

AP - 018

REPORTS

1/31/2000

PHASE II ENVIRONMENTAL ASSESSMENT
JANUARY, 2000 SOIL SAMPLING
ABANDONED TANK BATTERIES

SITE 1, SEC 18, T25S, R37E

SITE 2, SEC 18, T25S, R37E

SITE 3, SEC 18, T25S, R37E

SOUTH LANGLEY JAL UNIT
LEA COUNTY, NEW MEXICO

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SOUTH LANGLEY JAL UNIT
LEA COUNTY, NEW MEXICO

PREPARED FOR:

Bristol Resources Corporation

Mr. Dan Abney

6655 South Lewis

Tulsa, Oklahoma 74136

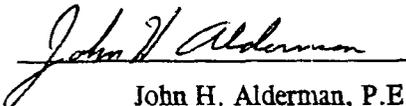
PREPARED BY:

Cornerstone Environmental Resources, Inc.

2997 LBJ Freeway

Suite 103

Dallas, Texas 75234-7606



John H. Alderman, P.E.

President

PHASE II ENVIRONMENTAL ASSESSMENT

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SOUTH LANGLEY JAL UNIT

LEA COUNTY, NEW MEXICO

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1.0 EXECUTIVE SUMMARY

Additional soil sampling was conducted in January 2000 to assist in evaluating the remediation plan approved by New Mexico Oil Conservation Division. The additional sampling would provide information on the deeper soils and the extent of deeper hydrocarbon contamination. Based on the results of the soil analysis, the soils from one foot down do not appear to have been adversely impacted for hydrocarbons.

2.0 INTRODUCTION AND PURPOSE

CERI conducted soil sampling at abandoned tank battery sites in the South Langley Jal Unit (SLJU) located in Lea County, New Mexico in January 2000 at the request of and on behalf of Bristol Resources Corporation (Bristol). The SLJU is located north of Jal as shown on the Location Map, Figure 1, and Topographic Map, Figure 2. CERI had conducted soil sampling in July at three sites identified by Bristol. The three sites where sampling was conducted are located as shown in Figure 2 and are identified as:

- Site 1 , Sec 18, T25S, R 37E

This site is located in the northeast quarter of Section 18, T25S, R37E. A sign at the facility identified it as the Winters "E" Lease Tank Battery. Two out of service storage tanks were located on the facility in July 1999. These tanks were removed and only a fence remained at the facility in January 2000.

- Site 2 , Sec 18, T25S, R 37E

There were no storage tanks at this site in July 1999 or in January 2000. Some flow lines were removed from the site during the period from July 1999 to January 2000.

- Site 3 , Sec 18, T25S, R 37E

This site was a former flare pit located west of an abandoned tank battery site. Soil material had been placed on a plastic tarp located west of the pit.

CERI prepared a report dated August 18, 1999 documenting the results of the soil analysis. This report

also provided recommendations concerning remediation of the three sites. We recommended that the material at Site 1 be removed for treatment or disposal. The material is in a soft semi liquid state which could be problem with live stock when the fence and tanks are removed. In our opinion the material at the other sites do not offer a threat to the environment. We did recommend the hard pan on the east side of Site 2 be broken up and the soil tilled to allow air to contact soil and allow natural bioremediation to continue. The material in the bottom of the pit at Site 3 should be removed from the pit prior to backfilling of the pit. There were no indications of light hydrocarbons in the pit. However, bringing the material to the surface prior to backfilling the pit would allow the material to be in contact with the air and permit bioremediation.

Ms. Donna Williams with the NMOCD replied to Bristol in a letter dated December 2, 1999. She notified Bristol in the letter that the NMOCD approved the work plans under certain conditions. The conditions of the NMOCD were:

- Bristol shall provide the legal locations of each site in future investigations and/or remediation reports (ie, Unit Letter, Section, Township and Range).
- Bristol shall remediate soil contamination at each site in accordance with NMOCD'S Guidelines for Remediation of Leaks, Spills and Releases.
- All waste disposed of off-site must receive NMOCD approval prior to disposal.
- Bristol shall notify the NMOCD at least 48 hours in advance of the scheduled activities such that the NMOCD has the opportunity to witness the events and/or split samples during NMOCD'S normal working hours.

The purpose of this report is to document the testing conducted on January 12, 2000. The results of the test analysis will assist in further evaluating the extent of the hydrocarbon contamination and in determining the amount of soil that will be removed for offsite disposal. We were not able to find the unit designation of the old tank batteries. We have made an estimate of the location and have used that designation to identify the site.

3.0 SAMPLING

3.1 Soil Sampling

Soil samples were placed in four-ounce glass jars for analysis. The jars were labeled and placed in an ice chest with ice for transport to Anachem, Incorporated laboratory in Allen, Texas. A backhoe was

used to dig trenches to obtain subsurface samples to delineate the vertical contamination.

The soil at Site 1 with visible hydrocarbon contamination was pushed to the northeast corner of the former tank battery. This spoil area was located inside the fenced area. Five trenches were dug at Site 1 to evaluate the vertical and horizontal limits of contamination. The locations of the trenches are shown on Figure 3. Trench 1 was dug in the area between and under the former storage tanks. Samples were taken at depths of one, two and three feet. Photo 1 shows the top of Trench 1. Photo 2 shows Trench 2. Hydrocarbon contamination was not observed below the surface and soil samples were not taken at this location. Trench 3 was placed in an area under where hydrocarbon contaminated soil had been removed. Samples were taken at depths of one foot and at approximately two feet. Visible staining was not observed from these areas. Trench 4 was also dug in an area below where hydrocarbon contaminated soil had been removed. The trench is shown in Photo 3. Hydrocarbon contamination was not observed and samples were not taken from this trench. Trench 5 was placed on the west side of the facility. A hard lime streak was encountered in Trench 5 at a depth of 2.3 feet. A soil sample was taken at this point and from the surface. Photo 5 shows Trench 5.

Four trenches were dug at Site 2. Figure 4 shows the location of the trenches dug in August 1999 and in January 2000. The samples taken in 1999 were primarily from the surface or at points where an odor was detected. The samples in 2000 were taken from depths of one to three feet. Photo 5 shows Trench 7. There is a hard asphalt layer over portions of this area. Samples from Trench 7 were taken below the asphalt at depths of one and two feet. No asphalt staining was observed on the west side of the facility where Trench 9 was placed. Only one sample was taken from Trench 9 because there was no indication of past spills in this area. The sample was taken at a depth of a half to a foot.

Site 3 is the location of a former flare pit. The Site is shown of Figure 5. On the west side of the flare pit is an area where soil had been placed on plastic material. In July 1999 a soil sample was taken near the surface at the bottom of the pit. During the January 2000 sampling, samples were taken from one foot and 2 feet in a trench dug in the middle of the pit. Soil samples were also taken from each of the four corners of the material placed on plastic and composited for analysis. The locations are indicated on Figure 5.

4.0 SAMPLE ANALYSES AND DISCUSSION

4.1 Laboratory Analysis

Soil samples taken in July 1999 and in January 2000 were analyzed for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) using EPA 8021. The soil samples were also tested for Total Petroleum Hydrocarbons (TPH) in the Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) using EPA 8015 Modified. These hydrocarbon ranges cover the aromatic hydrocarbons and polycyclic aromatic hydrocarbons typically of concern in petroleum products.

When all the samples taken in January 2000, were below the detection limits using the above analysis, some of the samples were chosen for additional testing using EPA 418.1. This method should provide additional information on the presence of heavier hydrocarbons. Four samples were chosen at Site 2 for additional testing. These samples were chosen in areas where GRO and DRO had been detected in the near surface soil samples taken in 1999. Additional testing was also conducted on the composite sample taken at Site 3.

The results of the laboratory analysis are shown in the Appendix.

4.2 Soil Analysis Results

The sample taken at Site 1 in 1999 was taken in an area that insured obtaining a sample of the hydrocarbon contamination. The purpose of this sample was to assist in characterizing the hydrocarbons observed at the site. This sample detected TPH GRO of 23.1 mg/kg and TPH DRO of 13,900 mg/kg. There was no BTEX detected in this sample. The samples taken in 2000 were below the contaminated soil levels and BTEX, TPH GRO nor TPH DRO were not detected in any of the samples. It appears that removing the top layer on hydrocarbon contamination will remove the threat of hydrocarbon contamination at this site.

Surface hydrocarbon contamination was observed primarily at the east end of Site 2. The surface sampling results in 1999 detected TPH GRO of 1.55 mg/kg and TPH DRO of 4,160 in the southeast corner of Site 2. No TPH GRO were detected at the other three sampling locations at Site 2 but TPH DRO was detected as shown on Figure 4. The deeper sampling conducted in 2000 did not detect TPH in the DRO nor the GRO. Hydrocarbon staining was not observed in the sample areas. Additional

testing using EPA 418.1 did detect TPH in the 8,000 to 8,800 mg/kg ranges. There was no BTEX detected neither in 1999 nor in 2000.

A near surface sample taken in the middle of the former flare pit at Site 3 contained TPH DRO of 24,300 mg/kg. BTEX and TPH GRO were not detected in the sample. In 2000 a trench was dug in the middle of the flare pit and samples were taken at one and two feet. BTEX, TPH GRO and TPH DRO were not detected in these soil samples. No hydrocarbon staining was observed in the area where the sampling was conducted. A soil sample was taken from the material that had been placed on plastic. BTEX, TPH DRO and TPH GRO were not detected in the analysis of the composite sample. TPH using EPA 418.1 did detect a TPH of 8,700 mg/kg.

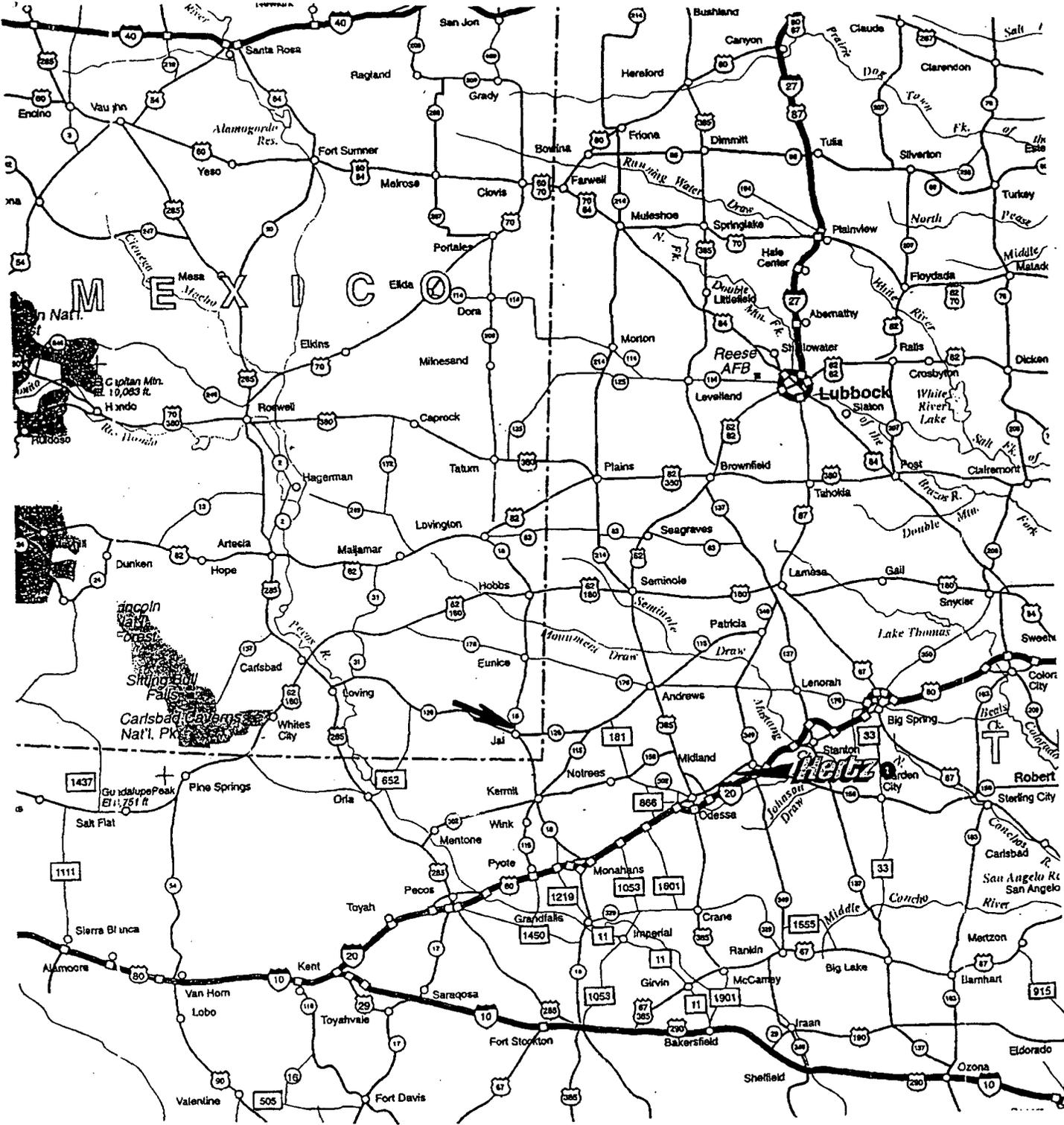
5.0 CONCLUSIONS AND RECOMMENDATIONS

Removal of the hydrocarbon contaminated soil at Site 1 should remove the exposure of deeper hydrocarbon impact based on the results of the deeper soil analysis at Site 1. Plans to remove the contaminated site for off site disposal and remediation should continue.

The top hard pan at Site 2 can be removed and taken with the material from Site 1 for off site disposal. No further actions in our opinion are warranted based on the additional testing.

The top half-foot of soil can be taken out for remediation on site. Based on the sample results, we recommend that no further action be required on the material on the plastic and the material should be left in place. The pit should be backfilled with clean material.

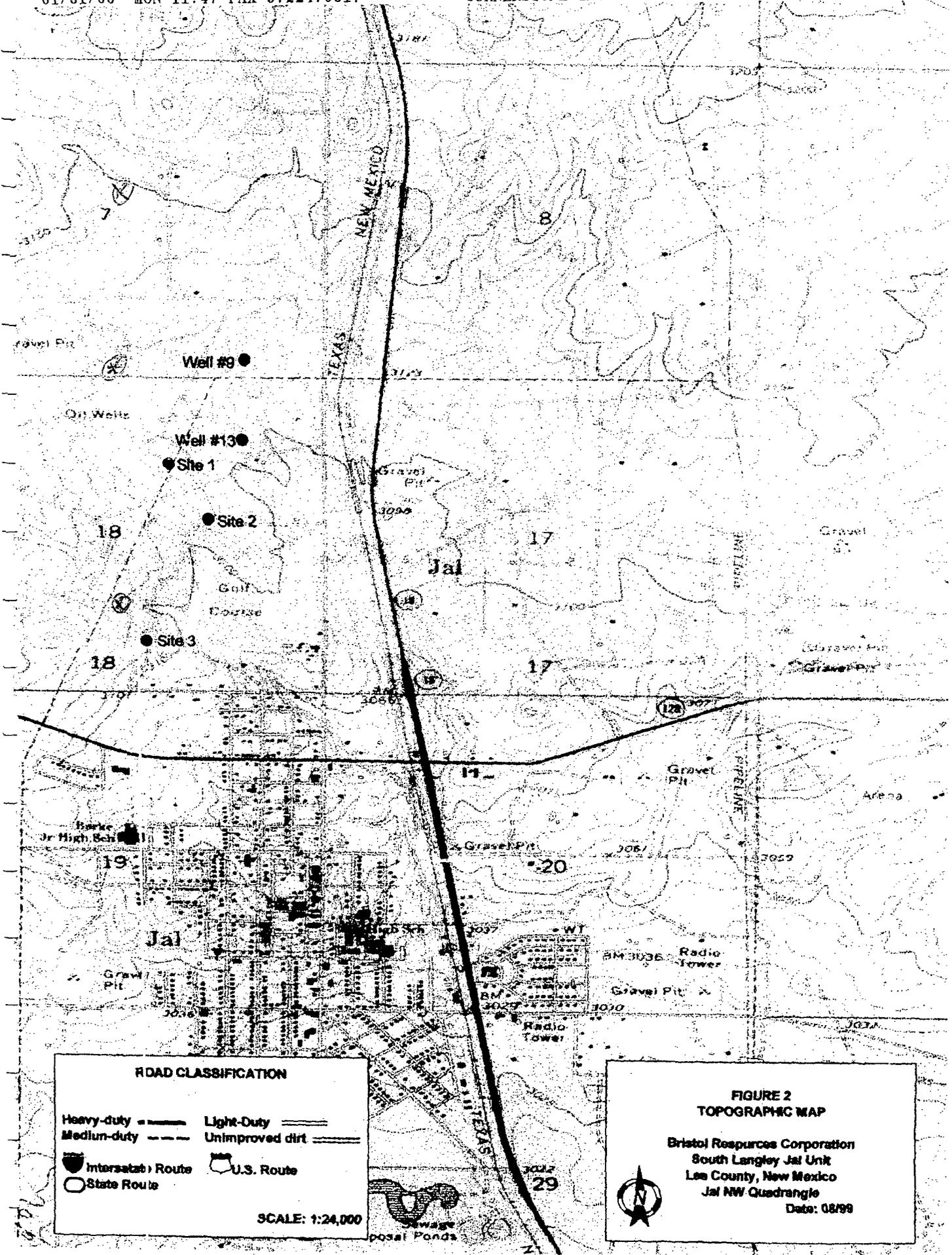
FIGURES



**FIGURE 1
LOCATION MAP**

**Bristol Resources Corporation
South Langley Jal Unit
Lea County, New Mexico**

Scale: NONE Date: 02/99



ROAD CLASSIFICATION

Heavy-duty ———	Light-Duty ———
Medium-duty - - -	Unimproved dirt ———
Interstate Route	U.S. Route
State Route	

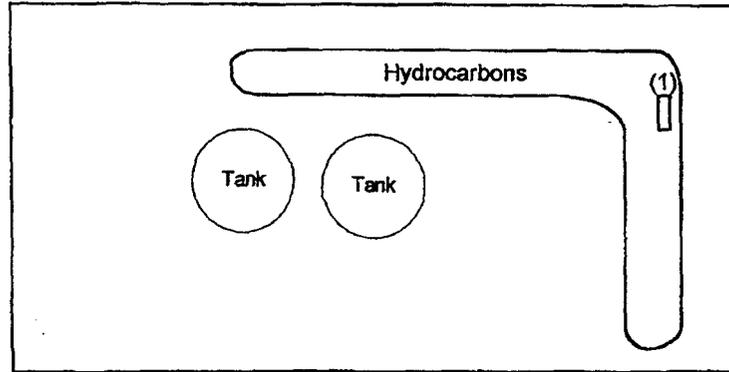
SCALE: 1:24,000

Sewage disposal Ponds

**FIGURE 2
TOPOGRAPHIC MAP**

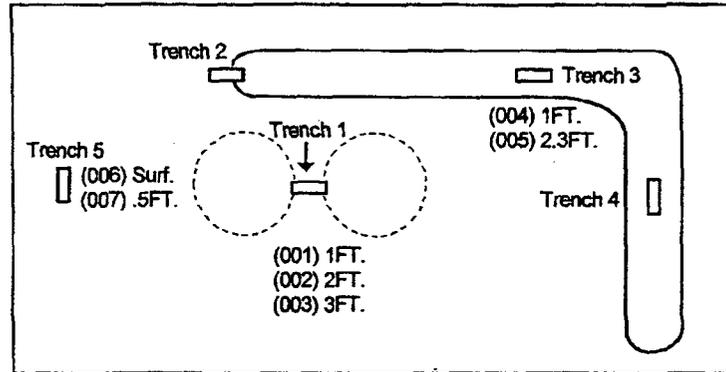
Bristol Resources Corporation
 South Langley Jal Unit
 Lee County, New Mexico
 Jal NW Quadrangle
 Date: 08/99

Sampling 07/99



(1) BTEX 8021 - ND
 TPH GRO 8015 - 23.1 Mg/Kg
 TPH DRO 8015 - 13,900 Mg/Kg

Sampling 01/00



(001) BTEX 8021 - ND
 TPH GRO 8015 - ND
 TPH DRO 8015 - ND

(004) BTEX 8021 - ND
 TPH GRO 8015 - ND
 TPH DRO 8015 - ND

(007) BTEX 8021 - ND
 TPH GRO 8015 - ND
 TPH DRO 8015 - ND

(002) BTEX 8021 - ND
 TPH GRO 8015 - ND
 TPH DRO 8015 - ND

(005) BTEX 8021 - ND
 TPH GRO 8015 - ND
 TPH DRO 8015 - ND

(003) BTEX 8021 - ND
 TPH GRO 8015 - ND
 TPH DRO 8015 - ND

(006) BTEX 8021 - ND
 TPH GRO 8015 - ND
 TPH DRO 8015 - ND

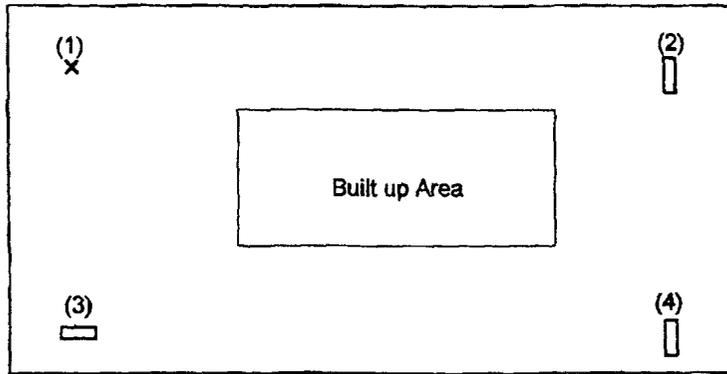
LEGEND

☐ = Trench
 (1) = Sample Number
 DRO = Diesel Range Organics
 GRO = Gasoline Range Organics
 ND = Non Detected
 TPH = Total Petroleum Hydrocarbons

**FIGURE 3
 SITE 1 SITE MAP**

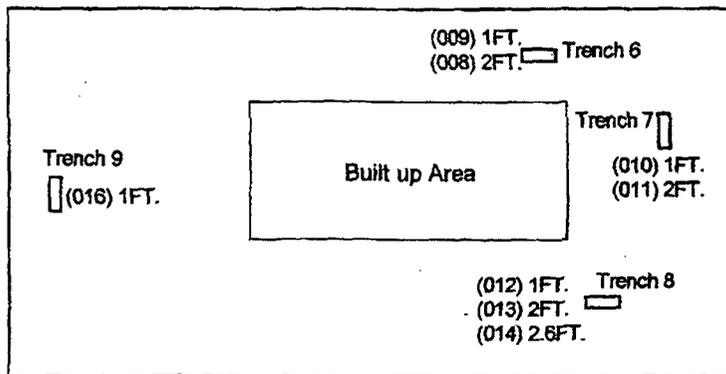
Bristol Resources Corporation
 Winters Tank Battery
 South Langley Jal Unit
 Jal County, New Mexico
 Date: 01/00

Sampling 07/99



- | | |
|---|--|
| (1)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - 180 Mg/Kg | (2)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - 4,440 Mg/Kg |
| (3)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - 40.2 Mg/Kg | (4)
BTEX 8021 - ND
TPH GRO 8015 - 1.56 Mg/Kg
TPH DRO 8015 - 4,180 Mg/Kg |

Sampling 01/00



- | | | |
|--|--|---|
| (008)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND | (011)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND | (014)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND |
| (009)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND
TPH 418.1 - 8,300 Mg/Kg | (012)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND
TPH 418.1 - 8,000 Mg/Kg | (016)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND |
| (010)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND
TPH 418.1 - 8,800 Mg/Kg | (013)
BTEX 8021 - ND
TPH GRO 8015 - ND
TPH DRO 8015 - ND
TPH 418.1 - 8,800 Mg/Kg | |

LEGEND

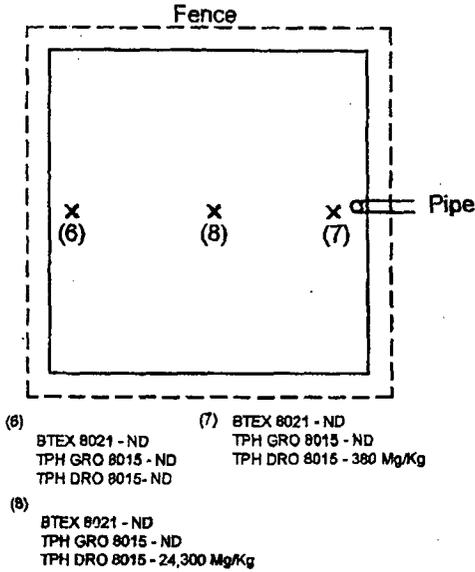
▭ = Trench
 (1) = Sample Number
 DR() = Diesel Range Organics
 GR() = Gasoline Range Organics
 ND = Non Detected
 TPH = Total Petroleum Hydrocarbons

**FIGURE 4
SITE 2 SITE MAP**

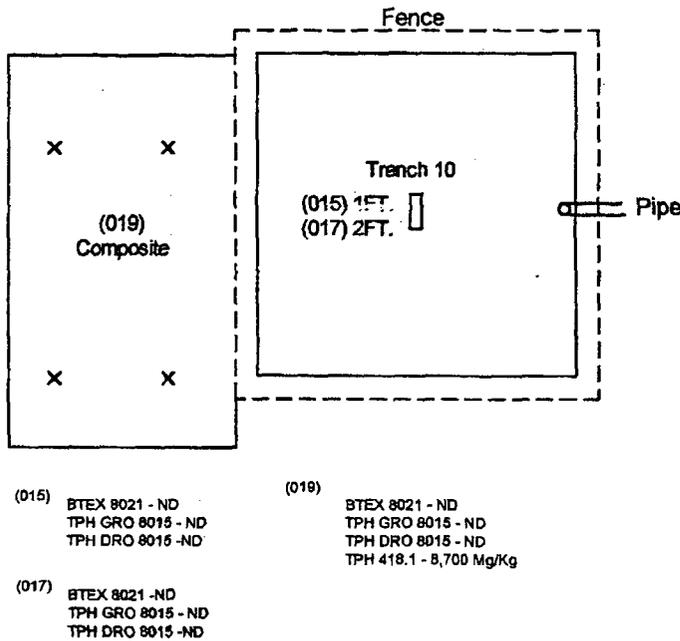
Bristol Resources Corporation
 Abandon Tank Battery Site
 South Langley Jal Unit
 Jal County, New Mexico
 Date: 01/00



Sampling 07/99



Sampling 01/00



LEGEND

= Trench
 (1) = Sample Number
 DRO = Diesel Range Organics
 GRO = Gasoline Range Organics
 ND = Not Detected
 TPH = Total Petroleum Hydrocarbons

**FIGURE 5
SITE 3 SITE MAP**

Bristol Resources Corporation
 Abandon Flare Pit Site
 South Langley Jal Unit
 Jal County, New Mexico
 Date: 01/00

PHOTOGRAPHS

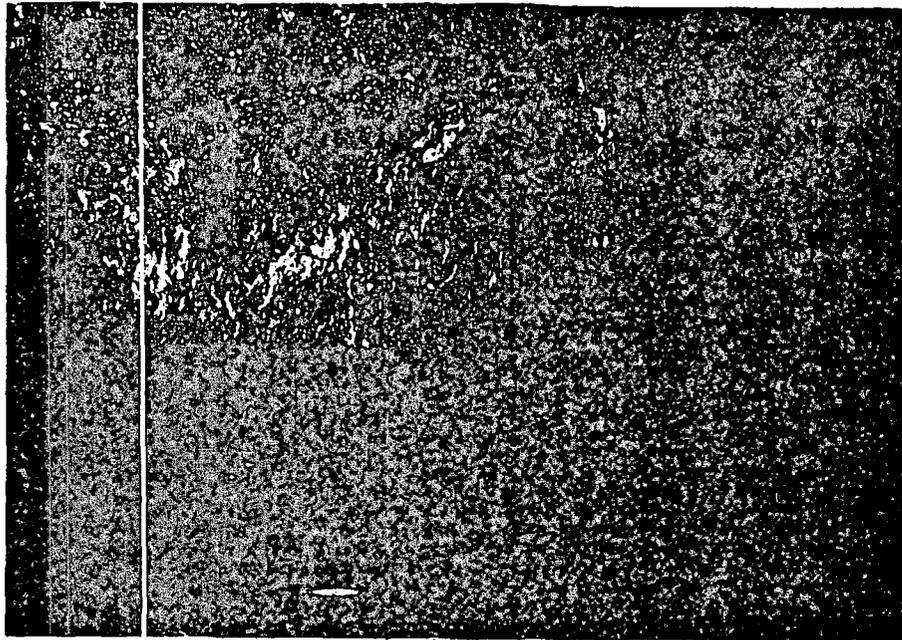


PHOTO 1: Trench 1 Located between and under the Site of the former tanks at Site 1.

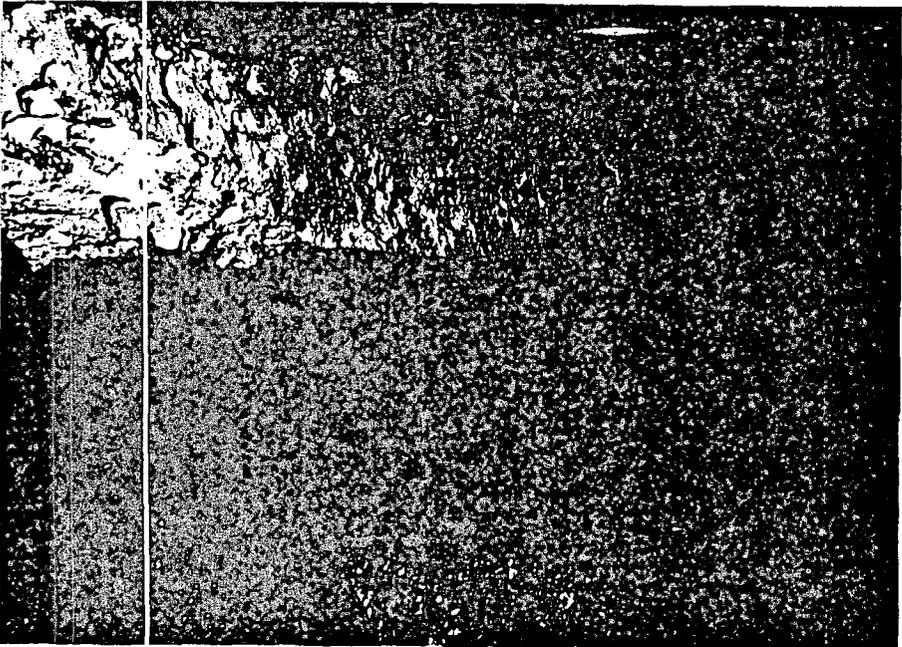


PHOTO 2: Trench 2 location northwest area of Site 1.

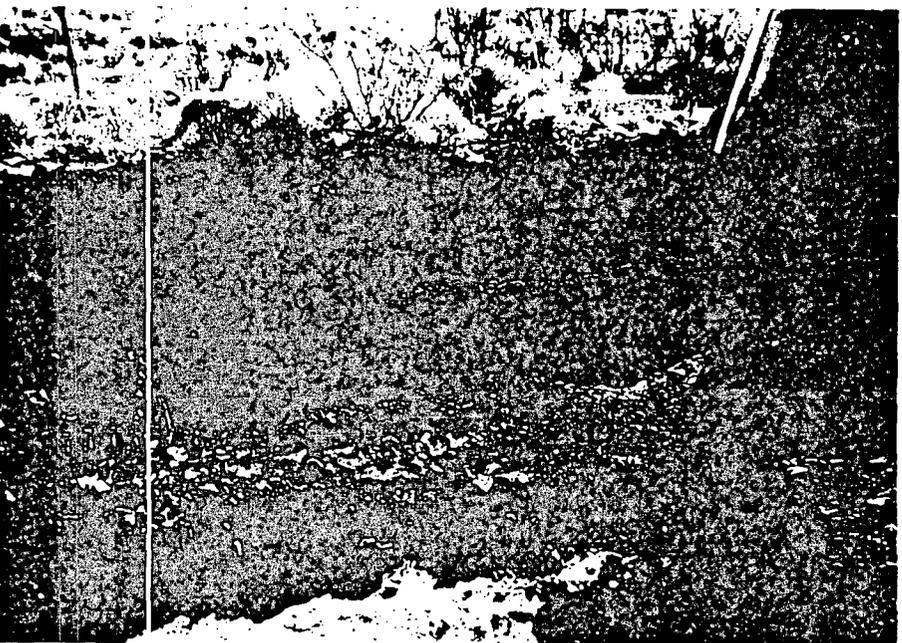


PHOTO 3: Trench 4 on East side of Site 1 under area where Hydrocarbon Contaminated Soil had been removed.

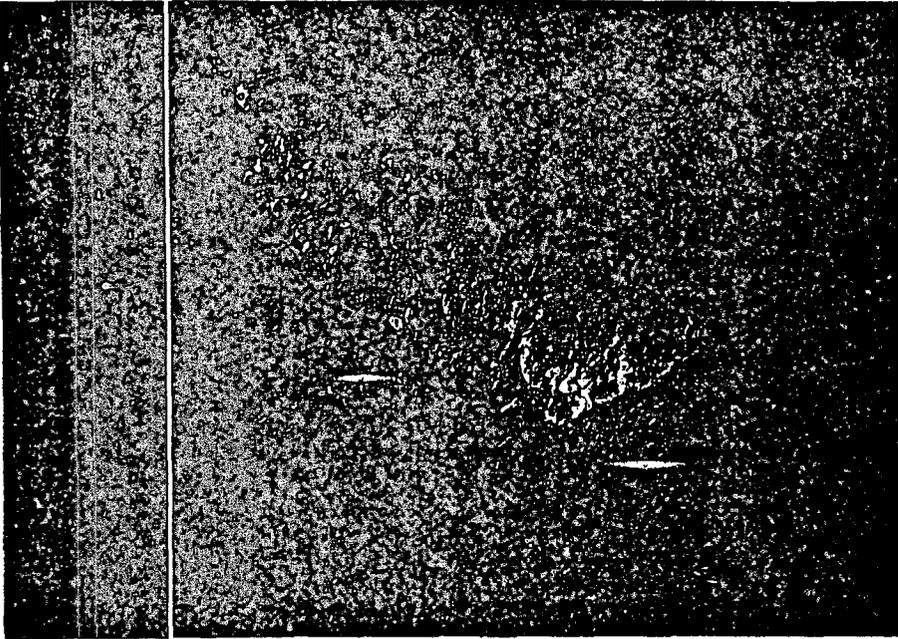


PHOTO 4: Trench 5 located on West Side of Site 1 encountered hard lime layer at about 0.5 feet below surface.

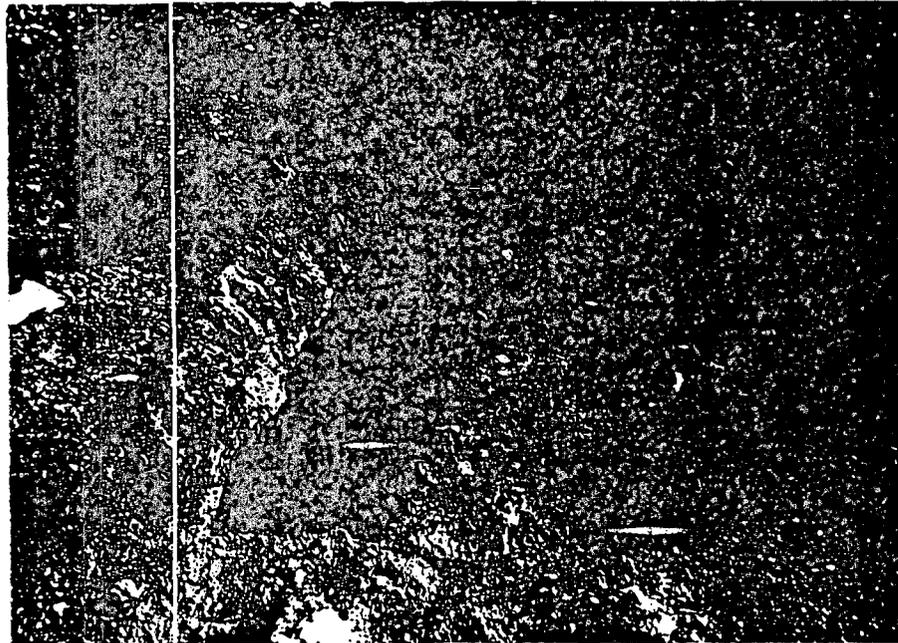


PHOTO 5: Trench 7 located in Northeast corner of Site 2.

APPENDIX A



ANACHEM INC.

8 Prestige Circle, Suite 104 Allen, Texas 75002
972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

January 17, 2000

Mr. John Alderman
Cornerstone Environmental, Inc
2997 LBJ Freeway
Suite 103
Dallas, TX 75234
TEL: 972-243-7643 FAX: 972-247-0617

Work Order: 0001137
Project: S. Langley Jar Unit
JAL

Dear Client:

Anachem, Inc. received 19 samples on 01/14/2000 for the analyses presented in the following report.

The samples were analyzed for the following tests:

BTEX by EPA 8021 - Solid
TPH DRO by Mod. EPA 8015 - Solid
TPH GRO by Mod. EPA 8015 - Solid

Respectfully Submitted,
Anachem, Inc.

Howard H. Hayden, B.S.
Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned. The use of our name and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualities of apparently identical or similar materials.

0001137-11A To 0001137-19A

Page 1 Of 9

Anachem, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc
Work Order: 0001137
Project: S. Langley Jar Unit

Analyses	Result	Limit	Units	Date Analyzed
Lab ID:	0001137-01A			
Client Sample ID:	01120001	Collection Date:	1/12/00	
Location:	Lea County, New Mexico	Matrix:	SOIL	
0001137-01A	BTEX BY EPA 8021 - SOLID			Prep Date
Benzene	ND	0.4	mg/Kg	Analyst: AT 1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-01A	TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00
Diesel Range Organics	ND	5	mg/Kg	Analyst: MP 1/14/00
0001137-01A	TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date
Gasoline Range Organics	ND	1	mg/Kg	Analyst: AT 1/15/00

Lab ID:	0001137-02A			
Client Sample ID:	01120002	Collection Date:	1/12/00	
Location:	Lea County, New Mexico	Matrix:	SOIL	
0001137-02A	BTEX BY EPA 8021 - SOLID			Prep Date
Benzene	ND	0.4	mg/Kg	Analyst: AT 1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-02A	TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00
Diesel Range Organics	ND	5	mg/Kg	Analyst: MP 1/14/00
0001137-02A	TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date
Gasoline Range Organics	ND	1	mg/Kg	Analyst: AT 1/15/00

Lab ID:	0001137-03A			
Client Sample ID:	01120003	Collection Date:	1/12/00	
Location:	Lea County, New Mexico	Matrix:	SOIL	
0001137-03A	BTEX BY EPA 8021 - SOLID			Prep Date
Benzene	ND	0.4	mg/Kg	Analyst: AT 1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-03A	TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00
Diesel Range Organics	ND	5	mg/Kg	Analyst: MP 1/14/00
0001137-03A	TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date
Gasoline Range Organics	ND	1	mg/Kg	Analyst: AT 1/15/00

Qualifiers: ND - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank

Anachem, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc
Work Order: 0001137
Project: S. Langley Jaf Unit

Analyses	Result	Limit	Units	Date Analyzed
Lab ID: 0001137-04A				
Client Sample ID: 01120004			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-04A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-04A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-04A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID: 0001137-05A				
Client Sample ID: 01120005			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-05A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-05A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-05A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID: 0001137-06A				
Client Sample ID: 01120006			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-06A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-06A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-06A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Qualifiers: ND - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank

Anachen, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc
 Work Order: 0001137
 Project: S. Langley ^{JAL} Unit

Analyses	Result	Limit	Units	Date Analyzed
Lab ID:	0001137-07A			
Client Sample ID:	01120007	Collection Date:	1/12/00	
Location:	Lea County, New Mexico		Matrix:	SOIL
0001137-07A	BTEX BY EPA 8021 - SOLID			Prep Date
Benzene	ND	0.4	mg/Kg	Analyst: AT 1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-07A	TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00
Diesel Range Organics	ND	5	mg/Kg	Analyst: MP 1/14/00
0001137-07A	TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date
Gasoline Range Organics	ND	1	mg/Kg	Analyst: AT 1/15/00

Lab ID:	0001137-08A			
Client Sample ID:	01120008	Collection Date:	1/12/00	
Location:	Lea County, New Mexico		Matrix:	SOIL
0001137-08A	BTEX BY EPA 8021 - SOLID			Prep Date
Benzene	ND	0.4	mg/Kg	Analyst: AT 1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-08A	TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00
Diesel Range Organics	ND	5	mg/Kg	Analyst: MP 1/14/00
0001137-08A	TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date
Gasoline Range Organics	ND	1	mg/Kg	Analyst: AT 1/15/00

Lab ID:	0001137-09A			
Client Sample ID:	01120009	Collection Date:	1/12/00	
Location:	Lea County, New Mexico		Matrix:	SOIL
0001137-09A	BTEX BY EPA 8021 - SOLID			Prep Date
Benzene	ND	0.4	mg/Kg	Analyst: AT 1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-09A	TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00
Diesel Range Organics	ND	5	mg/Kg	Analyst: MP 1/14/00
0001137-09A	TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date
Gasoline Range Organics	ND	1	mg/Kg	Analyst: AT 1/15/00

Qualifiers: ND - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank.

Anachem, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc

Work Order: 0001137

Project: S. Langley ^{JAL} Unit

Analyses	Result	Limit	Units	Date Analyzed
Lab ID: 0001137-10A				
Client Sample ID: 01120010			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-10A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-10A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-10A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID: 0001137-11A				
Client Sample ID: 01120011			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-11A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-11A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-11A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID: 0001137-12A				
Client Sample ID: 01120012			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-12A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-12A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-12A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Qualifiers: ND - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank

Anachen, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc
Work Order: 0001137
Project: S. Langley Jar Unit

Analyses	Result	Limit	Units	Date Analyzed
Lab ID: 0001137-13A				
Client Sample ID: 01120013			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-13A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-13A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-13A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID: 0001137-14A				
Client Sample ID: 01120014			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-14A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-14A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-14A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID: 0001137-15A				
Client Sample ID: 01120015			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001137-15A BTEX BY EPA 8021 - SOLID			Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-15A TPH DRO BY MOD. EPA 8015 - SOLID			Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-15A TPH GRO BY MOD. EPA 8015 - SOLID			Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Qualifiers: ND - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank

Anachen, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc

Work Order: 0001137

Project: S. Langley ^{of} Unit
_{FAL}

Analyses	Result	Limit	Units	Date Analyzed
Lab ID:	0001137-16A			
Client Sample ID:	01120016	Collection Date:	1/12/00	
Location:	Lea County, New Mexico	Matrix:	SOIL	
0001137-16A	BTEX BY EPA 8021 - SOLID		Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-16A	TPH DRO BY MOD. EPA 8015 - SOLID		Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-16A	TPH GRO BY MOD. EPA 8015 - SOLID		Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID:	0001137-17A			
Client Sample ID:	01120017	Collection Date:	1/12/00	
Location:	Lea County, New Mexico	Matrix:	SOIL	
0001137-17A	BTEX BY EPA 8021 - SOLID		Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-17A	TPH DRO BY MOD. EPA 8015 - SOLID		Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-17A	TPH GRO BY MOD. EPA 8015 - SOLID		Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Lab ID:	0001137-18A			
Client Sample ID:	01120018	Collection Date:	1/12/00	
Location:	Lea County, New Mexico	Matrix:	SOIL	
0001137-18A	BTEX BY EPA 8021 - SOLID		Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-18A	TPH DRO BY MOD. EPA 8015 - SOLID		Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-18A	TPH GRO BY MOD. EPA 8015 - SOLID		Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Qualifiers: ND - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank

Anachen, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc
 Work Order: 0001137
 Project: S. Langley Jet Unit
 JAL

Analyses	Result	Limit	Units	Date Analyzed
Lab ID:	0001137-19A			
Client Sample ID:	01120019		Collection Date:	1/12/00
Location:	Lea County, New Mexico		Matrix:	SOIL
0001137-19A	BTEX BY EPA 8021 - SOLID		Prep Date	Analyst: AT
Benzene	ND	0.4	mg/Kg	1/15/00
Toluene	ND	0.5	mg/Kg	1/15/00
Ethylbenzene	ND	0.5	mg/Kg	1/15/00
Xylenes, Total	ND	0.5	mg/Kg	1/15/00
0001137-19A	TPH DRO BY MOD. EPA 8015 - SOLID		Prep Date 1/14/00	Analyst: MP
Diesel Range Organics	ND	5	mg/Kg	1/14/00
0001137-19A	TPH GRO BY MOD. EPA 8015 - SOLID		Prep Date	Analyst: AT
Gasoline Range Organics	ND	1	mg/Kg	1/15/00

Qualifiers: ND - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank

Anachem, Inc.

Date: 17-Jan-00

CLIENT: Cornerstone Environmental, Inc

QC SUMMARY REPORT

Work Order: 0001137

Project: S. Langley Jar Unit
JAL

TPH DRO by Mod. EPA 8015 - Solid

Units: mg/Kg

Analysis Date: 1/14/00

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Diesel Range Organics	500	92.6%	82.8%	20%	150%	11.2%	30

BTEX by I:PA 8021 - Solid

Units: mg/Kg

Analysis Date: 1/15/00

Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Benzene	100	97.9%	96.8%	60%	140%	1.1%	30
Ethylbenzene	100	93.3%	95.0%	60%	140%	1.8%	30
Toluene	100	96.6%	97.2%	60%	140%	0.6%	30
Xylenes, Total	300	92.5%	93.5%	60%	140%	1.1%	30



ANACHEM INC.

8 Prestige Circle, Suite 104 Allen, Texas 75002
972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

January 21, 2000

Mr. John Alderman
Cornerstone Environmental, Inc
2997 LBJ Freeway
Suite 103
Dallas, TX 75234
TEL: 972-243-7643 FAX: 972-247-0617

Work Order: 0001205
Project: S. Langley Jar Unit

Dear Client:

Anachem, Inc. received 5 samples on 01/18/2000 for the analyses presented in the following report.

The samples were analyzed for the following tests:

TPH by EPA 413.1 - Solid

Respectfully Submitted,
Anachem, Inc.

Howard H. Hayden, B.S.
Chemist

ADDITIONAL ANALYSIS

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned. The use of our name and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualities of apparently identical or similar materials.

0001205-01A To 0001205-05A

Page 1 Of 5

Anachem, Inc.

Date: 21-Jan-00

CLIENT: Cornerstone Environmental, Inc
Work Order: 0001205
Project: S. Langley Jar Unit

Analyses	Result	Limit	Units	Date Analyzed
Lab ID: 0001205-01A				
Client Sample ID: 01120009			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001205-01A TPH BY EPA 418.1 - SOLID			Prep Date 1/21/00	Analyst: AT
Petroleum Hydrocarbons, TR	8300	10	mg/Kg	1/21/00
Lab ID: 0001205-02A				
Client Sample ID: 01120010			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001205-02A TPH BY EPA 418.1 - SOLID			Prep Date 1/21/00	Analyst: AT
Petroleum Hydrocarbons, TR	8600	10	mg/Kg	1/21/00
Lab ID: 0001205-03A				
Client Sample ID: 01120012			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001205-03A TPH BY EPA 418.1 - SOLID			Prep Date 1/21/00	Analyst: AT
Petroleum Hydrocarbons, TR	8000	10	mg/Kg	1/21/00
Lab ID: 0001205-04A				
Client Sample ID: 01120013			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001205-04A TPH BY EPA 418.1 - SOLID			Prep Date 1/21/00	Analyst: AT
Petroleum Hydrocarbons, TR	8800	10	mg/Kg	1/21/00
Lab ID: 0001205-05A				
Client Sample ID: 01120019			Collection Date: 1/12/00	
Location: Lea County, New Mexico			Matrix: SOIL	
0001205-05A TPH BY EPA 418.1 - SOLID			Prep Date 1/21/00	Analyst: AT
Petroleum Hydrocarbons, TR	8700	10	mg/Kg	1/21/00

ADDITIONAL ANALYSIS

Qualifiers: ND - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank

Anachen, Inc.

Date: 21-Jan-00

CLIENT: Cornerstone Environmental, Inc
Work Order: 0001205
Project: S. Langley Jar Unit

QC SUMMARY REPORT

TPH by EPA 418.1 - Solid		Units: mg/Kg			Analysis Date: 1/21/00		
Analyte	SPK value	REC 1	REC 2	LowLimit	HighLimit	%RPD	RPDLimit
Petroleum hydrocarbons, TR		8200	8300			1.2%	

ADDITIONAL ANALYSIS

Chain Of Custody/Order Form
Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, Tx 75002 Phone: 214-727-9003 Fax: 214-727-9686

Report To: JOHN ALDERMAN Company: CORNERSTONE ENV. RESOURCES Address: 2997 LBJ FWY SUITE 103 City, State, Zip: DALLAS, TX 75234 Phone: 972-243-7674 Fax: 972-247-0617		Bill To: CORNERSTONE ENV. RESOURCES Purchase Order #: 97051 Address: SAME City, State, Zip: Phone: Fax:					
Project Name: S. LANGLEY JAM. UNIT Project Location: LEA COUNTY TEXAS Date Due:		City, State: NEW MEXICO Rush: 0% 50% 100% Sampled By: JOHN ALDERMAN					
Anachem Lab#	Client Sample ID#	Matrix	Date/Time	Presrv/Temp.	Transport Method	Time	Analyst
0001137-01	01120001	SOIL	1/12/2000 9:02				
02	01120002	SOIL	1/12/2000 9:04			7:25	
03	01120003	SOIL	1/12/2000 9:09				
04	01120004		1/12/2000 10:03				
05	01120005		1/12/2000 10:12				
06	01120006		1/12/2000 10:17				
07	01120007		1/12/2000 10:23				
08	01120008		1/12/2000 11:20				
09	01120009		1/12/2000 11:15				
10	01120010		1/12/2000 11:35				
Relinquished By	Rec'd By	Transport Method	Date	Time	Analyst		
<i>[Signature]</i>	P. Dumbaulf	CAR	1/12/2000	7:25			

TPH 4181 (EPA)
 TPH 8015 DRD
 E:TEX/TPH 8021/8015 GRD

Comments

In the event that Anachem determines that a sample is hazardous, client agrees to:
 Pay For Sample Disposal _____
 Accept Returned Sample _____

Remarks: **SAMPLES ON ICE**

Anachem Submission #: **0001137**

Chain Of Custody/Order Form
Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, Tx 75002 Phone: 214-727-9003 Fax: 214-727-9686

Report To: John Alteman Company: Cornerstone Env. Resources Address: 2997 LB5 Suite 103 City, State, Zip: Dallas Tx. 75234 Phone: 972-243-7643 Fax: 972-247-0617		Bill To: Cornerstone Env. Resources Purchase Order #: 99051 Address: SAME City, State, Zip: SAME Phone: Fax:		
Project Name: S. Langley JAL Unit Project Location: Lea County New Mexico Date Due: Rush: 0% 50% 100% Sampled By: John Alteman				
Anachem Lab#	Client Sample ID#	Matrix	Date/Time	Pressure/Temp
0001137H	01120011	Soil	1/12/2000 11:38	
-12	01120012		1/12/2000 11:56	
-13	01120013		1/12/2000 12:02	
-14	01120014		1/12/2000 12:06	
-15	01120015		1/12/2000 13:37	
-16	01120016		1/12/2000 12:12	
-17	01120017		1/12/2000 13:43	
-18	01120018		1/12/2000 13:45	
-19	01120019		1/12/2000 14:09	

Relinquished By	Rec'd By	Transport Method	Date	Time	Analyst
John Alteman	P. Dumbord	car	1/12/2000	7:25	

Analysis	Comments
TPH 418.1 (EPA)	X X
TPH 8015 DRO	X
BTEX/TPH 8020/8015 G-RO	X

In the event that Anachem determines that a sample is hazardous, client agrees to:
 Pay For Sample Disposal _____
 Accept Returned Sample _____

Remarks: **SAMPLES ON ICE**

Anachem Submission #: **0001137**

