

ExxonMobil Pipeline Company
800 Bell Street
Post Office Box 2220
Houston, Texas 77252-2220

Karen R. Bailor
Manager
Operations Integrity Department

December 29, 2003

ExxonMobil
Pipeline

Mr. Chris Williams
District Supervisor
Oil Conservation Division, District 1
1625 N. French Drive
Hobbs, New Mexico 88240



Re: 8" Crossroads Loop Line
August 2, 1995 Release Site
NMOCD Report #: 315-95-058

Dear Mr. Williams:

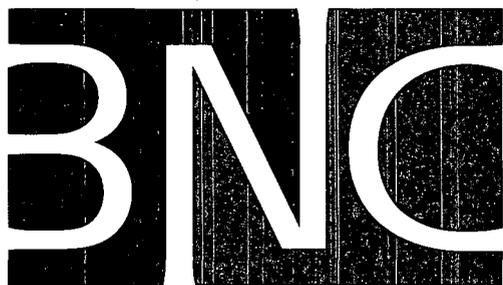
Pursuant to the landowners request to define the vertical and horizontal extent of hydrocarbon impact at the subject property identified above, ExxonMobil Pipeline Company has conducted an additional investigation. The results of this investigation are summarized in the attached report prepared by BNC Environmental. This report indicates the regulatory cleanup standard has been met and hydrocarbon levels at the site are attenuating naturally.

If you have any questions regarding the investigation or findings, please do not hesitate to contact Marshall Smith at (713) 656-4629.

Karen Bailor

Attachment

cc: Mr. Darr Angell, PO Box 190, Lovington, NM 88260 (Attachment sent under separate cover)



BNC Environmental Services, Inc.

SOIL ASSESSMENT REPORT

**EXXONMOBIL PIPELINE COMPANY
MARCH 9, 1995 CRUDE OIL PIPELINE RELEASE
CROSSROADS TO SEMINOLE RELEASE SITE
LEA COUNTY, NEW MEXICO**

December 15, 2003



*ExxonMobil Pipeline OGRID = 143287
facility = FPAC 0602027133
incident = nPAC 0602027389
application = pPAC 0602027632*



BNC Environmental Services, Inc.

AUSTIN ▪ DALLAS ▪ HOUSTON ▪ MIDLAND ▪ NEW MEXICO ▪ OKLAHOMA

SOIL ASSESSMENT REPORT

**EXXONMOBIL PIPELINE COMPANY
MARCH 9, 1995 CRUDE OIL PIPELINE RELEASE
CROSSROADS TO SEMINOLE RELEASE SITE
LEA COUNTY, NEW MEXICO**

PREPARED FOR:

Mr. Marshall H. Smith
EXXONMOBIL PIPELINE COMPANY
800 Bell Street
Houston, Texas 77002

PREPARED BY:

BNC Environmental Services, Inc.
2135 S Loop 250 West
Midland, Texas 79703



William H. Murley, P.G., Project Geologist

Aaron M. Hale, P.G., Project Geologist

Thomas C. Larson, P.G., Senior Geologist

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
I. REGULATORY FRAMEWORK AND SITE CLASSIFICATION	1
II. SOIL ASSESSMENT	2
Field Sampling and Laboratory Protocol	2
Confirmation Soil Sampling and Analytical Results	2
III. SUMMARY OF FINDINGS	4

FIGURES

FIGURE 1	Site Location Map
FIGURE 2	Site Details Map – Soil Boring Locations
FIGURE 3	Soil Boring Legend and Notes
FIGURE 4	Logs and Details for Soil Borings B-1 through B-4
FIGURE 5	Logs and Details for Soil Borings B-5 through B-8
FIGURE 6	Logs and Details for Soil Borings B-9 through B-12
FIGURE 7	Logs and Details for Soil Borings B-13 through B-15

TABLES

TABLE I	Summary of Analytical Results – Confirmation Soil Samples
TABLE II	95% Upper Confidence Limit

APPENDICES

APPENDIX A	Laboratory Analytical Reports
APPENDIX B	Daily Drilling Sheets

EXECUTIVE SUMMARY

The ExxonMobil Pipeline Company Crossroads to Seminole crude oil release site (here after referred to as "Site") is located approximately fifteen miles northeast of Lovington, New Mexico. The site is specifically located in the NW/4 of the SW/4, Section 33, Township 14S, Range 38E, Lea County, New Mexico on property owned by Mr. Darr Angell (FIGURE 1).

BNC understands that a crude oil release originally estimated as seventy-five barrels with no oil recovered was discovered at the Site on March 9, 1995. On November 27, 1995 a Plan of Intent of Remediation was provided to the New Mexico Oil Conservation Division (NMOCD), Hobbs, New Mexico office and a copy sent to the landowner.

In August 1995, R.E. Environmental Services, Inc. (RE) removed soils from the remedial excavation six feet below ground surface (bgs) in a surface area measuring 275 feet by 75 feet. Eight confirmation samples collected from the remedial excavation were analyzed with a field instrument for Total Petroleum Hydrocarbon (TPH) concentrations. The sampled soils exhibited TPH concentrations ranging from 430 parts per million (ppm) to 8,080 ppm, with an average concentration of 3,011 ppm.

The excavated soils were apparently spread out along the remedial excavation and pipeline right-of-way (ROW) in an area measuring 60 feet by 1,350 feet. Twenty-four samples of excavated soils were analyzed for TPH concentrations. Soil samples exhibited TPH concentrations ranging from 1,260 ppm to 4,790 ppm, with an average concentration of 3,604 ppm.

At the request of ExxonMobil Pipeline Company, BNC Environmental Services, Inc. (BNC) was contracted to further investigate the area of the remedial excavation and mixed soils along the ROW. On August 19, 2003 Mr. Tom Larson and Mr. Robbie Walker with BNC conducted a site visit for the purpose of staking out proposed boring locations around the site.

On October 3, 2003 Mr. Aaron Hale of BNC met with personnel from White Drilling Company, Inc. from Clyde, Texas at the site for the purpose of advancing fifteen borings. Samples were collected continuously during the drilling operations (FIGURE 2). The samples were assessed for the presence of hydrocarbons using visual and olfactory screening. A portion of each sample was further evaluated using a Photo-ionization detector (PID). Selected samples were collected for laboratory analyses at SPL Laboratories in Houston, Texas for the presence of TPH using EPA Method SW8015B (modified). Additionally, six selected samples were analyzed for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) using EPA Method SW8021B. Laboratory results are presented in TABLE I. Certified copies of laboratory reports and chain-of-custody documentation are presented in APPENDIX A. Soil Borings Legends and Notes are presented in FIGURE 3, Soil Boring Logs and Details are presented in FIGURES 4 through 7. Daily Drilling Sheets are presented in APPENDIX B.

Analytical results demonstrate crude oil-affected soils above NMOCD clean up goals have been delineated both horizontally and vertically at this site. Of the 15 borings drilled as part of this investigation, one location exhibited soil concentrations above

NMOCD regulatory limits. Boring SB-4 samples at 2-4' and 5-7' had TPH concentrations of 1,500 mg/Kg and 1,000.85 mg/Kg, respectively, that were above the 1,000 mg/Kg clean up goal. Soil samples collected from the remaining 14 soil borings did not exhibit hydrocarbon concentrations above regulatory levels. Comparison of site analytical data from 1995 to 2003 demonstrates that TPH concentrations have decreased significantly over time.

SECTION I

REGULATORY FRAMEWORK AND SITE CLASSIFICATION

The NMOCD has regulatory jurisdiction over oil and gas production operations, including crude oil pipeline spills and associated closure activities in the State of New Mexico. This project is being conducted under the regulatory guidance of the NMOCD, which requires that soil affected by a crude oil spill be remediated in such a manner that the potential for future effects to groundwater or the environment are minimized. The NMOCD cleanup levels are determined on a site-by-site basis and are based on ranking criteria, which is outlined in the NMOCD "Guidelines for Remediation of Spills, Leaks, and Releases", dated August 13, 1993. These ranking criteria guidelines are based on site characteristics consisting of depth to groundwater, wellhead protection (useable water sources), and distance to surface water.

In general, the surface of the subject site and adjacent properties consists of short native range grasses with broken caliche fragments spread across a flat topographic plain (a.k.a. the Llano Estacado, or "staked plains"). Adjacent land use in the immediate area surrounding the site is a combination of rangeland and oil leases. Surface water and wellhead protection areas are greater than 1,000 feet from the release site. Windmills were observed in the vicinity at the approximate locations indicated on the topographic map.

The table below illustrates the ranking criteria used by the NMOCD and associated site specific characteristics indicated for this pipeline release site.

Criteria	Site Characteristics	Ranking Score
Depth to Ground Water	50-99 feet	10
Wellhead Protection Area	>1,000 feet	0
Distance to Surface Water	>1,000 feet	0
	Total Ranking Score	10

Evaluation of the New Mexico Water Resources Atlas, New Mexico State Engineers Office, Framework to a State Water Plan (December 2002) was utilized to assess the depth-to-groundwater at the site. Based on an approximate surface elevation of 3,775 feet (msl) and the published elevation of the underlying Ogallala Aquifer (plate 10) of 3,700 feet, the depth-to-groundwater at the site is calculated at 75 feet below the ground surface. Consequently, interpreted site conditions and the NMOCD ranking criteria (score 10) indicate that maximum soil concentrations of 1,000 ppm TPH, 10 ppm Benzene and 50 ppm total BTEX are appropriate as guidelines for soil assessment and remediation purposes for the Site. At this time, the locations of any wellhead protection areas within 1,000 feet on the site have not been identified.

Field Sampling and Laboratory Protocol

Soil samples were obtained by personnel utilizing appropriate sampling tools and wearing clean, disposable gloves. The sampling equipment was cleaned with Alconox detergent and rinsed with distilled water between sample locations. Each sample selected for laboratory analysis was placed in a new sterile glass container equipped with a teflon-lined lid furnished by the analytical laboratory. The containers were filled to capacity with soil limiting the amount of head-space present. Each container was labeled, placed on ice in an insulated cooler, and chilled to a temperature of approximately 40°F (4°C). The cooler was sealed for shipment to the laboratory. Proper chain of custody documentation accompanied the samples to the laboratory. Soil samples obtained from the borings were submitted to SPL Laboratories in Houston, Texas for analysis

The laboratory was responsible for proper analytical QA/QC procedures. These procedures are generally transmitted with the laboratory reports or are on file at the laboratory. Soil samples obtained from the borings were analyzed for TPH by EPA Modified Method 8015B (Diesel Range Organics and Gas Range Organics) and selected samples for BTEX by EPA Method 8021B. Soil samples were analyzed within 14 days after their collection.

Confirmation Soil Sampling and Analytical Results

On October 3, 2003 15 soil borings were advanced to depths ranging from five feet below ground surface (bgs) in the soil stockpile areas to 10 to 25 feet bgs in the former remedial excavation (FIGURE 2). The exact location of the former excavation was not visible at the surface. The landowner and EMPCo records disagree with each other as to the location of the former remedial excavation. Borings to a depth of 25' bgs were planned in each location to both identify formerly disturbed soil consistent with an excavation and to vertically delineate any possible hydrocarbon impacts below the former remedial excavation. Field observations determined that the landowner was accurate with his assessment for the location of the remedial excavation.

Continuous samples were collected using a 24-inch, stainless steel, split spoon sampler which was hydraulically advanced ahead of the borehole to obtain undisturbed samples. The samples were collected and analyzed in the field using visual and olfactory screening. Additionally the samples were analyzed using a Photo-ionization detector (PID) to test for the presence of hydrocarbons in the soil. Select soil samples were submitted for laboratory analyses for TPH with six of these samples additionally analyzed for BTEX. Samples selected for laboratory analyses were based on elevated PID readings and/or visual and olfactory observations. Laboratory results indicated that all the samples had concentrations of analytes below the NMOCD recommended remediation levels with the exception of sample SB-4 (2-4'), and SB-4 (5-7'). The TPH concentrations in the DRO range in these two samples were 1,500 mg/Kg and 1,000 mg/Kg respectively. Groundwater was not encountered in any of the borings at this Site.

The extent of hydrocarbon impacts were defined both vertically and horizontally. All other samples exhibited TPH and BTEX soil concentrations either below detection limits or below NMOCD regulatory limits. Further statistical analysis determined the 95% upper confidence limit to be 417.37 mg/Kg for Total TPH (TABLE II). Laboratory results

are presented in TABLE I, certified copies of laboratory reports and chain-of-custody documentation is presented in APPENDIX A. Soil borings legends and Notes are presented in FIGURE 3. Logs and Details of the Soil Borings are presented in FIGURES 4 through 7.

SECTION III

SUMMARY OF FINDINGS

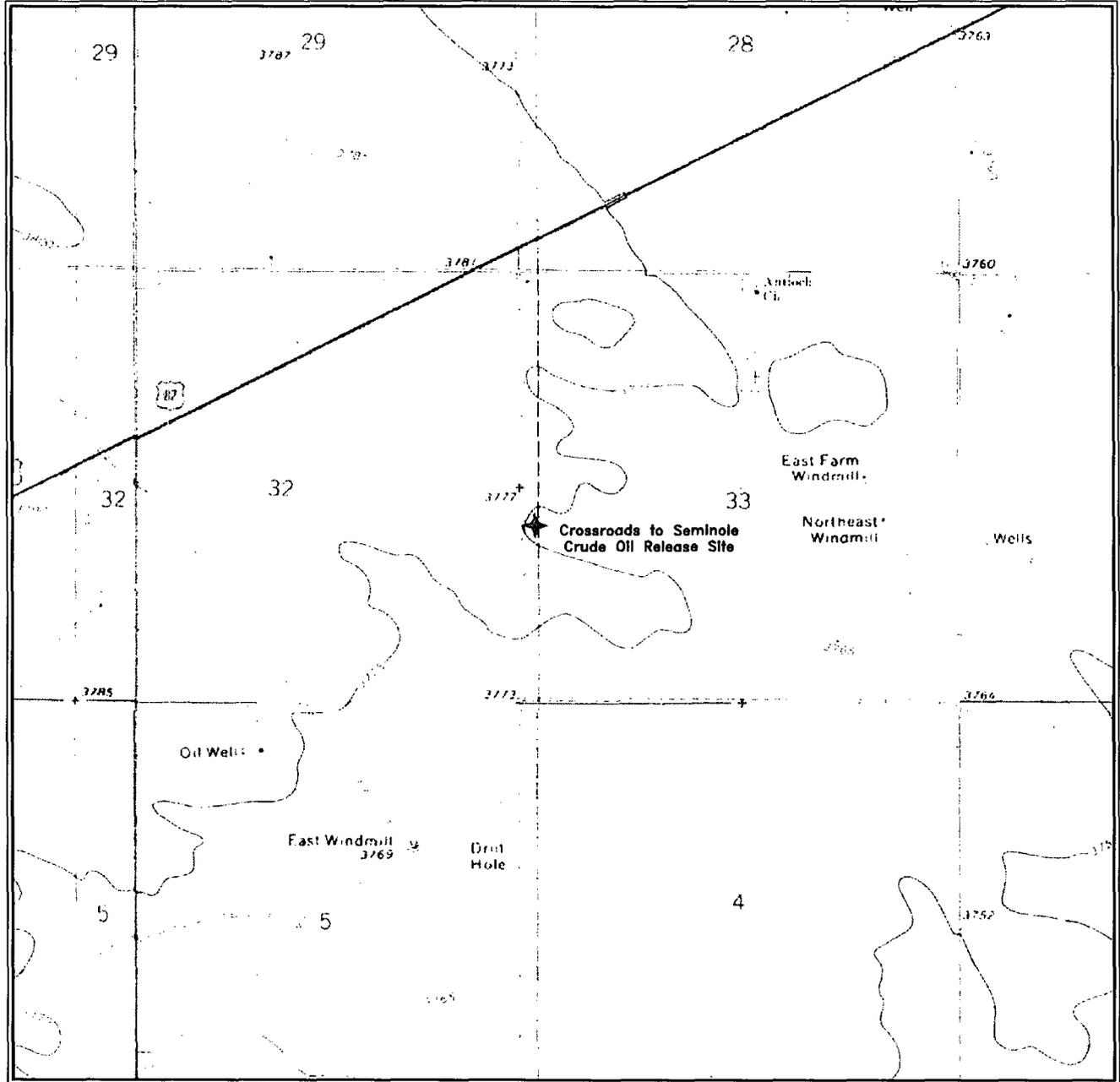
Based on soil assessment activities performed to date, BNC presents the following summary of findings.

- A crude oil release was discovered at Mobil Pipe Line Company's Crossroads to Seminole pipeline on March 9, 1995. The leak source was identified and the pipeline was repaired. RE removed soils from a remedial excavation to a depth of six feet bgs in a surface area measuring 275 feet by 75 feet. Eight confirmation samples collected from the remedial excavation were analyzed with a field instrument for TPH concentrations. The sampled soils exhibited TPH concentrations ranging from 470 ppm to 8,080 ppm, with an average concentration of 3,011 ppm.
- ExxonMobil Pipeline Company contracted BNC to advance 15 soil borings to delineate any hydrocarbon impacted soils at the site in October 2003. The boreholes ranged in depth from five feet bgs in the shallow mixing area to 10 to 25 feet bgs in the former remedial excavation area. Samples collected from the October 2003 soil boring activities were examined in the field using visual and olfactory screening. Additionally the samples were screened using an PID. Selected samples were collected for laboratory analyses for TPH and six samples were collected for laboratory BTEX analyses.
- Two soil samples (one soil boring location) were above NMOCD soil assessment and remediation levels for TPH. Soil samples collected from the remaining 14 soil borings did not exhibit hydrocarbon concentrations above regulatory levels. Further statistical calculations determined the 95 percent Upper Confidence Limit for Total TPH to be 417.37 mg/Kg.
- The maximum TPH soil concentration during backfilling activities in 1995 was 4,790 mg/Kg. The maximum TPH soil concentration encountered during the October 2003 soil boring investigation was 1,500 mg/Kg.
- Comparison of site soil analytical data from 1995 to 2003 demonstrates that TPH concentrations have decreased significantly over time.
- Based on the analysis of the soil samples obtained in October 2003, the vertical and horizontal extent of hydrocarbon-affected soils have been delineated to regulatory levels.

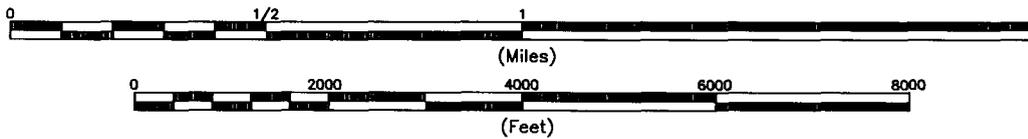
PRAIRIEVIEW SOUTHEAST QUADRANGLE
TEXAS

LAT=33° 03' 38.2" N
LONG=103° 06' 35.5" W

PHOTOREVISED 1970



SCALE 1:24000



1194 SLR 120803

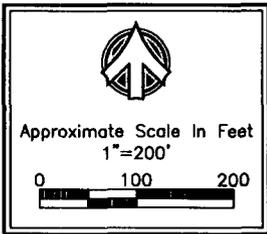


SITE LOCATION MAP

EXXONMOBIL PIPELINE COMPANY
CRUDE OIL RELEASE LEA COUNTY, NEW MEXICO

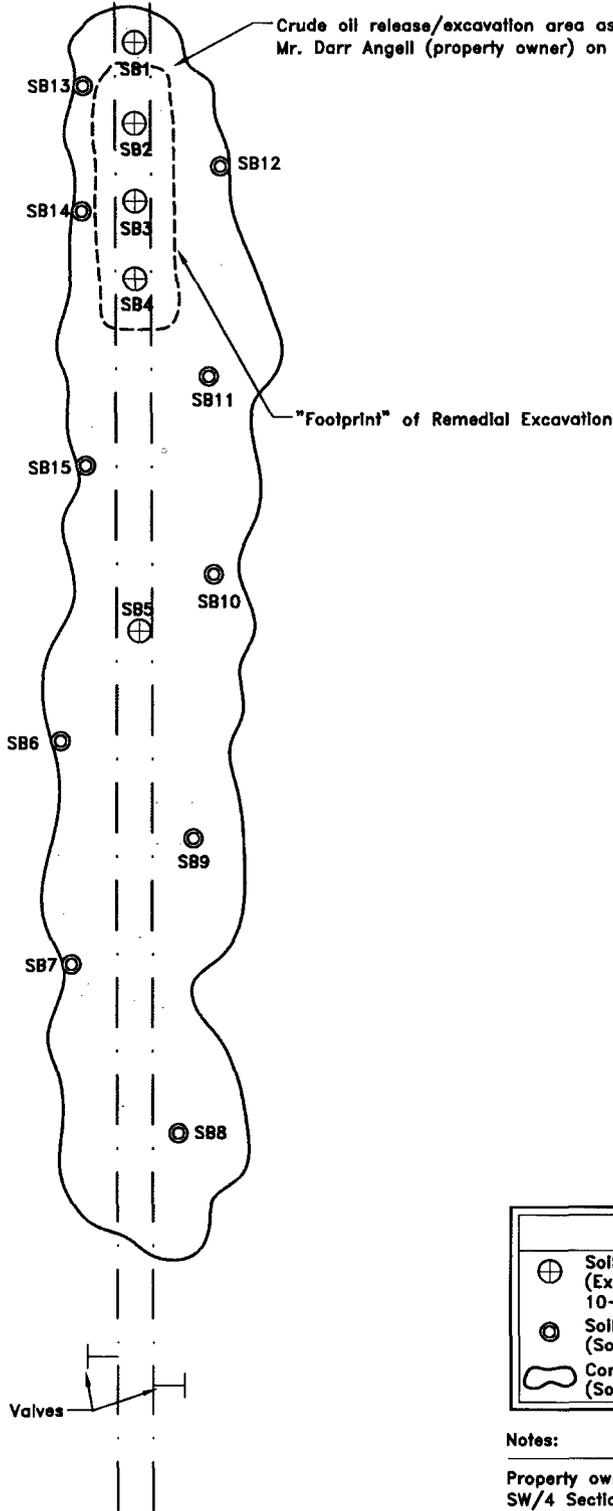
JOB No. 1194

FIGURE 1



Mobil Pipe Line Company/Crossroads to Seminole Pipelines

Crude oil release/excavation area as reported by Mr. Darr Angell (property owner) on August 19, 2003.



LEGEND	
⊕	Soil Boring Location (Excavation Investigation; 10-25' borings)
⊙	Soil Boring Location (Soil Mixing Area; 0-5' borings)
⬭	Construction-Affected Area (Soil Mixing Area)

Notes:
Property owned by Mr. Darr Angell in SW/4 Section 33, T-14-S, R-38-E.

1194 SLR 120403



SITE DETAILS – SOIL BORING LOCATIONS

EXXONMOBIL PIPELINE COMPANY
CRUDE OIL RELEASE LEA COUNTY, NEW MEXICO

JOB No. 1194

FIGURE 2

SOIL TYPE



Silty Sand: fine to very fine grained, moderate to well consolidation (Caliche/Limestone); Very Pale Orange (10YR 8/2)



Sand/Silty Sand/Caliche Nodules: (Backfill) does not appear native, very loose, keeps sluffing



Silty Sand: fine to very fine grained, 10% caliche nodules; Moderate Brown (5YR 4/4)



Indicates sample interval. Sample was obtained by rock core tool.



Indicates sample interval. Sample was obtained by shovel.



Indicates sample interval. Sample was obtained by split spoon.



Indicates sample selected for laboratory analysis.

- B Benzene Concentration (mg/Kg)
- BTEX Benzene, Toluene, Ethylbenzene and Xylenes Concentration (mg/Kg)
- TPH Total Petroleum Hydrocarbons Concentration (mg/Kg) (GRO/DRO)

- PID Head-space readings in ppm obtained with a photo-ionization detector.

NOTES

1. The soil borings were drilled on October 3, 2003, using an air rotary drill rig.
2. The lines between soil types indicated on the logs represent approximate boundaries. Actual transitions may be gradual.
3. The depths indicated are referenced from the ground surface.
4. Soil borings were grouted with a cement and bentonite mixture.

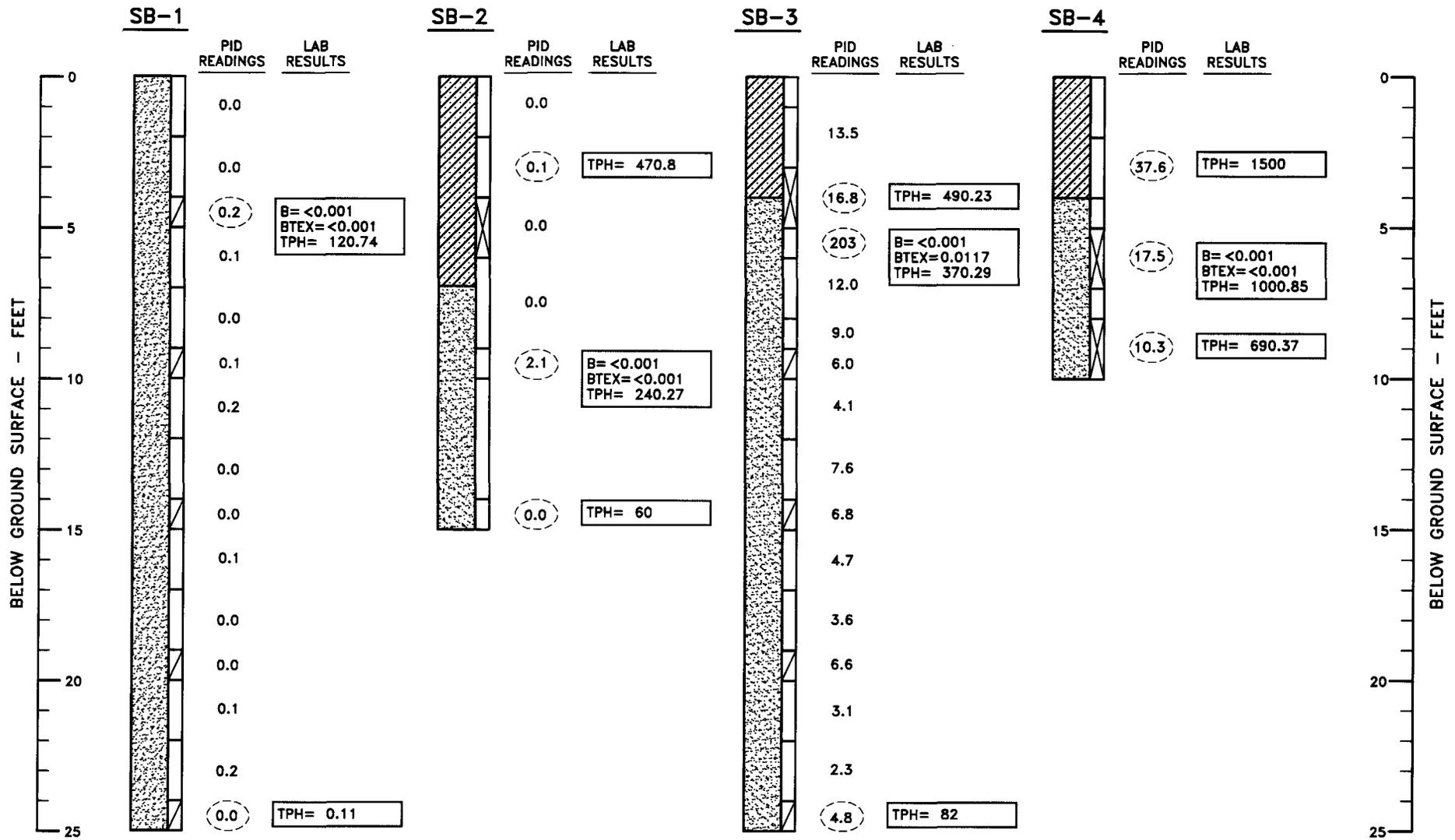
1194 boring SUR 120403



LEGEND AND NOTES
EXXONMOBIL PIPELINE COMPANY
CROSSROADS TO SEMINOLE LEA COUNTY, NEW MEXICO

JOB No.
1194
FIGURE
3

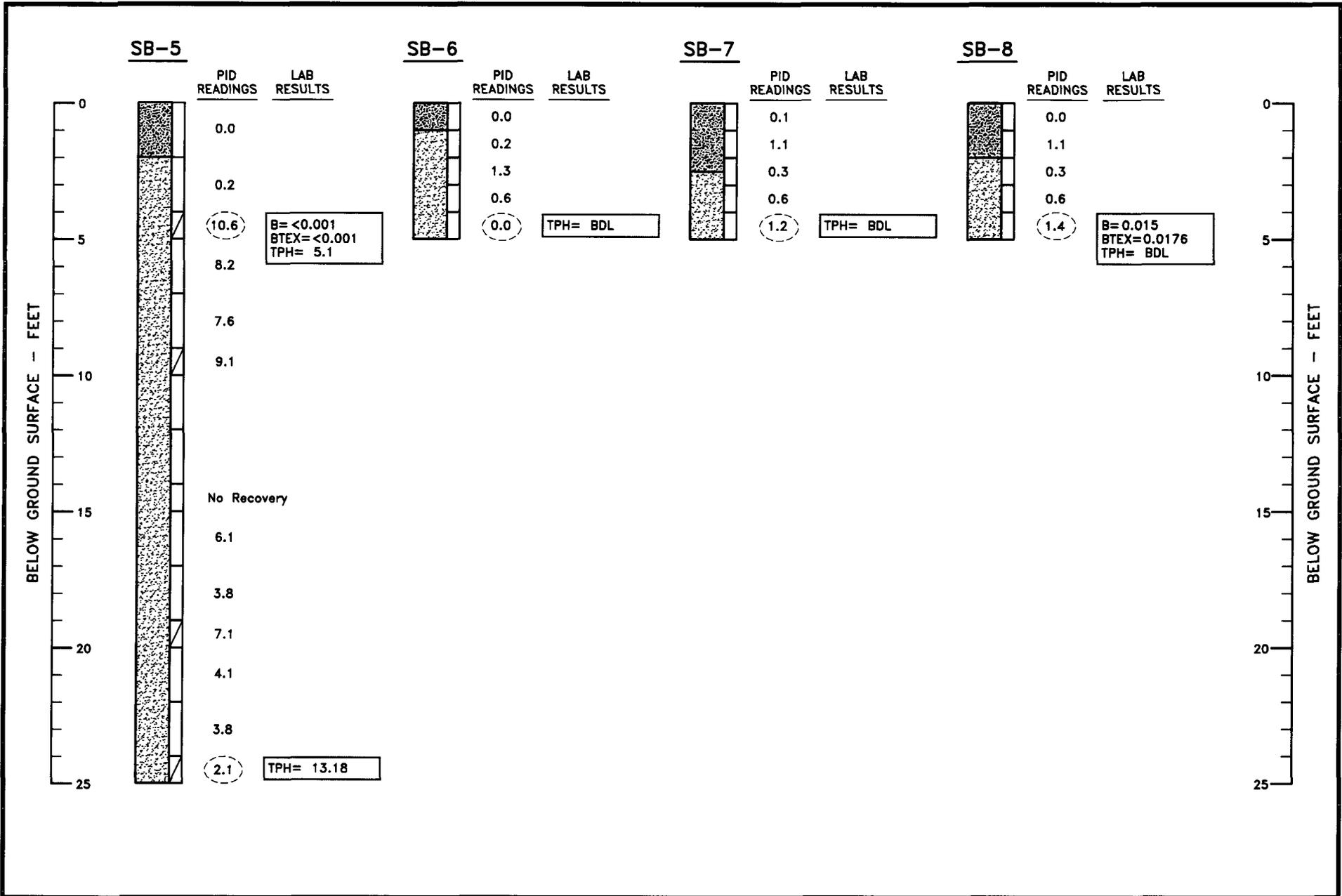
1194 SB1-SB4 SLR 111803



LOGS AND DETAILS FOR SOIL BORINGS B-1 THROUGH B-4
 EXXONMOBIL PIPELINE COMPANY
 CROSSROADS TO SEMINOLE LEA COUNTY, NEW MEXICO

JOB No.
 1194
 FIGURE
 4

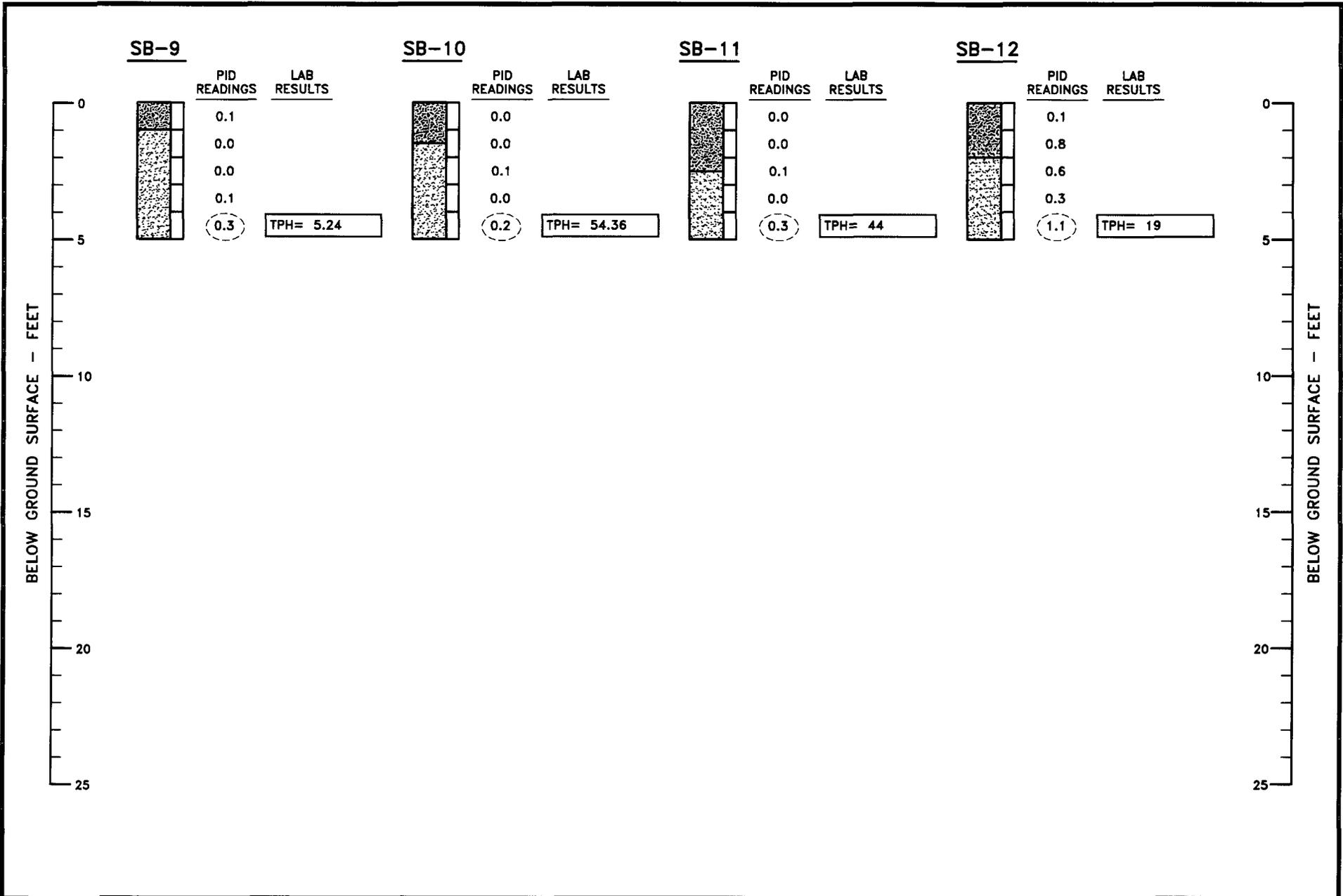
1194 SB5-SB8 SLR 111703



LOGS AND DETAILS FOR SOIL BORINGS B-5 THROUGH B-8
 EXXONMOBIL PIPELINE COMPANY
 CROSSROADS TO SEMINOLE LEA COUNTY, NEW MEXICO

JOB No. 1194
 FIGURE 5

1194 SB9-SB12 SLR 111803



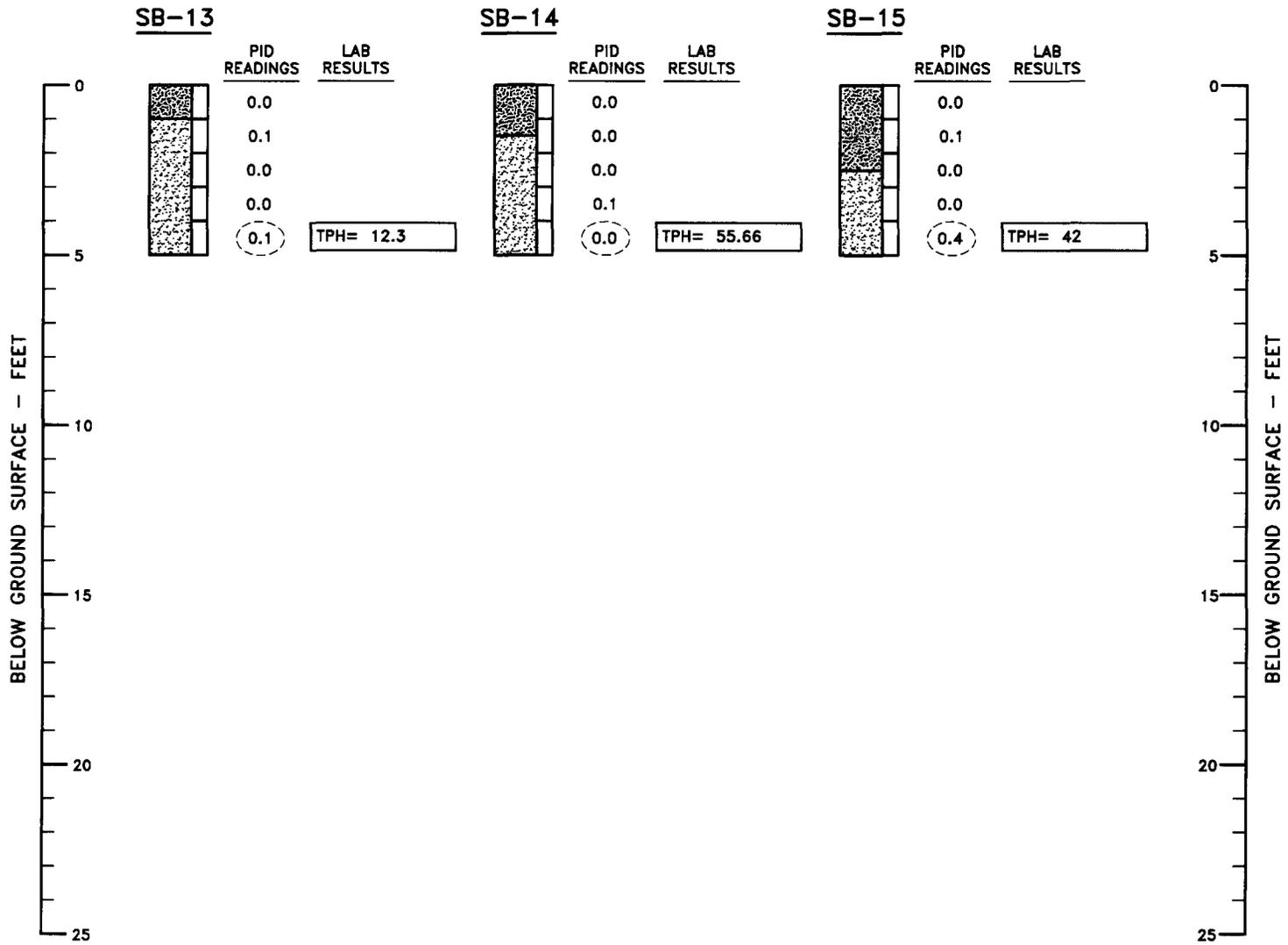
LOGS AND DETAILS FOR SOIL BORINGS B-9 THROUGH B-12

EXXONMOBIL PIPELINE COMPANY
CROSSROADS TO SEMINOLE LEA COUNTY, NEW MEXICO

JOB No.
1194

FIGURE
6

1194 SB13-SB15 SLR 111803



LOGS AND DETAILS FOR SOIL BORINGS B-13 THROUGH B-15

EXXONMOBIL PIPELINE COMPANY
CROSSROADS TO SEMINOLE LEA COUNTY, NEW MEXICO

JOB No.
1194
FIGURE
7

TABLE I

SUMMARY OF SOIL ANALYTICAL DATA – BTEX/TPH
 EXXONMOBIL PIPELINE COMPANY
 CROSSROADS TO SEMINOLE
 LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	DEPTH (feet)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	TPH (8015 Modified)		
								TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	TPH (GRO/DRO) (mg/Kg)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Total Ranking Score =10)										
			10 mg/Kg	---	---	---	50.0 mg/Kg	---	---	1,000 mg/Kg
Excavation Confirmation Samples										
SB - 1 (4 - 5)	10/3/2003	4 - 5	<0.001	<0.001	<0.001	<0.001	<0.001	120	0.74	120.74
SB - 1 (24 - 25)	10/3/2003	24 - 25	---	---	---	---	---	<5	0.11	0.11
SB - 2 (4 - 6)	10/3/2003	4 - 6	---	---	---	---	---	470	0.8	470.8
SB - 2 (9 - 10)	10/3/2003	9 - 10	<0.001	<0.001	<0.001	<0.001	<0.001	240	0.27	240.27
SB - 2 (14 - 15)	10/3/2003	14 - 15	---	---	---	---	---	60	<0.1	60
SB - 3 (3 - 5)	10/3/2003	3 - 5	---	---	---	---	---	490	0.23	490.23
SB - 3 (5 - 6)	10/3/2003	5 - 6	<0.001	<0.001	0.0029	0.0088	0.0117	370	0.29	370.29
SB - 3 (24 - 25)	10/3/2003	24 - 25	---	---	---	---	---	82	<0.1	82
SB - 4 (2 - 4)	10/3/2003	2 - 4	---	---	---	---	---	1,500	<0.1	1,500
SB - 4 (5 - 7)	10/3/2003	5 - 7	<0.001	<0.001	<0.001	<0.001	<0.001	1,000	0.85	1,000.85
SB - 4 (8 - 10)	10/3/2003	8 - 10	---	---	---	---	---	690	0.37	690.37
SB - 5 (4 - 5)	10/3/2003	4 - 5	<0.001	<0.001	<0.001	<0.001	<0.001	5.1	<0.1	5.1
SB - 5 (24 - 25)	10/3/2003	24 - 25	---	---	---	---	---	13	0.18	13.18
SB - 6 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	<5	<0.1	BDL
SB - 7 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	<5	<0.1	BDL
SB - 8 (4 - 5)	10/3/2003	4 - 5	0.015	<0.001	<0.001	0.0026	0.0176	<5	<0.1	BDL
SB - 9 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	5.5	0.19	5.24
SB - 10 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	54	0.36	54.36
SB - 11 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	44	<0.1	44
SB - 12 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	19	<0.1	19
SB - 13 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	8.6	3.7	12.3
SB - 14 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	55	0.66	55.66
SB - 15 (4 - 5)	10/3/2003	4 - 5	---	---	---	---	---	42	<0.1	42

Notes:

BTEX analysis by EPA Method 8021.

TPH analysis by EPA Method 8015 Modified.

BDL - Below Detection Limits.

TABLE II

95% UPPER CONFIDENCE LIMIT
 EXXONMOBIL PIPELINE COMPANY
 CROSSROADS TO SEMINOLE
 LEA COUNTY, NEW MEXICO

Sample ID	Date Collected	Sample Depth (Feet bgs)	Total TPH (mg/Kg)
SB - 1	10/3/2003	4 - 5	120.74
SB - 1	10/3/2003	24 - 25	0.11
SB - 2	10/3/2003	4 - 6	470.8
SB - 2	10/3/2003	9 - 10	240.27
SB - 2	10/3/2003	14 - 15	60
SB - 3	10/3/2003	3 - 5	490.23
SB - 3	10/3/2003	5 - 6	370.29
SB - 3	10/3/2003	24 - 25	82
SB - 4	10/3/2003	2 - 4	1,500
SB - 4	10/3/2003	5 - 7	1,000.85
SB - 4	10/3/2003	8 - 10	690.37
SB - 5	10/3/2003	4 - 5	5.1
SB - 5	10/3/2003	24 - 25	13.18
SB - 9	10/3/2003	4 - 5	5.24
SB - 10	10/3/2003	4 - 5	54.36
SB - 11	10/3/2003	4 - 5	44
SB - 12	10/3/2003	4 - 5	19
SB - 13	10/3/2003	4 - 5	12.30
SB - 14	10/3/2003	4 - 5	55.66
SB - 15	10/3/2003	4 - 5	42
95% UCL			417.37

Notes:

Analysis by method SW 8015B.

Sample locations shown on attached site map.

Media Type: Soil

Maximum and Minimum Detection Concentration (mg/kg): 208, 18.6.

Description of Statistical Method Used: 95% Upper Confidence Limit (UCL). UCL = mean + t(std deviation/ $\sqrt{\text{number samples}}$)

Statistical Parameters: number of sample points = 20; t = 1.72; Mean = 263.83; Std. deviation = 399.24; **95% UCL = 417.37**



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Case Narrative for:
Exxon Mobil Pipelins Co.

Certificate of Analysis Number:
03100264

<p>Report To:</p> <p>BNC Environmental Services Aaron Hale 2135 S. Loop 250 West</p> <p>Midland TX 79703- ph fax:</p>	<p>Project Name: Crossroads to Seminole 1194</p> <p>Site: Lea County, NM</p> <p>Site Address:</p> <p>PO Number:</p> <p>State: New Mexico</p> <p>State Cert. No.:</p> <p>Date Reported: 10/23/03</p>
--	--

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Sonia West
 Senior Project Manager

03100264 Page 1
 10/23/03

Date



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Exxon Mobil Pipelins Co.

Certificate of Analysis Number:

03100264

Report To: BNC Environmental Services
 Aaron Hale
 2135 S. Loop 250 West

Project Name: Crossroads to Seminole 1194

Site: Lea County, NM

Site Address:

Midland

TX

79703-

ph

fax:

PO Number:

State: New Mexico

State Cert. No.:

Date Reported: 10/23/03

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
SB-1 (4-5)	03100264-01	Soil	10/3/03 9:20:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-1 (24-25)	03100264-02	Soil	10/3/03 9:45:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-2 (4-6)	03100264-03	Soil	10/3/03 10:20:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-2 (9-10)	03100264-04	Soil	10/3/03 10:30:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-2 (14-15)	03100264-05	Soil	10/3/03 10:35:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-3 (3-5)	03100264-07	Soil	10/3/03 11:10:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-3 (5-6)	03100264-08	Soil	10/3/03 11:20:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-3 (24-25)	03100264-09	Soil	10/3/03 11:45:00 AM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-4 (2-4)	03100264-10	Soil	10/3/03 12:00:00 PM	10/8/03 9:30:00 AM	2017	<input type="checkbox"/>
SB-4 (5-7)	03100264-11	Soil	10/3/03 2:00:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-4 (8-10)	03100264-12	Soil	10/3/03 2:05:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-5 (4-5)	03100264-13	Soil	10/3/03 2:35:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-5 (24-25)	03100264-14	Soil	10/3/03 3:00:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-6 (4-5)	03100264-15	Soil	10/3/03 3:30:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-7 (4-5)	03100264-16	Soil	10/3/03 3:45:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-8 (4-5)	03100264-17	Soil	10/3/03 3:55:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-9 (4-5)	03100264-18	Soil	10/3/03 4:05:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-10 (4-5)	03100264-19	Soil	10/3/03 4:15:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-11 (4-5)	03100264-20	Soil	10/3/03 4:25:00 PM	10/8/03 9:30:00 AM	2018	<input type="checkbox"/>
SB-12 (4-5)	03100264-21	Soil	10/3/03 4:45:00 PM	10/8/03 9:30:00 AM	2019	<input type="checkbox"/>
SB-13 (4-5)	03100264-22	Soil	10/3/03 4:50:00 PM	10/8/03 9:30:00 AM	2019	<input type="checkbox"/>
SB-14 (4-5)	03100264-23	Soil	10/3/03 5:00:00 PM	10/8/03 9:30:00 AM	2019	<input type="checkbox"/>
SB-15 (4-5)	03100264-24	Soil	10/3/03 4:30:00 PM	10/8/03 9:30:00 AM	2019	<input type="checkbox"/>

Sonia West

10/23/03

Sonia West
 Senior Project Manager

Date

Joel Grice
 Laboratory Director

Ted Yen
 Quality Assurance Officer



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-1 (4-5) Collected: 10/03/2003 9:20 SPL Sample ID: 03100264-01

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	120	25	5		10/22/03 13:16	AR	1920758
Surr: n-Pentacosane	101	% 20-154	5		10/22/03 13:16	AR	1920758

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.74	0.1		1	10/16/03 9:40	FB	1910930
Surr: 1,4-Difluorobenzene	102	% 63-122		1	10/16/03 9:40	FB	1910930
Surr: 4-Bromofluorobenzene	109	% 39-150		1	10/16/03 9:40	FB	1910930

PURGEABLE AROMATICS			MCL	SW8021B	Units: mg/Kg		
Benzene	ND	0.001		1	10/11/03 2:49	FB	1903850
Ethylbenzene	ND	0.001		1	10/11/03 2:49	FB	1903850
Toluene	ND	0.001		1	10/11/03 2:49	FB	1903850
Xylenes, Total	ND	0.001		1	10/11/03 2:49	FB	1903850
Surr: 1,4-Difluorobenzene	90.5	% 77-126		1	10/11/03 2:49	FB	1903850
Surr: 4-Bromofluorobenzene	99.7	% 66-145		1	10/11/03 2:49	FB	1903850

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-1 (24-25) Collected: 10/03/2003 9:45 SPL Sample ID: 03100264-02

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	ND	5	1		10/21/03 4:50	AR	1920748
Surr: n-Pentacosane	87.8	% 20-154	1		10/21/03 4:50	AR	1920748

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.11	0.1	1		10/16/03 10:07	FB	1910932
Surr: 1,4-Difluorobenzene	94.0	% 63-122	1		10/16/03 10:07	FB	1910932
Surr: 4-Bromofluorobenzene	104	% 39-150	1		10/16/03 10:07	FB	1910932

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-2 (4-6) Collected: 10/03/2003 10:20 SPL Sample ID: 03100264-03

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	470	25	5		10/22/03 13:55	AR	1920759
Surr: n-Pentacosane	165 MI	% 20-154	5	*	10/22/03 13:55	AR	1920759

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.8	0.1	1		10/16/03 10:34	FB	1910934
Surr: 1,4-Difluorobenzene	97.0	% 63-122	1		10/16/03 10:34	FB	1910934
Surr: 4-Bromofluorobenzene	109	% 39-150	1		10/16/03 10:34	FB	1910934

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-2 (9-10) Collected: 10/03/2003 10:30 SPL Sample ID: 03100264-04

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	240	25	5		10/21/03 15:59	AR	1920752
Surr: n-Pentacosane	146	% 20-154	5		10/21/03 15:59	AR	1920752

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.27	0.1	1		10/16/03 6:33	FB	1910928
Surr: 1,4-Difluorobenzene	89.3	% 63-122	1		10/16/03 6:33	FB	1910928
Surr: 4-Bromofluorobenzene	171 MI	% 39-150	1	*	10/16/03 6:33	FB	1910928

PURGEABLE AROMATICS			MCL	SW8021B	Units: mg/Kg		
Benzene	ND	0.001	1		10/11/03 3:16	FB	1903851
Ethylbenzene	ND	0.001	1		10/11/03 3:16	FB	1903851
Toluene	ND	0.001	1		10/11/03 3:16	FB	1903851
Xylenes, Total	0.0013	0.001	1		10/11/03 3:16	FB	1903851
Surr: 1,4-Difluorobenzene	93.8	% 77-126	1		10/11/03 3:16	FB	1903851
Surr: 4-Bromofluorobenzene	120	% 66-145	1		10/11/03 3:16	FB	1903851

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-2 (14-15) Collected: 10/03/2003 10:35 SPL Sample ID: 03100264-05

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	60	5	1		10/22/03 12:37	AR	1920757
Surr: n-Pentacosane	90.6 %	20-154	1		10/22/03 12:37	AR	1920757

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 11:27	FB	1910937
Surr: 1,4-Difluorobenzene	95.0 %	63-122	1		10/16/03 11:27	FB	1910937
Surr: 4-Bromofluorobenzene	114 %	39-150	1		10/16/03 11:27	FB	1910937

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-3 (3-5) Collected: 10/03/2003 11:10 SPL Sample ID: 03100264-07

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	490	25	5		10/21/03 16:38	AR	1920763
Surr: n-Pentacosane	163 MI	% 20-154	5	*	10/21/03 16:38	AR	1920763

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.23	0.1	1		10/16/03 11:54	FB	1910939
Surr: 1,4-Difluorobenzene	101	% 63-122	1		10/16/03 11:54	FB	1910939
Surr: 4-Bromofluorobenzene	106	% 39-150	1		10/16/03 11:54	FB	1910939

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-3 (5-6) Collected: 10/03/2003 11:20 SPL Sample ID: 03100264-08

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	370	25	5		10/21/03 17:17	AR	1920753
Surr: n-Pentacosane	211 MI	% 20-154	5	*	10/21/03 17:17	AR	1920753

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.29	0.1	1		10/16/03 12:21	FB	1910941
Surr: 1,4-Difluorobenzene	99.0	% 63-122	1		10/16/03 12:21	FB	1910941
Surr: 4-Bromofluorobenzene	301 MI	% 39-150	1	*	10/16/03 12:21	FB	1910941

PURGEABLE AROMATICS			MCL	SW8021B	Units: mg/Kg		
Benzene	ND	0.001	1		10/11/03 3:43	FB	1903852
Ethylbenzene	0.0029	0.001	1		10/11/03 3:43	FB	1903852
Toluene	ND	0.001	1		10/11/03 3:43	FB	1903852
Xylenes, Total	0.0088	0.001	1		10/11/03 3:43	FB	1903852
Surr: 1,4-Difluorobenzene	103	% 77-126	1		10/11/03 3:43	FB	1903852
Surr: 4-Bromofluorobenzene	242 MI	% 66-145	1	*	10/11/03 3:43	FB	1903852

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-3 (24-25) Collected: 10/03/2003 11:45 SPL Sample ID: 03100264-09

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	82	10	2		10/22/03 13:16	AR	1920769
Surr: n-Pentacosane	102	% 20-154	2		10/22/03 13:16	AR	1920769

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1		1	10/16/03 12:47	FB	1910943
Surr: 1,4-Difluorobenzene	93.3	% 63-122		1	10/16/03 12:47	FB	1910943
Surr: 4-Bromofluorobenzene	102	% 39-150		1	10/16/03 12:47	FB	1910943

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-4 (2-4) Collected: 10/03/2003 12:00 SPL Sample ID: 03100264-10

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	1500	50	10		10/22/03 11:58	AR	1920755
Surr: n-Pentacosane	268 MI	% 20-154	10	*	10/22/03 11:58	AR	1920755

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1		1	10/16/03 5:56	FB	1911387
Surr: 1,4-Difluorobenzene	95.3	% 63-122		1	10/16/03 5:56	FB	1911387
Surr: 4-Bromofluorobenzene	88.7	% 39-150		1	10/16/03 5:56	FB	1911387

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-4 (5-7) Collected: 10/03/2003 14:00 SPL Sample ID: 03100264-11

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	1000	50	10		10/22/03 14:34	AR	1920760
Surr: n-Pentacosane	207 MI	% 20-154	10	*	10/22/03 14:34	AR	1920760

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.85	0.1		1	10/16/03 6:26	FB	1911388
Surr: 1,4-Difluorobenzene	90.3	% 63-122		1	10/16/03 6:26	FB	1911388
Surr: 4-Bromofluorobenzene	87.0	% 39-150		1	10/16/03 6:26	FB	1911388

PURGEABLE AROMATICS			MCL	SW8021B	Units: mg/Kg		
Benzene	ND	0.001		1	10/11/03 4:36	FB	1903854
Ethylbenzene	ND	0.001		1	10/11/03 4:36	FB	1903854
Toluene	ND	0.001		1	10/11/03 4:36	FB	1903854
Xylenes, Total	ND	0.001		1	10/11/03 4:36	FB	1903854
Surr: 1,4-Difluorobenzene	106	% 77-126		1	10/11/03 4:36	FB	1903854
Surr: 4-Bromofluorobenzene	90.3	% 66-145		1	10/11/03 4:36	FB	1903854

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-4 (8-10) Collected: 10/03/2003 14:05 SPL Sample ID: 03100264-12

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	690	50	10		10/22/03 13:55	AR	1920770
Surr: n-Pentacosane	213 MI	% 20-154	10	*	10/22/03 13:55	AR	1920770

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:38	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.37	0.1		1	10/16/03 6:56	FB	1911389
Surr: 1,4-Difluorobenzene	89.0	% 63-122		1	10/16/03 6:56	FB	1911389
Surr: 4-Bromofluorobenzene	101	% 39-150		1	10/16/03 6:56	FB	1911389

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-5 (4-5) Collected: 10/03/2003 14:35 SPL Sample ID: 03100264-13

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	5.1	5	1		10/18/03 13:43	AM	1915966
Surr: n-Pentacosane	91.0	% 20-154	1		10/18/03 13:43	AM	1915966

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 12:26	FB	1911411
Surr: 1,4-Difluorobenzene	88.7	% 63-122	1		10/16/03 12:26	FB	1911411
Surr: 4-Bromofluorobenzene	86.7	% 39-150	1		10/16/03 12:26	FB	1911411

PURGEABLE AROMATICS			MCL	SW8021B	Units: mg/Kg		
Benzene	ND	0.001	1		10/11/03 5:03	FB	1903855
Ethylbenzene	ND	0.001	1		10/11/03 5:03	FB	1903855
Toluene	ND	0.001	1		10/11/03 5:03	FB	1903855
Xylenes, Total	ND	0.001	1		10/11/03 5:03	FB	1903855
Surr: 1,4-Difluorobenzene	96.7	% 77-126	1		10/11/03 5:03	FB	1903855
Surr: 4-Bromofluorobenzene	104	% 66-145	1		10/11/03 5:03	FB	1903855

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-5 (24-25)

Collected: 10/03/2003 15:00 SPL Sample ID: 03100264-14

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	13	5	1		10/18/03 14:21 AM	AM	1915967
Surr: n-Pentacosane	68.0 %	20-154	1		10/18/03 14:21 AM	AM	1915967

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.18	0.1	1		10/16/03 12:56	FB	1911412
Surr: 1,4-Difluorobenzene	88.3 %	63-122	1		10/16/03 12:56	FB	1911412
Surr: 4-Bromofluorobenzene	90.0 %	39-150	1		10/16/03 12:56	FB	1911412

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-6 (4-5) Collected: 10/03/2003 15:30 SPL Sample ID: 03100264-15

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	ND	5	1		10/18/03 15:00 AM		1915968
Surr: n-Pentacosane	90.0 %	20-154	1		10/18/03 15:00 AM		1915968

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 13:26	FB	1911413
Surr: 1,4-Difluorobenzene	90.0 %	63-122	1		10/16/03 13:26	FB	1911413
Surr: 4-Bromofluorobenzene	86.7 %	39-150	1		10/16/03 13:26	FB	1911413

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-7 (4-5) Collected: 10/03/2003 15:45 SPL Sample ID: 03100264-16

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	ND	5	1		10/18/03 15:39	AM	1915969
Surr: n-Pentacosane	86.2	% 20-154	1		10/18/03 15:39	AM	1915969

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 13:55	FB	1911414
Surr: 1,4-Difluorobenzene	92.7	% 63-122	1		10/16/03 13:55	FB	1911414
Surr: 4-Bromofluorobenzene	89.7	% 39-150	1		10/16/03 13:55	FB	1911414

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-8 (4-5) Collected: 10/03/2003 15:55 SPL Sample ID: 03100264-17

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	ND	5	1		10/18/03 16:18	AM	1915970
Surr: n-Pentacosane	89.4	% 20-154	1		10/18/03 16:18	AM	1915970

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 11:56	FB	1911410
Surr: 1,4-Difluorobenzene	89.3	% 63-122	1		10/16/03 11:56	FB	1911410
Surr: 4-Bromofluorobenzene	90.3	% 39-150	1		10/16/03 11:56	FB	1911410

PURGEABLE AROMATICS			MCL	SW8021B	Units: mg/Kg		
Benzene	0.015	0.001	1		10/11/03 5:30	FB	1903856
Ethylbenzene	ND	0.001	1		10/11/03 5:30	FB	1903856
Toluene	ND	0.001	1		10/11/03 5:30	FB	1903856
Xylenes, Total	0.0026	0.001	1		10/11/03 5:30	FB	1903856
Surr: 1,4-Difluorobenzene	101	% 77-126	1		10/11/03 5:30	FB	1903856
Surr: 4-Bromofluorobenzene	114	% 66-145	1		10/11/03 5:30	FB	1903856

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-9 (4-5) Collected: 10/03/2003 16:05 SPL Sample ID: 03100264-18

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	5.5	5	1		10/18/03 16:57 AM		1915971
Surr: n-Pentacosane	87.3	% 20-154	1		10/18/03 16:57 AM		1915971

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.19	0.1	1		10/16/03 14:26	FB	1911415
Surr: 1,4-Difluorobenzene	88.3	% 63-122	1		10/16/03 14:26	FB	1911415
Surr: 4-Bromofluorobenzene	88.0	% 39-150	1		10/16/03 14:26	FB	1911415

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-10 (4-5) Collected: 10/03/2003 16:15 SPL Sample ID: 03100264-19

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	54	5	1		10/18/03 19:32	AM	1915981
Surr: n-Pentacosane	105	% 20-154	1		10/18/03 19:32	AM	1915981

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.36	0.1	1		10/16/03 14:56	FB	1912138
Surr: 1,4-Difluorobenzene	93.3	% 63-122	1		10/16/03 14:56	FB	1912138
Surr: 4-Bromofluorobenzene	93.7	% 39-150	1		10/16/03 14:56	FB	1912138

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-11 (4-5) Collected: 10/03/2003 16:25 SPL Sample ID: 03100264-20

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	44	5	1		10/18/03 20:11	AM	1915982
Surr: n-Pentacosane	75.1	% 20-154	1		10/18/03 20:11	AM	1915982

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 15:26	FB	1912139
Surr: 1,4-Difluorobenzene	94.0	% 63-122	1		10/16/03 15:26	FB	1912139
Surr: 4-Bromofluorobenzene	89.7	% 39-150	1		10/16/03 15:26	FB	1912139

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-12 (4-5) Collected: 10/03/2003 16:45 SPL Sample ID: 03100264-21

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	19	5	1		10/18/03 18:15	AM	1915973
Surr: n-Pentacosane	77.6	% 20-154	1		10/18/03 18:15	AM	1915973

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 16:42	FB	1912141
Surr: 1,4-Difluorobenzene	91.0	% 63-122	1		10/16/03 16:42	FB	1912141
Surr: 4-Bromofluorobenzene	94.3	% 39-150	1		10/16/03 16:42	FB	1912141

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-13 (4-5) Collected: 10/03/2003 16:50 SPL Sample ID: 03100264-22

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	8.6	5	1		10/18/03 18:53	AM	1915974
Surr: n-Pentacosane	105	% 20-154	1		10/18/03 18:53	AM	1915974

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	3.7	0.1	1		10/16/03 17:12	FB	1912142
Surr: 1,4-Difluorobenzene	95.3	% 63-122	1		10/16/03 17:12	FB	1912142
Surr: 4-Bromofluorobenzene	94.0	% 39-150	1		10/16/03 17:12	FB	1912142

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-14 (4-5) Collected: 10/03/2003 17:00 SPL Sample ID: 03100264-23

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	55	5	1		10/18/03 18:15	AM	1915979
Surr: n-Pentacosane	95.7	% 20-154	1		10/18/03 18:15	AM	1915979

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	0.66	0.1	1		10/16/03 18:42	FB	1912145
Surr: 1,4-Difluorobenzene	91.3	% 63-122	1		10/16/03 18:42	FB	1912145
Surr: 4-Bromofluorobenzene	96.0	% 39-150	1		10/16/03 18:42	FB	1912145

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID: SB-15 (4-5) Collected: 10/03/2003 16:30 SPL Sample ID: 03100264-24

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Diesel Range Organics	42	5	1		10/18/03 18:53	AM	1915980
Surr: n-Pentacosane	141	% 20-154	1		10/18/03 18:53	AM	1915980

Prep Method	Prep Date	Prep Initials
SW3550B	10/10/2003 14:45	WLV

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/Kg		
Gasoline Range Organics	ND	0.1	1		10/16/03 19:12	FB	1912146
Surr: 1,4-Difluorobenzene	91.0	% 63-122	1		10/16/03 19:12	FB	1912146
Surr: 4-Bromofluorobenzene	85.0	% 39-150	1		10/16/03 19:12	FB	1912146

Sonia West

Sonia West
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL

Quality Control Documentation



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Exxon Mobil Pipelins Co.
Crossroads to Seminole 1194

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 03100264
Lab Batch ID: 32390

Method Blank

Samples in Analytical Batch:

RunID: HP_V_031021B-1920745 Units: mg/Kg
Analysis Date: 10/21/2003 3:32 Analyst: AR
Preparation Date: 10/10/2003 14:38 Prep By: WLV Method SW3550B

Table with 2 columns: Lab Sample ID, Client Sample ID. Lists sample IDs from 03100264-01A to 03100264-12A.

Table with 3 columns: Analyte, Result, Rep Limit. Shows Diesel Range Organics (ND, 5.0) and Surr: n-Pentacosane (92.8, 20-154).

Laboratory Control Sample (LCS)

RunID: HP_V_031021B-1920747 Units: mg/Kg
Analysis Date: 10/21/2003 4:11 Analyst: AR
Preparation Date: 10/10/2003 14:38 Prep By: WLV Method SW3550B

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Shows Diesel Range Organics with values 83, 74, 90, 65, 150.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03100264-01
RunID: HP_V_031021B-1920767 Units: mg/Kg
Analysis Date: 10/22/2003 11:58 Analyst: AR
Preparation Date: 10/10/2003 14:38 Prep By: WLV Method SW3550B

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Shows Diesel Range Organics with values 120, 83, 230, 130, 83, 200, 89, 16, 50, 21, 175.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Exxon Mobil Pipelins Co.
Crossroads to Seminole 1194

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 03100264
Lab Batch ID: 32392

Method Blank

Samples in Analytical Batch:

RunID: HP_V_031018B-1915964 Units: mg/Kg
Analysis Date: 10/18/2003 12:25 Analyst: AM
Preparation Date: 10/10/2003 14:45 Prep By: WLV Method SW3550B

Table with 2 columns: Lab Sample ID, Client Sample ID. Lists samples 03100264-13A through 03100264-24A and their corresponding client sample IDs.

Table with 3 columns: Analyte, Result, Rep Limit. Shows Diesel Range Organics (ND, 5.0) and Surr: n-Pentacosane (86.2, 20-154).

Laboratory Control Sample (LCS)

RunID: HP_V_031018B-1915965 Units: mg/Kg
Analysis Date: 10/18/2003 13:04 Analyst: AM
Preparation Date: 10/10/2003 14:45 Prep By: WLV Method SW3550B

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Shows Diesel Range Organics with spike 83, result 72, 87% recovery, and limits 65-150.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03100264-22
RunID: HP_V_031018B-1915975 Units: mg/Kg
Analysis Date: 10/18/2003 19:32 Analyst: AM
Preparation Date: 10/10/2003 14:45 Prep By: WLV Method SW3550B

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Shows Diesel Range Organics with sample result 8.6 and various recovery and limit values.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Exxon Mobil Pipelins Co.
Crossroads to Seminole 1194

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 03100264
Lab Batch ID: R95752

Method Blank

Samples in Analytical Batch:

RunID: HP_R_031010A-1903840 Units: ug/Kg
Analysis Date: 10/10/2003 22:21 Analyst: FB

Table with 2 columns: Lab Sample ID, Client Sample ID. Rows include 03100264-01A to 03100264-17A.

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Ethylbenzene, Toluene, Xylenes, Total, and two Surr. entries.

Laboratory Control Sample (LCS)

RunID: HP_R_031010A-1903839 Units: ug/Kg
Analysis Date: 10/10/2003 21:55 Analyst: FB

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Ethylbenzene, Toluene, Xylenes, Total.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03100260-01
RunID: HP_R_031010A-1903841 Units: ug/Kg-dry
Analysis Date: 10/10/2003 22:48 Analyst: FB

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Benzene, Ethylbenzene, Toluene, Xylenes, Total.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Exxon Mobil Pipelins Co.
Crossroads to Seminole 1194

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 03100264
Lab Batch ID: R96041

Method Blank

Samples in Analytical Batch:

RunID: HP_R_031016B-1910923 Units: mg/Kg
Analysis Date: 10/16/2003 5:13 Analyst: FB

Table with 2 columns: Lab Sample ID, Client Sample ID. Lists sample IDs from 03100264-01A to 03100264-09A and their corresponding client sample IDs.

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Gasoline Range Organics, Surr: 1,4-Difluorobenzene, and Surr: 4-Bromofluorobenzene.

Laboratory Control Sample (LCS)

RunID: HP_R_031016B-1910921 Units: mg/Kg
Analysis Date: 10/16/2003 4:46 Analyst: FB

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row for Gasoline Range Organics.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03100264-04
RunID: HP_R_031016B-1910924 Units: mg/Kg
Analysis Date: 10/16/2003 5:39 Analyst: FB

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row for Gasoline Range Organics.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Exxon Mobil Pipelins Co.
Crossroads to Seminole 1194

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 03100264
Lab Batch ID: R96051

Method Blank

Samples in Analytical Batch:

RunID: HP_O_031015B-1911377 Units: mg/Kg
Analysis Date: 10/15/2003 17:55 Analyst: FB

Lab Sample ID Client Sample ID
03100264-10A SB-4 (2-4)
03100264-11A SB-4 (5-7)
03100264-12A SB-4 (8-10)

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Gasoline Range Organics, Surr: 1,4-Difluorobenzene, and Surr: 4-Bromofluorobenzene.

Laboratory Control Sample (LCS)

RunID: HP_O_031015B-1911376 Units: mg/Kg
Analysis Date: 10/15/2003 17:25 Analyst: FB

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row for Gasoline Range Organics.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03100515-01
RunID: HP_O_031015B-1911382 Units: mg/Kg-dry
Analysis Date: 10/16/2003 1:26 Analyst: FB

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row for Gasoline Range Organics.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Exxon Mobil Pipelins Co.
Crossroads to Seminole 1194

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 03100264
Lab Batch ID: R96053

Method Blank

Samples in Analytical Batch:

RunID: HP_O_031016A-1911407 Units: mg/Kg
Analysis Date: 10/16/2003 9:26 Analyst: FB

Table with 2 columns: Lab Sample ID, Client Sample ID. Lists samples 03100264-13A through 03100264-24A with corresponding client IDs SB-5 (4-5) through SB-15 (4-5).

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Gasoline Range Organics (ND, 0.10), Surr: 1,4-Difluorobenzene (90.3, 63-122), and Surr: 4-Bromofluorobenzene (83.7, 39-150).

Laboratory Control Sample (LCS)

RunID: HP_O_031016A-1911406 Units: mg/Kg
Analysis Date: 10/16/2003 8:56 Analyst: FB

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row for Gasoline Range Organics shows 1 spike added, result 0.787, 79% recovery, and limits 70-130.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03100264-17
RunID: HP_O_031016A-1911408 Units: mg/Kg
Analysis Date: 10/16/2003 10:56 Analyst: FB

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row for Gasoline Range Organics shows ND sample result, 0.9 MS spike, 0.835 MS result, 86.9% MS recovery, 0.9 MSD spike, 0.922 MSD result, 96.6% MSD recovery, 9.92 RPD, 50 RPD limit, 26 low limit, 147 high limit.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder: 03100264	Received By: RE
Date and Time Received: 10/8/03 9:30:00 AM	Carrier name: Fedex-Standard Overni
Temperature: 4.5°C	Chilled by: Water Ice

- 1. Shipping container/cooler in good condition? Yes No Not Present
- 2. Custody seals intact on shipping container/cooler? Yes No Not Present
- 3. Custody seals intact on sample bottles? Yes No Not Present
- 4. Chain of custody present? Yes No
- 5. Chain of custody signed when relinquished and receive Yes No
- 6. Chain of custody agrees with sample labels? Yes No
- 7. Samples in proper container/bottle? Yes No
- 8. Sample containers intact? Yes No
- 9. Sufficient sample volume for indicated test? Yes No
- 10. All samples received within holding time? Yes No
- 11. Container/Temp Blank temperature in compliance? Yes No
- 12. Water - VOA vials have zero headspace? Yes No Not Applicable
- 13. Water - pH acceptable upon receipt? Yes No Not Applicable

SPL Representative	<input type="text"/>	Contact Date & Time	<input type="text"/>
Client Name Contacted	<input type="text"/>		
Non Conformance Issues	<input type="text"/>		
Client Instructions	<input type="text"/>		

03100264

ExxonMobil Engineer: Mike Hargrave Phone: 432-686-0086
 Consultant Co. Name: BNC Environmental Contact: Aaron Hale
 Address: 2135 S. Loop 250 West Fax: 432-686-0186
Midland, Tx 79705
 RAS #: _____ Facility/State ID#(TN Only): _____
 AFE#(Terminal Only): _____ Consultant Project #: 1194
 Location: Crossroads to Seminole (City) Lea County (State) Tx
 EE C&M SDT
 0160 ExxonMobil Oil Corp 0944 ExxonMobil Marketing & Ref. Co.
 0614 ExxonMobil Pipeline Co. 0231 Mobil Oil Pipeline Co.
 Purchase Order No.: NA

ANALYSIS REQUEST:
(CHECK APPROPRIATE BOX)

NO. OF CONTAINERS	TPH/GC 8015 GROW	BTEX 8021	MTBE 8021	OXYGENATES (7) 8260	O&G IR 413.1	VOL. 8260	SEMI-VOL. 8270	PNA/PAH 8100	PCB/PEST 8081/8082	TCLP FULL	METALS TOTAL RCRA	PB, TOTAL 200.7	PB, DISSOLVED	REACTIVITY	PURGEABLE HYDROCARBON	TPH/IR 418.1	TOX/TOH	OTHER
1	8015 DRGX	8021	8021	8260	413.2	8260	8270	8100	8082	<input type="checkbox"/>								

SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX			OTHER	PRESERVATIVE
					H ₂ O	SOIL	AIR		
SB-12 (4-5)	10-3	1645		X	X			ICE	
SB-13 (4-5)	10-3	1650		X	X				
SB-14 (4-5)	10-3	1700		X	X				
SB-15 (4-5)	10-3	1630		X	X				

TAT (* - Contact us Prior to Sending Samples)
 24 HR. _____ * 48 HR. _____ *
 72 HR. _____ * 5 BUS. _____ *
 8 BUS. _____ 10 BUS. X
 15 BUS. _____ 30 BUS. _____

QA/QC Level
 STANDARD "A" _____
 ENHANCED "B" _____
 FULL DATA "C" _____
 TRRP DATA "C" _____

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)
 RDF EDD

REMARKS:
 EXXONMOBIL CONTRACT NO. C57160
 Way Bill #: _____ Cooler Temp: 4.5°

CUSTODY RECORD	Relinquished By Sampler: <u>[Signature]</u>	Date: <u>10-7-03</u>	Time: <u>1120</u>	Received By: _____
	Relinquished:	Date: <u>10/8/03</u>	Time: <u>0930</u>	Received By: <u>[Signature]</u>
	Relinquished:	Date: _____	Time: _____	Received By: _____

