility's ID 81905				
10. US EPA ID Number T X D 0 5 2 5 4 9 0 2 7						H. 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				
16. 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 S. L. AND						Signature Michael S. L. AND			Month Day Year 02/25/97	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name FERNANDO MONTE						Signature FERNANDO MONTE			Month Day Year 02/25/97	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name LEONARD FRAZIER						Signature LEONARD FRAZIER			Month Day Year 03/13/97	
19. Discrepancy Indication Space COLLECTING IN SECTION 4 per. Damian Reed 3/14/97 AG Collector # 4 (915) 229-7200										
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name Alfonso Guerrero						Signature Alfonso Guerrero			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.