BNC Environmental Services, Inc.

SOIL SAMPLING REPORT

SHELL PIPELINE COMPANY, LP

GRIZZEL GATHERING CRUDE OIL RELEASE
EUNICE, NEW MEXICO

BNC Job No. E58

October 7, 2002

Shell Pipeline = 127613
facility ID = fPAC0601957059
Incident = nPAC0601957229
Application = pPAC0601957504

BNC SERVICES
BNC Environmental Services, Inc.
BNC Engineering, LLC

AUSTIN | DALLAS | HOUSTON | MIDLAND

October 7, 2002

Mr. Lamar Stokes
SHELL PIPELINE COMPANY, LP
P. O. Box 3038
Pearland, Texas 77588-3038

SUBJECT: Soil Sampling Report
Grizzell Gathering Crude Oil Release - LCW09
Eunice, New Mexico

Dear Mr. Stokes:

BNC Environmental Services, Inc. (BNC) is pleased to resent this soil sampling report for Shell Pipeline Company (Shell) at the above referenced site. BNC understands that information presented in this report may be included in a more comprehensive report prepared by Shell on the remedial activities performed at the Grizzell Gathering-LCW09 release site. The Grizzell Gathering crude oil release site is located approximately 2 miles southwest of Eunice, New Mexico. A crude oil release reportedly occurred on May 8, 2002. The release was reported to be 8 barrels lost with 6 barrels being recovered by vacuum truck. The cause of the release was overfilling of a sump due to a faulty drain valve. A release notification and corrective action form C-141 was submitted to the New Mexico Oil Conservation Division (NMOCD). Crude oil affected soils were excavated and soil samples of the walls and floors of the excavation were submitted for laboratory analysis of benzene, toluene, ethylbenzene, xylene (BTEX) and total petroleum hydrocarbons (TPH). A Copy of NMOCD form C-141 is attached in APPENDIX A.

The site is specifically located in the NW/4 of the NW/4, Section 9, Township 22 South, Range 37 East, in Lea County, New Mexico. The site location and surrounding area is presented on the attached Jal Quadrangle U.S.G.S. topographic map (FIGURE 1).

This report summarizes soil sampling activities conducted by BNC and includes the following:

- Regulatory Framework and Site Classification
- Field Sampling and Laboratory Protocol
- Confirmation Soil Sampling Activities and Results

4400 N. Big Spring, Suite A-7
Midland, Texas 79705
915.686.0086 fax 915.686.0186

Mailing:
PO Box 1271
Midland, Texas 79702

REGULATORY FRAMEWORK AND SITE CLASSIFICATION

The State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division (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 soil assessment was 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 affects 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 that is outlined in the NMOCD "Guidelines for Remediation of Spills, Leaks, and Releases" dated August 13, 1993. These ranking criteria guidelines are based on the following site characteristics: depth to groundwater, wellhead protection (useable water sources), and distance to surface water.

The Grizzell Gathering crude oil leak site consists of an injection pump, sump, activated custody transfer (ACT) unit and associated piping and valves. The release site is located in a rural setting approximately two miles southwest of Eunice New Mexico. The release occurred within the pipeline right of way which traverses north-south and runs parallel with Legion Road. Residential housing with a shallow water well exists within 1,000 feet of the release. The land surface within the area of the pipeline is relatively flat with undulating drift sand deposits resulting in a low relief, hilly, sandy, and dry topography. Land use in the immediate area surrounding the leak site is a combination of rangeland, farmland and oil leases, mostly vegetated by mesquite brush, cactus and native range grass. Surface water was not observed within 1,000 feet of the release site. The table below illustrates the criteria for site specific characteristics used by the NMOCD to provide ranking scores for individual sites:

Criteria	Site Characteristics	Ranking Score
Depth to Groundwater	< 50 feet	20
Wellhead Protection Area	<1000 feet	20
Distance to Surface Water	>1000 feet	0
	Total Ranking Score	**40**

Based on the Grizzell Gathering site characteristics and the NMOCD "Guidelines for Remediation of Spills, Leaks, and Releases", the site has a ranking score of >19. Consequently, the ranking criteria cleanup levels of 10 mg/kg benzene, 50 mg/kg total BTEX, and 100 mg/kg TPH are established for closure activities at the site.

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. Soil samples were submitted to TraceAnalysis for analysis. Each container was labeled, placed on ice in an insulated cooler, and chilled to a temperature of approximately 40^0F (4^0C). The cooler was sealed for shipment to the laboratory. Proper chain of custody documentation accompanied the samples to the laboratory.

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 were analyzed for TPH by EPA Modified Method 8015B (DRO-GRO) and for BTEX by EPA Method 8021B. Soil samples were analyzed within 14 days after their collection.

CONFIRMATION SOIL SAMPLING ACTIVITIES AND RESULTS

BNC conducted soil sampling activities at the Grizzell Gathering crude oil release site as directed by Shell. Excavation and remedial activities were managed by Shell and BNC understands that oil affected soils, resulting from the release were transported to Environmental Plus, Inc. (EPI), a State approved landfarm facility, located just outside Eunice.

Five separate soil sampling events were conducted at the site between May 17 and July 24, 2002. Analytical results of each soil sampling event dictated the path of further excavation activities. BTEX concentrations in all samples were below the NMOCD site specific cleanup standards of 50 mg/kg. Benzene concentrations in all samples were below the NMOCD clean up standards of 10 mg/kg.

TABLE I displays the analytical results of BTEX and TPH concentrations for soil samples collected in the five separate sampling events. Yellow highlighting designates TPH concentrations above the NMOCD site specific clean up levels of 100 mg/kg. FIGURES 2-5 display the excavation boundaries and floor depths as they existed on the sampling event date. The figures also display the location of each sample collected during each sampling event. Copies of the certified analytical reports and chain of custody documentation are attached in APPENDIX B.

SAMPLING EVENT # 1 – May 17, 2002

BNC collected a total of nine soil samples from the walls and floor of the excavated area affected by the crude oil release (FIGURE 2). These initial samples were obtained for the purpose of determining laboratory concentrations of hydrocarbons in the walls and floor of the current excavation and serve as base line information for continued excavation activities. Soil samples obtained from the Sump area, West Wall, North Wall, and NW Floor of the excavation exhibited TPH concentrations above the NMOCD site specific cleanup standards of 100 mg/kg. Soil samples obtained from the East Wall, NE floor, SE Floor, SW Floor and Pump Floor exhibited TPH concentrations below the NMOCD site specific cleanup standards of 100 mg/kg.

SAMPLING EVENT # 2 – May 23,2002

BNC collected a total of three soil samples from the NW Floor, NW-SW Floor and West Wall areas (FIGURE 3). These areas exhibited TPH concentrations above NMOCD cleanup levels from the initial sampling event and were further excavated prior to sampling on May 23, 2002. FIGURE 3 displays the expanded west wall, deepened floor of the excavation and sample locations on this day. The deepened NW Floor sample obtained from ten feet bgs still exhibited TPH concentrations above NMOCD cleanup standards. However, the West Wall and NW-SW Floor samples exhibited TPH concentrations below NMOCD site specific clean up standards.

Based on analytical results of sampling events one and two, confirmation samples obtained from the SE Floor, SW Floor, NW-SW Floor and East Wall #2, exhibited TPH concentrations below NMOCD clean up levels and the shallower south half of the excavation was backfilled with clean fill dirt. Backfilling of the southern half of the excavation was a targeted goal for re-locating the ACT unit and other associated equipment to the south and out of the northern leak source area. After backfilling the southern half of the excavation, further excavation of the northern half was performed. Excavation activities included deepening the northern portion of the excavation on both sides of the north-south traversing pipelines. The northeastern side of the excavation was deepened to approximately eight feet bgs and was the area at which the sump was located and the release occurred. Originally this area was excavated to five feet bgs and initial sampling of the sump area indicated TPH concentrations of 9,015 mg/kg. The northwestern portion of the excavation was deepened to approximately 11 feet bgs due to TPH concentrations above regulatory clean up goals exhibited in the Northwest Floor samples obtained from nine and then ten feet bgs from sampling events one and two, respectively.

SAMPLING EVENT # 3 – June 22, 2002

BNC obtained three composite wall samples and a floor composite at a depth of 11 feet bgs from the northwestern portion of the excavation (FIGURE 4). These soil samples were identified as Excavation A (EA). The northeastern portion of the excavation was identified as

Excavation B (EB). Four composite wall samples and one composite floor sample from eight feet bgs was obtained for laboratory analysis in the Excavation B area. Analytical results for the EA wall and floor samples indicated TPH concentrations above NMOCD site specific clean up levels ranging from 189 mg/kg to 783 mg/kg. Analytical results for the EB wall samples indicated TPH concentrations above NMOCD site specific clean up levels ranging from 160 mg/kg to 1,352 mg/kg. The EB floor sample exhibited aTPH concentration of <50 mg/kg.

Based on the analytical results of sampling event #4, the excavation was deepened, widened and the wall existing under the pipelines that divided the northwest and northeast portions of the excavation was removed. The resulting excavation is displayed on FIGURE 5.

SAMPLING EVENT # 4 – July 11, 2002

BNC collected six confirmation grab soil samples from selected locations of the walls and floor of the excavation (FIGURE 5). Sampling activities were witnessed by NMOCD personnel and it was noted during sampling activities that the walls and floor of the current excavation appeared to be free of hydrocarbon staining and odor with the exception of a relatively small area at a depth of 11 feet bgs on the north wall. NMOCD personnel agreed upon selected grab sample locations on the walls and floor of the excavation and one sample collected from the stained area on the north wall (NWSW 11') was split between NMOCD and BNC for independent analysis by the NMOCD. Analytical results from sampling event #4 indicated that all wall and floor samples now exhibited TPH concentrations below NMOCD clean up levels with the exception of the north wall sample obtained at 11 feet bgs (NWSW 11'), which exhibited a TPH concentration of 5,475 mg/kg.

Based on the analytical results of sampling event #4, the area on the north wall exhibiting TPH concentrations above NMOCD site specific clean up goals was excavated to the north from ground surface to approximately 12 feet bgs.

SAMPLING EVENT # 5 – July 24, 2002

BNC collected one grab confirmation sample from the newly excavated north wall at a depth of 11 feet bgs (FIGURE 5). NMOCD was notified and was tentively scheduled to be onsite during this sampling event. Due to unknown reasons NMOCD personnel was not on site during the sampling event, however had previously directed BNC as to the location and depth to collect the sample. Analytical results from this sample (NSW2-11') indicated that TPH concentrations were below laboratory detection limits.

CONCLUSIONS

On May 8, 2002 a release of eight barrels of crude oil occurred at the Grizzell Gathering ACT site located approximately 2 miles southwest of Eunice New Mexico. Emergency abatement activities conducted on that day included removal of free liquids utilizing a

activities were conducted from early May to late July 2002. The progression of excavation boundaries and depth was based on analytical results derived from soil samples collected from the walls and floor of the excavation from five separate sampling events. Based on the analytical results of the five sampling events, horizontal and vertical delineation of the release area has been achieved and the Grizzell Gathering release area was backfilled with clean soil and is eligible for closure subject to the NMOCD "Guidelines for Remediation of Spills, Leaks, and Releases", dated August 13, 1993. BNC recommends that Shell request a "No Further Action" Letter from the NMOCD.

BNC appreciates the opportunity to provide Shell Pipeline Company with environmental services on this project. If you have any questions or comments concerning this report, please contact our Midland office at 915-686-0086.

Respectfully submitted,
BNC Environmental Services, Inc.

Craig Eschberger
Project Geologist C.P.G.

Tom Larson
Senior Project Geologist

FIGURES

FIGURE 1 – Site Location Map
FIGURE 2 –Excavation details and sample locations on May 17, 2002
FIGURE 3 – Excavation details and sample locations on May 23, 2002
FIGURE 4 – Excavation details and sample locations on June 22, 2002
FIGURE 5 – Excavation details and sample locations on July 11 & 24, 2002

TABLES

TABLE I – Analytical Results – Confirmation Soil Samples (5/17-7/24/2002)

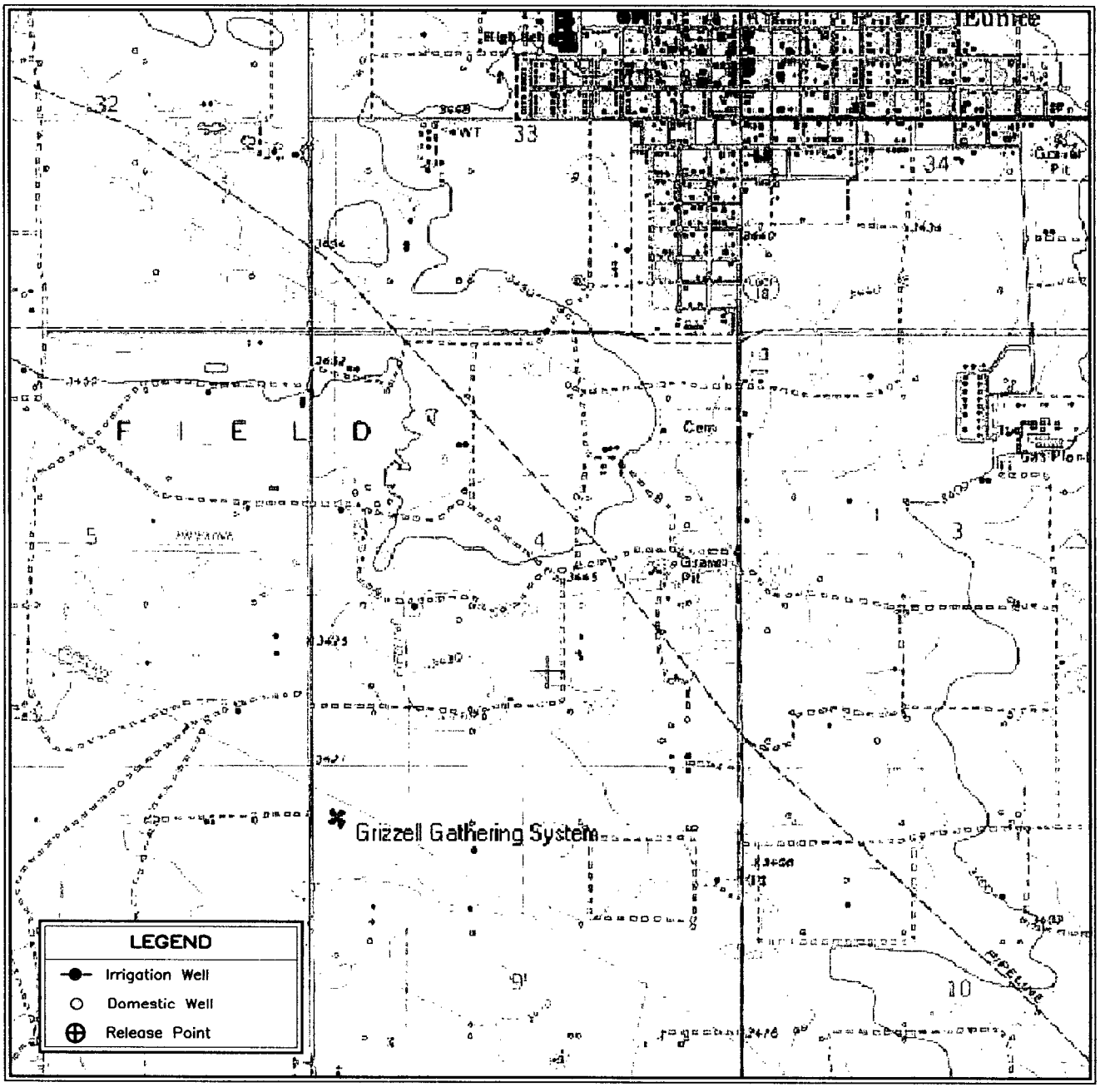
APPENDICES

APPENDIX A – NMOCD Form C-141
APPENDIX B – Certified Analytical Reports and Chain of Custody Documentation

SEMINOLE QUADRANGLE
TEXAS– GAINES CO.

LAT=32°42'19"N
LONG=102°40'58"W

PHOTOREVISED 1992



SCALE 1:24000

0 1/2 1 2
(Miles)

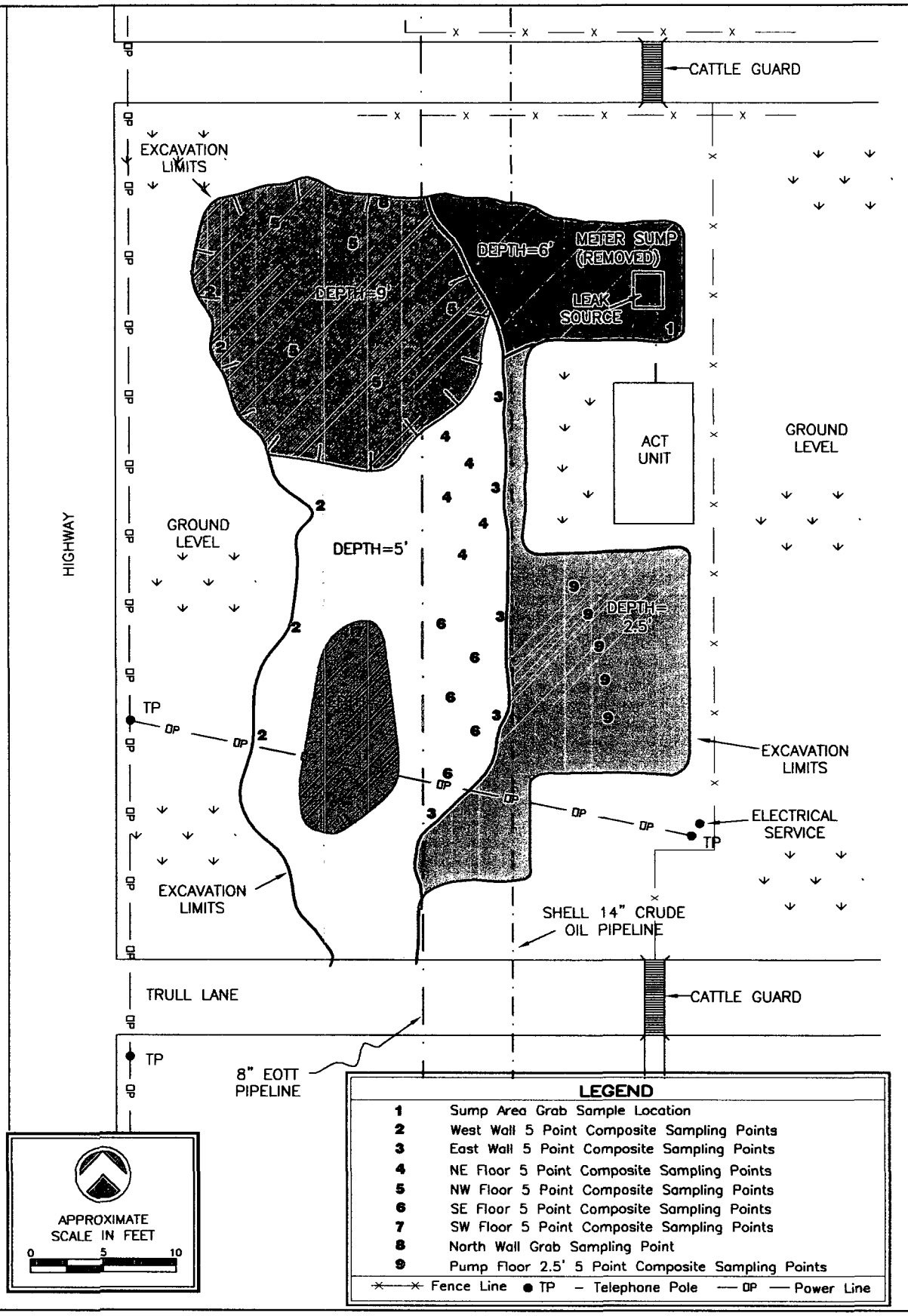
0 2000 4000 6000 8000
(Feet)

CONTOUR INTERVAL 5 FEET

NORTH

BNC

SITE LOCATION MAP	**JOB No. E58**
SHELL PIPELINE COMPANY GRIZZEL GATHERING – LCW09 EUNICE, NEW MEXICO	**FIGURE 1**



E58 SR 10/02/02

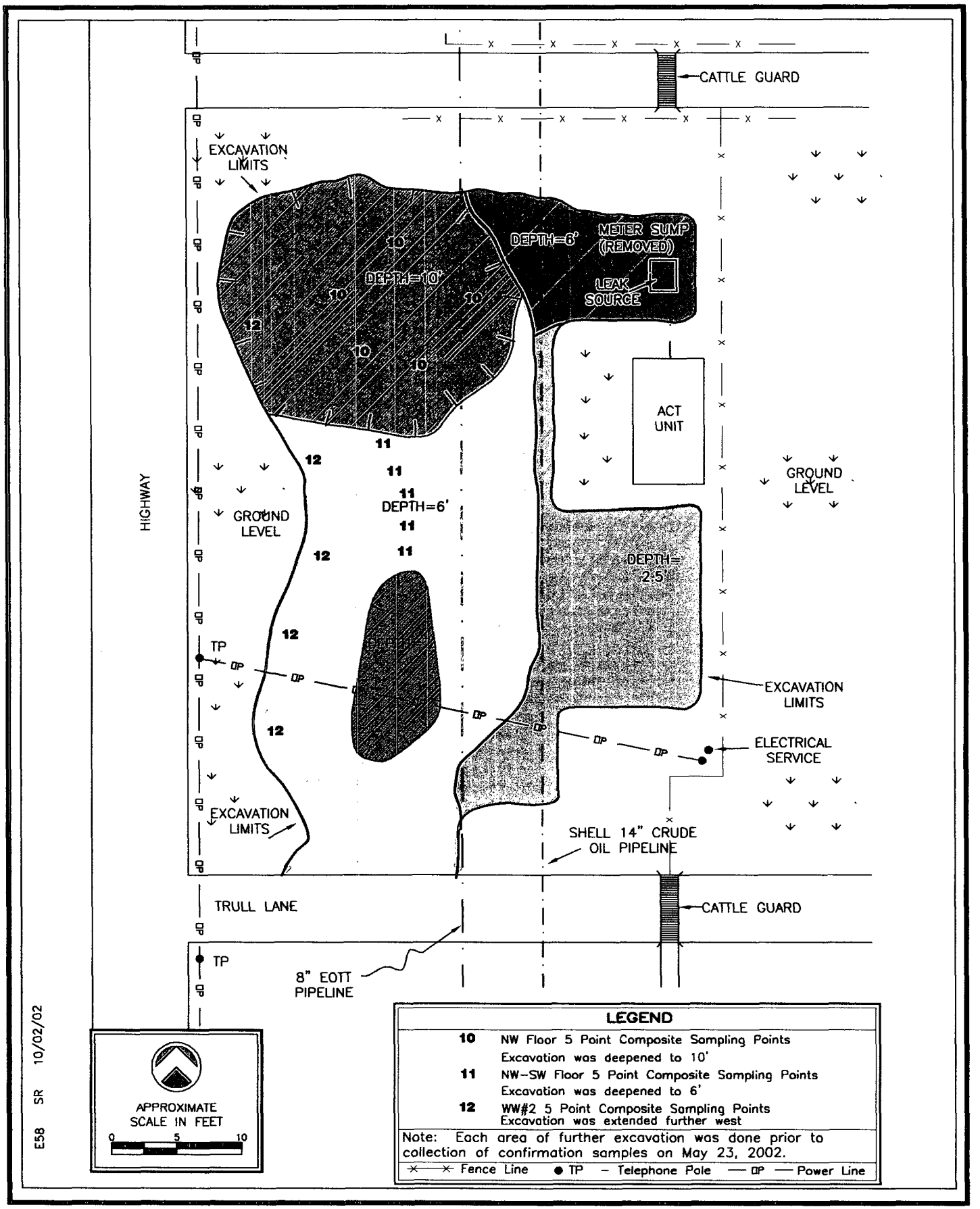
BNC

SAMPLING EVENT #1 – MAY 17, 2002

SHELL PIPELINE COMPANY
GRIZZEL GATHERING – LCW09 EUNICE, NEW MEXICO

JOB No. E58

FIGURE 2



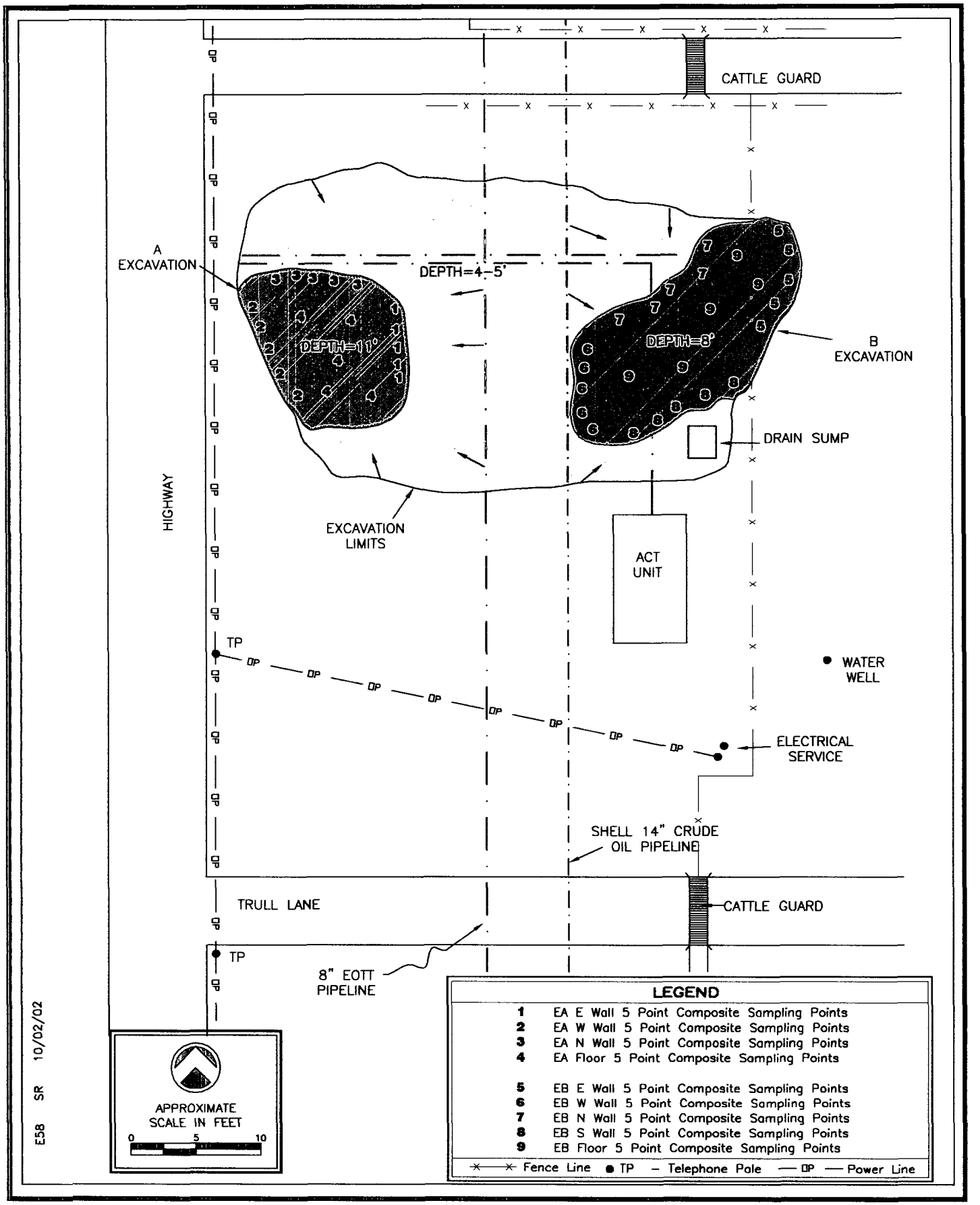
BNC

SAMPLING EVENT #2— MAY 23, 2002

SHELL PIPELINE COMPANY
GRIZZEL GATHERING — LCW09 EUNICE, NEW MEXICO

JOB No. E58

FIGURE 3



E58 SR 10/02/02

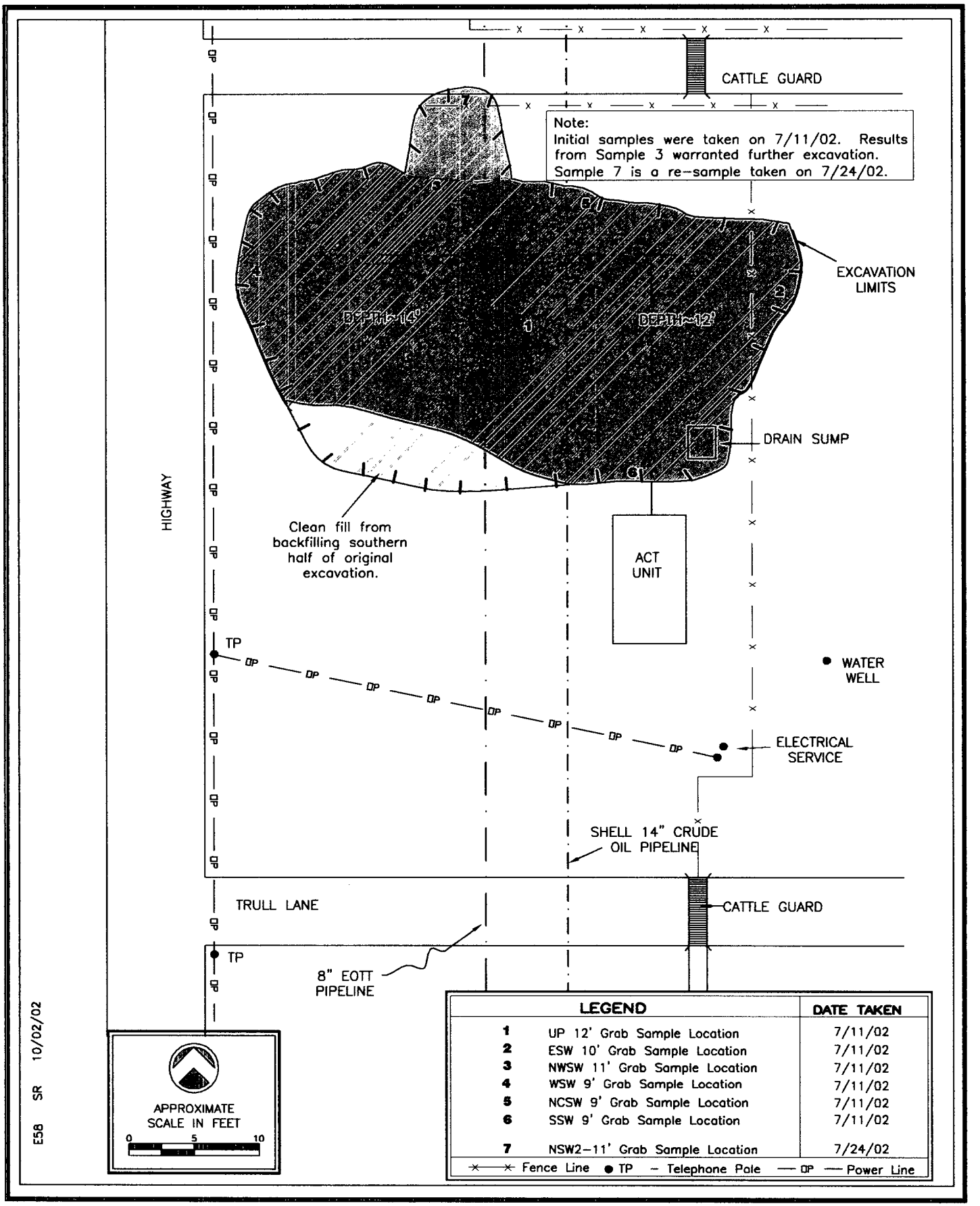
BNC

SAMPLING EVENT #3 – JUNE 22, 2002

SHELL PIPELINE COMPANY
GRIZZEL GATHERING – LCW09 EUNICE, NEW MEXICO

JOB No. E58

FIGURE 4



BNC

SAMPLING EVENT #4 – JULY 11 & 24, 2002

SHELL PIPELINE COMPANY
GRIZZEL GATHERING – LCW09 EUNICE, NEW MEXICO

JOB No. E58

FIGURE 5

TABLE I

SUMMARY OF ANALYTICAL RESULTS - EXCAVATION SOIL SAMPLES
Grizzell Gathering System - LCW09
Lea County, New Mexico

SOIL BORING SAMPLES	SAMPLE DEPTH	DATE SAMPLE TAKEN	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	TPH DRO (mg/kg)	TPH GRO (mg/kg)	TOTAL TPH (8015B) (mg/kg)
New Mexico Guidelines for remediation of leaks, spills, and releases:										
Ranking Score of >19			10 mg/kg				50 mg/kg	—	—	100 mg/kg
SAMPLING EVENT #1 - Excavation - Wall and Floor Samples collected on 5/17/02 - FIGURE 1										
Sump Area	5	5/17/2002	<0.020	0.0249	0.0276	0.2200	0.272	8970	45.2	9,015
West Wall	4	5/17/2002	<0.020	0.0224	<0.020	<0.020	0.0224	147	5.08	152
East Wall	4	5/17/2002	<0.010	<0.010	<0.010	0.0105	0.0105	66.8	<1.0	67
NE Floor	5	5/17/2002	<0.010	<0.010	<0.010	0.0133	0.0133	66.7	4.22	71
NW Floor	9	5/17/2002	<0.020	<0.020	<0.020	0.0515	0.0515	248	5.25	253
SE Floor	5	5/17/2002	<0.010	<0.010	0.0258	0.0373	0.0631	89.8	6.55	96
SW Floor	7	5/17/2002	<0.010	<0.010	<0.010	0.0303	0.0303	<50	<1.0	<50
North Wall	8	5/17/2002	0.136	4.480	7.450	7.530	19.596	522	154	676
Pump Floor 2.5'	3	5/17/2002	<0.010	<0.010	0.0162	0.0217	0.0379	72.6	<1.0	73
SAMPLING EVENT #2 - Deepen main excavation an additional 1 ft and widen excavation to the west - Resample on 5/23/02 - FIGURE 2										
NW Floor	10	5/23/02	<.050	0.055	0.165	0.127	0.347	132	<5	132
NW-SW Floor	6	5/23/02	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1.0	<50
West Wall #2	4.5	5/23/02	<0.010	<0.010	<0.010	0.013	0.013	<50	<1.0	<50
SAMPLING EVENT #3 - Backfill south half of excavation, deepen and widen north half of excavation -Collect wall and floor samples on 6/22/02 - FIGURE 3										
EA E Wall Comp	8	6/22/2002	<0.020	<0.020	<0.020	<0.020	<0.020	778	4.99	783
EA W Wall Comp	8	6/22/2002	<0.010	0.0369	0.0102	0.0232	0.0703	186	2.71	189
EA N Wall Comp	8	6/22/2002	<0.020	0.109	0.0281	0.1638	0.301	722	30.7	753
EA Floor Comp	11	6/22/2002	<0.010	0.0147	0.0154	0.0257	0.0558	568	13.9	582
EB E Wall Comp	6	6/22/2002	<0.010	0.0153	0.017	0.0442	0.0765	973	7.18	980
EB W Wall Comp	6	6/22/2002	<0.010	0.154	0.0274	0.0701	0.252	1340	12.5	1352
EB N Wall Comp	6	6/22/2002	<0.010	0.236	<0.010	<0.010	0.236	374	7.75	382
EB S Wall Comp	6	6/22/2002	<0.020	0.203	<0.020	<0.020	0.203	160	<2.0	160
EB Floor Comp	8	6/22/2002	<0.010	0.0109	<0.010	0.0132	0.0241	<50	<1.0	<50
SAMPLING EVENT # 4 - Excavate north half of excavation to 12-14 ft - Collect Wall and Floor grab samples as per NMOCD personnel on 7/11/02 - FIGURE 4										
UP 12'	12	7/11/2002	<0.010	<0.010	<0.010	<0.010	<0.010	<50.0	<1.0	<50.0
ESW 10'	10	7/11/2002	<0.010	<0.010	<0.010	<0.010	<0.010	<50.0	<1.0	<50.0
NWSW 11'	11	7/11/2002	<0.020	<0.020	<0.020	<0.020	<0.020	5,240	235	5,475
WSW 11'	11	7/11/2002	<0.010	<0.010	0.0125	0.0148	0.0273	<50.0	15	15
NC SW 9'	9	7/11/2002	<0.010	<0.010	0.0135	0.094	0.0108	<50.0	3.57	4
SSW 9'	9	7/11/2002	<0.010	<0.010	0.0125	<0.010	0.0125	<50.0	<1.0	<50.0
SAMPLING EVENT #5 - Excavate north wall area and collect confirmation sample on 7/24/02 - FIGURE 4										
NSW2-11'	11	7/24/02	NA	NA	NA	NA	NA	<50.0	<1.0	<50.0
Horizontal and vertical delineation achieved and hydrocarbon-affected area excavated and backfilled with clean soil. Hydrocarbon-affected soils transported to Environmental Plus Inc. Landfarm Facility. Site eligible for closure.										
Yellow highlight =	Concentrations above NMOCD site specific cleanup standards of 100 mg/kg.									

State of New Mexico

Energy Minerals and Natural Resources Department

Oil Conservation Division

2040 South Pacheco Street

Santa Fe, New Mexico 87505

Form C-141

Revised March 17, 1999

Submit 2 copies to appropriate District Office in accordance with Rule 116 on back side of form

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

Release Notification and Corrective Action

OPERATOR

[X] Initial Report [ ] Final Report

Name: Shell Pipeline Company, LP (SPLC)	Contact: H. Lamar Stokes
Address: P. O. Box 3038 Pearland, TX. 77588-3038	Telephone No.: (281) 922-9085
Facility Name: Shell-Grizzell Gathering System	Facility Type: Injection Pump, sump and ACT Unit

Surface Owner: Bill P. Trull	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from	North/South Line	Feet from	East/West Line	County
	NW/4 NW/4 Sect 9	225	37 East					Lea

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 8 bbls	Volume Recovered: 6 bbls	
Source of Release: 2" steel drain valve	Date and Hour of Occurrence: 5/8/02 8:00 PM	Date and Hour of Discovery: 5/8/02 8:30 PM	
Was Immediate Notice Given? [ ] Yes [ ] No [X] N/R	If YES, To Whom?		
By Whom?	Date and Hour		
Was a Watercourse reached? No	If YES, Volume Impacting the Watercourse.		

If a Water course was Impacted, Describe Fully*

Describe Cause of Problem and Remedial Action Taken.* Release occurred when the 2" drain valve to the sump leaked by in the closed position, causing the sump to overfill. The system was isolated and valve was replaced. Free liquid was picked up via vacuum truck.

Describe Area Affected and Cleanup Action Taken.* ~1100 ft2 affected. Impacted soil to be removed and land farmed at Environmental Plus, Inc. facility in Eunice, NM. Historical contamination will also be removed.

Describe General Conditions Prevailing (Temperature, Precipitation, etc).*

Weather conditions: dry, clear, and ~85° F

I here by certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed Name: H. Lamar Stokes

Title: Environmental Rep - Southwest Region

Phone: (281) 922-9085

Oil Conservation Division

Approved by District Supvsr:

Approval Date: Expiration Date:

Conditions of Approval: Attached [ ]

*Attach Additional Sheets If Necessary

Summary Report

Lenny Woods
Equiva Lenny Woods
HCR 1 Box 89
Denver City, Tx. 79323

Report Date: May 23, 2002

Order ID Number: A02052009

Project: E-58
TA Job Code: Grizzel Gathering
Casualty Code: E-58 Shell # LCW09
Project Location: Eunice, NM
Project Address:
BNC-Midland / Midland / Craig Eschberger

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197398	Sump Area	Soil	5/17/02	10:30	5/18/02
197399	West Wall	Soil	5/17/02	10:35	5/18/02
197400	East Wall	Soil	5/17/02	10:40	5/18/02
197401	NE Floor	Soil	5/17/02	10:45	5/18/02
197402	NW Floor	Soil	5/17/02	10:50	5/18/02
197403	SE Floor	Soil	5/17/02	10:55	5/18/02
197404	SW Floor	Soil	5/17/02	11:00	5/18/02
197405	North Wall	Soil	5/17/02	11:05	5/18/02
197406	Pump Floor 2.5'	Soil	5/17/02	11:10	5/18/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX						TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	Test Comments	DRO	GRO
Sample - Field Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
197398 - Sump Area	<0.020	0.0249	0.0276	0.22	0.272	* [1]	8970	45.2
197399 - West Wall	<0.020	0.0224	<0.020	<0.020	0.0224	* [2]	147	5.08
197400 - East Wall	<0.010	<0.010	<0.010	0.0105	0.0105	-	66.8	<1.00
197401 - NE Floor	<0.010	<0.010	<0.010	0.0133	0.0133	-	66.7	4.22
197402 - NW Floor	<0.020	<0.020	<0.020	0.0515	0.0515	* [3]	248	5.25
197403 - SE Floor	<0.010	<0.010	0.0258	0.0373	0.0631	-	89.8	6.55
197404 - SW Floor	<0.010	<0.010	<0.010	0.0303	0.0303	-	<50.0	<1.00
197405 - North Wall	0.136	4.48	7.45	7.53	19.596	-	522	154
197406 - Pump Floor 2.5'	<0.010	<0.010	0.0162	0.0217	0.0379	-	72.6	<1.00

[1]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.00473 which is the MDL.
[2]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0075 which is lower than the RDL but greater than the MDL of 0.00473.
[3]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0049 which is lower than the RDL but greater than the MDL of 0.0047.

This is only a summary. Please, refer to the complete report package for quality control data.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Lenny Woods
Equiva Lenny Woods
HCR 1 Box 89
Denver City, Tx. 79323

Report Date: May 23, 2002

Order ID Number: A02052009

Project: E-58
TA Job Code: Grizzel Gathering
Casualty Code: E-58 Shell # LCW09
Project Location: Eunice, NM
BNC-Midland / Midland / Craig Eschberger

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197398	Sump Area	Soil	5/17/02	10:30	5/18/02
197399	West Wall	Soil	5/17/02	10:35	5/18/02
197400	East Wall	Soil	5/17/02	10:40	5/18/02
197401	NE Floor	Soil	5/17/02	10:45	5/18/02
197402	NW Floor	Soil	5/17/02	10:50	5/18/02
197403	SE Floor	Soil	5/17/02	10:55	5/18/02
197404	SW Floor	Soil	5/17/02	11:00	5/18/02
197405	North Wall	Soil	5/17/02	11:05	5/18/02
197406	Pump Floor 2.5'	Soil	5/17/02	11:10	5/18/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 197398 - Sump Area

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		0.0249	mg/Kg	20	0.001
Ethylbenzene		0.0276	mg/Kg	20	0.001
M,P,O-Xylene		0.22	mg/Kg	20	0.001
Total BTEX		0.272	mg/Kg	20	0.001
Test Comments	[1]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.963	mg/Kg	20	1	96	70 - 130
4-BFB		0.901	mg/Kg	20	1	90	70 - 130

Sample: 197398 - Sump Area

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		8970	mg/Kg	20	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[2]	854	mg/Kg	20	150	569	70 - 130

Sample: 197398 - Sump Area

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		45.2	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.22	mg/Kg	20	0.10	122	70 - 130
4-BFB	[3]	1.53	mg/Kg	20	0.10	153	70 - 130

[1] Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.00473 which is the MDL.
[2] Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.
[3] High surrogate recovery due to peak interference.

Sample: 197399 - West Wall

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		0.0224	mg/Kg	20	0.001
Ethylbenzene		<0.020	mg/Kg	20	0.001
M,P,O-Xylene		<0.020	mg/Kg	20	0.001
Total BTEX		0.0224	mg/Kg	20	0.001
Test Comments	[4]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.777	mg/Kg	20	1	77	70 - 130
4-BFB		0.709	mg/Kg	20	1	71	70 - 130

Sample: 197399 - West Wall

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		147	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		155	mg/Kg	1	150	103	70 - 130

Sample: 197399 - West Wall

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		5.08	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[5]	0.807	mg/Kg	20	0.10	81	70 - 130
4-BFB		1.02	mg/Kg	20	0.10	102	70 - 130

Sample: 197400 - East Wall

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

[4]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0075 which is lower than the RDL but greater than the MDL of 0.00473.

[5]*

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		0.0105	mg/Kg	10	0.001
Total BTEX		0.0105	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.708	mg/Kg	10	1	71	70 - 130
4-BFB	[6]	0.622	mg/Kg	10	1	62	70 - 130

Sample: 197400 - East Wall

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		66.8	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		144	mg/Kg	1	150	96	70 - 130

Sample: 197400 - East Wall

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.00	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.07	mg/Kg	10	0.10	107	70 - 130
4-BFB		0.842	mg/Kg	10	0.10	84	70 - 130

Sample: 197401 - NE Floor

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		0.0133	mg/Kg	10	0.001

Continued ...

[6]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

... *Continued* Sample: 197401 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Total BTEX		0.0133	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[7]	0.685	mg/Kg	10	1	68	70 - 130
4-BFB	[8]	0.600	mg/Kg	10	1	60	70 - 130

Sample: 197401 - NE Floor

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		66.7	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		141	mg/Kg	1	150	94	70 - 130

Sample: 197401 - NE Floor

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		4.22	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.08	mg/Kg	10	0.10	108	70 - 130
4-BFB		0.862	mg/Kg	10	0.10	86	70 - 130

Sample: 197402 - NW Floor

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		<0.020	mg/Kg	20	0.001
Ethylbenzene		<0.020	mg/Kg	20	0.001
M,P,O-Xylene		0.0515	mg/Kg	20	0.001
Total BTEX		0.0515	mg/Kg	20	0.001
Test Comments	[9]	*	mg/Kg	1	

[7] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[8] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[9] Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0049 which is lower than the RDL but greater than the MDL of 0.0047.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[10]	0.633	mg/Kg	20	1	63	70 - 130
4-BFB	[11]	0.591	mg/Kg	20	1	59	70 - 130

Sample: 197402 - NW Floor

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		248	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		156	mg/Kg	1	150	104	70 - 130

Sample: 197402 - NW Floor

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		5.25	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.13	mg/Kg	20	0.10	113	70 - 130
4-BFB		0.841	mg/Kg	20	0.10	84	70 - 130

Sample: 197403 - SE Floor

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		0.0258	mg/Kg	10	0.001
M,P,O-Xylene		0.0373	mg/Kg	10	0.001
Total BTEX		0.0631	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[12]	0.488	mg/Kg	10	1	48	70 - 130

Continued ...

[10] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[11] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[12] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-BFB	[13]	0.483	mg/Kg	10	1	48	70 - 130

Sample: 197403 - SE Floor

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		89.8	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		140	mg/Kg	1	150	93	70 - 130

Sample: 197403 - SE Floor

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		6.55	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.785	mg/Kg	10	0.10	78	70 - 130
4-BFB		0.760	mg/Kg	10	0.10	76	70 - 130

Sample: 197404 - SW Floor

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		0.0303	mg/Kg	10	0.001
Total BTEX		0.0303	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[14]	0.692	mg/Kg	10	1	69	70 - 130
4-BFB	[15]	0.554	mg/Kg	10	1	55	70 - 130

[13] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[14] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[15] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

Sample: 197404 - SW Floor

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		144	mg/Kg	1	150	96	70 - 130

Sample: 197404 - SW Floor

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.00	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.926	mg/Kg	10	0.10	93	70 - 130
4-BFB		0.752	mg/Kg	10	0.10	75	70 - 130

Sample: 197405 - North Wall

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.136	mg/Kg	50	0.001
Toluene		4.48	mg/Kg	50	0.001
Ethylbenzene		7.45	mg/Kg	50	0.001
M,P,O-Xylene		7.53	mg/Kg	50	0.001
Total BTEX		19.596	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[16]	0.629	mg/Kg	50	1	62	70 - 130
4-BFB	[17]	2.26	mg/Kg	50	1	226	70 - 130

Sample: 197405 - North Wall

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

[16]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[17]High surrogate recovery due to peak interference.

Param	Flag	Result	Units	Dilution	RDL
DRO		522	mg/Kg	5	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[18]	253	mg/Kg	5	150	168	70 - 130

Sample: 197405 - North Wall

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		154	mg/Kg	50	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[19]	0.505	mg/Kg	50	0.10	50	70 - 130
4-BFB	[20]	5.04	mg/Kg	50	0.10	504	70 - 130

Sample: 197406 - Pump Floor 2.5'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20478	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		0.0162	mg/Kg	10	0.001
M,P,O-Xylene		0.0217	mg/Kg	10	0.001
Total BTEX		0.0379	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.784	mg/Kg	10	1	78	70 - 130
4-BFB	[21]	0.650	mg/Kg	10	1	65	70 - 130

Sample: 197406 - Pump Floor 2.5'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20545	Date Analyzed:	5/21/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19602	Date Prepared:	5/21/02

Param	Flag	Result	Units	Dilution	RDL
DRO		72.6	mg/Kg	1	50

[18] Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.
[19] Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[20] High surrogate recovery due to peak interference.
[21] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		142	mg/Kg	1	150	95	70 - 130

Sample: 197406 - Pump Floor 2.5'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20479	Date Analyzed:	5/20/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19551	Date Prepared:	5/20/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.00	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.11	mg/Kg	10	0.10	111	70 - 130
4-BFB		0.854	mg/Kg	10	0.10	85	70 - 130

Quality Control Report
Method Blank

Method Blank QCBatch: QC20478

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.864	mg/Kg	10	1	86	70 - 130
4-BFB		0.766	mg/Kg	10	1	77	70 - 130

Method Blank QCBatch: QC20479

Param	Flag	Results	Units	Reporting Limit
GRO		<1	mg/Kg	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.958	mg/Kg	10	0.10	96	70 - 130
4-BFB		0.970	mg/Kg	10	0.10	97	70 - 130

Method Blank QCBatch: QC20545

Param	Flag	Results	Units	Reporting Limit
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		143	mg/Kg	1	150	95	70 - 130

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC20478

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.910	0.926	mg/Kg	10	1	<0.010	91	1	70 - 130	20
Benzene	0.897	0.919	mg/Kg	10	1	<0.010	89	2	70 - 130	20
Toluene	0.91	0.92	mg/Kg	10	1	<0.010	91	1	70 - 130	20
Ethylbenzene	0.898	0.896	mg/Kg	10	1	<0.010	89	0	70 - 130	20
M,P,O-Xylene	2.89	2.88	mg/Kg	10	3	<0.010	96	0	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.830	0.864	mg/Kg	10	1	83	86	70 - 130
4-BFB	0.809	0.796	mg/Kg	10	1	80	79	70 - 130

Laboratory Control Spikes

QCBatch: QC20479

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	10.3	10.6	mg/Kg	10	1	<1	103	2	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.963	0.984	mg/Kg	10	0.10	96	98	70 - 130
4-BFB	1.03	1.05	mg/Kg	10	0.10	103	105	70 - 130

Laboratory Control Spikes

QCBatch: QC20545

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	251	235	mg/Kg	1	250	<50.0	100	6	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	149	139	mg/Kg	1	150	99	93	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC20478

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.783	0.756	mg/Kg	10	1	<0.010	78	3	70 - 130	20
Toluene	0.8	0.764	mg/Kg	10	1	<0.010	80	4	70 - 130	20
Ethylbenzene	0.806	0.755	mg/Kg	10	1	<0.010	80	6	70 - 130	20
M,P,O-Xylene	2.54	2.44	mg/Kg	10	3	0.0148	84	4	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.760	0.779	mg/Kg	10	1	76	77	70 - 130
4-BFB	0.747	0.736	mg/Kg	10	1	74	73	70 - 130

Matrix Spikes

QCBatch: QC20479

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	9.61	9.71	mg/Kg	10	1	<1.00	96	1	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.994	1.01	mg/Kg	10	0.10	99	101	70 - 130
4-BFB	0.944	0.957	mg/Kg	10	0.10	94	96	70 - 130

Matrix Spikes

QCBatch: QC20545

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	265	294	mg/Kg	1	250	72.6	77	14	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
n-Triacontane	133	140	mg/Kg	1	150	89	93	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC20478

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0892	89	85 - 115	5/20/02
Benzene		mg/L	0.10	0.0875	88	85 - 115	5/20/02
Toluene		mg/L	0.10	0.085	85	85 - 115	5/20/02
Ethylbenzene	[22]	mg/L	0.10	0.0833	83	85 - 115	5/20/02
M,P,O-Xylene		mg/L	0.30	0.269	90	85 - 115	5/20/02

CCV (2)

QCBatch: QC20478

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0894	89	85 - 115	5/20/02
Benzene		mg/L	0.10	0.0889	88	85 - 115	5/20/02
Toluene		mg/L	0.10	0.0871	87	85 - 115	5/20/02
Ethylbenzene	[23]	mg/L	0.10	0.0837	83	85 - 115	5/20/02
M,P,O-Xylene		mg/L	0.30	0.277	92	85 - 115	5/20/02

ICV (1)

QCBatch: QC20478

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0917	92	85 - 115	5/20/02
Benzene		mg/L	0.10	0.0886	89	85 - 115	5/20/02
Toluene		mg/L	0.10	0.0877	88	85 - 115	5/20/02
Ethylbenzene	[24]	mg/L	0.10	0.0844	84	85 - 115	5/20/02
M,P,O-Xylene		mg/L	0.30	0.272	91	85 - 115	5/20/02

CCV (1)

QCBatch: QC20479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.893	89	85 - 115	5/20/02

CCV (2)

QCBatch: QC20479

Continued ...

[22] Ethylbenzene outside normal limits. Average of CCV components within acceptable range.
[23] Ethylbenzene outside normal limits. Average of CCV components within acceptable range.
[24] Ethylbenzene outside normal limits. Average of CCV components within acceptable range.

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.911	91	85 - 115	5/20/02

ICV (1) QCBatch: QC20479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.04	104	85 - 115	5/20/02

CCV (1) QCBatch: QC20545

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	272	108	75 - 125	5/21/02

CCV (2) QCBatch: QC20545

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	242	96	75 - 125	5/21/02

CCV (3) QCBatch: QC20545

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	257	102	75 - 125	5/21/02

ICV (1) QCBatch: QC20545

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	248	99	75 - 125	5/21/02

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
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1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #: 402052009

Company Name: BNC Environmental Services
Phone #: 915/686-0086
Address: (Street, City, Zip) Midland
Fax #: 915/6860186
Contact Person: Craig Eschberger
Invoice to: (If different from above) Shell (Equilon) TO: Lanny Wood HCR1 Box 89 Denver City TX 79323
Project #: E-58 - Shell # is LCW09
Project Name: Grizzel Gathering
Project Location: Eunice NM
Sampler Signature: Craig Eschberger

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
197398	Sump Area	1	40z		X							X		5/17/02	10:30
399	West Wall	1	"		X							X		"	10:35
400	East Wall	1	"		X							X		"	10:40
401	NE Floor	1	"		X							X		"	10:45
402	NW Floor	1	"		X							X		"	10:50
403	SE Floor	1	"		X							X		"	10:55
404	SW Floor	1	"		X							X		"	11:00
405	North Wall	1	"		X							X		"	11:05
406	Pump Floor 2.5'	1	"		X							X		"	11:10

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH ~~418.1/TX1005~~ 8015 Modified DRO/GRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
X	X	X														
X	X	X														
X	X	X														
X	X	X														
X	X	X														
X	X	X														
X	X	X														
X	X	X														
X	X	X														

Relinquished by: Craig Eschberger Date: 5/17/02 Time: 1700
Received by: Helen Shelton Date: 5/17/02 Time: 1700
Relinquished by: Helen Shelton Date: 5/17/02 Time: 1832
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: 5/18/02 Time: 9:20 AM

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 9 samples-HS

ORIGINAL COPY

LAB USE ONLY
Intact (Y) N
Headspace Y (N)
Temp 1 °
Log-in Review N
Carrier # Fed Ex

REMARKS:
New Mexico Methods — 5 days TAT
Fax Results to BNC/Midland and Lamar Stokes - Shell 281/922-7034 DRO 5/22
☐ Check If Special Reporting Limits Are Needed
Need Result on or Before 5/22/02
ECI 713 660 7737

Summary Report

Lanny Woods
Equiva Lanny Woods
HCR 1 Box 89
Denver City, Tx. 79323

Report Date: June 4, 2002

Order ID Number: A02052419

Project: E-58
TA Job Code: Grizzel Gathering
Casualty Code: E-58 LCW09
Project Location: Eunice,NM
Project Address:
BNC-Midland / Midland / Craig Eschberger

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197863	NW Floor 90'	Soil	5/23/02	15:45	5/24/02
197864	NW-SW Floor	Soil	5/23/02	15:50	5/24/02
197865	West Wall #2	Soil	5/23/02	15:55	5/24/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH DRO	TPH GRO
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	DRO (ppm)	GRO (ppm)
197863 - NW Floor 90'	<0.050	0.0546	0.165	0.127	0.347	132	<5.00
197864 - NW-SW Floor	<0.010	<0.010	<0.010	<0.010	<0.010	<50.0	<1.00
197865 - West Wall #2	<0.010	<0.010	<0.010	0.0133	0.0133	<50.0	<1.00

This is only a summary. Please, refer to the complete report package for quality control data.

TRACEANALYSIS, INC.

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155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Lanny Woods
Equiva Lanny Woods
HCR 1 Box 89
Denver City, Tx. 79323

Report Date: June 4, 2002

Order ID Number: A02052419

Project: E-58
TA Job Code: Grizzel Gathering
Casualty Code: E-58 LCW09
Project Location: Eunice,NM
BNC-Midland / Midland / Craig Eschberger

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197863	NW Floor 90'	Soil	5/23/02	15:45	5/24/02
197864	NW-SW Floor	Soil	5/23/02	15:50	5/24/02
197865	West Wall #2	Soil	5/23/02	15:55	5/24/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 197863 - NW Floor 90'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20479	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19550	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.050	mg/Kg	50	0.001
Toluene		0.0546	mg/Kg	50	0.001
Ethylbenzene		0.165	mg/Kg	50	0.001
M,P,O-Xylene		0.127	mg/Kg	50	0.001
Total BTEX		0.347	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.916	mg/Kg	50	1	91	70 - 130
4-BFB		0.941	mg/Kg	50	1	94	70 - 130

Sample: 197863 - NW Floor 90'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20535	Date Analyzed:	5/28/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19603	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
DRO		132	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		149	mg/Kg	1	150	99	70 - 130

Sample: 197863 - NW Floor 90'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20478	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19548	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.937	mg/Kg	50	0.10	94	70 - 130
4-BFB		1.1	mg/Kg	50	0.10	110	70 - 130

Sample: 197864 - NW-SW Floor

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20479	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19550	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		<0.010	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.857	mg/Kg	10	1	85	70 - 130
4-BFB		0.811	mg/Kg	10	1	81	70 - 130

Sample: 197864 - NW-SW Floor

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20535	Date Analyzed:	5/28/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19603	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		136	mg/Kg	1	150	91	70 - 130

Sample: 197864 - NW-SW Floor

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20478	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19548	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.00	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.905	mg/Kg	10	0.10	90	70 - 130
4-BFB		0.784	mg/Kg	10	0.10	78	70 - 130

Sample: 197865 - West Wall #2

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20479	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19550	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		0.0133	mg/Kg	10	0.001
Total BTEX		0.0133	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[1]	0.568	mg/Kg	10	1	56	70 - 130
4-BFB	[2]	0.537	mg/Kg	10	1	53	70 - 130

Sample: 197865 - West Wall #2

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC20535	Date Analyzed:	5/28/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB19603	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		148	mg/Kg	1	150	99	70 - 130

Sample: 197865 - West Wall #2

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC20478	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB19548	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.00	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.85	mg/Kg	10	0.10	85	70 - 130
4-BFB	[3]	0.531	mg/Kg	10	0.10	53	70 - 130

[1]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[2]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[3]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Quality Control Report
Method Blank

Method Blank

QCBatch: QC20478

Param	Flag	Results	Units	Reporting Limit
GRO		<1	mg/Kg	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.05	mg/Kg	10	0.10	105	70 - 130
4-BFB		0.924	mg/Kg	10	0.10	92	70 - 130

Method Blank

QCBatch: QC20479

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.98	mg/Kg	10	1	98	70 - 130
4-BFB		0.948	mg/Kg	10	1	94	70 - 130

Method Blank

QCBatch: QC20535

Param	Flag	Results	Units	Reporting Limit
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		19.4	mg/Kg	1	150	102	70 - 130

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC20478

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	9.28	9.57	mg/Kg	10	1	<1	93	3	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.951	.966	mg/Kg	10	0.10	95	97	70 - 130
4-BFB	0.953	0.969	mg/Kg	10	0.10	95	97	70 - 130

Laboratory Control Spikes

QCBatch: QC20479

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	1.16	1.19	mg/Kg	10	1	<0.010	116	2	70 - 130	20
Benzene	0.968	1.01	mg/Kg	10	1	<0.010	96	4	70 - 130	20
Toluene	1	1.01	mg/Kg	10	1	<0.010	100	0	70 - 130	20
Ethylbenzene	1.01	1.04	mg/Kg	10	1	<0.010	101	2	70 - 130	20
M,P,O-Xylene	3.06	3.13	mg/Kg	10	3	<0.010	102	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.983	0.979	mg/Kg	10	1	98	97	70 - 130
4-BFB	1	0.991	mg/Kg	10	1	100	99	70 - 130

Laboratory Control Spikes

QCBatch: QC20535

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	233	255	mg/Kg	1	250	<50.0	93	9	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	136	142	mg/Kg	1	150	91	95	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC20479

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.836	0.828	mg/Kg	10	1	<0.010	83	0	70 - 130	20
Toluene	0.865	0.852	mg/Kg	10	1	<0.010	86	1	70 - 130	20
Ethylbenzene	0.86	0.847	mg/Kg	10	1	<0.010	86	1	70 - 130	20
M,P,O-Xylene	2.66	2.62	mg/Kg	10	3	0.01	88	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.879	0.849	mg/Kg	10	1	87	84	70 - 130
4-BFB	0.912	0.881	mg/Kg	10	1	91	88	70 - 130

Matrix Spikes

QCBatch: QC20535

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	224	227	mg/Kg	1	250	<50.0	90	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
n-Triacontane	134	132	mg/Kg	1	150	89	88	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC20478

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.08	108	85 - 115	5/24/02

ICV (1)

QCBatch: QC20478

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.958	95	85 - 115	5/24/02

CCV (1)

QCBatch: QC20479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.113	113	85 - 115	5/24/02
Benzene		mg/L	0.10	0.0988	98	85 - 115	5/24/02
Toluene		mg/L	0.10	0.0998	99	85 - 115	5/24/02
Ethylbenzene		mg/L	0.10	0.0979	97	85 - 115	5/24/02
M,P,O-Xylene		mg/L	0.30	0.3	100	85 - 115	5/24/02

CCV (2)

QCBatch: QC20479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.11	110	85 - 115	5/24/02
Benzene		mg/L	0.10	0.0959	95	85 - 115	5/24/02
Toluene		mg/L	0.10	0.0979	97	85 - 115	5/24/02
Ethylbenzene		mg/L	0.10	0.095	95	85 - 115	5/24/02
M,P,O-Xylene		mg/L	0.30	0.289	96	85 - 115	5/24/02

ICV (1)

QCBatch: QC20479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.108	108	85 - 115	5/24/02
Benzene		mg/L	0.10	0.0961	96	85 - 115	5/24/02
Toluene		mg/L	0.10	0.0988	98	85 - 115	5/24/02
Ethylbenzene		mg/L	0.10	0.0993	99	85 - 115	5/24/02
M,P,O-Xylene		mg/L	0.30	0.308	102	85 - 115	5/24/02

CCV (1)

QCBatch: QC20535

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	232	93	75 - 125	5/28/02

CCV (2)

QCBatch: QC20535

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	229	91	75 - 125	5/28/02

ICV (1)

QCBatch: QC20535

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	232	93	75 - 125	5/28/02

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD2052419

Company Name: BNC ENVIRONMENTAL
Phone #: 915/686-0086
Address: (Street, City, Zip) MIDLAND
Fax #: 915/686-0186
Contact Person: CRAIG ESCHBERGER
Invoice to: (If different from above) S LELL Lanny Wood HCR1 Box 89 Denver City, TX 79323
Project #: E-58 - Shell LC W09
Project Name: GRIZZEL CONNECTING
Project Location: EUNICE NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
197863	NW FLOOR 90'	1	4oz		X							X		5/23/02	15:45
64	NW-SW FLOOR	1	11		X							X		11	15:50
65	WEST WALL #2	1	11		X							X		11	15:55

MTBE 8021B/602	BTEX 8021B/602	TPH ~~418.1/TX1005~~ 8015 Modified DRO-GRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 3260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
	X	X														
	X	X														
	X	X														

Relinquished by:	Date: 5/23/02	Time: 17:45	Received by:
Relinquished by:	Date: 5/23	Time: 5:8	Received by:
Relinquished by:	Date:	Time:	Received at Laboratory by: Date: 5-24-02 Time: 10:00

Date: 5/23 Time: 5:40p

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp 2° °
Log-in Review MJ

REMARKS:
4/4 PP verbals 5/29/02
1/5 FIP

☐ Check If Special Reporting Limits Are Needed

Carrier # Greyhound 163-566-7781

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

Summary Report

Lanny Woods
Equiva Lanny Woods
HCR 1 Box 89
Denver City, Tx. 79323

Report Date: June 26, 2002

Order ID Number: A02062410

Project: E-58
TA Job Code: Grizzel Gathering
Casualty Code: E-58 LCW09
Project Location: Eunice,NM
Project Address:
BNC-Midland / Midland / Craig Eschberger

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
199910	EA E Wall Comp	Soil	6/22/02	13:35	6/22/02
199911	EA W Wall Comp.	Soil	6/22/02	13:40	6/22/02
199912	EA N Wall Comp.	Soil	6/22/02	13:45	6/22/02
199913	EA Floor Comp.	Soil	6/22/02	13:50	6/22/02
199914	EB E Wall Comp	Soil	6/22/02	14:00	6/22/02
199915	EB W Wall Comp	Soil	6/22/02	14:05	6/22/02
199916	EB N Wall Comp	Soil	6/22/02	14:10	6/22/02
199917	EB S Wall Comp	Soil	6/22/02	14:15	6/22/02
199918	EB Floor Comp	Soil	6/22/02	14:20	6/22/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX						TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	Test Comments	DRO	GRO
Sample - Field Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
199910 - EA E Wall Comp	<0.020	<0.020	<0.020	<0.020	<0.020	* [1]	778	4.99
199911 - EA W Wall Comp.	<0.010	0.0369	0.0102	0.0232	0.0703	-	186	2.71
199912 - EA N Wall Comp.	<0.020	0.109	0.0281	0.1638	0.301	* [2]	722	30.7
199913 - EA Floor Comp.	<0.010	0.0147	0.0154	0.0257	0.0558	-	568	13.9
199914 - EB E Wall Comp	<0.010	0.0153	0.017	0.0442	0.0765	-	973	7.18
199915 - EB W Wall Comp	<0.010	0.154	0.0274	0.0701	0.252	-	1340	12.5
199916 - EB N Wall Comp	<0.010	0.236	<0.010	<0.010	0.236	-	374	7.75
199917 - EB S Wall Comp	<0.020	0.203	<0.020	<0.020	0.203	* [3]	160	<2.00
199918 - EB Floor Comp	<0.010	0.0109	<0.010	0.0132	0.0241	-	<50.0	<1.00

[1]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.
[2]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.
[3]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.

This is only a summary. Please, refer to the complete report package for quality control data.

TRACEANALYSIS, INC.

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155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Lanny Woods
Equiva Lanny Woods
HCR 1 Box 89
Denver City, Tx. 79323

Report Date: June 26, 2002

Order ID Number: A02062410

Project: E-58
TA Job Code: Grizzel Gathering
Casualty Code: E-58 LCW09
Project Location: Eunice,NM
BNC-Midland / Midland / Craig Eschberger

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
199910	EA E Wall Comp	Soil	6/22/02	13:35	6/22/02
199911	EA W Wall Comp.	Soil	6/22/02	13:40	6/22/02
199912	EA N Wall Comp.	Soil	6/22/02	13:45	6/22/02
199913	EA Floor Comp.	Soil	6/22/02	13:50	6/22/02
199914	EB E Wall Comp	Soil	6/22/02	14:00	6/22/02
199915	EB W Wall Comp	Soil	6/22/02	14:05	6/22/02
199916	EB N Wall Comp	Soil	6/22/02	14:10	6/22/02
199917	EB S Wall Comp	Soil	6/22/02	14:15	6/22/02
199918	EB Floor Comp	Soil	6/22/02	14:20	6/22/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 199910 - EA E Wall Comp

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		<0.020	mg/Kg	20	0.001
Ethylbenzene		<0.020	mg/Kg	20	0.001
M,P,O-Xylene		<0.020	mg/Kg	20	0.001
Total BTEX		<0.020	mg/Kg	20	0.001
Test Comments	[1]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.988	mg/Kg	20	1	99	70 - 130
4-BFB		0.934	mg/Kg	20	1	93	70 - 130

Sample: 199910 - EA E Wall Comp

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		778	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		195	mg/Kg	10	150	130	70 - 130

Sample: 199910 - EA E Wall Comp

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		4.99	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.13	mg/Kg	20	0.10	113	70 - 130
4-BFB		0.864	mg/Kg	20	0.10	86	70 - 130

[1]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.

Sample: 199911 - EA W Wall Comp.

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		0.0369	mg/Kg	10	0.001
Ethylbenzene		0.0102	mg/Kg	10	0.001
M,P,O-Xylene		0.0232	mg/Kg	10	0.001
Total BTEX		0.0703	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.906	mg/Kg	10	1	91	70 - 130
4-BFB		0.839	mg/Kg	10	1	84	70 - 130

Sample: 199911 - EA W Wall Comp.

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		186	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		157	mg/Kg	1	150	105	70 - 130

Sample: 199911 - EA W Wall Comp.

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		2.71	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.787	mg/Kg	10	0.10	79	70 - 130
4-BFB		0.768	mg/Kg	10	0.10	77	70 - 130

Sample: 199912 - EA N Wall Comp.

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		0.109	mg/Kg	20	0.001

Continued ....

... *Continued* Sample: 199912 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		0.0281	mg/Kg	20	0.001
M,P,O-Xylene		0.1638	mg/Kg	20	0.001
Total BTEX		0.301	mg/Kg	20	0.001
Test Comments	[2]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.928	mg/Kg	20	1	93	70 - 130
4-BFB		0.938	mg/Kg	20	1	94	70 - 130

Sample: 199912 - EA N Wall Comp.

Analysis: TPH DRO | Analytical Method: Mod. 8015B | QC Batch: QC21368 | Date Analyzed: 6/25/02
Analyst: MM | Preparation Method: 3550 B | Prep Batch: PB20301 | Date Prepared: 6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		722	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[3]	340	mg/Kg	10	150	226	70 - 130

Sample: 199912 - EA N Wall Comp.

Analysis: TPH GRO | Analytical Method: 8015B | QC Batch: QC21330 | Date Analyzed: 6/24/02
Analyst: CG | Preparation Method: 5035 | Prep Batch: PB20269 | Date Prepared: 6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		30.7	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.934	mg/Kg	20	0.10	93	70 - 130
4-BFB	[4]	1.85	mg/Kg	20	0.10	185	70 - 130

Sample: 199913 - EA Floor Comp.

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC21329 | Date Analyzed: 6/24/02
Analyst: CG | Preparation Method: S 5035 | Prep Batch: PB20269 | Date Prepared: 6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		0.0147	mg/Kg	10	0.001

Continued ...

[2]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.
[3]Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.
[4]High surrogate recovery due to peak interference.

... *Continued* Sample: 199913 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		0.0154	mg/Kg	10	0.001
M,P,O-Xylene		0.0257	mg/Kg	10	0.001
Total BTEX		0.0558	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.925	mg/Kg	10	1	92	70 - 130
4-BFB		0.848	mg/Kg	10	1	85	70 - 130

Sample: 199913 - EA Floor Comp.

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		568	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		190	mg/Kg	10	150	127	70 - 130

Sample: 199913 - EA Floor Comp.

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		13.9	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.965	mg/Kg	10	0.10	96	70 - 130
4-BFB		1.10	mg/Kg	10	0.10	110	70 - 130

Sample: 199914 - EB E Wall Comp

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		0.0153	mg/Kg	10	0.001
Ethylbenzene		0.017	mg/Kg	10	0.001
M,P,O-Xylene		0.0442	mg/Kg	10	0.001
Total BTEX		0.0765	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[5]	0.681	mg/Kg	10	1	68	70 - 130
4-BFB	[6]	0.660	mg/Kg	10	1	66	70 - 130

Sample: 199914 - EB E Wall Comp

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		973	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[7]	353	mg/Kg	10	150	235	70 - 130

Sample: 199914 - EB E Wall Comp

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		7.18	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[8]	0.576	mg/Kg	10	0.10	58	70 - 130
4-BFB		0.732	mg/Kg	10	0.10	73	70 - 130

Sample: 199915 - EB W Wall Comp

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		0.154	mg/Kg	10	0.001
Ethylbenzene		0.0274	mg/Kg	10	0.001
M,P,O-Xylene		0.0701	mg/Kg	10	0.001
Total BTEX		0.252	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.937	mg/Kg	10	1	94	70 - 130

Continued ...

[5]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[6]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[7]Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.
[8]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-BFB		0.810	mg/Kg	10	1	81	70 - 130

Sample: 199915 - EB W Wall Comp

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		1340	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[9]	393	mg/Kg	10	150	262	70 - 130

Sample: 199915 - EB W Wall Comp

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		12.5	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.11	mg/Kg	10	0.10	111	70 - 130
4-BFB		1.15	mg/Kg	10	0.10	115	70 - 130

Sample: 199916 - EB N Wall Comp

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		0.236	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		0.236	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.801	mg/Kg	10	1	80	70 - 130
4-BFB	[10]	0.663	mg/Kg	10	1	66	70 - 130

[9]Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.
[10]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Sample: 199916 - EB N Wall Comp

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		374	mg/Kg	5	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[11]	234	mg/Kg	5	150	156	70 - 130

Sample: 199916 - EB N Wall Comp

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		7.75	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[12]	0.586	mg/Kg	10	0.10	59	70 - 130
4-BFB		0.714	mg/Kg	10	0.10	71	70 - 130

Sample: 199917 - EB S Wall Comp

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		0.203	mg/Kg	20	0.001
Ethylbenzene		<0.020	mg/Kg	20	0.001
M,P,O-Xylene		<0.020	mg/Kg	20	0.001
Total BTEX		0.203	mg/Kg	20	0.001
Test Comments	[13]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.833	mg/Kg	20	1	83	70 - 130
4-BFB		0.783	mg/Kg	20	1	78	70 - 130

Sample: 199917 - EB S Wall Comp

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

[11]Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.
[12]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[13]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.

Param	Flag	Result	Units	Dilution	RDL
DRO		160	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		160	mg/Kg	1	150	107	70 - 130

Sample: 199917 - EB S Wall Comp

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<2.00	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[14]	0.674	mg/Kg	20	0.10	67	70 - 130
4-BFB	[15]	0.625	mg/Kg	20	0.10	62	70 - 130

Sample: 199918 - EB Floor Comp

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21329	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		0.0109	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		0.0132	mg/Kg	10	0.001
Total BTEX		0.0241	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.958	mg/Kg	10	1	96	70 - 130
4-BFB		0.859	mg/Kg	10	1	86	70 - 130

Sample: 199918 - EB Floor Comp

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21368	Date Analyzed:	6/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20301	Date Prepared:	6/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

[14]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[15]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		145	mg/Kg	1	150	97	70 - 130

Sample: 199918 - EB Floor Comp

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21330	Date Analyzed:	6/24/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20269	Date Prepared:	6/24/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.00	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.806	mg/Kg	10	0.10	81	70 - 130
4-BFB		0.822	mg/Kg	10	0.10	82	70 - 130

Quality Control Report
Method Blank

Method Blank

QCBatch: QC21329

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.10	mg/Kg	10	1	110	70 - 130
4-BFB		1.01	mg/Kg	10	1	101	70 - 130

Method Blank

QCBatch: QC21330

Param	Flag	Results	Units	Reporting Limit
GRO		<1	mg/Kg	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.07	mg/Kg	10	0.10	107	70 - 130
4-BFB		0.943	mg/Kg	10	0.10	94	70 - 130

Method Blank

QCBatch: QC21368

Param	Flag	Results	Units	Reporting Limit
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		152	mg/Kg	1	150	101	70 - 130

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC21329

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	1.12	1.1	mg/Kg	10	1	<0.010	112	1	70 - 130	20
Benzene	1.06	1.04	mg/Kg	10	1	<0.010	106	1	70 - 130	20
Toluene	1.03	1.02	mg/Kg	10	1	<0.010	103	0	70 - 130	20
Ethylbenzene	1	0.998	mg/Kg	10	1	<0.010	100	0	70 - 130	20
M,P,O-Xylene	2.92	2.91	mg/Kg	10	3	<0.010	97	0	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	1.07	1.07	mg/Kg	10	1	107	107	70 - 130
4-BFB	1.01	1.01	mg/Kg	10	1	101	101	70 - 130

Laboratory Control Spikes

QCBatch: QC21330

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	< 1	< 1	mg/Kg	10	1	<1	91	0	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.91	1.03	mg/Kg	10	0.10	91	103	70 - 130
4-BFB	0.918	0.918	mg/Kg	10	0.10	92	92	70 - 130

Laboratory Control Spikes

QCBatch: QC21368

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	241	232	mg/Kg	1	250	<50.0	96	3	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	143	145	mg/Kg	1	150	95	97	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC21330

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	1.03	< 1	mg/Kg	10	1	<1.00	103	11	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	[16] 0.323	1.03	mg/Kg	10	0.10	32	103	70 - 130
4-BFB	[17] 0.368	0.754	mg/Kg	10	0.10	37	75	70 - 130

Matrix Spikes

QCBatch: QC21368

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	[18] <500	[19] <500	mg/Kg	10	250	160	-64	-200	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
n-Triacontane	166	314	mg/Kg	10	150	11	21	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC21329

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.107	107	85 - 115	6/24/02
Benzene		mg/L	0.10	0.105	105	85 - 115	6/24/02
Toluene		mg/L	0.10	0.103	103	85 - 115	6/24/02
Ethylbenzene		mg/L	0.10	0.101	101	85 - 115	6/24/02
M,P,O-Xylene		mg/L	0.30	0.294	98	85 - 115	6/24/02

CCV (2)

QCBatch: QC21329

[16] Low surrogate recovery due to prep. ICV, CCV show the method to be in control.
[17] Low surrogate recovery due to prep. ICV, CCV show the method to be in control.
[18] MS and MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.
[19] MS and MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.103	103	85 - 115	6/24/02
Benzene		mg/L	0.10	0.102	102	85 - 115	6/24/02
Toluene		mg/L	0.10	0.0993	99	85 - 115	6/24/02
Ethylbenzene		mg/L	0.10	0.098	98	85 - 115	6/24/02
M,P,O-Xylene		mg/L	0.30	0.284	94	85 - 115	6/24/02

ICV (1) QCBatch: QC21329

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.106	106	85 - 115	6/24/02
Benzene		mg/L	0.10	0.105	105	85 - 115	6/24/02
Toluene		mg/L	0.10	0.102	102	85 - 115	6/24/02
Ethylbenzene		mg/L	0.10	0.099	99	85 - 115	6/24/02
M,P,O-Xylene		mg/L	0.30	0.288	96	85 - 115	6/24/02

CCV (1) QCBatch: QC21330

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.931	93	85 - 115	6/24/02

CCV (2) QCBatch: QC21330

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.15	115	85 - 115	6/24/02

ICV (1) QCBatch: QC21330

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.14	114	85 - 115	6/24/02

CCV (1) QCBatch: QC21368

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	256	102	75 - 125	6/25/02

CCV (2)

QCBatch: QC21368

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	279	111	75 - 125	6/25/02

CCV (3)

QCBatch: QC21368

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	239	95	75 - 125	6/25/02

ICV (1)

QCBatch: QC21368

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	231	92	75 - 125	6/25/02

Equiva Services, LLC

TraceAnalysis, Inc.

6701 Aberdeen Ave, Ste 9
Lubbock, Texas 79424
Tel (806) 794-1296
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1 (800) 378-1296

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0206 2410

Consulting Company Name: BNC ENVIRONMENTAL
Phone #: 915/686-0086
Consulting Company Address: MIDLAND
Fax #: 915/686-0186
Consulting Contact: CRAIG ESCHBERGER
Equiva Contact: LAMAR STOKES / LANNY WOOD
Location/SAP: ~~ESUNICE~~ ~~LCW09~~ GRIZZEL GATHERING
Incident # LCW09
Location Address: EUNICE NM
Project Task:
Consultant Job#: E58
Sampler Signature: Craig Eschberger

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO_3	$NaHSO_4$	H_2SO_4	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/~~602~~	TPH ~~418.1/TX1005~~ 8015 modified (DRO-GRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
1990 10	EA E WALL COMP	1	402		X							X		6/21	13:35		X	X												72	
11	EA W WALL COMP	1	"		X							X			13:40		X	X													
12	EA N WALL COMP	1	"		X							X			13:45		X	X													
13	EA FLOOR COMP	1	"		X							X			13:50		X	X													
14	EB E WALL COMP	1	402		X							X			14:00		X	X													
15	EB W WALL COMP	1	"		X							X			14:05		X	X													
16	EB N WALL COMP	1	"		X							X			14:10		X	X													
17	EB S WALL COMP	1	"		X							X			14:15		X	X													
18	EB FLOOR COMP	1	"		Y							Y			14:20		X	X													

Relinquished by: Craig Eschberger Date: 6/21/02 Time: 1700
Received by: Helen Shelton Date: 6/21/02 Time: 1700
Relinquished by: Helen Shelton Date: 6/21/02 Time: 1830
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: Time:
6/22/02 10:05

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 5 °
Log-in Review MT

REMARKS: Need Results by 6/26/02
☐ Check if special reporting limits needed.
New Mexico Methods - 6/27 FP
*Invoice to Shell - Lanny Wood
HCR1 Box 89
Denver City, Tx 79323
Carrier # Greyhound FB 163566707

9 samples - HS

FAX Results to LAMAR Stokes 281-922-9094

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of COC

ORIGINAL COPY

Summary Report

Craig Eschberger
BNC-Midland
P.O. Box 1271
Midland, Tx. 79702

Report Date: July 16, 2002

Order ID Number: A02071234

Project Number: E-58 LCW09
Project Name: Grizzel Gathering
Project Location: Eunice,NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
201498	LIP 12'	Soil	7/11/02	:	7/12/02
201499	ESW 10'	Soil	7/11/02	:	7/12/02
201500	NWSW 11'	Soil	7/11/02	:	7/12/02
201501	WSW 11'	Soil	7/11/02	:	7/12/02
201502	NC SW 9'	Soil	7/11/02	:	7/12/02
201503	SSW 9'	Soil	7/11/02	:	7/12/02
201504	Duplicate	Soil	7/11/02	:	7/12/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH DRO	TPH GRO
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	DRO (ppm)	GRO (ppm)
201498 - LIP 12'	<0.010	<0.010	<0.010	<0.010	<0.010	<50.0	<1
201499 - ESW 10'	<0.010	<0.010	<0.010	<0.010	<0.010	<50.0	<1
201500 - NWSW 11'	<0.020	<0.020	<0.020	<0.020	<0.020	5240	235
201501 - WSW 11'	<0.010	<0.010	0.0125	0.0148	0.0273	<50.0	15.3
201502 - NC SW 9'	<0.010	<0.010	0.0135	0.0943	0.108	<50.0	3.57
201503 - SSW 9'	<0.010	<0.010	0.0125	<0.010	0.0125	<50.0	<1
201504 - Duplicate	<0.020	<0.020	0.723	1.28	2.00	2940	187

This is only a summary. Please, refer to the complete report package for quality control data.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Craig Eschberger
BNC-Midland
P.O. Box 1271
Midland, Tx. 79702

Report Date: July 16, 2002

Order ID Number: A02071234

Project Number: E-58 LCW09
Project Name: Grizzel Gathering
Project Location: Eunice,NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
201498	LIP 12'	Soil	7/11/02	:	7/12/02
201499	ESW 10'	Soil	7/11/02	:	7/12/02
201500	NWSW 11'	Soil	7/11/02	:	7/12/02
201501	WSW 11'	Soil	7/11/02	:	7/12/02
201502	NC SW 9'	Soil	7/11/02	:	7/12/02
201503	SSW 9'	Soil	7/11/02	:	7/12/02
201504	Duplicate	Soil	7/11/02	:	7/12/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 201498 - LIP 12'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21860	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		<0.010	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.14	mg/Kg	10	1	114	70 - 130
4-BFB		1.06	mg/Kg	10	1	106	70 - 130

Sample: 201498 - LIP 12'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21924	Date Analyzed:	7/15/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20749	Date Prepared:	7/15/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		154	mg/Kg	1	150	103	70 - 130

Sample: 201498 - LIP 12'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21861	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[1]	1.52	mg/Kg	10	0.10	152	70 - 130
4-BFB		0.861	mg/Kg	10	0.10	85	70 - 130

[1]High TFT due to peak interference. BFB acceptable. Result acceptable.

Sample: 201499 - ESW 10'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21860	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		<0.010	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.08	mg/Kg	10	1	108	70 - 130
4-BFB		1.01	mg/Kg	10	1	101	70 - 130

Sample: 201499 - ESW 10'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21924	Date Analyzed:	7/15/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20749	Date Prepared:	7/15/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		152	mg/Kg	1	150	101	70 - 130

Sample: 201499 - ESW 10'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21861	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[2]	1.41	mg/Kg	10	0.10	141	70 - 130
4-BFB		0.821	mg/Kg	10	0.10	82	70 - 130

Sample: 201500 - NWSW 11'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21860	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Continued ...

[2]High TFT due to peak interference.

... *Continued* Sample: 201500 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		<0.020	mg/Kg	20	0.001
Ethylbenzene		<0.020	mg/Kg	20	0.001
M,P,O-Xylene		<0.020	mg/Kg	20	0.001
Total BTEX		<0.020	mg/Kg	20	0.001
Test Comments	[3]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.918	mg/Kg	20	1	92	70 - 130
4-BFB	[4]	6.73	mg/Kg	20	1	673	70 - 130

Sample: 201500 - NWSW 11'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21924	Date Analyzed:	7/15/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20749	Date Prepared:	7/15/02

Param	Flag	Result	Units	Dilution	RDL
DRO		5240	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[5]	464	mg/Kg	10	150	309	70 - 130

Sample: 201500 - NWSW 11'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21861	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
GRO		235	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[6]	0.636	mg/Kg	20	0.10	64	70 - 130
4-BFB	[7]	16.8	mg/Kg	20	0.10	1690	70 - 130

Sample: 201501 - WSW 11'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21860	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

[3]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.01183 which is the MDL.
[4]High surrogate recovery due to peak interference.
[5]Surrogate out of recovery limits due to peak inteference. LCS, ICV, and CCV show the process is in control.
[6]Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[7]High surrogate recovery due to peak interference.

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		0.0125	mg/Kg	10	0.001
M,P,O-Xylene		0.0148	mg/Kg	10	0.001
Total BTEX		0.0273	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.10	mg/Kg	10	1	110	70 - 130
4-BFB		1.06	mg/Kg	10	1	106	70 - 130

Sample: 201501 - WSW 11'

Analysis: TPH DRO | Analytical Method: Mod. 8015B | QC Batch: QC21924 | Date Analyzed: 7/15/02
Analyst: MM | Preparation Method: 3550 B | Prep Batch: PB20749 | Date Prepared: 7/15/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		156	mg/Kg	1	150	104	70 - 130

Sample: 201501 - WSW 11'

Analysis: TPH GRO | Analytical Method: 8015B | QC Batch: QC21861 | Date Analyzed: 7/12/02
Analyst: CG | Preparation Method: 5035 | Prep Batch: PB20692 | Date Prepared: 7/12/02

Param	Flag	Result	Units	Dilution	RDL
GRO		15.3	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[8]	1.37	mg/Kg	10	0.10	137	70 - 130
4-BFB		1.12	mg/Kg	10	0.10	115	70 - 130

Sample: 201502 - NC SW 9'

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC21860 | Date Analyzed: 7/12/02
Analyst: CG | Preparation Method: S 5035 | Prep Batch: PB20692 | Date Prepared: 7/12/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		0.0135	mg/Kg	10	0.001
M,P,O-Xylene		0.0943	mg/Kg	10	0.001

Continued ...

[8]High surrogate due to peak interference.

... Continued Sample: 201502 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Total BTEX		0.108	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.983	mg/Kg	10	1	98	70 - 130
4-BFB		0.948	mg/Kg	10	1	95	70 - 130

Sample: 201502 - NC SW 9'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21924	Date Analyzed:	7/15/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20749	Date Prepared:	7/15/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		152	mg/Kg	1	150	101	70 - 130

Sample: 201502 - NC SW 9'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21861	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
GRO		3.57	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[9]	1.35	mg/Kg	10	0.10	135	70 - 130
4-BFB		0.810	mg/Kg	10	0.10	81	70 - 130

Sample: 201503 - SSW 9'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21860	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		0.0125	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		0.0125	mg/Kg	10	0.001

[9]High surrogate due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.984	mg/Kg	10	1	98	70 - 130
4-BFB		0.882	mg/Kg	10	1	88	70 - 130

Sample: 201503 - SSW 9'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21924	Date Analyzed:	7/15/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20749	Date Prepared:	7/15/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		154	mg/Kg	1	150	103	70 - 130

Sample: 201503 - SSW 9'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21861	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[10]	1.34	mg/Kg	10	0.10	134	70 - 130
4-BFB		0.748	mg/Kg	10	0.10	75	70 - 130

Sample: 201504 - Duplicate

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC21860	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.020	mg/Kg	20	0.001
Toluene		<0.020	mg/Kg	20	0.001
Ethylbenzene		0.723	mg/Kg	20	0.001
M,P,O-Xylene		1.28	mg/Kg	20	0.001
Total BTEX		2.00	mg/Kg	20	0.001
Test Comments	[11]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.00	mg/Kg	20	1	100	70 - 130

Continued ...

[10] High surrogate due to peak interference.

[11] Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.01183 which is the MDL.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-BFB	[12]	5.41	mg/Kg	20	1	541	70 - 130

Sample: 201504 - Duplicate

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC21924	Date Analyzed:	7/15/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB20749	Date Prepared:	7/15/02

Param	Flag	Result	Units	Dilution	RDL
DRO		2940	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[13]	407	mg/Kg	10	150	271	70 - 130

Sample: 201504 - Duplicate

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC21861	Date Analyzed:	7/12/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB20692	Date Prepared:	7/12/02

Param	Flag	Result	Units	Dilution	RDL
GRO		187	mg/Kg	20	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.929	mg/Kg	20	0.10	93	70 - 130
4-BFB	[14]	21.4	mg/Kg	20	0.10	214	70 - 130

[12]High surrogate recovery due to peak interference.
[13]Surrogate out of recovery limits due to peak inteference. LCS, ICV, and CCV show the process is in control.
[14]High surrogate recovery due to peak interference.

Quality Control Report
Method Blank

Method Blank

QCBatch: QC21860

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.10	mg/Kg	10	1	110	70 - 130
4-BFB		1.04	mg/Kg	10	1	104	70 - 130

Method Blank

QCBatch: QC21861

Param	Flag	Results	Units	Reporting Limit
GRO		<1	mg/Kg	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.02	mg/Kg	10	0.10	102	70 - 130
4-BFB		0.844	mg/Kg	10	0.10	84	70 - 130

Method Blank

QCBatch: QC21924

Param	Flag	Results	Units	Reporting Limit
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		157	mg/Kg	1	150	104	70 - 130

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC21860

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	1.06	0.797	mg/Kg	10	1	<0.010	106	28	70 - 130	20
Benzene	1.05	1.05	mg/Kg	10	1	<0.010	105	0	70 - 130	20
Toluene	1.04	1.04	mg/Kg	10	1	<0.010	104	0	70 - 130	20
Ethylbenzene	1.04	1.02	mg/Kg	10	1	<0.010	104	1	70 - 130	20
M,P,O-Xylene	3.01	2.87	mg/Kg	10	3	<0.010	100	4	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	1.04	1.06	mg/Kg	10	1	104	106	70 - 130
4-BFB	1.02	0.7	mg/Kg	10	1	102	70	70 - 130

Laboratory Control Spikes

QCBatch: QC21861

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	10.4	9.42	mg/Kg	10	1	<1	104	9	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	1.07	0.968	mg/Kg	10	0.10	107	97	70 - 130
4-BFB	0.848	0.832	mg/Kg	10	0.10	85	83	70 - 130

Laboratory Control Spikes

QCBatch: QC21924

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	278	279	mg/Kg	1	250	<50.0	111	0	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	162	162	mg/Kg	1	150	108	108	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC21860

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.934	0.935	mg/Kg	10	1	<0.010	93	0	70 - 130	20
Toluene	0.936	0.947	mg/Kg	10	1	<0.010	93	1	70 - 130	20
Ethylbenzene	0.959	0.97	mg/Kg	10	1	0.0102	94	1	70 - 130	20
M,P,O-Xylene	2.75	2.78	mg/Kg	10	3	0.0124	91	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.94	0.944	mg/Kg	10	1	94	94	70 - 130
4-BFB	0.916	0.928	mg/Kg	10	1	91	92	70 - 130

Matrix Spikes

QCBatch: QC21861

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	10.9	11.5	mg/Kg	10	1	<1	109	5	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	1.17	1.17	mg/Kg	10	0.10	117	117	70 - 130
4-BFB	0.805	0.864	mg/Kg	10	0.10	80	86	70 - 130

Matrix Spikes

QCBatch: QC21924

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	236	184	mg/Kg	1	250	<50.0	94	25	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
n-Triacontane	145	153	mg/Kg	1	150	97	102	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC21860

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.104	104	85 - 115	7/12/02
Benzene		mg/L	0.10	0.105	105	85 - 115	7/12/02
Toluene		mg/L	0.10	0.105	105	85 - 115	7/12/02
Ethylbenzene		mg/L	0.10	0.104	104	85 - 115	7/12/02
M,P,O-Xylene		mg/L	0.30	0.298	99	85 - 115	7/12/02

CCV (2)

QCBatch: QC21860

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.102	102	85 - 115	7/12/02
Benzene		mg/L	0.10	0.103	103	85 - 115	7/12/02
Toluene		mg/L	0.10	0.102	102	85 - 115	7/12/02
Ethylbenzene		mg/L	0.10	0.102	102	85 - 115	7/12/02
M,P,O-Xylene		mg/L	0.30	0.293	97	85 - 115	7/12/02

ICV (1)

QCBatch: QC21860

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0764	76	85 - 115	7/12/02
Benzene		mg/L	0.10	0.105	105	85 - 115	7/12/02
Toluene		mg/L	0.10	0.104	104	85 - 115	7/12/02
Ethylbenzene		mg/L	0.10	0.101	101	85 - 115	7/12/02
M,P,O-Xylene		mg/L	0.30	0.280	93	85 - 115	7/12/02

CCV (1)

QCBatch: QC21861

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.08	108	85 - 115	7/12/02

ICV (1)

QCBatch: QC21861

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.886	88	85 - 115	7/12/02

CCV (1)

QCBatch: QC21924

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	269	108	75 - 125	7/15/02

CCV (2)

QCBatch: QC21924

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	265	106	75 - 125	7/15/02

CCV (3)

QCBatch: QC21924

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	267	106	75 - 125	7/15/02

ICV (1)

QCBatch: QC21924

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	263	105	75 - 125	7/15/02

Equiva Services, LLC

Page 1 of 1

TraceAnalysis, Inc.

6701 Aberdeen Ave, Ste 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0207334

Consulting Company Name: BNC Environmental
Phone #: 915/686-6056
Consulting Company Address: Midland
Fax #: 915/686-0186
Consulting Contact: Craig Eschberger
Equiva Contact: Lamar Stokes
Location/SAP: Grizzel Gatherings
Incident #: NA
Location Address: Eunice New Mexico
Project Task:
Consultant Job#: E-58
Sampler Signature: Craig Eschberger

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO_3	$NaHSO_4$	H_2SO_4	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH ~~418.1~~/TX1005 Modified SW5 DRO-GRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
201498	UP 12'	1	4oz		X							X		7/11/02			X	X													
99	ESW 10'	1	"		X							X		"			X	X													
SD0	NWSW 11'	1	"		X							X		"			X	X													
SD1	WSW 11'	1	"		X							X		"			X	X													
SD2	NC SW 9'	1	"		X							X		"			X	X													
SD3	SSW 9'	1	"		X							X		"			X	X													
SD4	Duplicate	1	"		X							X		"			X	X													

Relinquished by: Craig Eschberger Date: 7/11/02 Time: 1635
Received by: Helen Shelton Date: 7/11/02 Time: 1635
Relinquished by: Helen Shelton Date: 7/11/02 Time: 1830
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: Time:

LAB USE ONLY
Intact Y/N
Headspace Y/N
Temp °
Log-in Review

REMARKS:
☐ Check if special reporting limits needed.
Need Results by 7/17/02
*New Mexico methods
7 samples - HS
7/12/02

Carrier # Hand Delivered GLI 1635566-522-9

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of COC

ORIGINAL COPY

Summary Report

Lanny Woods
Equiva Lanny Woods
HCR 1 Box 89
Denver City, Tx. 79323

Report Date: June 26, 2002

Order ID Number: A02062410

Project: E-58
TA Job Code: Grizzel Gathering
Casualty Code: E-58 LCW09
Project Location: Eunice,NM
Project Address:
BNC-Midland / Midland / Craig Eschberger

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
199910	EA E Wall Comp	Soil	6/22/02	13:35	6/22/02
199911	EA W Wall Comp.	Soil	6/22/02	13:40	6/22/02
199912	EA N Wall Comp.	Soil	6/22/02	13:45	6/22/02
199913	EA Floor Comp.	Soil	6/22/02	13:50	6/22/02
199914	EB E Wall Comp	Soil	6/22/02	14:00	6/22/02
199915	EB W Wall Comp	Soil	6/22/02	14:05	6/22/02
199916	EB N Wall Comp	Soil	6/22/02	14:10	6/22/02
199917	EB S Wall Comp	Soil	6/22/02	14:15	6/22/02
199918	EB Floor Comp	Soil	6/22/02	14:20	6/22/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX						TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	Test Comments	DRO	GRO
Sample - Field Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
199910 - EA E Wall Comp	<0.020	<0.020	<0.020	<0.020	<0.020	* [1]	778	4.99
199911 - EA W Wall Comp.	<0.010	0.0369	0.0102	0.0232	0.0703	-	186	2.71
199912 - EA N Wall Comp.	<0.020	0.109	0.0281	0.1638	0.301	* [2]	722	30.7
199913 - EA Floor Comp.	<0.010	0.0147	0.0154	0.0257	0.0558	-	568	13.9
199914 - EB E Wall Comp	<0.010	0.0153	0.017	0.0442	0.0765	-	973	7.18
199915 - EB W Wall Comp	<0.010	0.154	0.0274	0.0701	0.252	-	1340	12.5
199916 - EB N Wall Comp	<0.010	0.236	<0.010	<0.010	0.236	-	374	7.75
199917 - EB S Wall Comp	<0.020	0.203	<0.020	<0.020	0.203	* [3]	160	<2.00
199918 - EB Floor Comp	<0.010	0.0109	<0.010	0.0132	0.0241	-	<50.0	<1.00

[1]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.
[2]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.
[3]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concenntration of less than 0.00473 which is the MDL.

This is only a summary. Please, refer to the complete report package for quality control data.

Summary Report

Craig Eschberger
BNC-Midland
P.O. Box 1271
Midland, Tx. 79702

Report Date: July 26, 2002

Order ID Number: A02072510

Project Number: E-58 LCW09
Project Name: Grizzel Gathering
Project Location: Eunice,NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
202709	NSW2 @ 11'	Soil	7/24/02	11:00	7/25/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample - Field Code	TPH DRO DRO (ppm)	TPH GRO GRO (ppm)
202709 - NSW2 @ 11'	<50.0	<1

This is only a summary. Please, refer to the complete report package for quality control data.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Craig Eschberger
BNC-Midland
P.O. Box 1271
Midland, Tx. 79702

Report Date: July 26, 2002

Order ID Number: A02072510

Project Number: E-58 LCW09
Project Name: Grizzel Gathering
Project Location: Eunice,NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
202709	NSW2 @ 11'	Soil	7/24/02	11:00	7/25/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 202709 - NSW2 @ 11'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC22256	Date Analyzed:	7/25/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB21023	Date Prepared:	7/25/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<50.0	mg/Kg	1	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		162	mg/Kg	1	150	108	70 - 130

Sample: 202709 - NSW2 @ 11'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC22240	Date Analyzed:	7/25/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB21008	Date Prepared:	7/25/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<1	mg/Kg	10	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.71	mg/Kg	10	0.10	71	70 - 130
4-BFB		0.87	mg/Kg	10	0.10	87	70 - 130

Quality Control Report
Method Blank

Method Blank

QCBatch: QC22240

Param	Flag	Results	Units	Reporting Limit
GRO		<1	mg/Kg	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.949	mg/Kg	10	0.10	95	70 - 130
4-BFB		0.975	mg/Kg	10	0.10	97	70 - 130

Method Blank

QCBatch: QC22256

Param	Flag	Results	Units	Reporting Limit
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		170	mg/Kg	1	150	113	70 - 130

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC22240

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	11.1	10.4	mg/Kg	10	1	<1	111	6	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	1.03	1.04	mg/Kg	10	0.10	103	104	70 - 130
4-BFB	1.07	1.07	mg/Kg	10	0.10	107	107	70 - 130

Laboratory Control Spikes

QCBatch: QC22256

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	312	300	mg/Kg	1	250	<50.0	125	4	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	170	162	mg/Kg	1	150	1133	1080	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QCBatch: QC22240

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.991	99	85 - 115	7/25/02

ICV (1) QCBatch: QC22240

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.08	108	85 - 115	7/25/02

CCV (1) QCBatch: QC22256

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	297	119	75 - 125	7/25/02

ICV (1) QCBatch: QC22256

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	301	120	75 - 125	7/25/02

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0207250910

Company Name: BNC ENVIRONMENTAL
Phone #: (915) 686-0086
Address: (Street, City, Zip) MIDLAND, TX
Fax #: (915) 686-0186
Contact Person: CRAIG ESCHBERGER
Invoice to: (If different from above)
Project #: E58
Project Name: GNZZEL GATHERING
Project Location: EUNICE, NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
20219	NSW2 @ 11'	1			X							X		07/24	11:00

MTBE 8021B/602	BTEX 8021B/602	TPH ~~418.1~~ Modified 8015 DRO/GRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
		✓													24	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
ERIC ESCHBERGER	07/24/02	1800	Helen Shelton	7/24/02	1800
Helen Shelton	7/24/02	1830			
			Received at Laboratory by: Vicki Olvera	7-25-02	10:00

LAB USE ONLY
Intact (Y) N
Headspace Y / N
Temp -1 °
Log-in Review MM

REMARKS: R+E 7/29/02 V 7-26
RUSH 24 HR.
NEED RESULTS NO LATER THAN NOON, SATURDAY
☐ Check If Special Reporting Limits Are Needed
Verbal Confirmation

Carrier # Greyhound

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 1 sample-HS

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