

1R - 143

REPORTS

DATE:

12/12/2000

**EQUIVA SERVICES, LLC
SHELL TANK BATTERY
EXCAVATION SITES 1, 2 AND 3
JIMMIE COOPER RANCH
MONUMENT, LEA COUNTY, NEW MEXICO**

December 12, 2000

Prepared for:

**EQUIVA SERVICES, LLC
PMB 174
269 CYPRESS WOOD
SPRING, TEXAS 77388**

Project ES-608

Prepared by:

**ENERCON SERVICES, INC.
306 West Wall, Suite 1312
Midland, Texas 79701
(915) 570-8726
(915) 684-7587 Fax**

RECEIVED

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~~DEC~~ 12 2001

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

December 12, 2000

Mr. Kyle Landreneau
Equiva Services LLC
28510-C Tomball Parkway, Suite 406
Tomball, Texas 77375

**RE: SUMMARY OF STATUS OF FIELD ACTIVITIES AT THREE SPILL SITES
LOCATED ADJACENT TO THE FORMER SHELL TANK BATTERY ON THE
JIMMIE COOPER RANCH IN MONUMENT, LEA COUNTY, NEW MEXICO**

Dear Mr. Landreneau,

The following report details the status of the above referenced three spill sites located in Lea County, New Mexico (see Figure 1 in Appendix A). As of this report, the three sites have been excavated/backfilled and the roads rebuilt.

SITE 1

From August 8 to August 18, 2000, soils were excavated from site 1 located adjacent to the former Shell Tank Battery (see photographs in Appendix B). A total of 3,276 cubic yards were removed from the site and transported to C & C Landfarm located in Monument, New Mexico (see Figures 2, Appendix A for excavation dimensions).

The site was ranked according to the New Mexico Oil Conservation District (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases*. Ranking is determined based on depth to groundwater, distance from water source/domestic wells, and distance to nearest surface water body. Based on these criteria, the following soil remediation action levels were set for the site:

Benzene (mg/Kg)	10
BTEX (mg/Kg)	50
TPH (mg/Kg)	100

While excavating the site on August 17, 2000, groundwater was encountered at 33 feet below ground level (bgl). A slight sheen was noted on the groundwater at this time. Ms. Donna Williams and Mr. William Olsen of the Hobbs/Santa Fe offices of the New Mexico Oil Conservation District (NMOCD) were informed immediately of the groundwater impact.

According to Ms. Williams, Equilon is responsible for installation of monitor wells to determine groundwater gradient direction along with vertical and horizontal extent of groundwater impacts at the site.

In addition to the groundwater, hydrocarbon-impacted soils were observed along the groundwater/soil contact at 33 feet bgl. These impacted soils extended south approximately 20 feet with an average thickness of two feet. At the request of the landowner, these hydrocarbon-impacted soils within the vadose zone were excavated and transported to the landfarm.

Confirmatory soil sampling of the completed site excavation was below the NMOCD action levels (see Table 1 in Appendix C and Laboratory Analysis in Appendix D). At the request of the NMOCD, the bottom sample was further analyzed for total chlorides. Analytical results were negligible.

Backfilling of the site commenced on August 18 and was completed on August 22, 2000. Soils from the surrounding overburden of Site 2 were utilized as backfill material for Site 1. A caliche road over Site 1 was completed on September 6, 2000.

SITE 2 (WESTPIT)

From July 17 to July 18, 2000, soils were excavated from the site (see photographs in Appendix B). A total of 210 cubic yards were removed from the site and transported to C & C Landfarm located in Monument, New Mexico (see Figures 3, Appendix A for excavation dimensions).

The site was ranked according to the New Mexico Oil Conservation District (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases*. Ranking is determined based on depth to groundwater, distance from water source/domestic wells, and distance to nearest surface water body. Based on these criteria, the following soil remediation action levels were set for the site:

Benzene (mg/Kg)	10
BTEX (mg/Kg)	50
TPH (mg/Kg)	100

Confirmatory soil sampling of the completed site excavation was below the NMOCD action levels (see Table 1 in Appendix C and Laboratory Analysis in Appendix D). At the request of the NMOCD, the bottom sample was further analyzed for total chlorides. Analytical results were negligible.

Subsequent approval for closure of the site was granted by Ms. Donna Williams of the NMOCD on July 21, 2000. Backfilling commenced and was completed on July 21, 2000.

No groundwater was encountered during excavation of this site.

SITES 2 (EASTPIT)

From July 18 to August 24, 2000, soils were excavated from the site (see photographs in Appendix B). A total of 9,814 cubic yards were removed from the site and transported to C & C Landfarm located in Monument, New Mexico (see Figures 4, Appendix A for excavation dimensions).

The site was ranked according to the New Mexico Oil Conservation District (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases*. Ranking is determined based on depth to groundwater, distance from water source/domestic wells, and distance to nearest surface water body. Based on these criteria, the following soil remediation action levels were set for the site:

Benzene (mg/Kg)	10
BTEX (mg/Kg)	50
TPH (mg/Kg)	100

While excavating the site on July 27, 2000, groundwater was encountered at 35 feet bgl. A smear of oil was noted on the groundwater at this time. Ms. Donna Williams and Mr. William Olsen of the Hobbs/Santa Fe offices of the NMOCD were informed immediately of the groundwater impact. Ms. Williams arrived at the site on July 27, 2000 to inspect the site and informed Equilon that monitor wells will need to be installed to determine groundwater gradient direction along with vertical and horizontal extent of groundwater impacts at the site.

In addition to the groundwater, hydrocarbon-impacted soils were observed along the groundwater/soil contact at 35 feet bgl. These impacted soils extended to the north approximately 30 feet and towards the west/southwest approximately 60 feet. Average thickness of the impacted soils was 3 feet. At the request of the landowner, these hydrocarbon-impacted soils within the vadose zone were excavated and transported to the landfarm.

Confirmatory soil sampling of the completed site excavation was below the NMOCD action levels (see Table 1 in Appendix C and Laboratory Analysis in Appendix D). At the request of the NMOCD, the bottom sample was further analyzed for total chlorides. Analytical results were negligible.

Backfilling of the site commenced on August 24 and was completed on September 6, 2000. Approximately 15,260 cubic yards of clean soil was transported from offsite and utilized as backfill material at the site.

SITE 3

From August 1 to August 7, 2000, soils were excavated from the site (see photographs in Appendix B). A total of 3,276 cubic yards were removed from the Jimmie Cooper Ranch side of the site and transported to C & C Landfarm located in Monument, New Mexico (see Figures 5, Appendix A for excavation dimensions). The soils were excavated to the west up to the State of

New Mexico Highway Department's property boundary. Ms. Donna Williams of the NMOCD granted permission to allow hydrocarbon-impacted soils along the west wall to remain in place, due to the excavations proximity to State Highway 8 (approximately 30 feet to the west) and possible destabilization of the road.

The site was ranked according to the New Mexico Oil Conservation District (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases*. Ranking is determined based on depth to groundwater, distance from water source/domestic wells, and distance to nearest surface water body. Based on these criteria, the following soil remediation action levels were set for the site:

Benzene (mg/Kg)	10
BTEX (mg/Kg)	50
TPH (mg/Kg)	100

While excavating the site on August 2, 2000, groundwater was encountered at 31 feet bgl. No evidence of soil staining or hydrocarbon impact to groundwater was noted. Ms. Donna Williams of the NMOCD was onsite August 2, and informed Equilon that no additional excavation will take place to the west due to the proximity to State Highway 8. In addition, she recommended that Equilon drill test holes adjacent to the leak site on the westside of State Highway 8 to determine the horizontal extent of the impact.

Confirmatory soil sampling of the completed site excavation was below the NMOCD action levels for the north, south, east and bottom samples. (see Table 1 in Appendix C and Laboratory Analysis in Appendix D). The west wall soil sample exceeded the NMOCD action levels for TPH with a result of 9,629 milligrams/kilogram. At the request of the NMOCD, the bottom sample was further analyzed for total chlorides. Analytical results were negligible.

Backfilling of the site commenced on August 8 and was completed on August 14, 2000. Approximately 784 cubic yards of clean soil was transported from offsite and utilized as backfill material at the site. The remainder of the excavation was backfilled with clean soils from the onsite surrounding dunes.

If you have any questions pertaining to the status of the eighteen sites or four landfarms, please contact Jeffrey Kindley at (915) 570-8726 or (915) 631-6591 or Charles Harlan at (972) 484-3854.

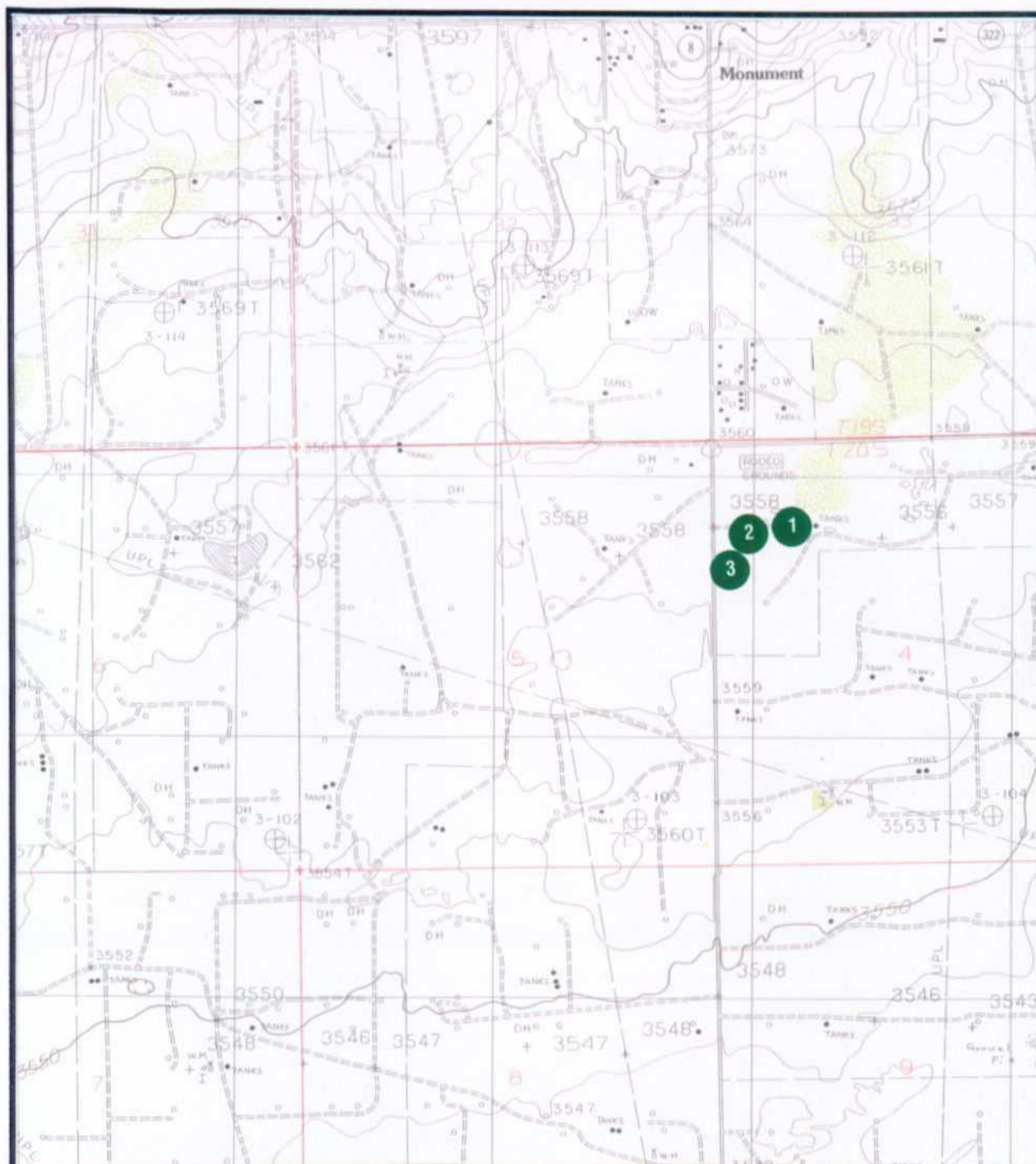
Sincerely,
Enercon Services, Inc.


Jeffrey Kindley, P.G.
Project Manager- Midland
Attachments


Don R. Parsons, Jr. C.P.G.
Senior Project Manager-Dallas

APPENDIX A

FIGURES



SHELL TANK BATTERY SITES



Enercon Services, Inc.
306 West Wall, Suite 1312
Midland, Texas 79701

Equiva Services, Inc.
USGS 7.5" Quadrangle
Monument South, NM
1985 Edition

Figure 1
Project ES-608
Scale 1:24,000



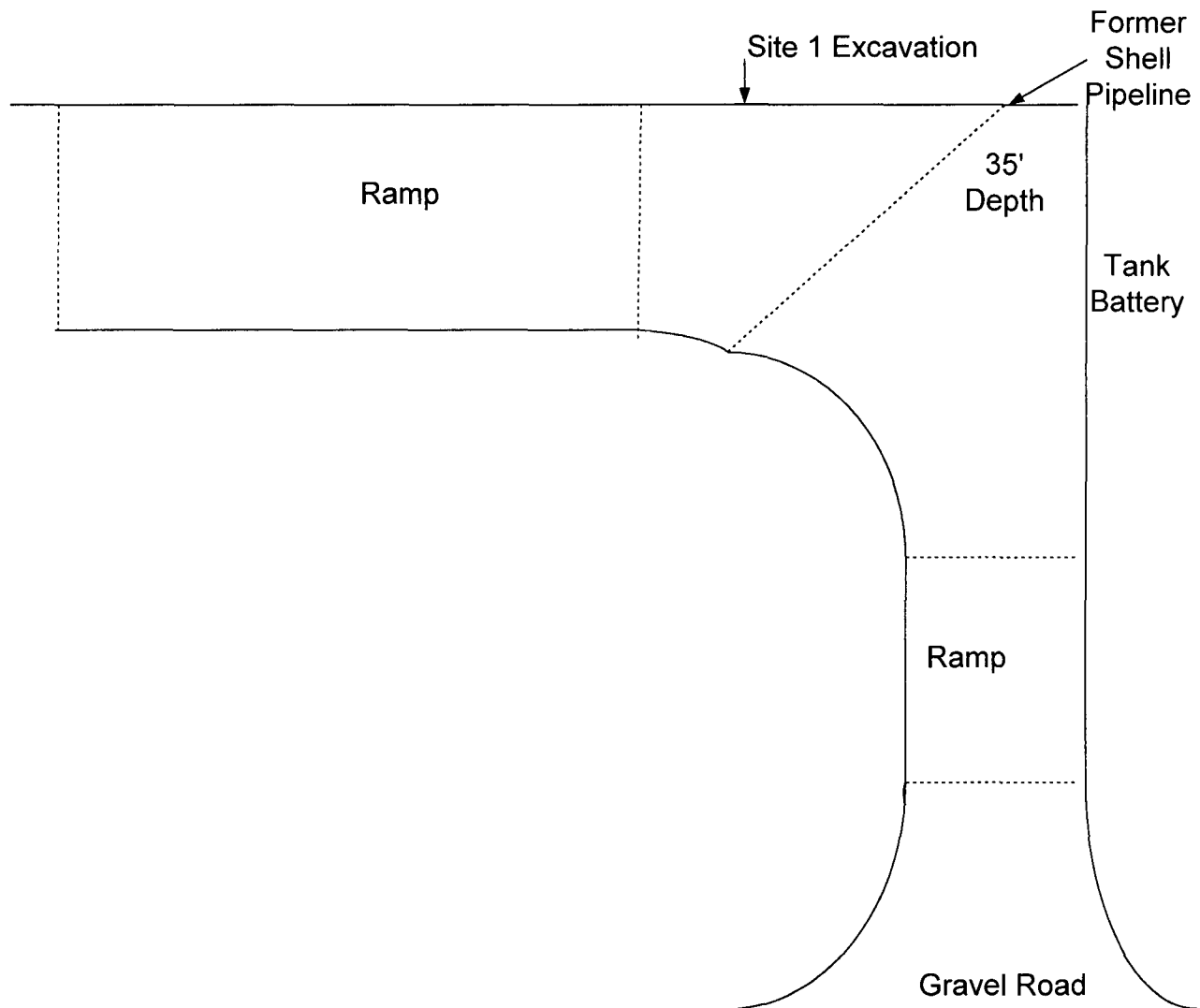
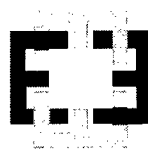


Figure 2
ES-608



Site Location
1" = 25'

Equilon Pipeline
Jimmie Cooper Ranch
Shell Tank Battery Site 1
Monument, Lea County, New Mexico



Enercon Services, Inc.
306 West Wall, Suite 1312
Midland, Texas 79701

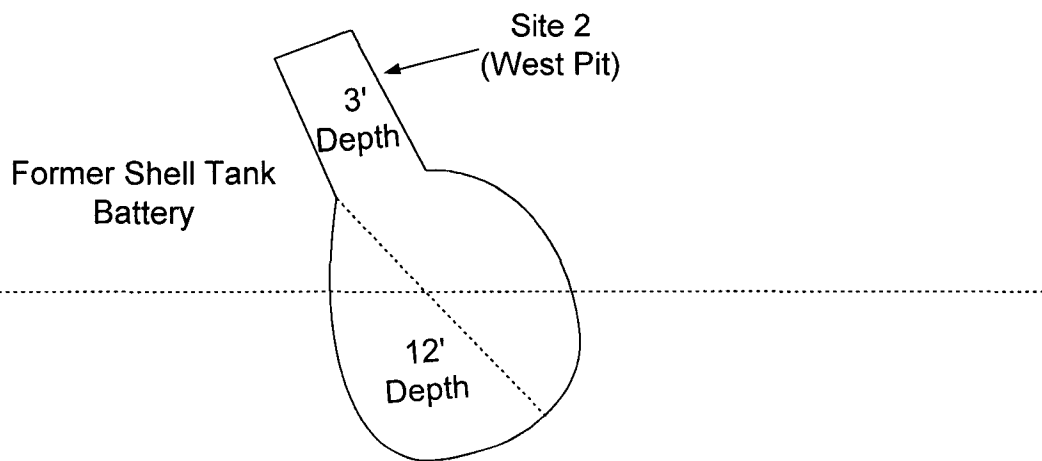


Figure 3
ES-608

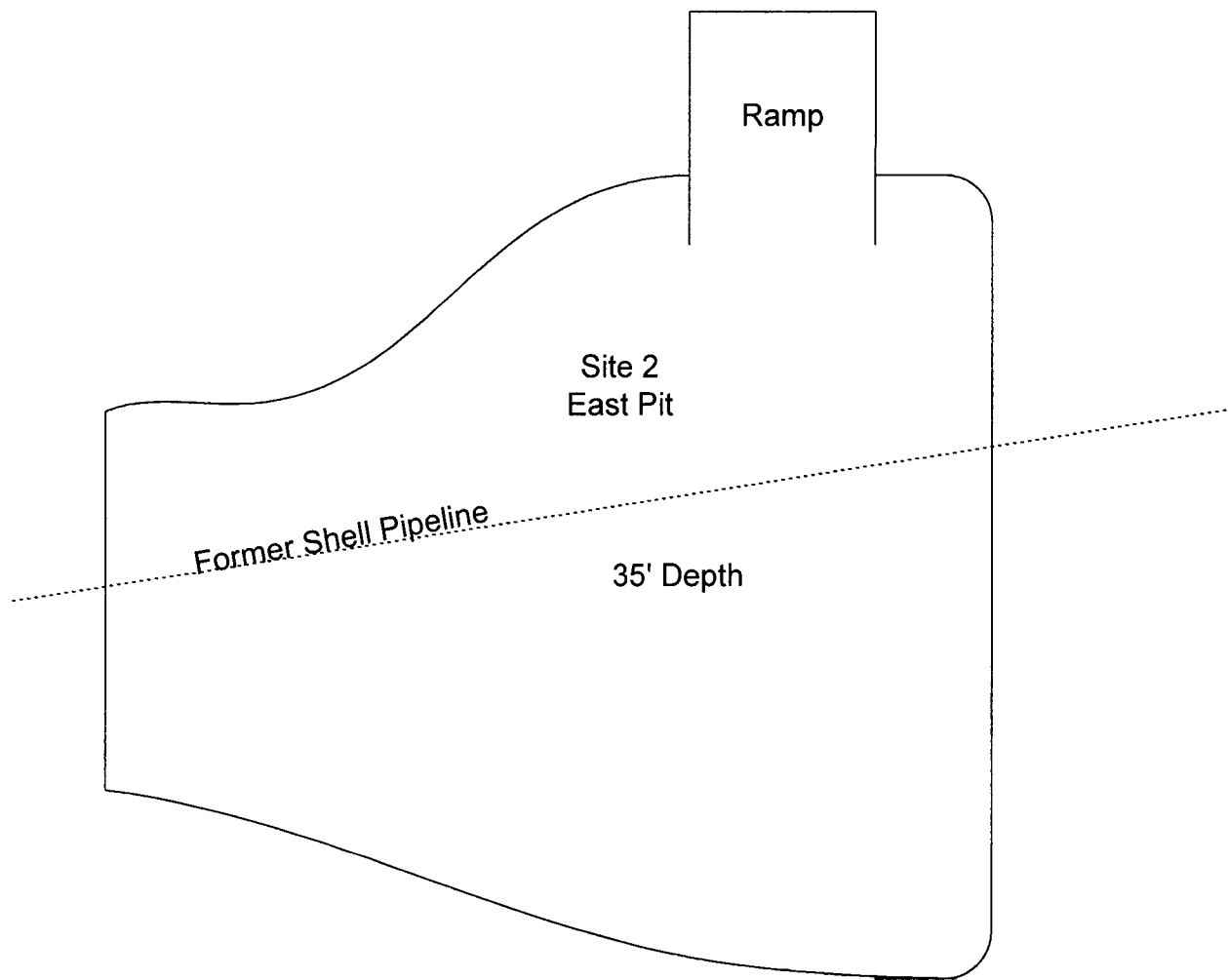


Site Location
1" = 25'

Equilon Pipeline
Jimmie Cooper Ranch
Shell Tank Battery Site 2 (West Pit)
Monument, Lea County, New Mexico



Enercon Services, Inc.
306 West Wall, Suite 1312
Midland, Texas 79701

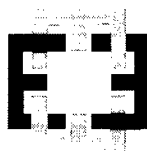


**Figure 4
ES-608**



**Site Location
1" = 25'**

**Equilon Pipeline
Jimmie Cooper Ranch
Shell Tank Battery Site 2 (East Pit)
Monument, Lea County, New Mexico**



**Enercon Services, Inc.
306 West Wall, Suite 1312
Midland, Texas 79701**

State of New Mexico
Highway Department

Jim Cooper Ranch

New Mexico
State Highway
8

Site 3

Former Shell Pipeline

Ramp

33' Depth

Ramp

Property Boundary

Legend

- - - - - Overhead Power Lines
- * - - - - * Fence Line

Figure 5



Site Location
1" = 25'

**Equilon Pipeline
Jimmie Cooper Ranch
Shell Tank Battery Site 3
Monument, Lea County, New Mexico**



**Enercon Services, Inc.
306 West Wall, Suite 1312
Midland, Texas 79701**

APPENDIX B
PHOTOGRAPHS



Photo 1: Excavation of Site 1.



Photo 2: Excavation of Site 1.



Photo 3: Ramp into Site 1 excavation.



Photo 4: Excavation of Site 1.



Photo 5: Excavation of Site 1.



Photo 6: Completed backfilling of Site 1.



Photo 7: Excavation of Site 2 (westpit).



Photo 8: Excavation of Site 2 (westpit).



Photo 9: Completed backfilling of Site 2 (westpit).



Photo 10: Stockpiling of overburden soil from Site 2 (eastpit).



Photo 11: Excavation of Site 2 (eastpit).



Photo 12: Excavation of Site 2 (eastpit).



Photo 13: Excavation of Site 2 (eastpit) 35 feet depth in redbed.



Photo 14: Groundwater in Site 2 (eastpit).



Photo 15: Extension of ramp to north for Site 2 (eastpit).



Photo 16: Excavation of northside of Site 2 (eastpit).



Photo 17: Backfilling of Site 2 (eastpit).



Photo 18: Backfilling of Site 2 (eastpit).



Photo 19: Completed backfilling of Site 2 (eastpit).



Photo 20: Excavation of Site3.



Photo 21: Excavation of Site 3.



Photo 22: Excavation of Site 3.



Photo 23: Repairs to dirt road.



Photo 24: Repairs to dirt road.

APPENDIX C

TABLE

TABLE 1

SOIL ANALYTICAL RESULTS
EQUILON JIMMIE COOPER RANCH
MONUMENT, LEA COUNTY, NEW MEXICO

Sample Location	Date	Benzene (in mg/kg)	Toluene (in mg/kg)	Ethylbenzene (in mg/kg)	Xylenes (in mg/kg)	Total BTEX (in mg/kg)	Chlorides (in mg/kg)	TPH (Dro/Gro) (in mg/kg)	Depth to groundwater	NMOCD Ranking
Site 1 (Northwall) 15'	08/17/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	33.0'	20
Site 1 (Eastwall) 15'	08/17/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	33.0'	20
Site 1 (Westwall) 15'	08/17/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	33.0'	20
Site 1 (Southwall) 15'	08/17/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	33.0'	20
Site 1 (Bottom) 33'	08/17/00	<0.05	<0.05	<0.05	<0.05	<0.05	50	<50	33.0'	20
Site 2 westpit (Northwall) 5'	07/18/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 westpit (Eastwall) 5'	07/18/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 westpit (Westwall) 5'	07/18/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 westpit (Southwall) 5'	07/18/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 westpit (Bottom) 12'	07/18/00	<0.05	<0.05	<0.05	0.078	0.078	16	<50	35.0'	20
Site 2 eastpit (Northwall) 15'	08/01/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 eastpit (Eastwall) 15'	08/01/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 eastpit (Westwall) 15'	08/01/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 eastpit (Southwall) 15'	08/01/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	35.0'	20
Site 2 eastpit (Bottom) 35'	08/01/00	<0.05	<0.05	<0.05	<0.05	<0.05	39	<50	35.0'	20
Site 3 (Northwall) 15'	08/07/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	38	31.0'	20
Site 3 (Eastwall) 15'	08/07/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	<50	31.0'	20
Site 3 (Westwall) 15'	08/07/00	<.100	0.46	1.76	11.5	13.7	NA	9629*	31.0'	20
Site 3 (Southwall) 15'	08/07/00	<0.05	<0.05	<0.05	<0.05	<0.05	NA	81	31.0'	20
Site 3 (Bottom) 35'	08/07/00	<0.05	<0.05	<0.05	<0.05	<0.05	49	74	31.0'	20
NMOCD Rankings		10	NA	NA	NA	50	NA	100	NA	NA

ND = Not detected NA = Not applicable NS = Not sampled

* represents sample that is above current NMOCD standards

APPENDIX D

LABORATORY ANALYSIS

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
4725 Ripley Avenue, Suite A

Lubbock, Texas 79424
El Paso, Texas 79922

800•378•1296
888•588•3443

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Equilon Pipeline Co.
Jeff Kindley
28569 Tomball Parkway #106
Tomball, Tx. 77375

Report Date: August 22, 2000

Order ID Number: A00081813

Project: ES-608
TA Job Code: Jimmy Cooper Ranch
Casualty Code: Monument, Lea County, New Mexico
Project Location: ES-608
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

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
151707	Site 1 Northwall	Soil	8/17/00	13:40	8/18/00
151708	Site 1 South Wall	Soil	8/17/00	13:55	8/18/00
151709	Site 1 Westwall	Soil	8/17/00	14:03	8/18/00
151710	Site Eastwall	Soil	8/17/00	14:13	8/18/00
151711	Site 1 Bottom 33'	Soil	8/17/00	14:25	8/18/00

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 151707 - Site 1 Northwall

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04377 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03802 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.13	mg/Kg	1	0.10	102	72 - 128
4-BFB		4.42	mg/Kg	1	0.10	88	72 - 128

Sample: 151707 - Site 1 Northwall

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04346 Date Analyzed: 8/18/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03777 Date Prepared: 8/18/00

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

Sample: 151707 - Site 1 Northwall

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04378 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: Prep Batch: PB03803 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 151708 - Site 1 South Wall

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04377 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03802 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.42	mg/Kg	1	0.10	108	72 - 128
4-BFB		4.65	mg/Kg	1	0.10	93	72 - 128

Sample: 151708 - Site 1 South Wall

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04346 Date Analyzed: 8/18/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03777 Date Prepared: 8/18/00

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

Sample: 151708 - Site 1 South Wall

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04378 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: Prep Batch: PB03803 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 151709 - Site 1 Westwall

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04377 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03802 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.51	mg/Kg	1	0.10	110	72 - 128
4-BFB		4.71	mg/Kg	1	0.10	94	72 - 128

Sample: 151709 - Site 1 Westwall

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04346 Date Analyzed: 8/18/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03777 Date Prepared: 8/18/00

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

Sample: 151709 - Site 1 Westwall

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04378 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: Prep Batch: PB03803 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 151710 - Site Eastwall

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04377 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03802 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.04	mg/Kg	1	0.10	100	72 - 128
4-BFB		4.41	mg/Kg	1	0.10	88	72 - 128

Sample: 151710 - Site Eastwall

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04346 Date Analyzed: 8/18/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03777 Date Prepared: 8/18/00

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

Sample: 151710 - Site Eastwall

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04378 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: Prep Batch: PB03803 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 151711 - Site 1 Bottom 33'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04377 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03802 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001

Continued ...

... Continued Sample: 151711 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.41	mg/Kg	1	0.10	108	72 - 128
4-BFB		4.72	mg/Kg	1	0.10	94	72 - 128

Sample: 151711 - Site 1 Bottom 33'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04346 Date Analyzed: 8/18/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03777 Date Prepared: 8/18/00

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

Sample: 151711 - Site 1 Bottom 33'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04378 Date Analyzed: 8/21/00
Analyst: RC Preparation Method: Prep Batch: PB03803 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC04346

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

Sample: Method Blank QCBatch: QC04377

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		4.29	mg/Kg	0.10	85	72 - 128
4-BFB		3.66	mg/Kg	0.10	73	72 - 128

Sample: Method Blank QCBatch: QC04378

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS QC Batch: QC04346

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		250.	mg/Kg	1	250	<50	100		70 - 130	20

Sample: LCS QC Batch: QC04377

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		5.04	mg/Kg	50	0.10	<0.05	100		80 - 120	20
Benzene		4.82	mg/Kg	50	0.10	<0.05	96		80 - 120	20
Toluene		4.67	mg/Kg	50	0.10	<0.05	93		80 - 120	20
Ethylbenzene		4.7	mg/Kg	50	0.10	<0.05	94		80 - 120	20
M,P,O-Xylene		16.2	mg/Kg	50	0.30	<0.05	108		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.31	mg/Kg	50	0.10	106	72 - 128
4-BFB		4.83	mg/Kg	50	0.10	96	72 - 128

Sample: LCSD QC Batch: QC04377

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		5.16	mg/Kg	50	0.10	<0.05	103	2	80 - 120	20
Benzene		4.94	mg/Kg	50	0.10	<0.05	98	2	80 - 120	20
Toluene		4.77	mg/Kg	50	0.10	<0.05	95	2	80 - 120	20
Ethylbenzene		4.78	mg/Kg	50	0.10	<0.05	95	2	80 - 120	20
M,P,O-Xylene		16.4	mg/Kg	50	0.30	<0.05	109	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.2	mg/Kg	50	0.10	104	72 - 128
4-BFB		4.73	mg/Kg	50	0.10	94	72 - 128

Sample: LCS QC Batch: QC04378

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.867	mg/Kg	1	1	<5	86		80 - 120	20

Sample: LCSD QC Batch: QC04378

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.892	mg/Kg	1	1	<5	89	3	80 - 120	20

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC04346

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		250	mg/Kg	1	250	<50	100		70 - 130	20

Sample: MS QC Batch: QC04377

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		<0.05	mg/Kg	50	0.10	<0.05	0	2	80 - 120	20
Toluene		<0.05	mg/Kg	50	0.10	<0.05	0	2	80 - 120	20
Ethylbenzene		<0.05	mg/Kg	50	0.10	<0.05	0	2	80 - 120	20
M,P,O-Xylene		<0.05	mg/Kg	50	0.30	<0.05	0	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.92	mg/Kg	50	0.10	118	72 - 128
4-BFB		5.06	mg/Kg	50	0.10	101	72 - 128

Sample: MSD QC Batch: QC04377

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		<0.05	mg/Kg	50	0.10	<0.05	0	2	80 - 120	20
Toluene		<0.05	mg/Kg	50	0.10	<0.05	0	2	80 - 120	20
Ethylbenzene		<0.05	mg/Kg	50	0.10	<0.05	0	2	80 - 120	20
M,P,O-Xylene		<0.05	mg/Kg	50	0.30	<0.05	0	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		6.12	mg/Kg	50	0.10	122	72 - 128
4-BFB		5.27	mg/Kg	50	0.10	105	72 - 128

Quality Control Report Continuing Calibration Verification Standards

Sample: CCV (1) QC Batch: QC04346

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	250	100	70 - 130	8/18/00

Sample: ICV (1) QC Batch: QC04346

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	250	100	70 - 130	8/18/00

Sample: CCV (1) QC Batch: QC04377

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.093	93	80 - 120	8/21/00
Toluene		mg/Kg	0.10	0.089	89	80 - 120	8/21/00
Ethylbenzene		mg/Kg	0.10	0.09	90	80 - 120	8/21/00
M,P,O-Xylene		mg/Kg	0.30	0.31	103	80 - 120	8/21/00

Sample: ICV (1) QC Batch: QC04377

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.1	100	80 - 120	8/21/00
Toluene		mg/Kg	0.10	0.096	96	80 - 120	8/21/00
Ethylbenzene		mg/Kg	0.10	0.097	97	80 - 120	8/21/00
M,P,O-Xylene		mg/Kg	0.30	0.334	111	80 - 120	8/21/00

Sample: CCV (1) QC Batch: QC04378

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.13	113	80 - 120	8/21/00

Sample: ICV (1) QC Batch: QC04378

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.878	87	80 - 120	8/21/00

TraceAnalysis, Inc.

TraceAnalysis, Inc.

Company Name:	Brown Service Inc.	Phone #:	915-570-8722
Address:	(Street, City, Zip)	Mobile	915-631-6591
		Fax #:	915-684-7587

306 West Wall, Suite 1312, Midland, TX 79701
Contact Dave.

Jeffrey Kindley	SHE Science + Engineering	Suite 406	
Invoice to: Kyle Landman	28510-C Tomball Parkway	Tomball, TX	77375
(If different from above) Equiva Services			

Project #:	ES-608	Project Name:	Jimmie Coogan Ranch
Project Location:		Sampler Signature:	

Monument, Lee County, New Mexico	Jeffrey Kinley	1981
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LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	NaHSO ₄	H ₂ SO ₄	NaOH	ICE	NONE	DATE
151707	Site 1 Northwall	1	40%	✓								✓	✓	08/11/00	1340
08	Site 1 Southwall	1	40%	✓								✓	✓	08/11/00	1355
09	Site 1 Westwall	1	40%	✓								✓	✓	08/11/00	1403
10	Site 1 Eastwall	1	40%	✓								✓	✓	08/11/00	1413
11	Site 1 Bottom 33'	1	40%	✓								✓	✓	08/11/00	1425

[illegible]

LAB USE ONLY Intact <u>Y / N</u> Headspace <u>Y / N</u> Temp <u>5</u> Log-in Review <u>me</u>	REMARKS:
	24-hr
	Turnaround.

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

TRACE ANALYSIS, INC.

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4725 Ripley Avenue, Suite A

Lubbock, Texas 79424
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806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Equilon Pipeline Co.
Jeff Kindley
28569 Tomball Parkway #106
Tomball, Tx. 77375

Report Date: July 21, 2000

Order ID Number: A00072003

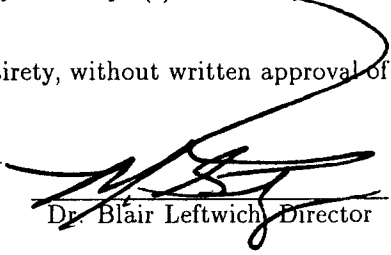
Project: ES-608
TA Job Code: Jimmy Cooper Ranch
Casualty Code: Monument, Lea County, New Mexico
Project Location: ES-608
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

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
150040	Site 2 West Pit (Bottom 12')	Soil	7/18/00	12:50	7/20/00
150041	Site 2 Wet Pit (Northside 5')	Soil	7/18/00	13:04	7/20/00
150042	Site 2 West Pit (Eastside 5')	Soil	7/18/00	12:55	7/20/00
150043	Site 2 West Pit (Westside 5')	Soil	7/18/00	12:52	7/20/00
150044	Site 2 West Pit (Southside 5')	Soil	7/18/00	12:58	7/20/00
150045	Comp 1 Site 2	Soil	7/18/00	14:50	7/20/00
150046	Comp 2 Site 2	Soil	7/18/00	14:55	7/20/00
150047	Comp 3 Site 2	Soil	7/18/00	15:00	7/20/00
150048	Comp 4 Site 2	Soil	7/18/00	15:10	7/20/00
150049	Comp 5 Site 2	Soil	7/18/00	15:15	7/20/00
150050	Comp 6 Site 2	Soil	7/18/00	15:20	7/20/00
150051	comp 7 Site 2	Soil	7/18/00	15:30	7/20/00
150052	Comp 8 Site 2	Soil	7/18/00	15:35	7/20/00
150053	Comp 9 Site 2	Soil	7/18/00	15:40	7/20/00

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.

This report consists of a total of 17 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 150040 - Site 2 West Pit (Bottom 12')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		0.078	mg/Kg	50	0.001
Total BTEX		0.078	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.87	mg/Kg	1	0.10	117	72 - 128
4-BFB		5.99	mg/Kg	1	0.10	119	72 - 128

Sample: 150040 - Site 2 West Pit (Bottom 12')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

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

Sample: 150040 - Site 2 West Pit (Bottom 12')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150041 - Site 2 Wet Pit (Northside 5')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		6	mg/Kg	1	0.10	120	72 - 128
4-BFB		6.16	mg/Kg	1	0.10	123	72 - 128

Sample: 150041 - Site 2 Wet Pit (Northside 5')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

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

Sample: 150041 - Site 2 Wet Pit (Northside 5')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150042 - Site 2 West Pit (Eastside 5')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		6.27	mg/Kg	1	0.10	125	72 - 128
4-BFB		6.3	mg/Kg	1	0.10	126	72 - 128

Sample: 150042 - Site 2 West Pit (Eastside 5')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

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

Report Date: July 21, 2000
ES-608

Order Number: A00072003
Jimmy Cooper Ranch

Page Number: 4 of 17
Monument, Lea County, New Mexico

Sample: 150042 - Site 2 West Pit (Eastside 5')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150043 - Site 2 West Pit (Westside 5')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		6.27	mg/Kg	1	0.10	125	72 - 128
4-BFB		6.39	mg/Kg	1	0.10	127	72 - 128

Sample: 150043 - Site 2 West Pit (Westside 5')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

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

Sample: 150043 - Site 2 West Pit (Westside 5')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150044 - Site 2 West Pit (Southside 5')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001

Continued ...

... Continued Sample: 150044 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.29	mg/Kg	1	0.10	106	72 - 128
4-BFB		5.42	mg/Kg	1	0.10	108	72 - 128

Sample: 150044 - Site 2 West Pit (Southside 5')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

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

Sample: 150044 - Site 2 West Pit (Southside 5')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150045 - Comp 1 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.1	mg/Kg	100	0.001
Toluene		<0.1	mg/Kg	100	0.001
Ethylbenzene		<0.1	mg/Kg	100	0.001
M,P,O-Xylene		0.212	mg/Kg	100	0.001
Total BTEX		0.212	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		12.3	mg/Kg	1	0.10	123	72 - 128
4-BFB		12.4	mg/Kg	1	0.10	124	72 - 128

Sample: 150045 - Comp 1 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		228	mg/Kg	1	50

Sample: 150045 - Comp 1 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150046 - Comp 2 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.5	mg/Kg	500	0.001
Toluene		<0.5	mg/Kg	500	0.001
Ethylbenzene		<0.5	mg/Kg	500	0.001
M,P,O-Xylene		1.87	mg/Kg	500	0.001
Total BTEX		1.87	mg/Kg	500	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		61.2	mg/Kg	1	0.10	122	72 - 128
4-BFB		62	mg/Kg	1	0.10	124	72 - 128

Sample: 150046 - Comp 2 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		663	mg/Kg	1	50

Sample: 150046 - Comp 2 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		182	mg/Kg	1	0.10

Sample: 150047 - Comp 3 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.1	mg/Kg	100	0.001
Toluene		<0.1	mg/Kg	100	0.001
Ethylbenzene		0.227	mg/Kg	100	0.001
M,P,O-Xylene		1.55	mg/Kg	100	0.001
Total BTEX		1.78	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		12.2	mg/Kg	1	0.10	122	72 - 128
4-BFB		12.3	mg/Kg	1	0.10	123	72 - 128

Sample: 150047 - Comp 3 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		207	mg/Kg	1	50

Sample: 150047 - Comp 3 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		406	mg/Kg	1	0.10

Sample: 150048 - Comp 4 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.5	mg/Kg	500	0.001
Toluene		<0.5	mg/Kg	500	0.001
Ethylbenzene		0.983	mg/Kg	500	0.001
M,P,O-Xylene		6.15	mg/Kg	500	0.001
Total BTEX		7.14	mg/Kg	500	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		60.1	mg/Kg	1	0.10	120	72 - 128
4-BFB		61.6	mg/Kg	1	0.10	123	72 - 128

Sample: 150048 - Comp 4 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		2490	mg/Kg	1	50

Sample: 150048 - Comp 4 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		972	mg/Kg	1	0.10

Sample: 150049 - Comp 5 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.5	mg/Kg	500	0.001
Toluene		<0.5	mg/Kg	500	0.001
Ethylbenzene		<0.5	mg/Kg	500	0.001
M,P,O-Xylene		1.7	mg/Kg	500	0.001
Total BTEX		1.7	mg/Kg	500	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		59.6	mg/Kg	1	0.10	119	72 - 128
4-BFB		59.8	mg/Kg	1	0.10	119	72 - 128

Sample: 150049 - Comp 5 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03822 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03289 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		601	mg/Kg	1	50

Sample: 150049 - Comp 5 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		192	mg/Kg	1	0.10

Sample: 150050 - Comp 6 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.5	mg/Kg	500	0.001
Toluene		<0.5	mg/Kg	500	0.001
Ethylbenzene		1.03	mg/Kg	500	0.001
M,P,O-Xylene		9.39	mg/Kg	500	0.001
Total BTEX		10.4	mg/Kg	500	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		59.6	mg/Kg	1	0.10	119	72 - 128
4-BFB		62.2	mg/Kg	1	0.10	124	72 - 128

Sample: 150050 - Comp 6 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03823 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03290 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		2496	mg/Kg	1	50

Sample: 150050 - Comp 6 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		1440	mg/Kg	1	0.10

Sample: 150051 - comp 7 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.94	mg/Kg	1	0.10	118	72 - 128
4-BFB		6.12	mg/Kg	1	0.10	122	72 - 128

Sample: 150051 - comp 7 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03823 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03290 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		396	mg/Kg	1	50

Sample: 150051 - comp 7 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<50	mg/Kg	1	0.10

Sample: 150052 - Comp 8 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.2	mg/Kg	200	0.001
Toluene		<0.2	mg/Kg	200	0.001
Ethylbenzene		0.289	mg/Kg	200	0.001
M,P,O-Xylene		2.45	mg/Kg	200	0.001
Total BTEX		2.74	mg/Kg	200	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		25	mg/Kg	1	0.10	125	72 - 128
4-BFB		25.3	mg/Kg	1	0.10	126	72 - 128

Sample: 150052 - Comp 8 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03823 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03290 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		598	mg/Kg	1	50

Sample: 150052 - Comp 8 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		508	mg/Kg	1	0.10

Sample: 150053 - Comp 9 Site 2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC03818 Date Analyzed: 7/20/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03302 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.83	mg/Kg	1	0.10	116	72 - 128
4-BFB		6	mg/Kg	1	0.10	120	72 - 128

Sample: 150053 - Comp 9 Site 2

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC03823 Date Analyzed: 7/20/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03290 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
DRO		108	mg/Kg	1	50

Sample: 150053 - Comp 9 Site 2

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC03821 Date Analyzed: 7/21/00
Analyst: RC Preparation Method: Prep Batch: PB03306 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Quality Control Report Method Blank

Sample: Method Blank QC Batch: QC03818

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		5.6	mg/Kg	0.10	112	72 - 128
4-BFB		5.78	mg/Kg	0.10	115	72 - 128

Sample: Method Blank QCBatch: QC03821

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Sample: Method Blank QCBatch: QC03822

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

Sample: Method Blank QCBatch: QC03823

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

Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS QC Batch: QC03818

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.47	mg/Kg	50	0.10	<0.05	90		80 - 120	20
Benzene		5.64	mg/Kg	50	0.10	<0.05	113		80 - 120	20
Toluene		5.77	mg/Kg	50	0.10	<0.05	115		80 - 120	20
Ethylbenzene		5.62	mg/Kg	50	0.10	<0.05	112		80 - 120	20
M,P,O-Xylene		16.4	mg/Kg	50	0.30	<0.05	109		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.69	mg/Kg	50	0.10	113	72 - 128
4-BFB		5.55	mg/Kg	50	0.10	111	72 - 128

Sample: LCSD QC Batch: QC03818

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.29	mg/Kg	50	0.10	<0.05	86	4	80 - 120	20
Benzene		4.52	mg/Kg	50	0.10	<0.05	90	22	80 - 120	20
Toluene		4.57	mg/Kg	50	0.10	<0.05	92	23	80 - 120	20
Ethylbenzene		4.43	mg/Kg	50	0.10	<0.05	89	24	80 - 120	20
M,P,O-Xylene		13	mg/Kg	50	0.30	<0.05	87	23	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.64	mg/Kg	50	0.10	93	72 - 128
4-BFB		4.55	mg/Kg	50	0.10	91	72 - 128

Sample: LCS QC Batch: QC03821

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.847	mg/Kg	1	1	<5	84		80 - 120	20

Sample: LCSD QC Batch: QC03821

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.86	mg/Kg	1	1	<5	86	2	80 - 120	20

Sample: LCS QC Batch: QC03822

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		274	mg/Kg	1	250	<50	109		70 - 130	20

Sample: LCSD QC Batch: QC03822

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		281	mg/Kg	1	250	<50	112	2	70 - 130	20

Sample: LCS QC Batch: QC03823

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO	1	282	mg/Kg	1	250	<50	112		70 - 130	20

Sample: LCSD QC Batch: QC03823

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO	2	252	mg/Kg	1	250	<50	100	11	70 - 130	20

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC03818

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.06	mg/Kg	50	0.10	<0.05	101		80 - 120	20
Toluene		5.19	mg/Kg	50	0.10	<0.05	104		80 - 120	20
Ethylbenzene		5.	mg/Kg	50	0.10	<0.05	100		80 - 120	20
M,P,O-Xylene		14.7	mg/Kg	50	0.30	<0.05	98		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.7	mg/Kg	50	0.10	114	72 - 128
4-BFB		5.77	mg/Kg	50	0.10	115	72 - 128

Sample: MSD QC Batch: QC03818

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.93	mg/Kg	50	0.10	<0.05	99	3	80 - 120	20
Toluene		5.05	mg/Kg	50	0.10	<0.05	101	3	80 - 120	20
Ethylbenzene		4.97	mg/Kg	50	0.10	<0.05	100	1	80 - 120	20
M,P,O-Xylene		14.5	mg/Kg	50	0.30	<0.05	97	1	80 - 120	20

¹LCS AND LCSD WERE USED FOR %EA AND RPD DUE TO MATRIX EFFECTS OF SPIKED SAMPLE.

²LCS AND LCSD WERE USED FOR %EA AND RPD DUE TO MATRIX EFFECTS OF SPIKED SAMPLE.

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.59	mg/Kg	50	0.10	91	72 - 128
4-BFB		4.63	mg/Kg	50	0.10	92	72 - 128

Sample: MS QC Batch: QC03822

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		283	mg/Kg	1	250	<50	113		70 - 130	20

Sample: MSD QC Batch: QC03822

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		276	mg/Kg	1	250	<50	110	2	70 - 130	20

Sample: MS QC Batch: QC03823

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO	³	644	mg/Kg	1	250	108	214		70 - 130	20

Sample: MSD QC Batch: QC03823

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO	⁴	655	mg/Kg	1	250	108	218	2	70 - 130	20

Quality Control Report

Continuing Calibration Verification Standards

Sample: CCV (1) QC Batch: QC03818

³LCS AND LCSD WERE USED FOR %EA AND RPD DUE TO MATRIX EFFECTS OF SPIKED SAMPLE.

⁴LCS AND LCSD WERE USED FOR %EA AND RPD DUE TO MATRIX EFFECTS OF SPIKED SAMPLE.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.105	105	80 - 120	7/20/00
Toluene		mg/Kg	0.10	0.109	109	80 - 120	7/20/00
Ethylbenzene		mg/Kg	0.10	0.107	107	80 - 120	7/20/00
M,P,O-Xylene		mg/Kg	0.30	0.315	105	80 - 120	7/20/00

Sample: CCV (2) QC Batch: QC03818

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.104	104	80 - 120	7/20/00
Toluene		mg/Kg	0.10	0.106	106	80 - 120	7/20/00
Ethylbenzene		mg/Kg	0.10	0.106	106	80 - 120	7/20/00
M,P,O-Xylene		mg/Kg	0.30	0.314	104	80 - 120	7/20/00

Sample: ICV (1) QC Batch: QC03818

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.116	116	80 - 120	7/20/00
Toluene		mg/Kg	0.10	0.12	120	80 - 120	7/20/00
Ethylbenzene		mg/Kg	0.10	0.118	118	80 - 120	7/20/00
M,P,O-Xylene		mg/Kg	0.30	0.348	116	80 - 120	7/20/00

Sample: CCV (1) QC Batch: QC03821

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.86	86	80 - 120	7/21/00

Sample: CCV (2) QC Batch: QC03821

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.13	113	80 - 120	7/21/00

Sample: ICV (1) QC Batch: QC03821

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.06	106	80 - 120	7/21/00

Sample: CCV (1) QC Batch: QC03822

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	278	111	70 - 130	7/20/00

Sample: CCV (2) QC Batch: QC03822

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	244	97	70 - 130	7/20/00

Sample: ICV (1) QC Batch: QC03822

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	320	128	70 - 130	7/20/00

Sample: CCV (1) QC Batch: QC03823

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	289	115	70 - 130	7/20/00

Sample: ICV (1) QC Batch: QC03823

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	283	113	70 - 130	7/20/00

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TraceAnalysis, Inc.

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Company Name:

Environ Services, Inc.

Address: (Street, City, Zip)

306 West Wall, Suite 1312, Midland, TX 79701

Contact Person:

Jeffrey Kindley

Invoice to: Kyle Landrenow

(If different from above) **Environ Services, Inc.**

Project #:

ES-608

Project Location:

Monument, Lea County, New Mexico

Project Name:

Equiva Jimmy Cadden Ranch

Sampler Signature:

Jeffrey Kindley

Phone #: (915) 570-8726

Fax #: (915) 684-7587

(381) 251-6914

28510 - C. Tomball Parkway, Suite 406, Tomball, TX 77375

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

40072003

Company Name:

Environ Services, Inc.

Address: (Street, City, Zip)

306 West Wall, Suite 1312, Midland, TX 79701

Contact Person:

Jeffrey Kindley

Invoice to: Kyle Landrenow

(If different from above) **Environ Services, Inc.**

Project #:

ES-608

Project Location:

Monument, Lea County, New Mexico

Project Name:

Equiva Jimmy Cadden Ranch

Sampler Signature:

Jeffrey Kindley

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	TPH 418.1/TX1005	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	TPH 8015-methyl (DDP1660)	Turn Around Time if different from standard	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

LAB USE ONLY

Intact ☒ Y ☐ N
Headspace ☐ Y ☒ N
Temp 3°
Log-in Review ☒

REMARKS:

24 hr turnaround

Rush

7/21

Date: Time:

Date: Time:

Received by:

Received by:

Date: Time:

Date: Time:

Relinquished by:

Jeffrey Kindley

Date: July 18, 2000

Relinquished by:

Relinquished by:

Date: Time:

Received at Laboratory by:

Date: Time:

Jeffrey Kindley 7-20-00 9:30

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

ORIGINAL COPY

Carrier # **TN1479 902-439-274-0**

TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Equilon Pipeline Co.
Jeff Kindley
28569 Tomball Parkway #106
Tomball, Tx. 77375

Report Date: August 4, 2000

Order ID Number: A00080209

Project: ES-608
TA Job Code: Jimmy Cooper Ranch
Casualty Code: Monument, Lea County, New Mexico
Project Location: ES-608
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

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
150762	Site 2 East Pit (Eastwall)	Soil	8/1/00	:	8/2/00
150763	Site 2 East Pit (Southwall)	Soil	8/1/00	:	8/2/00
150764	Site 2 East Pit (Bottom 35')	Soil	8/1/00	:	8/2/00
150765	Site 2 East Pit (Westwall)	Soil	8/1/00	:	8/2/00
150766	Site 2 East Pit (Northwell)	Soil	8/1/00	:	8/2/00

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.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 150762 - Site 2 East Pit (Eastwall)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.54	mg/Kg	1	0.10	90	72 - 128
4-BFB		4.33	mg/Kg	1	0.10	86	72 - 128

Sample: 150762 - Site 2 East Pit (Eastwall)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

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

Sample: 150762 - Site 2 East Pit (Eastwall)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150763 - Site 2 East Pit (Southwall)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.66	mg/Kg	1	0.10	93	72 - 128
4-BFB		4.43	mg/Kg	1	0.10	88	72 - 128

Sample: 150763 - Site 2 East Pit (Southwall)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

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

Sample: 150763 - Site 2 East Pit (Southwall)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150764 - Site 2 East Pit (Bottom 35')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.76	mg/Kg	1	0.10	95	72 - 128
4-BFB		4.46	mg/Kg	1	0.10	89	72 - 128

Sample: 150764 - Site 2 East Pit (Bottom 35')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

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

Sample: 150764 - Site 2 East Pit (Bottom 35')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150765 - Site 2 East Pit (Westwall)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.58	mg/Kg	1	0.10	91	72 - 128
4-BFB		4.35	mg/Kg	1	0.10	87	72 - 128

Sample: 150765 - Site 2 East Pit (Westwall)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

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

Sample: 150765 - Site 2 East Pit (Westwall)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 150766 - Site 2 East Pit (Northwell)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001

Continued ...

... Continued Sample: 150766 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.6	mg/Kg	1	0.10	92	72 - 128
4-BFB		4.34	mg/Kg	1	0.10	86	72 - 128

Sample: 150766 - Site 2 East Pit (Northwell)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

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

Sample: 150766 - Site 2 East Pit (Northwell)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC04053

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

Sample: Method Blank QCBatch: QC04066

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001

Continued ...

... Continued

Param	Flag	Results	Units	Reporting Limit
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		4.62	mg/Kg	0.10	92	72 - 128
4-BFB		4.28	mg/Kg	0.10	85	72 - 128

Sample: Method Blank QC Batch: QC04067

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		283	mg/Kg	1	250	<50	113		70 - 130	20

Sample: LCSD QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		285	mg/Kg	1	250	<50	114	1	70 - 130	20

Sample: LCS QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.88	mg/Kg	50	0.10	<0.05	97		80 - 120	20
Toluene		4.9	mg/Kg	50	0.10	<0.05	98		80 - 120	20
Ethylbenzene		4.71	mg/Kg	50	0.10	<0.05	94		80 - 120	20
M,P,O-Xylene		14.2	mg/Kg	50	0.30	<0.05	94		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.44	mg/Kg	50	0.10	88	72 - 128
4-BFB		3.93	mg/Kg	50	0.10	78	72 - 128

Sample: LCSD

QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.83	mg/Kg	50	0.10	<0.05	96	1	80 - 120	20
Toluene		4.87	mg/Kg	50	0.10	<0.05	97	1	80 - 120	20
Ethylbenzene		4.67	mg/Kg	50	0.10	<0.05	93	1	80 - 120	20
M,P,O-Xylene		14.2	mg/Kg	50	0.30	<0.05	94	0	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.45	mg/Kg	50	0.10	89	72 - 128
4-BFB		3.96	mg/Kg	50	0.10	79	72 - 128

Sample: LCS

QC Batch: QC04067

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		1.05	mg/Kg	1	1	<5	105		80 - 120	20

Sample: LCSD

QC Batch: QC04067

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		1.04	mg/Kg	1	1	<5	104	1	80 - 120	20

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		351	mg/Kg	1	250	<50	140		70 - 130	20

Sample: MSD QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		352	mg/Kg	1	250	<50	140	0	70 - 130	20

Sample: MS QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.1	mg/Kg	50	0.10	<0.05	102	1	80 - 120	20
Toluene		5.1	mg/Kg	50	0.10	<0.05	102	1	80 - 120	20
Ethylbenzene		4.9	mg/Kg	50	0.10	<0.05	98	1	80 - 120	20
M,P,O-Xylene		14.9	mg/Kg	50	0.30	0.058	98	0	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.5	mg/Kg	50	0.10	90	72 - 128
4-BFB		4.27	mg/Kg	50	0.10	85	72 - 128

Sample: MSD QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.04	mg/Kg	50	0.10	<0.05	100	1	80 - 120	20
Toluene		5.04	mg/Kg	50	0.10	<0.05	100	1	80 - 120	20
Ethylbenzene		4.86	mg/Kg	50	0.10	<0.05	97	1	80 - 120	20
M,P,O-Xylene		14.7	mg/Kg	50	0.30	0.058	97	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.5	mg/Kg	50	0.10	90	72 - 128
4-BFB		4.25	mg/Kg	50	0.10	85	72 - 128

Quality Control Report

Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC04053

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	261	104	70 - 130	8/2/00

Sample: CCV (2)

QC Batch: QC04053

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	271	108	70 - 130	8/2/00

Sample: ICV (1)

QC Batch: QC04053

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	308	123	70 - 130	8/2/00

Sample: CCV (1)

QC Batch: QC04066

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.087	87	80 - 120	8/3/00
Toluene		mg/Kg	0.10	0.087	87	80 - 120	8/3/00
Ethylbenzene		mg/Kg	0.10	0.085	85	80 - 120	8/3/00
M,P,O-Xylene		mg/Kg	0.30	0.257	85	80 - 120	8/3/00

Sample: CCV (2)

QC Batch: QC04066

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.084	84	80 - 120	8/3/00
Toluene		mg/Kg	0.10	0.082	82	80 - 120	8/3/00
Ethylbenzene		mg/Kg	0.10	0.08	80	80 - 120	8/3/00
M,P,O-Xylene		mg/Kg	0.30	0.245	81	80 - 120	8/3/00

Sample: ICV (1)

QC Batch: QC04066

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.097	97	80 - 120	8/3/00
Toluene		mg/Kg	0.10	0.098	98	80 - 120	8/3/00
Ethylbenzene		mg/Kg	0.10	0.095	95	80 - 120	8/3/00
M,P,O-Xylene		mg/Kg	0.30	0.287	95	80 - 120	8/3/00

Sample: CCV (1)

QC Batch: QC04067

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.04	104	80 - 120	8/3/00

Sample: ICV (1)

QC Batch: QC04067

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.959	95	80 - 120	8/3/00

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Lubbock, Texas 79424
Tel (806) 794-1296
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1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 10088209

Company Name: Environ Services, Inc.

Phone #: (915) 570-8726

Address: (Street, City, Zip)
306 West Wall, Suite 1312, Midland, TX 79701

Mobile: (915) 631-6591

Fax #: (915) 684-7587

Contact Person: Jeffrey Kinley

Invoice to: Edwin Services, LLC

(If different from above) Attn: Kyle Landers

Project #: ES-608

Project Location: Monument, Abilene, Texas

Sampler Signature: Jeffrey Kinley

Project Name: 28510-C Tomball Parkway, Suite 406, Tomball, TX 77375

Matrix: SLUDGE

Volume/Amount: 1 4oz

CONTAINERS: 1

FIELD CODE: 150762 Site 2 Empty (Eastward)

LAB #
(LAB USE ONLY)

63 Site 2 Empty (Southward)

64 Site 2 Empty (Bottom 35')

65 Site 2 Empty (Westward)

66 Site 2 Empty (Northward)

ANALYSIS REQUEST

(Circle or Specify Method No.)

PAH 8270C	
TPH 418.1/TX1005	
BTEX 8021B/602	✓
MTBE 8021B/602	✓
TCLP Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC-MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
TPH 8015 modified (DIO/600)	✓
Turn Around Time if different from standard	

Hold

Relinquished by: Jeffrey Kinley

Date: 08/10/00

Time: 1700

Received by:

Date: _____

Time: _____

Relinquished by:

Date: _____

Time: _____

Received by:

Date: _____

Time: _____

Relinquished by:

Date: _____

Time: _____

Received at Laboratory by: Jeffrey Kinley

Date: _____

Time: _____

LAB USE ONLY

Intact (X) N
Headspace Y / N
Temp 20 °
Log-in Review MS

REMARKS:

24 hr Turnaround

Rush.

Call with results +

Fax copy

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

ORIGINAL COPY

Carrier # UPS 5096-825-381-8

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
4725 Ripley Avenue, Suite A

Lubbock, Texas 79424
El Paso, Texas 79922

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Equilon Pipeline Co.
Jeff Kindley
28569 Tomball Parkway #106
Tomball, Tx. 77375

Report Date: August 14, 2000

Order ID Number: A00080807

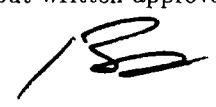
Project: ES-608
TA Job Code: Jimmy Cooper Ranch
Casualty Code: Monument, Lea County, New Mexico
Project Location: ES-608
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

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
151128	Site 3 (East Wall)	Soil	8/7/00	:	8/8/00
151129	Site 3 (West Wall)	Soil	8/7/00	:	8/8/00
151130	Site (South Wall)	Soil	8/7/00	:	8/8/00
151131	Site 3 (Bottom 33')	Soil	8/7/00	:	8/8/00
151132	Site 3 (North Wall)	Soil	8/7/00	:	8/8/00

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.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 151128 - Site 3 (East Wall)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04236 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03678 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.45	mg/Kg	1	0.10	89	72 - 128
4-BFB		4.51	mg/Kg	1	0.10	90	72 - 128

Sample: 151128 - Site 3 (East Wall)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04132 Date Analyzed: 8/8/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03592 Date Prepared: 8/8/00

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

Sample: 151128 - Site 3 (East Wall)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04237 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: Prep Batch: PB03679 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 151129 - Site 3 (West Wall)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04236 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03678 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.100	mg/Kg	100	0.001
Toluene		0.46	mg/Kg	100	0.001
Ethylbenzene		1.76	mg/Kg	100	0.001
M,P,O-Xylene		11.5	mg/Kg	100	0.001
Total BTEX		13.7	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	1	10.6	mg/Kg	1	0.10	10600	72 - 128
4-BFB		23.3	mg/Kg	1	0.10	233	72 - 128

Sample: 151129 - Site 3 (West Wall)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04132 Date Analyzed: 8/8/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03592 Date Prepared: 8/8/00

Param	Flag	Result	Units	Dilution	RDL
DRO		8,230	mg/Kg	5	50

Sample: 151129 - Site 3 (West Wall)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04237 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: Prep Batch: PB03679 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
GRO		1399	mg/Kg	1	0.10

Sample: 151130 - Site (South Wall)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04236 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03678 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		3.49	mg/Kg	1	0.10	69	72 - 128
4-BFB		3.39	mg/Kg	1	0.10	67	72 - 128

Sample: 151130 - Site (South Wall)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04132 Date Analyzed: 8/8/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03592 Date Prepared: 8/8/00

Param	Flag	Result	Units	Dilution	RDL
DRO		81	mg/Kg	1	50

¹Surrogate out of limits due to matrix.

Sample: 151130 - Site (South Wall)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04237 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: Prep Batch: PB03679 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 151131 - Site 3 (Bottom 33')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04236 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03678 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.37	mg/Kg	1	0.10	87	72 - 128
4-BFB		4.42	mg/Kg	1	0.10	88	72 - 128

Sample: 151131 - Site 3 (Bottom 33')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04132 Date Analyzed: 8/8/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03592 Date Prepared: 8/8/00

Param	Flag	Result	Units	Dilution	RDL
DRO		74	mg/Kg	1	50

Sample: 151131 - Site 3 (Bottom 33')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04237 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: Prep Batch: PB03679 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 151132 - Site 3 (North Wall)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04236 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03678 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001

Continued ...

... Continued Sample: 151132 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.36	mg/Kg	1	0.10	87	72 - 128
4-BFB		4.48	mg/Kg	1	0.10	89	72 - 128

Sample: 151132 - Site 3 (North Wall)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04132 Date Analyzed: 8/8/00
Analyst: BP Preparation Method: 3550 B Prep Batch: PB03592 Date Prepared: 8/8/00

Param	Flag	Result	Units	Dilution	RDL
DRO		38	mg/Kg	1	50

Sample: 151132 - Site 3 (North Wall)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04237 Date Analyzed: 8/11/00
Analyst: RC Preparation Method: Prep Batch: PB03679 Date Prepared: 8/11/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC04132

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

Sample: Method Blank QCBatch: QC04236

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001

Continued ...

... Continued

Param	Flag	Results	Units	Reporting Limit
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		4.41	mg/Kg	0.10	88	72 - 128
4-BFB		4.36	mg/Kg	0.10	87	72 - 128

Sample: Method Blank QC Batch: QC04237

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS QC Batch: QC04132

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		<50	mg/Kg	1	250	<50	0		70 - 130	20

Sample: LCS QC Batch: QC04236

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		5.5	mg/Kg	50	0.10	<0.05	110		80 - 120	20
Benzene		4.81	mg/Kg	50	0.10	<0.05	96		80 - 120	20
Toluene		4.77	mg/Kg	50	0.10	<0.05	95		80 - 120	20
Ethylbenzene		4.79	mg/Kg	50	0.10	<0.05	95		80 - 120	20
M,P,O-Xylene		14	mg/Kg	50	0.30	<0.05	93		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.36	mg/Kg	50	0.10	87	72 - 128
4-BFB		4.16	mg/Kg	50	0.10	83	72 - 128

Sample: LCSD

QC Batch: QC04236

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		5.4	mg/Kg	50	0.10	<0.05	108	2	80 - 120	20
Benzene		4.85	mg/Kg	50	0.10	<0.05	97	1	80 - 120	20
Toluene		4.82	mg/Kg	50	0.10	<0.05	96	1	80 - 120	20
Ethylbenzene		4.83	mg/Kg	50	0.10	<0.05	96	1	80 - 120	20
M,P,O-Xylene		14.2	mg/Kg	50	0.30	<0.05	94	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.37	mg/Kg	50	0.10	87	72 - 128
4-BFB		4.19	mg/Kg	50	0.10	83	72 - 128

Sample: LCS

QC Batch: QC04237

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.946	mg/Kg	1	1	<5	94		80 - 120	20

Sample: LCSD

QC Batch: QC04237

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.872	mg/Kg	1	1	<5	87	8	80 - 120	20

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC04132

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		<50	mg/Kg	1	250	<50	0		70 - 130	20

Sample: MS

QC Batch: QC04236

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.15	mg/Kg	50	0.10	<0.05	97		80 - 120	20
Toluene		5.23	mg/Kg	50	0.10	0.074	97		80 - 120	20
Ethylbenzene		5.03	mg/Kg	50	0.10	0.052	93		80 - 120	20
M,P,O-Xylene		15.7	mg/Kg	50	0.30	0.824	93		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.56	mg/Kg	50	0.10	91	72 - 128
4-BFB		5.18	mg/Kg	50	0.10	103	72 - 128

Sample: MSD

QC Batch: QC04236

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.07	mg/Kg	50	0.10	<0.05	95	2	80 - 120	20
Toluene		5.09	mg/Kg	50	0.10	0.074	94	3	80 - 120	20
Ethylbenzene		4.99	mg/Kg	50	0.10	0.052	92	1	80 - 120	20
M,P,O-Xylene		15.5	mg/Kg	50	0.30	0.824	92	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.35	mg/Kg	50	0.10	87	72 - 128
4-BFB		5.04	mg/Kg	50	0.10	100	72 - 128

Quality Control Report

Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC04132

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	<50	0	70 - 130	8/8/00

Sample: ICV (1)

QC Batch: QC04132

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	<50	0	70 - 130	8/8/00

Sample: CCV (1) QC Batch: QC04236

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.095	95	80 - 120	8/11/00
Toluene		mg/Kg	0.10	0.093	93	80 - 120	8/11/00
Ethylbenzene		mg/Kg	0.10	0.094	94	80 - 120	8/11/00
M,P,O-Xylene		mg/Kg	0.30	0.279	93	80 - 120	8/11/00

Sample: CCV (2) QC Batch: QC04236

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.095	95	80 - 120	8/11/00
Toluene		mg/Kg	0.10	0.092	92	80 - 120	8/11/00
Ethylbenzene		mg/Kg	0.10	0.092	92	80 - 120	8/11/00
M,P,O-Xylene		mg/Kg	0.30	0.274	91	80 - 120	8/11/00

Sample: ICV (1) QC Batch: QC04236

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.099	99	80 - 120	8/11/00
Toluene		mg/Kg	0.10	0.098	98	80 - 120	8/11/00
Ethylbenzene		mg/Kg	0.10	0.1	100	80 - 120	8/11/00
M,P,O-Xylene		mg/Kg	0.30	0.291	97	80 - 120	8/11/00

Sample: CCV (1) QC Batch: QC04237

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.16	116	80 - 120	8/11/00

Sample: ICV (1) QC Batch: QC04237

Report Date: August 14, 2000
ES-608

Order Number: A00080807
Jimmy Cooper Ranch

Page Number: 10 of 10
Monument, Lea County, New Mexico

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.82	82	80 - 120	8/11/00

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Analytical and Quality Control Report

Equilon Pipeline Co.
Jeff Kindley
28569 Tomball Parkway #106
Tomball, Tx. 77375

Report Date: August 23, 2000

Order ID Number: A00081814

Project: ES-608
TA Job Code: Jimmy Cooper Ranch
Casualty Code: Monument, Lea County, New Mexico
Project Location: ES-608
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

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
151712	Site 1 Bottom 33'	Soil	8/17/00	14:25	8/18/00

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.

This report consists of a total of 3 pages and shall not be reproduced except in its entirety, without written approval of Trace Analysis, Inc.


Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 151712 - Site 1 Bottom 33'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC04387 Date Analyzed: 8/21/00
Analyst: JS Preparation Method: N/A Prep Batch: PB03815 Date Prepared: 8/21/00

Param	Flag	Result	Units	Dilution	RDL
CL		50	mg/Kg	1	1

Quality Control Report Method Blank

Sample: Method Blank QC Batch: QC04387

Param	Flag	Results	Units	Reporting Limit
CL		3.83	mg/Kg	1

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC04387

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		2631.07	mg/Kg	1	1250	1500	90		80 - 120	20

Sample: MSD QC Batch: QC04387

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		2639.48	mg/Kg	1	1250	1500	91	1	80 - 120	20

Quality Control Report Continuing Calibration Verification Standards

Report Date: August 23, 2000
ES-608

Order Number: A00081814
Jimmy Cooper Ranch

Page Number: 3 of 3
Monument, Lea County, New Mexico

Sample: CCV (1)

QC Batch: QC04387

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.73	93	80 - 120	8/21/00

Sample: ICV (1)

QC Batch: QC04387

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.82	94	80 - 120	8/21/00

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Analytical and Quality Control Report

Jeff Kindley
Enercon Services Inc.
306 W. Wall Suite 1312
Midland, Tx. 79701

Report Date: July 21, 2000

Order ID Number: A00072002

Project Number: ES-608
Project Name: Equiva Jimmy Cooper
Project Location: Monument, Lea County New Mexico

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
150039	Site 2 West Pit (Bottom 12')	Soil	7/18/00	12:50	7/20/00

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.

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Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 150039 - Site 2 West Pit (Bottom 12')

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC03817 Date Analyzed: 7/20/00
Analyst: JS Preparation Method: N/A Prep Batch: PB03301 Date Prepared: 7/20/00

Param	Flag	Result	Units	Dilution	RDL
CL		16	mg/Kg	1	0.50

Quality Control Report Method Blank

Sample: Method Blank QC Batch: QC03817

Param	Flag	Results	Units	Reporting Limit
CL		3.32	mg/Kg	0.50

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC03817

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		124.37	mg/Kg	1	125	16	86		80 - 120	20

Sample: MSD QC Batch: QC03817

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		124.23	mg/Kg	1	125	16	86	0	80 - 120	20

Quality Control Report Continuing Calibration Verification Standards

Report Date: July 21, 2000
ES-608

Order Number: A00072002
Equiva Jimmy Cooper

Page Number: 3 of 3
Monument, Lea County New Mexico

Sample: CCV (1)

QC Batch: QC03817

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.61	92	80 - 120	7/20/00

Sample: ICV (1)

QC Batch: QC03817

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.61	92	80 - 120	7/20/00

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Analytical and Quality Control Report

Jeff Kindley
Enercon Services Inc.
306 W. Wall Suite 1312
Midland, Tx. 79701

Report Date: August 3, 2000

Order ID Number: A00080208

Project Number: ES-608
Project Name: Jimmy Cooper Ranch
Project Location: Monument, Lea County, New Mexico

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
150761	Site 2 East Pit Bottom 35'	Soil	8/1/00	10:15	8/2/00

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.

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Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 150761 - Site 2 East Pit Bottom 35'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC04046 Date Analyzed: 8/2/00
Analyst: JS Preparation Method: N/A Prep Batch: PB03515 Date Prepared: 8/2/00

Param	Flag	Result	Units	Dilution	RDL
CL		39	mg/Kg	1	1

Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC04046

Param	Flag	Results	Units	Reporting Limit
CL		2.86	mg/Kg	1

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC04046

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		98.32	mg/Kg	1	62.50	39	94		80 - 120	20

Sample: MSD QC Batch: QC04046

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		93.14	mg/Kg	1	62.50	39	86	9	80 - 120	20

Quality Control Report Continuing Calibration Verification Standards

Report Date: August 3, 2000
ES-608

Order Number: A00080208
Jimmy Cooper Ranch

Page Number: 3 of 3
Monument, Lea County, New Mexico

Sample: CCV (1)

QC Batch: QC04046

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.78	94	80 - 120	8/2/00

Sample: ICV (1)

QC Batch: QC04046

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.82	94	80 - 120	8/2/00

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Analytical and Quality Control Report

Equilon Pipeline Co.
Jeff Kindley
28569 Tomball Parkway #106
Tomball, Tx. 77375

Report Date: August 10, 2000

Order ID Number: A00080808

Project: ES-608
TA Job Code: Jimmy Cooper Ranch
Casualty Code: Monument, Lea County, New Mexico
Project Location: ES-608
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

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
151133	Site 3 (Bottom 33')	Soil	8/7/00	14:30	8/8/00

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.

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Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 151133 - Site 3 (Bottom 33')

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC04159 Date Analyzed: 8/9/00
Analyst: JS Preparation Method: N/A Prep Batch: PB03615 Date Prepared: 8/8/00

Param	Flag	Result	Units	Dilution	RDL
CL		49	mg/Kg	1	I

Quality Control Report Method Blank

Sample: Method Blank QC Batch: QC04159

Param	Flag	Results	Units	Reporting Limit
CL		4.25	mg/Kg	1

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC04159

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		106.08	mg/Kg	1	62.50	49	91		80 - 120	20

Sample: MSD QC Batch: QC04159

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		106.11	mg/Kg	1	62.50	49	91	0	80 - 120	20

Quality Control Report Continuing Calibration Verification Standards

Report Date: August 10, 2000
ES-608

Order Number: A00080808
Jimmy Cooper Ranch

Page Number: 3 of 3
Monument, Lea County, New Mexico

Sample: CCV (1)

QC Batch: QC04159

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.46	91	80 - 120	8/9/00

Sample: ICV (1)

QC Batch: QC04159

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.36	90	80 - 120	8/9/00

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Company Name:

Evolution Services Inc.
(Street, City, Zip)

Address: 306 West Wall, Suite 1312, Midland, TX 79701

Contact Person: Edwin Sanchez Inc. SHE Science + Engineering

Attn: Mr. Kyle Landman 28510-C Tomball Parkway, Suite 406

Invoice to:
(If different from above)

Project #:

ES-608

Project Location:

Jimmie Cooper Ranch, Monument, New Mexico

Project Name:

Shell Tank Battery Site 3

Sampler Signature:

Jeff Kindley

Phone #: (915) 570-8726

mobile (915) 631-6591

Fax #: (915) 684-7587

Jeff Kindley
Tomball, TX 77375

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

A0080808

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/XX1005	
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	
Total Chlorides	✓
Turn Around Time if different from standard	
Hold	

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						PRESERVATIVE METHOD				DATE	TIME
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	NaHSO4	H2SO4	NaOH	ICE		

15/133 Site 3 (Bottom 33') 1 402 ✓ 08/07/00 1430

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Remarks:

LAB USE ONLY

48 hr Turnaround

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Intact

Headspace

Temp

Log-in Review

Relinquished by:

Date:

Time:

Received at Laboratory by:

Date:

Time:

Carrier #

UPS 5096-825-3836

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

ORIGINAL COPY

TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Equilon Pipeline Co.
Jeff Kindley
28569 Tomball Parkway #106
Tomball, Tx. 77375

Report Date: August 4, 2000

Order ID Number: A00080210

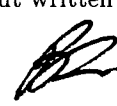
Project: ES-608
TA Job Code: Jimmy Cooper Ranch
Casualty Code: Monument, Lea County, New Mexico
Project Location: ES-608
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

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
150767	Site 3 (Comp 1)	Soil	8/1/00	:	8/2/00
150768	Site 3 (Comp 2)	Soil	8/1/00	:	8/2/00
150769	Site 3 (Comp 3)	Soil	8/1/00	:	8/2/00
150770	Site 3 (Comp 4)	Soil	8/1/00	:	8/2/00
150771	Site 3 (Comp 5)	Soil	8/1/00	:	8/2/00

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.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 150767 - Site 3 (Comp 1)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.1	mg/Kg	100	0.001
Toluene		<0.1	mg/Kg	100	0.001
Ethylbenzene		<0.1	mg/Kg	100	0.001
M,P,O-Xylene		0.574	mg/Kg	100	0.001
Total BTEX		0.574	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		9.4	mg/Kg	1	0.10	94	72 - 128
4-BFB		8.33	mg/Kg	1	0.10	83	72 - 128

Sample: 150767 - Site 3 (Comp 1)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

Param	Flag	Result	Units	Dilution	RDL
DRO		405	mg/Kg	1	50

Sample: 150767 - Site 3 (Comp 1)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		64.3	mg/Kg	1	0.10

Sample: 150768 - Site 3 (Comp 2)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.1	mg/Kg	100	0.001
Toluene		<0.1	mg/Kg	100	0.001
Ethylbenzene		0.539	mg/Kg	100	0.001
M,P,O-Xylene		3.43	mg/Kg	100	0.001
Total BTEX		3.97	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		8.45	mg/Kg	1	0.10	84	72 - 128
4-BFB		7.73	mg/Kg	1	0.10	77	72 - 128

Sample: 150768 - Site 3 (Comp 2)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

Param	Flag	Result	Units	Dilution	RDL
DRO		847	mg/Kg	1	50

Sample: 150768 - Site 3 (Comp 2)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		1170	mg/Kg	1	0.10

Sample: 150769 - Site 3 (Comp 3)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.36	mg/Kg	1	0.10	87	72 - 128
4-BFB		4.23	mg/Kg	1	0.10	84	72 - 128

Sample: 150769 - Site 3 (Comp 3)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

Param	Flag	Result	Units	Dilution	RDL
DRO		1170	mg/Kg	10	50

Sample: 150769 - Site 3 (Comp 3)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		10.6	mg/Kg	1	0.10

Sample: 150770 - Site 3 (Comp 4)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.2	mg/Kg	200	0.001
Toluene		<0.2	mg/Kg	200	0.001
Ethylbenzene		0.248	mg/Kg	200	0.001
M,P,O-Xylene		1.93	mg/Kg	200	0.001
Total BTEX		2.18	mg/Kg	200	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		19.5	mg/Kg	1	0.10	97	72 - 128
4-BFB		17.9	mg/Kg	1	0.10	89	72 - 128

Sample: 150770 - Site 3 (Comp 4)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

Param	Flag	Result	Units	Dilution	RDL
DRO		709	mg/Kg	1	50

Sample: 150770 - Site 3 (Comp 4)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		917	mg/Kg	1	0.10

Sample: 150771 - Site 3 (Comp 5)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC04066 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB03532 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.2	mg/Kg	200	0.001
Toluene		<0.2	mg/Kg	200	0.001

Continued ...

Report Date: August 4, 2000
ES-608

Order Number: A00080210
Jimmy Cooper Ranch

Page Number: 5 of 10
Monument, Lea County, New Mexico

... Continued Sample: 150771 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		0.21	mg/Kg	200	0.001
M,P,O-Xylene		1.89	mg/Kg	200	0.001
Total BTEX		2.1	mg/Kg	200	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits-
TFT		18.4	mg/Kg	1	0.10	92	72 - 128
4-BFB		16.4	mg/Kg	1	0.10	82	72 - 128

Sample: 150771 - Site 3 (Comp 5)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC04053 Date Analyzed: 8/2/00
Analyst: MA Preparation Method: 3550 B Prep Batch: PB03522 Date Prepared: 8/2/00

Param	Flag	Result	Units	Dilution	RDL
DRO		520	mg/Kg	1	50

Sample: 150771 - Site 3 (Comp 5)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04067 Date Analyzed: 8/3/00
Analyst: RC Preparation Method: Prep Batch: PB03533 Date Prepared: 8/3/00

Param	Flag	Result	Units	Dilution	RDL
GRO		121	mg/Kg	1	0.10

Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC04053

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

Sample: Method Blank QCBatch: QC04066

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001

Continued ...

... Continued

Param	Flag	Results	Units	Reporting Limit
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		4.62	mg/Kg	0.10	92	72 - 128
4-BFB		4.28	mg/Kg	0.10	85	72 - 128

Sample: Method Blank QCBatch: QC04067

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		283	mg/Kg	1	250	<50	113		70 - 130	20

Sample: LCSD QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		285	mg/Kg	1	250	<50	114	1	70 - 130	20

Sample: LCS QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.88	mg/Kg	50	0.10	<0.05	97		80 - 120	20
Toluene		4.9	mg/Kg	50	0.10	<0.05	98		80 - 120	20
Ethylbenzene		4.71	mg/Kg	50	0.10	<0.05	94		80 - 120	20
M,P,O-Xylene		14.2	mg/Kg	50	0.30	<0.05	94		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.44	mg/Kg	50	0.10	88	72 - 128
4-BFB		3.93	mg/Kg	50	0.10	78	72 - 128

Sample: LCSD

QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.83	mg/Kg	50	0.10	<0.05	96	1	80 - 120	20
Toluene		4.87	mg/Kg	50	0.10	<0.05	97	1	80 - 120	20
Ethylbenzene		4.67	mg/Kg	50	0.10	<0.05	93	1	80 - 120	20
M,P,O-Xylene		14.2	mg/Kg	50	0.30	<0.05	94	0	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.45	mg/Kg	50	0.10	89	72 - 128
4-BFB		3.96	mg/Kg	50	0.10	79	72 - 128

Sample: LCS

QC Batch: QC04067

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		1.05	mg/Kg	1	1	<5	105		80 - 120	20

Sample: LCSD

QC Batch: QC04067

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		1.04	mg/Kg	1	1	<5	104	1	80 - 120	20

Quality Control Report

Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		351	mg/Kg	1	250	<50	140		70 - 130	20

Sample: MSD QC Batch: QC04053

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		352	mg/Kg	1	250	<50	140	0	70 - 130	20

Sample: MS QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.1	mg/Kg	50	0.10	<0.05	102	1	80 - 120	20
Toluene		5.1	mg/Kg	50	0.10	<0.05	102	1	80 - 120	20
Ethylbenzene		4.9	mg/Kg	50	0.10	<0.05	98	1	80 - 120	20
M,P,O-Xylene		14.9	mg/Kg	50	0.30	0.058	98	0	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.5	mg/Kg	50	0.10	90	72 - 128
4-BFB		4.27	mg/Kg	50	0.10	85	72 - 128

Sample: MSD QC Batch: QC04066

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.04	mg/Kg	50	0.10	<0.05	100	1	80 - 120	20
Toluene		5.04	mg/Kg	50	0.10	<0.05	100	1	80 - 120	20
Ethylbenzene		4.86	mg/Kg	50	0.10	<0.05	97	1	80 - 120	20
M,P,O-Xylene		14.7	mg/Kg	50	0.30	0.058	97	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.5	mg/Kg	50	0.10	90	72 - 128
4-BFB		4.25	mg/Kg	50	0.10	85	72 - 128

Quality Control Report

Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC04053

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	261	104	70 - 130	8/2/00

Sample: CCV (2)

QC Batch: QC04053

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	271	108	70 - 130	8/2/00

Sample: ICV (1)

QC Batch: QC04053

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	308	123	70 - 130	8/2/00

Sample: CCV (1)

QC Batch: QC04066

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.087	87	80 - 120	8/3/00
Toluene		mg/Kg	0.10	0.087	87	80 - 120	8/3/00
Ethylbenzene		mg/Kg	0.10	0.085	85	80 - 120	8/3/00
M,P,O-Xylene		mg/Kg	0.30	0.257	85	80 - 120	8/3/00

Sample: CCV (2)

QC Batch: QC04066

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.084	84	80 - 120	8/3/00
Toluene		mg/Kg	0.10	0.082	82	80 - 120	8/3/00
Ethylbenzene		mg/Kg	0.10	0.08	80	80 - 120	8/3/00
M,P,O-Xylene		mg/Kg	0.30	0.245	81	80 - 120	8/3/00

Sample: ICV (1) QC Batch: QC04066

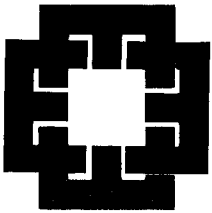
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.097	97	80 - 120	8/3/00
Toluene		mg/Kg	0.10	0.098	98	80 - 120	8/3/00
Ethylbenzene		mg/Kg	0.10	0.095	95	80 - 120	8/3/00
M,P,O-Xylene		mg/Kg	0.30	0.287	95	80 - 120	8/3/00

Sample: CCV (1) QC Batch: QC04067

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.04	104	80 - 120	8/3/00

Sample: ICV (1) QC Batch: QC04067

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.959	95	80 - 120	8/3/00



ENERCON SERVICES, INC.
An Employee Owned Company

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September 21, 2001

Mr. Kyle Landreneau
Equiva Services, L.L.C.
SHE/Science & Engineering
PMB 284
40 FM 1960 West
Houston, Texas 77090

**RE: CONFORMATION DRILLING AND SAMPLING REPORT FOR
FROMER SHELL PUMP SITES 1, 2, 3 - JIMMY COOPER RANCH
MONUMENT, LEA COUNTY, NEW MEXICO**

Mr. Landreneau:

Enercon Services, Inc. (Enercon) conducted drilling and soil sampling activities at the above referenced facility (Figure 1, Attachment A) from June 25th through June 27th, 2001. The site is located approximately 9 miles southwest of Hobbs, New Mexico on the east side of Highway 8, at the Jimmy Cooper Ranch, in Lea County, New Mexico.

From July 17 to August 24, 2000, three spill sites were excavated at the former Shell Tank Battery (Figure 2, Attachment A). During the excavation activities, a sheen on the groundwater was reported. The New Mexico Oil Conservation District (NMOCD) was informed, and at the request of the land owner, the stained soils were removed and transported to C & C Landfarm in Monument, New Mexico. The purpose of the current drilling and sampling activities was to confirm that the excavation of the 3 spill sites in July and August of 2000 had been successful. This report summarizes the verification drilling and sampling field activities and includes laboratory analytical results.

SITE SAFETY

Before work was initiated each day, all personnel working at the site attended a tailgate safety meeting. During the meetings, the Site Health and Safety Officer discussed the safety and health concerns and procedures for the site as outlined in the Site Health and Safety Plan (HASP). All personnel signed the HASP at the close of each meeting to document their attendance. A copy of the HASP was maintained at the site during all working hours in an easily accessible area. Air monitoring was performed at least four times daily to monitor and document vapor levels in the work zone. A Thermo Environmental Instruments, Inc., Model 580B Organic Vapor Monitor (OVM) was

employed to monitor organic vapors. Each monitoring event produced results below 1 ppm.

SUBSURFACE INVESTIGATION

From June 25th through June 27, 2001, monitor wells MW-1, MW-2, MW-3 and soil borings SB-1 and SB-2 were drilled to determine whether there were any residual petroleum hydrocarbon impacts from three excavated spills at the former Shell Tank Battery. Drilling operations were conducted by Eades Drilling Company, from Hobbs, New Mexico and supervised by Enercon personnel. The soil boring and monitor well locations are illustrated on Figures 2 and 3 in Attachment A. In general, the monitor wells were located on the southeast or down gradient side of each of the three former excavation locations. Soil borings were positioned on the west side of Highway 8, just south of the 3 former excavation areas. Soil boring SB-1 was located on the south side of an inactive EOTT pipeline and on the west side of an active EOTT pipeline. Soil boring SB-2 was drilled on the north side of the same inactive pipeline (Figures 2 and 3, Attachment A).

Soil Data

Monitor wells MW-1, MW-2 and MW-3 were drilled to depths of 42 feet below the ground surface (bgs) and soil borings SB-1 and SB-2 were drilled to 43 feet bgs, using an air rotary (AR) drilling method. Sampling procedures consisted of drilling to the desired depths and obtaining soil samples with a core sampling tool or Split Spoon sampling device. In general, soil samples were collected at five foot intervals and field screened for volatile organic constituents (VOCs) with a Thermo Environmental Instruments, Inc., Model 580B Organic Vapor Meter (OVM) using the head space procedure described in Guidelines for Remediation of Leaks, Spills and Releases. The OVM readings and soil strata locations are presented on the boring logs in Attachment C.

Soil samples collected from each boring (monitor well borings and soil borings) registered negligible OVM readings, with the exception of soil boring SB-1, which was completed 40 feet south of an inactive pipeline and approximately 25 feet west of an active crude oil pipeline. Between 10 and 15 feet bgs a hydrocarbon odor was detected. Laboratory analysis of the sample revealed a TPH GRO / DRO concentration of 522 ppm / 1360 ppm respectively. Soil concentrations are listed on Table 2 in Attachment B. The soil borings were properly plugged and abandoned according to NMOCD guidance.

Groundwater Data

During the subsurface exploration, a total of three (3) 42-foot monitoring wells were installed and sampled, and groundwater samples were collected from the two (2) open bore holes (SB-1 and SB-2) to evaluate potential groundwater contamination. The top of each well casing was surveyed and elevation was determined relative to a nearby permanent bench mark or fixed point. An Interphase Probe was employed to determine depth to groundwater and PSH thickness (if any) in each

monitoring well. Groundwater was encountered at depths ranging from 35.85 feet to 36.54 feet below the top of casing (TOC) across the property. The groundwater gradient map (Figure 4, Attachment A) indicates that groundwater flow direction is to the southeast.

After purging each monitoring well and soil boring of at least three well volumes, a groundwater sample was collected. Groundwater samples were collected from all three monitoring wells and both soil borings. All of the samples for laboratory analysis were placed on ice and transported under strict chain of custody. Groundwater samples were analyzed for Benzene, Ethyl benzene, Toluene and Total Xylenes (BTEX) by EPA Method 8021B. Groundwater samples were also tested for Poly Aromatic Hydrocarbons (PAH) by EPA Method 8270C. The State of New Mexico does not require groundwater to be analyzed for Total Petroleum Hydrocarbons (TPH).

All of the groundwater samples analyzed, were below detectable limits of the instrument. Laboratory results are summarized on Table 3, Attachment B of this document. Laboratory analytical reports are included in Attachment E.

A photo log illustrating and describing field activities is presented in Attachment D of this report.

FINDINGS / CONCLUSIONS

Laboratory analytical results for groundwater samples collected from monitor wells MW-1, MW-2 and MW-3 as well as soil borings SB-1 and SB-2, indicated no measurable concentrations of BTEX or PAH components.

Laboratory analytical results for soil samples collected from monitor wells MW-1 and MW-3 as well as soil boring SB-2, indicated no measurable concentrations of BTEX or TPH DRO/GRO.

Laboratory analytical results for soil samples collected from monitor well MW-2 revealed a Total Xylenes concentration at 40-42 feet bgs of 0.029 mg/Kg. At 10 to 15 feet bgs, soil boring SB-1 revealed concentrations of Ethylbenzene (1.24 mg/Kg), Toluene (1.76 mg/Kg), Total Xylenes (7.53 mg/Kg) and TPH DRO/GRO (522/1360 mg/Kg).

The NMOCD ranking system results for soils had previously been determined for the excavation activities in August 2000. Ranking is determined based on depth to groundwater, distance from water source/domestic wells, and distance to nearest surface water body. Based on the NMOCD ranking criteria, TPH concentrations in soil at this site were not to exceed 100 mg/Kg. Soils collected from monitor wells MW-1, MW-2 and MW-3, located on the site and directly associated with the excavations (located on the down gradient side of each excavation) were all below NMOCD soil concentration ranking requirements.

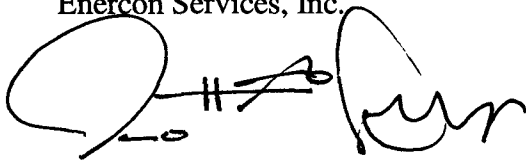
Soil boring SB-2, located across hwy 8 from the subject site, was drilled on the up gradient side of an inactive underground crude oil pipeline and approximately 25 feet west of an active underground crude oil pipeline. Laboratory analytical results from soil samples collected from SB-2 indicated no measurable hydrocarbon contamination.

Soil boring SB-1, which was completed 40 feet south of the same inactive pipeline and approximately 25 feet west of the active crude oil pipeline, revealed TPH DRO/GRO concentrations at a depth of approximately 10 to 15 feet bgs that exceeded the NMOCD's soil concentration ranking requirements.

It appears from the data collected that the excavations associated with the former Shell Pipeline site were successful and that the shallow depth of the contamination at soil boring SB-1 is unrelated to the former Shell Tank Battery activities.

Enercon Services, Inc. appreciates the opportunity to provide you with our professional consulting services on this important project. If you have any questions or if we can be of further assistance, please do not hesitate to call.

Respectfully,
Enercon Services, Inc.



Scott A. Lowry R.E.P.
Senior Project Manager



Charles D. Harlan, C.P.G.
Manager, Environmental Services

ATTACHMENT A

FIGURE 1 – Site Vicinity Map/Topo

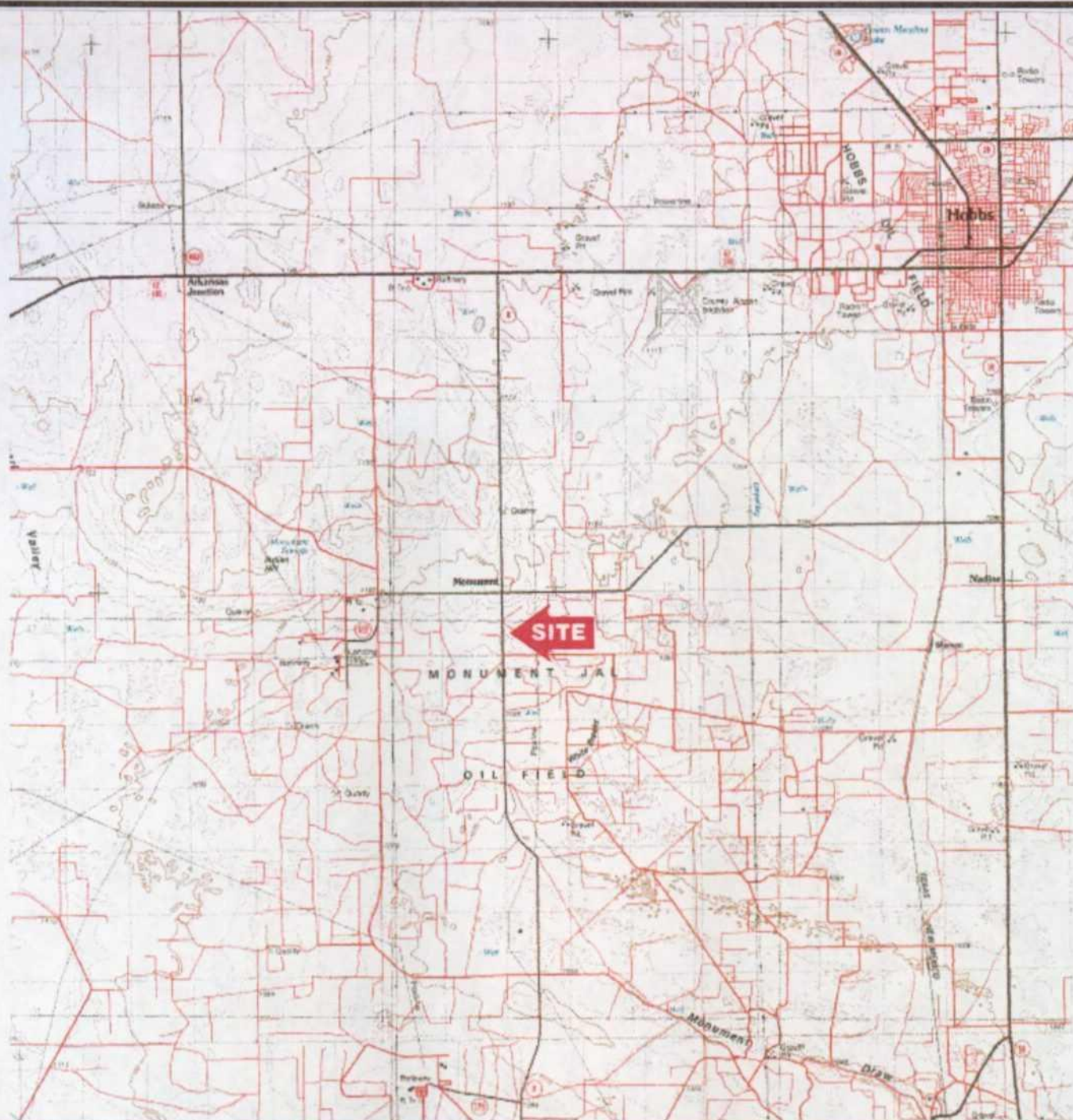
FIGURE 2 – Regional Map

FIGURE 3 – Site Plan (Exploded View)

FIGURE 4 – Soil Isoplith Map

FIGURE 5 – Groundwater Isoplith Map

FIGRUE 6 – Groundwater Gradient Map



U. S. G. S. MAP
MONUMENT SOUTH, NEW MEXICO
QUADRANGLE
DATED 1985
EQ-109



FIGURE 1

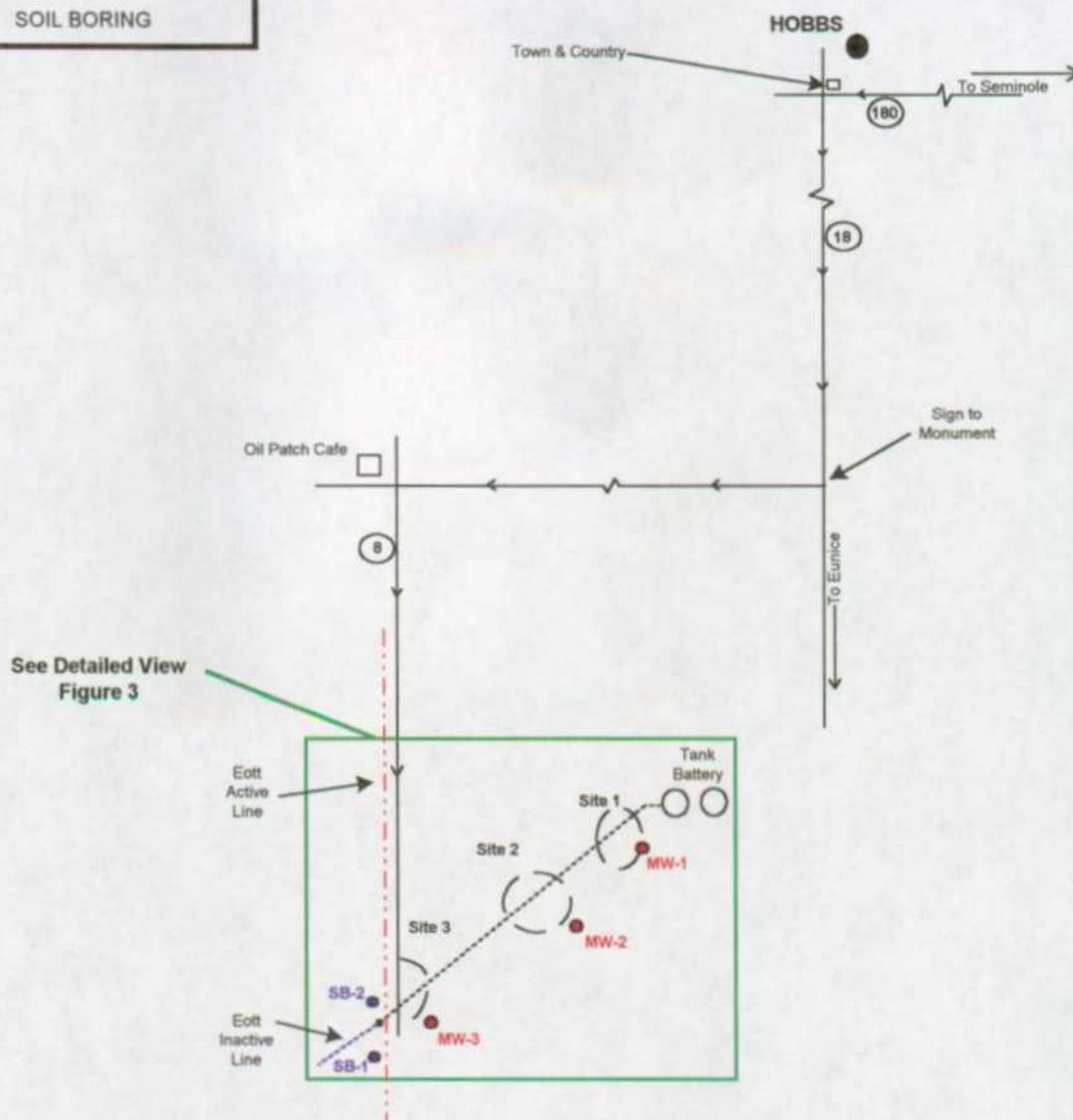
SCALE: 1" = 200,000'

EQUILON PIPELINE
JIMMIE COOPER RANCH
MONUMENT, LEA COUNTY,
NEW MEXICO



ENERCON SERVICES, INC.
2775 VILLA CREEK
SUITE 120
DALLAS, TX 75234-7420
(972) 484-3854

LEGEND	
(8)	HIGHWAY
MW	MONITOR WELL
SB	SOIL BORING



NOT TO SCALE

EQ-109



FIGURE 2
REGIONAL MAP

EQUILON PIPELINE
JIMMIE COOPER RANCH
MONUMENT, LEA COUNTY
NEW MEXICO



ENERCON SERVICES, INC.
2775 VILLA CREEK
SUITE 120
DALLAS, TX 75234-7420
(972) 484-3854

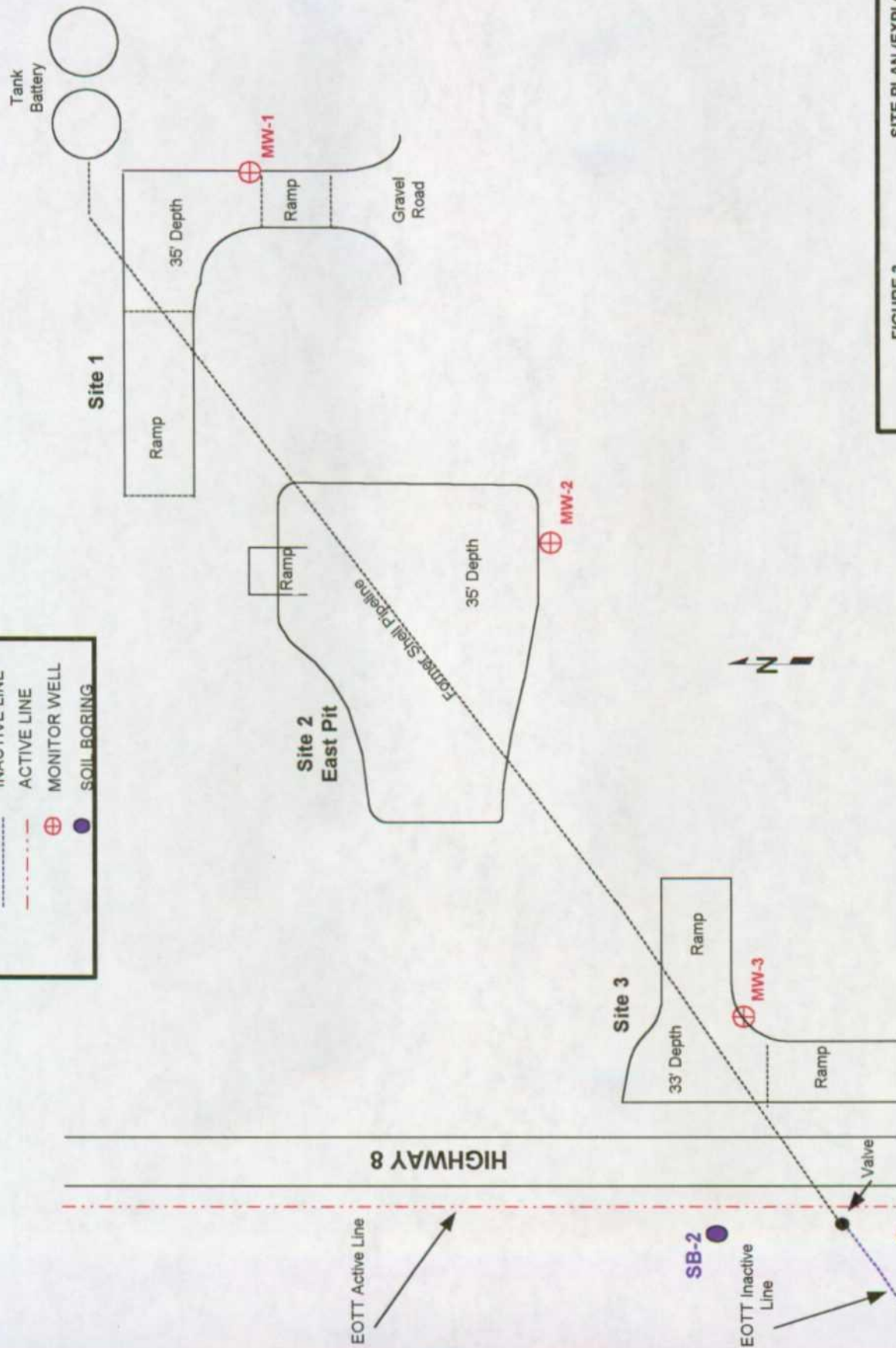
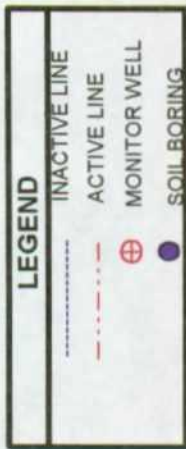
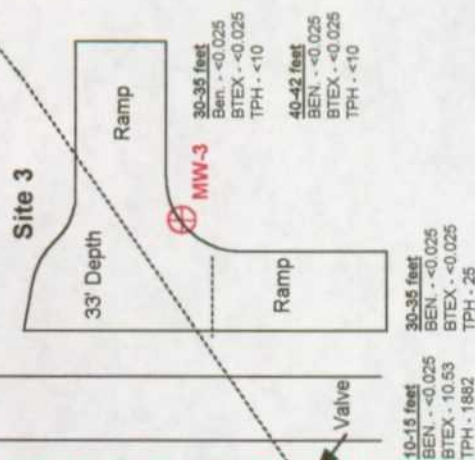
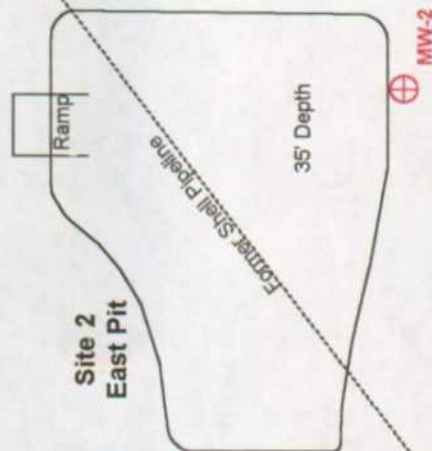
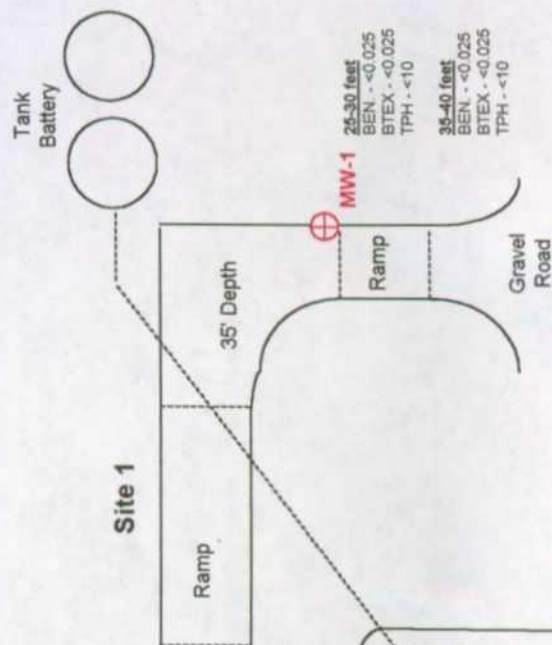


FIGURE 3 SITE PLAN (EXPLODED VIEW)

Equilon Pipeline
Jimmie Cooper Ranch
Monument, Lea County
New Mexico



ENERCON SERVICES, INC.
2775 VILLA CREEK
SUITE 120
DALLAS, TX 75234-7420
(972) 484-3854



10-15 feet
BEN - <0.025
BTEX - <0.025
TPH - <10

30-35 feet
BEN - <0.025
BTEX - <0.025
TPH - <10

SB-2

EOTT Inactive Line

SB-1



FIGURE 4

Equilon Pipeline
Jimmie Cooper Ranch
Monument, Lea County
New Mexico



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2775 VILLA CREEK
SUITE 120
DALLAS, TX 75234-7420
(972) 484-3854

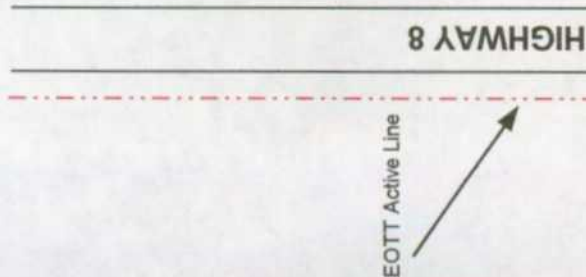
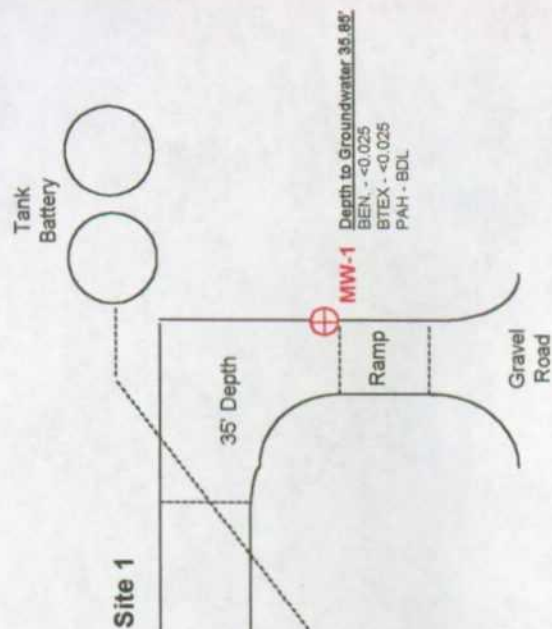
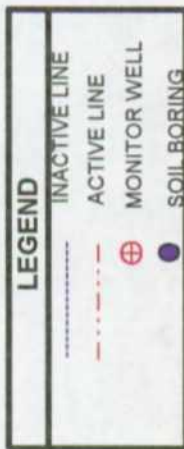


FIGURE 5 Groundwater Isopleth Map (ppm)

Equilon Pipeline
Jimmie Cooper Ranch
Monument, Lea County
New Mexico



ENERCON SERVICES, INC.
2775 VILLA CREEK
SUITE 120
DALLAS, TX 75234-7420
(972) 484-3864

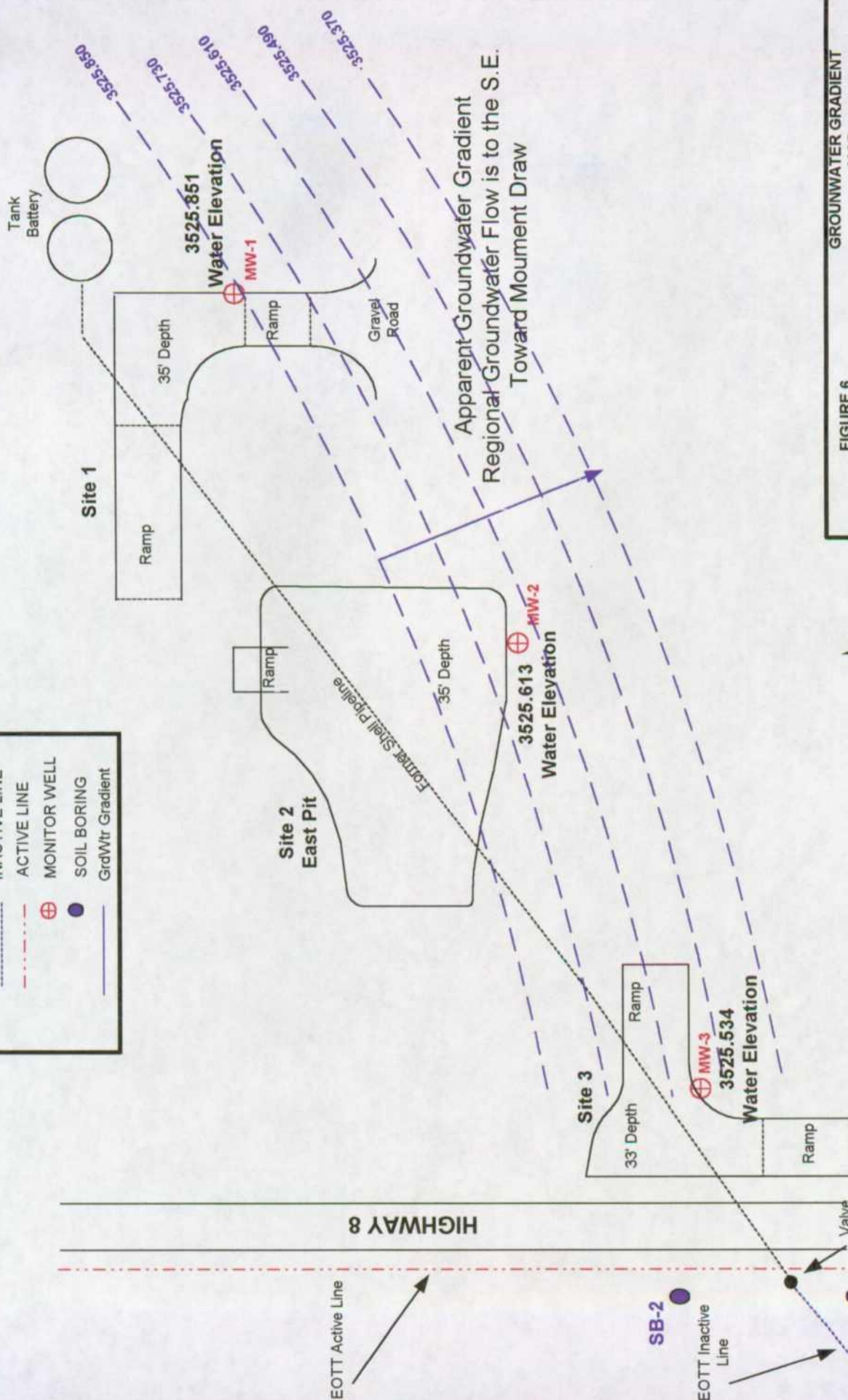
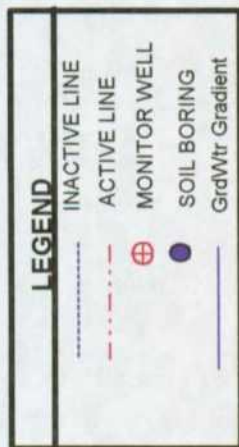


FIGURE 6

GROUNDWATER GRADIENT
MAP

Equilon Pipeline
Jimmie Cooper Ranch
Monument, Lea County
New Mexico



ENERCON SERVICES, INC.
2775 VILLA CREEK
SUITE 120
DALLAS, TX 75234-7420
(972) 484-3864

ATTACHMENT B

Soil Concentration Table (mg/kg)

Groundwater Concentration Table

Groundwater Elevation Measurements

TABLE 1
Groundwater Measurements

Well No.	Depth to GW	Casing Elevation	Water Elevation
MW-1	35.85	3561.701	3525.851
MW-2	36.54	3562.153	3525.613
MW-3	36.30	3561.834	3525.534

TABLE 2
Soil Contaminant Concentrations

Well No.	Sample Date	Depth	Benzene (BTEX 8021B)	Ethyl benzene (BTEX 8021B)	Toluene (BTEX 8021B)	Total Xylenes (BTEX 8021B)	TPH 8015 MODIFIED GRO/DRO
MW-1	6/25/01	25-30'	<0.025	<0.025	<0.025	<0.025	<10/<10
	6/25/01	35-40'	<0.025	<0.025	<0.025	<0.025	<10/<10
MW-2	6/25/01	29-31'	<0.025	<0.025	<0.025	<0.025	<10/<10
	6/25/01	40-42'	<0.025	<0.025	<0.025	0.029	<10/<10
MW-3	6/26/01	30-35'	<0.025	<0.025	<0.025	<0.025	<10/<10
	6/26/01	40-42'	<0.025	<0.025	<0.025	<0.025	<10/<10
SB-1	6/25/01	10-15'	<0.025	1.24	1.76	7.53	522/1360
	6/25/01	30-35'	<0.025	<0.025	<0.025	<0.025	<10/25
SB-2	6/25/01	10-15'	<0.025	<0.025	<0.025	<0.025	<10/<10
	6/25/01	30-35'	<0.025	<0.025	<0.025	<0.025	<10/<10

Concentrations expressed in parts per million (ppm)

BDL = Below Detection Limit

TABLE 3
Groundwater Contaminant Concentrations

Well No.	Sample Date	Benzene (BTEX 8021B)	Ethyl benzene (BTEX 8021B)	Toluene (BTEX 8021B)	Total Xylenes (BTEX 8021B)	PAH (8270C)
MW-1	6/26/01	<0.001	<0.001	<0.001	<0.001	BDL
MW-2	6/26/01	<0.001	<0.001	<0.001	<0.001	BDL
MW-3	6/27/01	<0.001	<0.001	<0.001	<0.001	BDL
SB-1	6/26/01	<0.001	<0.001	<0.001	<0.001	BDL
SB-2	6/26/01	<0.001	<0.001	<0.001	<0.001	BDL

Concentrations expressed in parts per million (ppm)

BDL = Below Detection Limit

ATTACHMENT C

Soil Boring Logs

ENERCON SERVICES, INC. 2775 VILLA CREEK, SUITE 120 DALLAS, TX 75234-7420			RECORD OF SUBSURFACE EXPLORATION		
Project #: EQ-109		Well/Boring #: MW-1		Date Drilled: 6/25/2001	
Project: Subsurface Investigation		Drilling Company: Eades Drilling		Drilling Method: Air Rotary & SS	
		Driller:		Logged By: S. Lowry	
DEPTH (FEET)	SOIL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	OVA (PPM)	REMARKS
0.0					Total Depth = 42' No odor or stains Groundwater encountered at approximately 35.85 feet below top of casing Soil samples collected at 25'-30' and 35'-40' submitted for laboratory analysis Well set at 42' Grab groundwater collected & submitted for laboratory analysis
5.0	0-5' Tan Sand & Some Caliche	1	Grab	0.0	
10.0	5'-10' Tan Sand & Powder Caliche	2	Grab	0.0	
15.0	10'-15' Tan Sand & Powder Caliche	3	Grab	1.0	
20.0	15'-20' White Powder Caliche	4	Grab	0.0	
25.0	20'-25' White Powder Caliche	5	Grab	0.0	
30.0	25'-30' Tan Sand & Caliche	6	Grab	3.0	
35.0	30'-35' Pink Sandy Clay	7	Grab	2.0	
40.0	35'-40' Red Sandy Clay	8	Grab	2.0	Moisture Line Sample Collected
	41'-42' Red Clay Sand				

ABBREVIATIONS AND SYMBOLS

-  Screened Interval
-  Sand pack
-  Grout

- SS - Driven Split Spoon
- ST - Pressed Shelby Tube
- CA - Continuous Flight Auger
- RC - Rock Core
- THD - Texas Highway Department Cone
- CT-5' - Continuous Sampler

- HSA - Hollow Stem Auger
- CFA - Continuous Flight Augers
- DC - Driving Casing
- MD - Mud Drilling
- HA - Hand Auger

ENERCON SERVICES, INC. 2775 VILLA CREEK, SUITE 120 DALLAS, TX 75234-7420			RECORD OF SUBSURFACE EXPLORATION		
Project #: EQ-109		Well/Boring #: MW-2		Date Drilled: 6/25/2001	
Project: Subsurface Investigation		Drilling Company: Eades Drilling		Drilling Method: Air Rotary & SS	
		Driller:		Logged By: S. Lowry	
DEPTH (FEET)	SOIL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	OVA (PPM)	REMARKS
0.0					Total Depth = 42' No odor or stains Groundwater encountered at approximately 36.54 feet below top of casing Soil samples collected at 29'-31' and 41'-42' submitted for laboratory analysis Well set at 42' Grab groundwater collected & submitted for laboratory analysis
5.0	0-5' Tan Sand	1	Grab	0.0	
10.0	5'-10' Tan Sand	2	Grab	0.0	
15.0	10'-15' Light Tan Sand	3	Grab	1.0	
20.0	15'-20' Dark Tan Sand	4	Grab	0.0	
25.0	20'-25' White Powder Caliche	5	Grab	1.0	
30.0	25'-30' White Calich/Sand	6	Grab	4.0	
35.0	30'-35' Tan to Pink Sand	7	Grab	2.0	
40.0	35'-40' Dark Tan Sand	8	Grab	2.0	
	41'-42' Red Clay Sand	9	Grab	3	Sample Collected

ABBREVIATIONS AND SYMBOLS

-  Screened Interval
-  Sand pack
-  Grout

- SS - Driven Split Spoon
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- CT-5' - Continuous Sampler

- HSA - Hollow Stem Auger
- CFA - Continuous Flight Augers
- DC - Driving Casing
- MD - Mud Drilling
- HA - Hand Auger

ENERCON SERVICES, INC. 2775 VILLA CREEK, SUITE 120 DALLAS, TX 75234-7420			RECORD OF SUBSURFACE EXPLORATION		
Project #: EQ-109		Well/Boring #: MW-3		Date Drilled: 6/25/2001	
Project: Subsurface Investigation		Drilling Company: Eades Drilling		Drilling Method: Air Rotary & SS	
		Driller:		Logged By: S. Lowry	
DEPTH (FEET)	SOIL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	OVA (PPM)	REMARKS
0.0					Total Depth = 42' No odor or stains Groundwater encountered at approximately 36.30 feet below top of casing Soil samples collected at 30'-35' and 40'-42' submitted for laboratory analysis Well set at 42' Grab groundwater collected & submitted for laboratory analysis
5.0	0-5' Tan Sand & Some Caliche	1	Grab	0.0	
10.0	5'-10' Tan Sand	2	Grab	0.0	
15.0	10'-15' Caliche Rock/Lt. Tan Sand	3	Grab	1.0	
20.0	15'-20' Light Tan Sand	4	Grab	0.0	
25.0	20'-25' Light Tan Sand	5	Grab	0.0	
30.0	25'-30' Light Tan Sand	6	Grab	3.0	
35.0	30'-35' Lt. Tan/Pink Sand & Caliche	7	Grab	2.0	
40.0	35'-40' Pink Coarse Sand/Caliche	8	Grab	2.0	
	41'-42' Red Sandy Clay	9	Grab	3.0	Sample Collected Groundwater Encountered Sample Collected

ABBREVIATIONS AND SYMBOLS



Screened Interval
 Sand pack
 Grout

SS - Driven Split Spoon
 ST - Pressed Shelby Tube
 CA - Continuous Flight Auger
 RC - Rock Core
 THD - Texas Highway Department Cone
 CT-5' - Continuous Sampler

HSA - Hollow Stem Auger
 CFA - Continuous Flight Augers
 DC - Driving Casing
 MD - Mud Drilling
 HA - Hand Auger

ENERCON SERVICES, INC. 2775 VILLA CREEK, SUITE 120 DALLAS, TX 75234-7420		RECORD OF SUBSURFACE EXPLORATION				
Project #: EQ-109		Well/Boring #: SB-1		Date Drilled: 6/25/2001		
Project: Subsurface Investigation		Drilling Company: Eades Drilling		Drilling Method: Air Rotary & SS		
		Driller:		Logged By: S. Lowry		
DEPTH (FEET)	SOIL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	OVA (PPM)	REMARKS	
0.0	0-5' Tan Sand & Caliche				Total Depth = 43' Strong Odor @ 10'-15' Groundwater encountered at approximately 32.9 feet below ground surface Soil samples collected at 10'-15' and 30'-35' submitted for laboratory analysis No well set	
5.0		1	Grab	0.9		
10.0	5'-10' Tan Sand & Caliche					
		2	Grab	1.3		
15.0	10'-15' Light Tan Sand (Strong Hydrocarbon Odor)	3	Grab	100.2		Sample Collected
20.0	15'-20' Light Tan Sand	4	Grab	41.0		
25.0	20'-25' Light Tan Sand	5	Grab	6.2		
30.0	25'-30' Light Tan Sand	6	Grab	8.1		
35.0	30'-35' Lt. Tan/Pink Sand & Caliche	7	Grab	9.0		Sample Collected
40.0	35'-43' Dark Tan Sand	8	Grab	2.0		
		9	Grab	3.0		

ABBREVIATIONS AND SYMBOLS



Screened Interval

Sand pack

SS - Driven Split Spoon
 ST - Pressed Shelby Tube
 CA - Continuous Flight Auger
 RC - Rock Core
 THD - Texas Highway Department Cone
 CT-5' - Continuous Sampler

HSA - Hollow Stem Auger
 CFA - Continuous Flight Augers
 DC - Driving Casing
 MD - Mud Drilling
 HA - Hand Auger

ENERCON SERVICES, INC. 2775 VILLA CREEK, SUITE 120 DALLAS, TX 75234-7420			RECORD OF SUBSURFACE EXPLORATION			
Project #: EQ-109		Well/Boring #: SB-2		Date Drilled: 6/25/2001		
Project: Subsurface Investigation		Drilling Company: Eades Drilling		Drilling Method: Air Rotary & SS		
		Driller:		Logged By: S. Lowry		
DEPTH (FEET)	SOIL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	OVA (PPM)	REMARKS	
0.0	0-5' Tan Sand & Caliche				Total Depth = 43' No odors or stains Groundwater encountered at approximately 32.60 feet below ground surface Soil samples collected at 10-15' and 30'-35' submitted for laboratory analysis No well set	
5.0		1	Grab	0.0		
10.0	5'-10' Tan Sand & Caliche					
15.0		2	Grab	0.0		
20.0	10'-15' Light Tan Sand	3	Grab	1.2	Sample Collected	
25.0	15'-20' Light Tan Sand					
30.0		4	Grab	1.0		
35.0	20'-25' Light Tan Sand	5	Grab	0.9		
40.0	25'-30' Light Tan Sand					
45.0		6	Grab	1.0		
50.0	30'-35' Lt. Tan/Pink Sand & Caliche				Groundwater Encountered	
55.0		7	Grab	1.2		
60.0	35'-43' Dark Tan Sand					
65.0		8	Grab	1.0		

ABBREVIATIONS AND SYMBOLS



Screened Interval



Sand pack

SS - Driven Split Spoon
 ST - Pressed Shelby Tube
 CA - Continuous Flight Auger
 RC - Rock Core
 THD - Texas Highway Department Cone
 CT-5' - Continuous Sampler

HSA - Hollow Stem Auger
 CFA - Continuous Flight Augers
 DC - Driving Casing
 MD - Mud Drilling
 HA - Hand Auger

ATTACHMENT D

Photographic Log



Photo 1: 6/25/01. Looking northeast. Set up to drill monitor well MW-1 located adjacent to southeast side of former "Site 1". Excavation completed August 18, 2000.



Photo 2: 6/25/01. Looking northeast. Setting monitor well MW-1. Well set at 42 feet below ground surface.



Photo 3: 6/25/01. Looking north-northeast. Drilling monitor well MW-2 at southeast edge of "Site 2" excavation. Note former excavation has been re-planted.



Photo 4: 6/25/01. Looking north-northeast. Setting monitor well MW-2.



Photo 5: 6/26/01. Looking northeast. Completing monitor well MW-2. Note completed monitor well MW-1 in background.



Photo 6: 6/26/01. Looking southwest. Drill rig set up at monitoring well MW-3. Note drainage area in background and pipeline marker at right.



Photo 7: 6/26/01. Looking northeast. Setting up to drill monitor well MW-3. Note slope of drainage area. MW-3 was completed on southeast edge of former excavation "Site 3".



Photo 8: 6/26/01. Looking north. Setting monitor well MW-3.



Photo 9: 6/26/01. Looking north. Completing monitor well MW-3.



Photo 10: 6/25/01. Looking south. Setting up to drill soil boring SB-1. Note pipeline markers in foreground and Highway 8 at left (east).



Photo 11: 6/25/01. Looking north. Setting up to drill soil boring SB-2. Note SB-1 in foreground. Pipeline markers and Highway 8 at right (east).

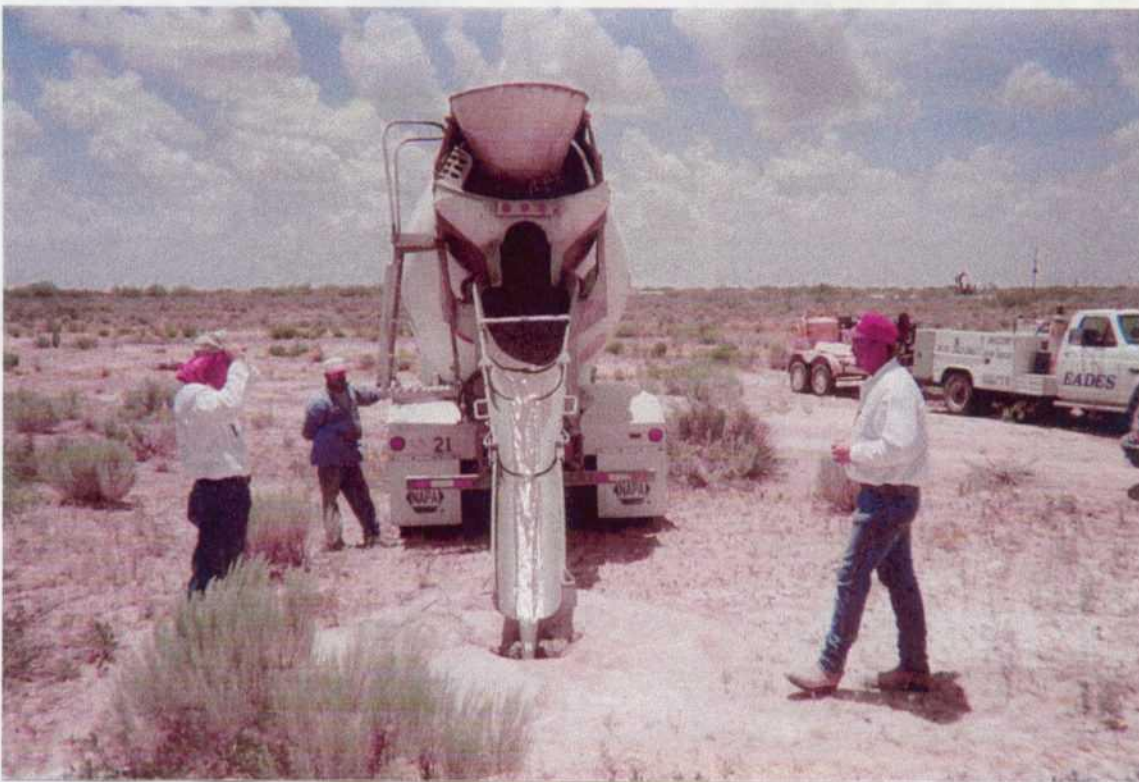


Photo 12: 6/26/01. Looking southwest. Soil boring SB-1 plugged and abandoned.



Photo 13: 6/26/01. Looking south. SB-2 plugged and abandoned.



Photo 14: 6/26/01. Looking northeast from soil boring locations. Note tank battery in background.



Photo 15: 6/26/01. Looking south. Highway 8 at left and boring locations at right.

ATTACHMENT E
Laboratory Analytical Results and Chain of Custody

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT A. LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75234
FAX: 972-484-8835

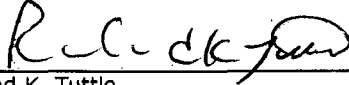
Sample Type: Soil
Sample Condition: Intact/ Iced/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

Sampling Date: See Below
Receiving Date: 06/27/01
Analysis Date: 06/27/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
41417	MW-1 25-30'	<0.025	<0.025	<0.025	<0.025	<0.025	06/25/01
41418	MW-1 35-40'	<0.025	<0.025	<0.025	<0.025	<0.025	06/25/01
41419	MW-2 29-31'	<0.025	<0.025	<0.025	<0.025	<0.025	06/25/01
41420	MW-2 40-42'	<0.025	<0.025	<0.025	0.029	<0.025	06/25/01
41421	MW-3 30-35'	<0.025	<0.025	<0.025	<0.025	<0.025	06/26/01
41422	MW-3 40-42'	<0.025	<0.025	<0.025	<0.025	<0.025	06/26/01
41423	SB-1 10-15'	<0.025	1.76	1.24	4.55	2.98	06/25/01
41424	SB-1 30-35'	<0.025	<0.025	<0.025	<0.025	<0.025	06/25/01
41425	SB-2 10-15'	<0.025	<0.025	<0.025	<0.025	<0.025	06/25/01
41426	SB-2 30-35'	<0.025	<0.025	<0.025	<0.025	<0.025	06/25/01

QUALITY CONTROL	0.098	0.096	0.094	0.207	0.096
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY	98	96	94	104	96
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.025	<0.025	<0.025	<0.025	<0.025
SPIKE	0.100	0.101	0.098	0.222	0.103
SPIKE DUP	0.096	0.096	0.094	0.212	0.099
% EXTRACTION ACCURACY	100	101	98	111	103
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	4	5	4	5	4

METHODS: EPA SW 846-8021B ,5030


Randal K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT A. LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75234
FAX: 972-484-8835

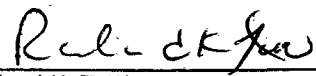
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

Sampling Date: See Below
Receiving Date: 06/27/01
Analysis Date: 06/27/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L	SAMPLE DATE
41427	MW-1	<0.001	<0.001	<0.001	<0.001	<0.001	06/26/01
41428	MW-2	<0.001	<0.001	<0.001	<0.001	<0.001	06/26/01
41429	MW-3	<0.001	<0.001	<0.001	<0.001	<0.001	06/27/01
41430	SB-1	<0.001	<0.001	<0.001	<0.001	<0.001	06/26/01
41431	SB-2	<0.001	<0.001	<0.001	<0.001	<0.001	06/26/01

QUALITY CONTROL	0.090	0.088	0.092	0.180	0.094
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY	90	88	92	90	94
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.001	<0.001	<0.001	<0.001	<0.001
SPIKE	0.091	0.088	0.090	0.174	0.092
SPIKE DUP	0.094	0.089	0.093	0.180	0.096
% EXTRACTION ACCURACY	94	89	93	90	96
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001
RPD	3	1	3	3	4

METHODS: EPA SW 846-8021B ,5030


Ralanda K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75234
FAX: 972-484-8835

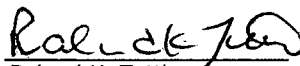
Sample Type: Soil
Sample Condition: Intact/ Iced/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

Sampling Date: See Below
Receiving Date: 06/27/01
Analysis Date: 06/27/01

ELT#	FIELD CODE	GRO	DRO	SAMPLE DATE
		C6-C10 mg/kg	>C10-C28 mg/kg	
41417	MW-1 25-30'	<10	<10	06/25/01
41418	MW-1 35-40'	<10	<10	06/25/01
41419	MW-2 29-31'	<10	<10	06/25/01
41420	MW-2 40-42'	<10	<10	06/25/01
41421	MW-3 30-35'	<10	<10	06/26/01
41422	MW-3 40-42'	<10	<10	06/26/01
41423	SB-1 10-15'	522	1360	06/25/01
41424	SB-1 30-35'	<10	25	06/25/01
41425	SB-2 10-15'	<10	<10	06/25/01
41426	SB-2 30-35'	<10	<10	06/25/01

QUALITY CONTROL	537	550
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	107	110
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	523	530
SPIKE DUP	524	506
% EXTRACTION ACCURACY	110	106
BLANK	<10	<10
RPD	0	5

Methods: EPA SW 846-8015M GRO/DRO


Raland K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75248
FAX: 972-484-8835

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

Sampling Date: 06/26/01
Receiving Date: 06/27/01
Analysis Date: 07/03/01
Field Code: MW-1

EPA SW846 8270C (mg/L)	REPORT LIMIT	ELT# 41427	RPD	%EA	%DEV
Naphthalene	0.005	ND			5.6
Acenaphthylene	0.005	ND			-6.9
Acenaphthene	0.005	ND	4	101	-8.2
Fluorene	0.005	ND			-0.3
Phenanthrene	0.005	ND			7.4
Anthracene	0.005	ND			9.8
Fluoranthene	0.005	ND			4.4
Pyrene	0.005	ND	6	89	-8.9
Benzo[a]anthracene	0.005	ND			-9.9
Chrysene	0.005	ND			-11.9
Benzo[b]fluoranthene	0.005	ND			8.0
Benzo[k]fluoranthene	0.005	ND			-16.9
Benzo [a]pyrene	0.005	ND			-7.6
Indeno[1,2,3-cd]pyrene	0.005	ND			4.7
Dibenz[a,h]anthracene	0.005	ND			10.0
Benzo[g,h,i]perylene	0.005	ND			13.2

% RECOVERY

Nitrobenzene-d5 SURR	50
2-Fluorobiphenyl SURR	66
p-Terphenyl-d14 SURR	78

ND= not detected at report limit.
Method: EPA SW 846 8270C , 3510


Raland K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75248
FAX: 972-484-8835

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

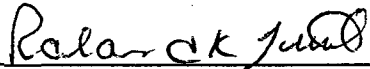
Sampling Date: 06/26/01
Receiving Date: 06/27/01
Analysis Date: 07/03/01
Field Code: MW-2

EPA SW846 8270C (mg/L)	REPORT LIMIT	ELT# 41428	RPD	%EA	%DEV
Naphthalene	0.005	ND			5.6
Acenaphthylene	0.005	ND			-6.9
Acenaphthene	0.005	ND	4	101	-8.2
Fluorene	0.005	ND			-0.3
Phenanthrene	0.005	ND			7.4
Anthracene	0.005	ND			9.8
Fluoranthene	0.005	ND			4.4
Pyrene	0.005	ND	6	89	-8.9
Benzo[a]anthracene	0.005	ND			-9.9
Chrysene	0.005	ND			-11.9
Benzo[b]fluoranthene	0.005	ND			8.0
Benzo[k]fluoranthene	0.005	ND			-16.9
Benzo[a]pyrene	0.005	ND			-7.6
Indeno[1,2,3-cd]pyrene	0.005	ND			4.7
Dibenz[a,h]anthracene	0.005	ND			10.0
Benzo[g,h,i]perylene	0.005	ND			13.2

% RECOVERY

Nitrobenzene-d5 SURR	51
2-Fluorobiphenyl SURR	69
p-Terphenyl-d14 SURR	95

ND= not detected at report limit.
Method: EPA SW 846 8270C , 3510


Raland K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75248
FAX: 972-484-8835

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

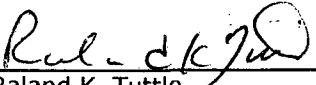
Sampling Date: 06/27/01
Receiving Date: 06/27/01
Analysis Date: 07/03/01
Field Code: MW-3

EPA SW846 8270C (mg/L)	REPORT LIMIT	ELT# 41429	RPD	%EA	%DEV
Naphthalene	0.005	ND			5.6
Acenaphthylene	0.005	ND			-6.9
Acenaphthene	0.005	ND	4	101	-8.2
Fluorene	0.005	ND			-0.3
Phenanthrene	0.005	ND			7.4
Anthracene	0.005	ND			9.8
Fluoranthene	0.005	ND			4.4
Pyrene	0.005	ND	6	89	-8.9
Benzo[a]anthracene	0.005	ND			-9.9
Chrysene	0.005	ND			-11.9
Benzo[b]fluoranthene	0.005	ND			8.0
Benzo[k]fluoranthene	0.005	ND			-16.9
Benzo [a]pyrene	0.005	ND			-7.6
Indeno[1,2,3-cd]pyrene	0.005	ND			4.7
Dibenz[a,h]anthracene	0.005	ND			10.0
Benzo[g,h,i]perylene	0.005	ND			13.2

% RECOVERY

Nitrobenzene-d5 SURR	48
2-Fluorobiphenyl SURR	68
p-Terphenyl-d14 SURR	71

ND= not detected at report limit.
Method: EPA SW 846 8270C , 3510


Raland K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75248
FAX: 972-484-8835

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

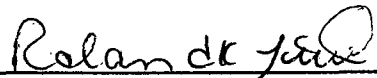
Sampling Date: 06/26/01
Receiving Date: 06/27/01
Analysis Date: 07/03/01
Field Code: SB-1

EPA SW846 8270C (mg/L)	REPORT LIMIT	ELT# 41430	RPD	%EA	%DEV
Naphthalene	0.005	ND			5.6
Acenaphthylene	0.005	ND			-6.9
Acenaphthene	0.005	ND	4	101	-8.2
Fluorene	0.005	ND			-0.3
Phenanthrene	0.005	ND			7.4
Anthracene	0.005	ND			9.8
Fluoranthene	0.005	ND			4.4
Pyrene	0.005	ND	6	89	-8.9
Benzo[a]anthracene	0.005	ND			-9.9
Chrysene	0.005	ND			-11.9
Benzo[b]fluoranthene	0.005	ND			8.0
Benzo[k]fluoranthene	0.005	ND			-16.9
Benzo [a]pyrene	0.005	ND			-7.6
Indeno[1,2,3-cd]pyrene	0.005	ND			4.7
Dibenz[a,h]anthracene	0.005	ND			10.0
Benzo[g,h,i]perylene	0.005	ND			13.2

% RECOVERY

Nitrobenzene-d5 SURR	47
2-Fluorobiphenyl SURR	65
p-Terphenyl-d14 SURR	67

ND= not detected at report limit.
Method: EPA SW 846 8270C , 3510


Raland K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENERCON SERVICES
ATTN: MR. SCOTT LOWRY
2775 VILLA CREEK, #120
DALLAS, TEXAS 75248
FAX: 972-484-8835

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 4.0 deg C
Project #: ES
Project Name: Jimmy Cooper Ranch
Project Location: None Given

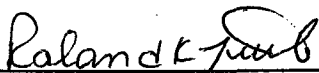
Sampling Date: 06/26/01
Receiving Date: 06/27/01
Analysis Date: 07/03/01
Field Code: SB-2

EPA SW846 8270C (mg/L)	REPORT LIMIT	ELT# 41431	RPD	%EA	%DEV
Naphthalene	0.005	ND			5.6
Acenaphthylene	0.005	ND			-6.9
Acenaphthene	0.005	ND	4	101	-8.2
Fluorene	0.005	ND			-0.3
Phenanthrene	0.005	ND			7.4
Anthracene	0.005	ND			9.8
Fluoranthene	0.005	ND			4.4
Pyrene	0.005	ND	6	89	-8.9
Benzo[a]anthracene	0.005	ND			-9.9
Chrysene	0.005	ND			-11.9
Benzo[b]fluoranthene	0.005	ND			8.0
Benzo[k]fluoranthene	0.005	ND			-16.9
Benzo[a]pyrene	0.005	ND			-7.6
Indeno[1,2,3-cd]pyrene	0.005	ND			4.7
Dibenz[a,h]anthracene	0.005	ND			10.0
Benzo[g,h,i]perylene	0.005	ND			13.2

% RECOVERY

Nitrobenzene-d5 SURR	48
2-Fluorobiphenyl SURR	63
p-Terphenyl-d14 SURR	63

ND= not detected at report limit.
Method: EPA SW 846 8270C , 3510


Raland K. Tuttle

7-5-01
Date