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REPORTS

DATE:

2002

ENERCON SERVICES, NC.
An Employee Owned Company

2775 Villa Creek, Suite 120
Dallas, TX 75234
(972) 484-3854
Fax: (972) 484-8835

May 24, 2002

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

RE: REPORT DETAILING THE INSTALLATION AND SAMPLING OF TEMPORARY MONITOR WELL TMW-1 FOR PENROSE 'A' LEASE-WINNIE KENNAN RANCH, LEA COUNTY, NEW MEXICO

PROJECT NUMBER: ES-533

Mr. Landreneau:

Enercon Services, Inc. (Enercon) conducted drilling and soil sampling activities at the above referenced facility (Figure 1, Attachment A) on February 27, 2002. The site is located approximately 7 ½ miles southeast of Eunice, New Mexico on the east side of Highway 18, at the Winnie Kennan Ranch, in Lea County, New Mexico.

From October 16 to November 21, 2000, the site was excavated and approximately 4,660 cubic yards of soil were transported to J and L Landfarm of Eunice, New Mexico for disposal. The site was excavated to a maximum depth of 40 feet below ground surface (bgs). The purpose of the current drilling and sampling activities was to confirm the extent of the hydrocarbon contamination at the excavation site and to determine if groundwater has been impacted by the release. This report summarizes the verification drilling and sampling field activities and includes laboratory analytical results.

SITE SAFETY

Before work was initiated, 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). 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 throughout the day 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

On January 27, 2002, temporary monitor well (TMW-1) was drilled to determine the vertical extent of hydrocarbon impacts to the soil and to determine if groundwater has been impacted from the former release at the site. Drilling operations were conducted by Eades Drilling Company, from Hobbs, New Mexico and supervised by Enercon personnel. The soil boring/temporary monitor well was placed through the center of the excavation (see Figure 2 in Attachment A).

Soil Data

The temporary monitor well (TMW-1) was drilled to a depth of 77 feet bgs or approximately 37 feet below the original excavation site using an air rotary (AR) drilling method. Sampling procedures consisted of drilling to the desired depths and obtaining soil samples with a split spoon sampling device. In general, the 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 location are presented on the boring log in Attachment C.

Soil samples collected from the boring/temporary monitor well registered from 296 to 368 ppm OVM readings. Samples were collected from 53 feet to 55 feet, 63 feet to 65 feet and at 75 feet bgs and submitted to Trace Analysis Laboratories (Trace) in Lubbock, Texas for analysis of benzene, toluene, ethylbenzene, and xlyenes (Total BTEX) using EPA Method 8021B, total petroleum hydrocarbons (TPH Dro/Gro) using EPA method 8015 M and further analysis for SPLP TPH (Dro/Gro) and SPLP BTEX for any sample that exceeded 10 parts per million benzene, 50 parts per million BTEX, and greater than 1,000 parts per million Dro/Gro combined. An additonal analysis for polynuclear aromatic hydrocarbons (PAH) using EPA method 8270C was requested for TMW-1 at 63 to 65 feet and TMW-1 at 75 feet. Of the analysis performed, only the TPH (Dro/Gro) samples exceeded the New Mexico Oil Conservation Division Rankings of greater than 1,000 ppm TPH. Soil sample TMW-1 at 53 to 55 feet, TMW-1 at 63 to 65 feet, and TMW-1 at 75 feet had concentrations of TPH at 2,071, 8,693, and 2,963 ppm, respectively. The remaining soil sample concentrations analysed were negligible. Soil concentrations are listed on Table 1 in Attachment B. Upon completion of the collection of the soil samples from the borehole, the boring was converted to a temporary monitor well (TMW-1).

Groundwater Data

During the subsurface exploration, groundwater was encountered at 77 feet bgs (appoximately 37 feet below the bottom of the excavation) and the soil boring was

converted to a temporary monitor well (TMW-1). Utilizing a sensor probe, groundwater was measured at a depth of approximately 78 feet bgs (38 feet below the bottom of the excavation) in the temporary well. Although groundwater gradient direction has not been established at the site, the regional (and presumed groundwater flow direction for the site) is to the southeast.

The temporary monitor well (TMW-1) was constructed of a 2-inch inside diameter, schedule 40 polyvinyl chloride riser, and a 10-foot long, 0.010 inch slotted screen. The screen was placed at the bottom of the boring and extended 5 feet above the groundwater. A sand pack was set around the well screen from the bottom of the well to two feet above the top of the well screen. Afterwards, a two-foot bentonite plug was placed above the sand pack. A diagram detailing the temporary monitor wells installation is included in Attachment C.

After purging the temporary monitoring well of at least three well volumes, a groundwater sample was collected on February 27, 2002, placed on ice, and transported under strict chain of custody to Trace Analysis of Lubbock, Texas. The groundwater sample was analyzed for total BTEX using EPA Method 8021B, TPH using EPA method 418.1, and PAH using EPA Method 8270. Due to a laboratory error, holding time on the PAH sample was exceeded so the results were considered invalid. When Enercon returned to the site to resample the groundwater for PAHs on March 15, 2002, a LNAPL layer measuring 0.16 feet was encountered on the groundwater. As a result, no additional groundwater samples were collected from the monitor well and hence no PAH results were available for temporary monitor well TMW-1.

Of the groundwater analyites analyzed, only benzene was below detection limit. The remaining analyes (Ethylbenzene, Toluene, Total Xylenes, and TPH) had levels which were above detection limits but were below drinking water standards. Laboratory results are summarized on Table 2, while groundwater measurements are on Table 3 and are included in Attachment B of this document. Laboratory analytical reports are included in Attachment D.

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

FINDINGS / CONCLUSIONS

The laboratory analytical results for the soil samples collected from temporary monitor well TMW-1 revealed that the soils have been impacted with TPH (Dro/Gro) which exceeds the NMOCD standards of 1,000 ppm. The TPH (Dro/Gro) concentration range from 2,071 ppm in TMW-1 at 53-55 feet bgs to 8,693 ppm at 63-65 feet bgs. The TPH result for the sample collected at the soil/groundwater interface at 75 feet bgs is 2,963 ppm. Additional analytical results for TMW-1 indicate that the concentration of BTEX and PAH components were below the current NMOCD standards.

Groundwater analytical results were below EPA drinking water standards for the analytes analyzed. However, a subsequent sampling event on March 15, 2002 revealed that LNAPL measuring 0.16 feet have impacted the groundwater. The NMOCD was notified on March 21, 2002.

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 Jeff Kindley at (915) 570-8726 or Bennett Howell at (972) 484-3854.

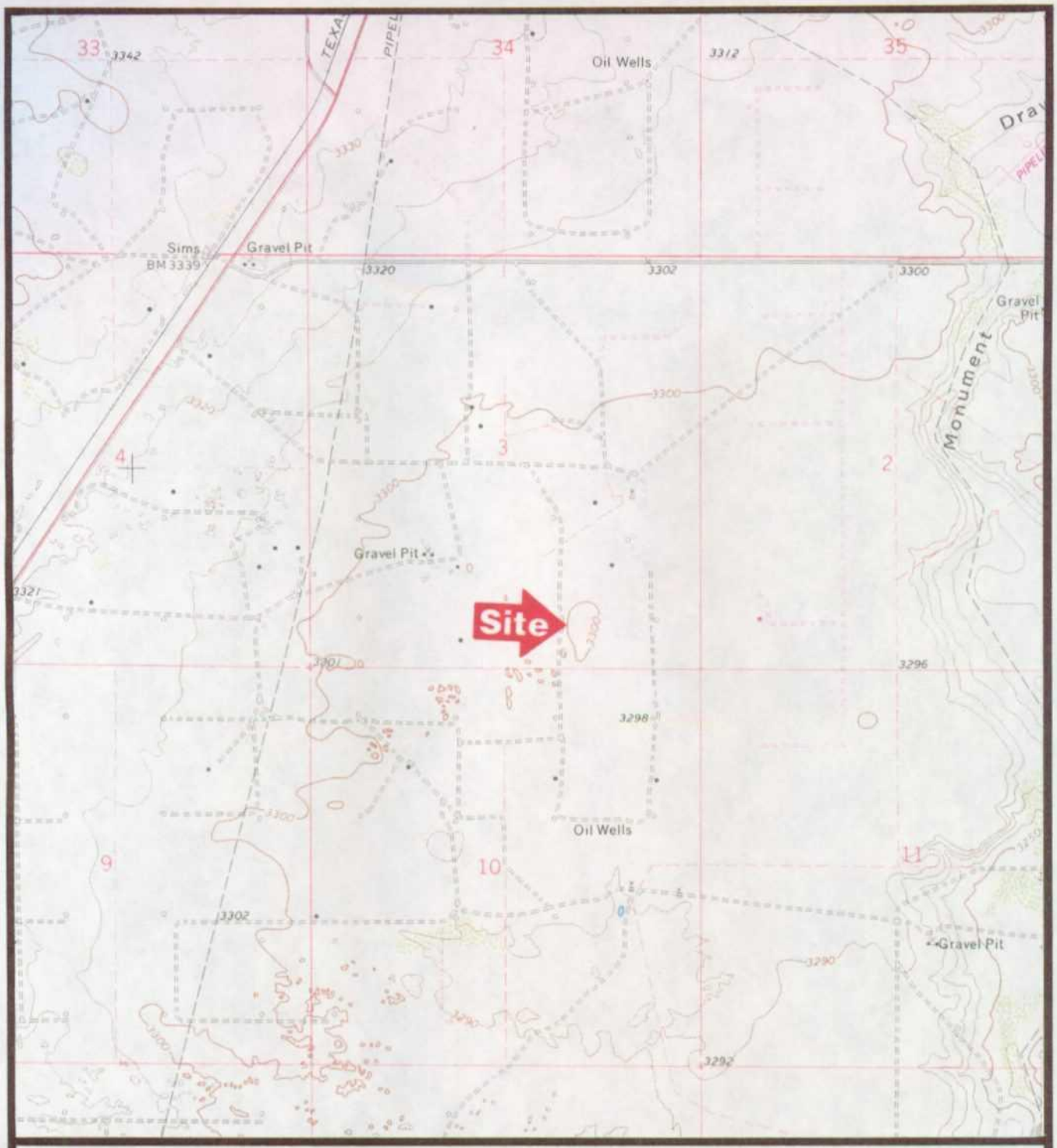
Respectfully,
Enercon Services, Inc.

Jeffrey Kindley, P.G.
Project Manager

Bennett C. Howell, III, P.E.
Senior Engineer

ATTACHMENT A

Figures 1 and 2



USGS TOPOGRAPHIC MAP
RATTLESNAKE CANYON, NEW MEXICO QUADRANGLE, DATED 1979
ES-533

N

FIGURE 1

Scale 1"= 1,000'

PENROSE SITE
WINNIE KENNAN RANCH
LEA COUNTY, NEW MEXICO

ENERCON SERVICES, INC.
306 WEST WALL
SUITE 1312
MIDLAND, TX 79707
(915) 570-8726

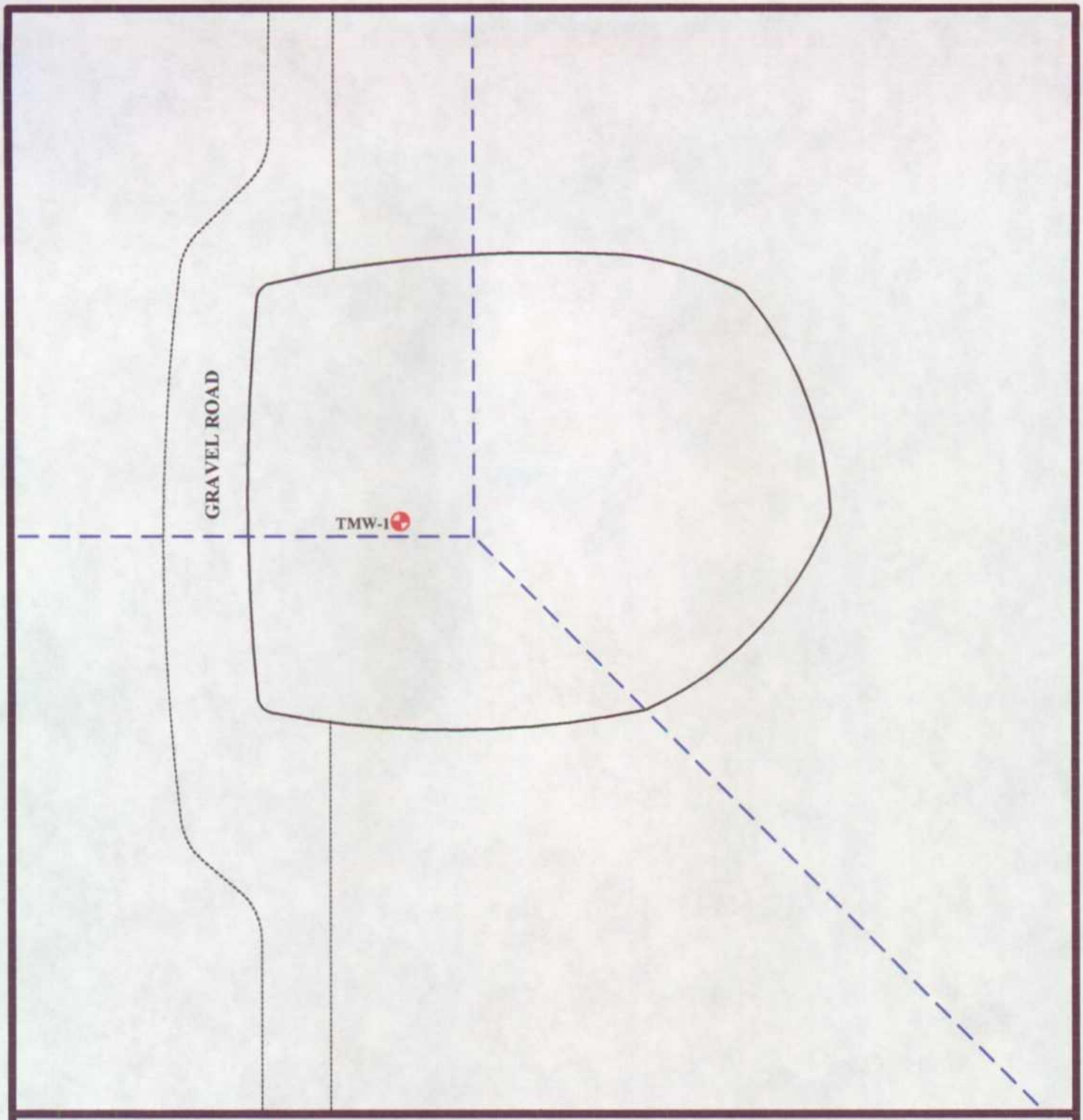


FIGURE 2: TEMPORARY MONITOR WELL LOCATION

NOT TO SCALE

ES-533

N

EXTENT OF EXCAVATION

FORMER SHELL PIPELINE

TMW-1 TEMPORARY MONITOR WELL

EQUIVA SERVICES, INC.
PENROSE (WINNIE KENNAN RANCH)
LEA COUNTY, NEW MEXICO

ENERCON SERVICES, INC.
306 WEST WALL
SUITE 1312
MIDLAND, TX 79701
(915) 570-8726

ATTACHMENT B

Tables 1, 2, and 3

TABLE 1
SOIL ANALYTICAL RESULTS
EQUILON PENROSE "A" LEASE (WINNIE KENNAN RANCH)
EUNICE, LEA COUNTY, NEW MEXICO

Sample Location	Date	Benzene (in mg/kg)	Toluene (in mg/kg)	Ethyl-benzene (in mg/kg)	Xylenes (in mg/kg)	Total BTEX (in mg/kg)	TPH (DRO/GRO) (in mg/kg)	Total PAH* (in mg/kg)	SPLP Benzene (in mg/L)	SPLP Toluene (in mg/L)	SPLP Ethylbenzene (in mg/L)	SPLP Xylenes (in mg/L)	SPLP Total BTEX (in mg/L)	SPLP DRO (in mg/L)	SPLP GRO (in mg/L)	Depth to groundwater
TMW-1 (53-55')	02/26/02	<0.100	<0.100	13.7	28.7	42.4	2,071	NA	NA	NA	NA	NA	NA	NA	NA	77'
TMW-1 (63-65')	02/26/02	0.0136	0.271	0.612	1.51	2.41	8,693	2.75	0.0071	0.241	0.568	1.36	2.1761	<5.00	6.85	77'
TMW-1 (75')	02/26/02	<0.005	<0.005	0.0405	0.132	0.173	2,963	1.08	NA	NA	NA	NA	NA	<5.00	1.55	77'
NMOCD Rankings		10	NA	NA	NA	50	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA

ND = Not detecl NA = Not applicable NS = Not sampled
* PAH result is for total PAH with the 2.75 ppm result being Naphthalene.

TABLE 2
GROUNDWATER MEASUREMENTS
EQUIVA PENROSE "A" LEASE (WINNIE KENNAN RANCH)
EUNICE, LEA COUNTY, NEW MEXICO

Well No.	Date	Casing Elevation (in feet)	Depth to Groundwater (in feet)	Depth to LNAPL (in feet)	LNAPL Thickness (in feet)	Corrected Groundwater Elevation (in feet)
TMW-1	02/27/02	NA	38.13	38.13	0	NA
	03/15/02	NA	38.15	38.31	0.16	NA

NA - Not available

TABLE 3
GROUNDWATER CONTAMINANT CONCENTRATIONS
EQUIVA PENROSE "A" LEASE (WINNIE KENNAN RANCH)
EUNICE, LEA COUNTY, NEW MEXICO

Well No.	Sample Date	Benzene (in mg/L)	Ethylbenzene (in mg/L)	Toluene (in mg/L)	Total Xylenes (in mg/L)	Total BTEX (in mg/L)	TPH (418.1) (in mg/L)	PAH (in mg/L)
TMW-1	02/27/02 03/15/02	<0.005 LNAPL	0.027 LNAPL	0.084 LNAPL	0.194 LNAPL	0.305	19.6 LNAPL	NA * LNAPL

LNAPL - Light Non-aqueous phase liquids

* Samples were collected, however the time frame for extraction was exceeded. A second sample was to be collected, however LNAPLs were noted in the well and hence no samples for PAH were collected or analyzed.

ATTACHMENT C

Soil Boring Log and Monitor Well Installation Diagram

ENERCON SERVICES, INC. 306 West Wall, Suite 1312 Midland, Texas 79701	RECORD OF SUBSURFACE EXPLORATION		
Project #: ES-533	Well/Boring #: TMW-1		Date Drilled: 2/27/02
Project: Penrose "A" Lease Winnie Kennan Ranch Lea County, NM	Drilling Company: Eades Drilling		Drilling Method: Air Rotary
	Driller: Alan Eades		Logged By: JWK

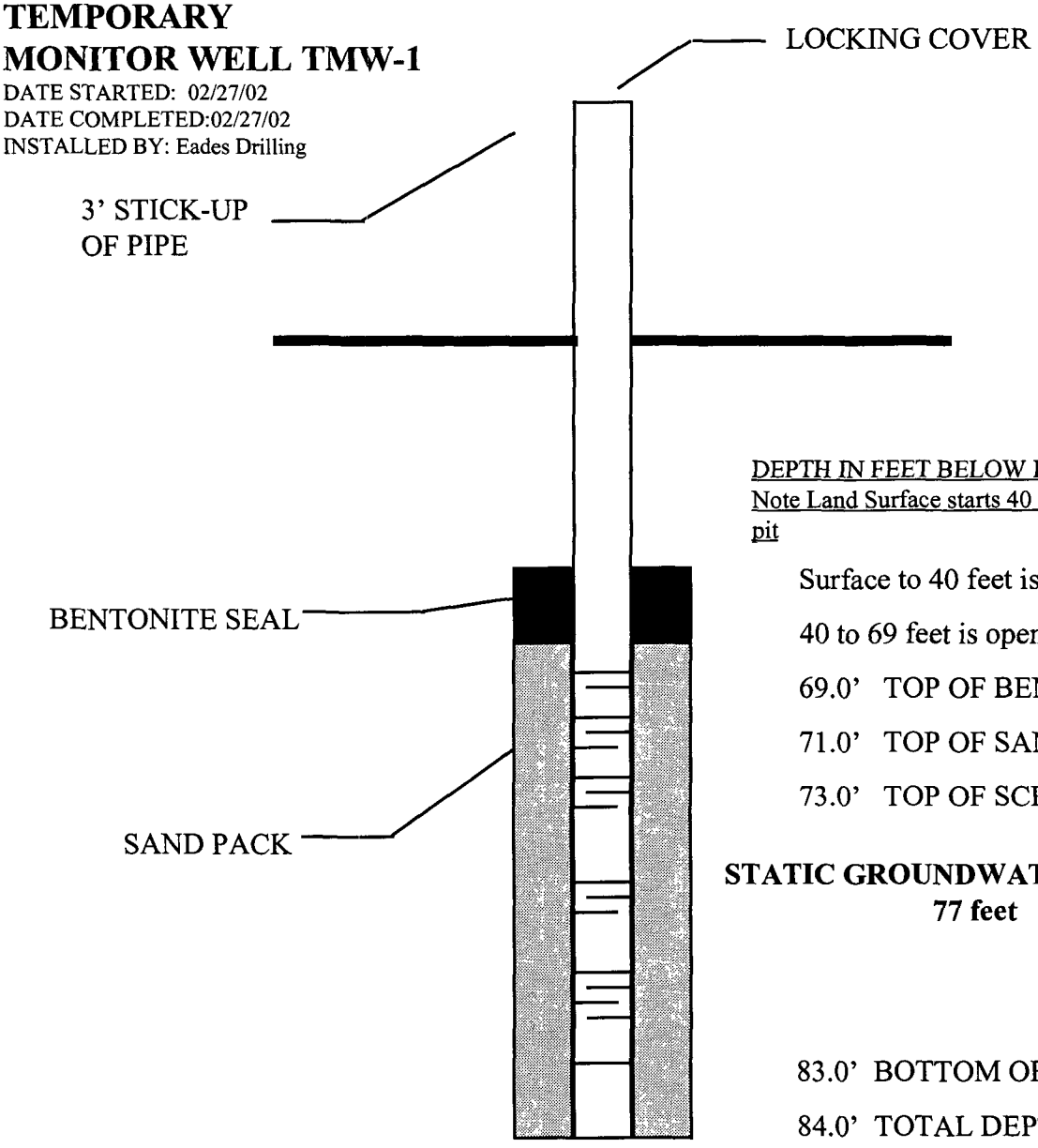
DEPTH (FEET)	SOIL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	OVA (PPM)	REMARKS	DEPTH (FEET)
40.0	Backfill material to 43 feet below ground level **		SS		No sample collected. Material is backfill.	0.0
	Tan well sorted medium grain sand				Stong hydrocarbon odor	
45.0			SS	NA	with staining	45.0
					Stong hydrocarbon odor	
50.0	with intermixed calcareous limestone		SS	350	with staining	50.0
					Stong hydrocarbon odor	
55.0		TMW-1 (53-55')	SS	368	with staining	55.0
					Strong hydrocarbo odor	
60.0			SS	349	with no staining	60.0
					No hydrocarbon odor	
65.0		TMW-1 (63'-65')	SS	365	or staining	65.0
					Groundwater encountered at 26 feet	
70.0			SS	299		70.0
	Tan well sorted medium grain clayey sand					
75.0		TMW-1 (75')	SS	296		75.0
					Groundwater encountered at 77 feet	
80.0	Boring temrinated at 82 feet and converted to a temporary monitor well.					80.0

ABBREVIATIONS AND SYMBOLS

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
HSA - Hollow Stem Auger
CFA - Continous Flight Augers
DC - Driving Casing

** Notes: Temporary Monitor Well installed inside a 40-foot deep previously excavated open pit.

TEMPORARY
MONITOR WELL TMW-1
DATE STARTED: 02/27/02
DATE COMPLETED:02/27/02
INSTALLED BY: Eades Drilling



DEPTH IN FEET BELOW LAND SURFACE
Note Land Surface starts 40 feet inside of open pit

Surface to 40 feet is open pit

40 to 69 feet is open annulus

69.0' TOP OF BENTONITE SEAL

71.0' TOP OF SAND PACK

73.0' TOP OF SCREEN

STATIC GROUNDWATER DEPTH: 77 feet

83.0' BOTTOM OF SCREEN

84.0' TOTAL DEPTH

CASING TYPE: 2" SCH. 40 PVC
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT
SAND PACK: 08/16 VOLUME SILICA SAND

ENERCON SERVICES CORPORATION

Temporary Monitor Well Installation Diagram

EQUIVA SERVICES, INC.
WINNIE KENNAN RANCH
LEA CO., NEW MEXICO

ATTACHMENT D

Laboratory Analytical

Summary Report

Kyle Landreneau
Equiva Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 6, 2002

Order ID Number: A02022812

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
191791	TMW-1	Water	2/27/02	9:30	2/28/02

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

	BTEX					TPH
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	TRPHC (ppm)
191791 - TMW-1	<0.005	0.027	0.084	0.194	0.305	19.6

TRACEANALYSIS, INC.

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

Analytical and Quality Control Report

Kyle Landreneau
Equiva Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 6, 2002

Order ID Number: A02022812

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
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
191791	TMW-1	Water	2/27/02	9:30	2/28/02

0
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 191791 - TMW-1

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18523	Date Analyzed:	2/28/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB17986	Date Prepared:	2/28/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		0.027	mg/L	5	0.001
Ethylbenzene		0.084	mg/L	5	0.001
M,P,O-Xylene		0.194	mg/L	5	0.001
Total BTEX		0.305	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.085	mg/L	5	0.10	85	70 - 130
4-BFB		0.089	mg/L	5	0.10	89	70 - 130

Sample: 191791 - TMW-1

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC18622	Date Analyzed:	3/6/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB18067	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		19.6	mg/L	5	0.50

Quality Control Report
Method Blank

Method Blank

QCBatch: QC18523

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.086	mg/L	1	0.10	86	70 - 130
4-BFB		0.087	mg/L	1	0.10	87	70 - 130

Method Blank

QCBatch: QC18622

Param	Flag	Results	Units	Reporting Limit
TRPHC		<0.500	mg/L	0.50

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC18523

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.094	0.095	mg/L	1	0.10	<0.001	94	1	82 - 111	20
Benzene	0.091	0.093	mg/L	1	0.10	<0.001	91	2	86 - 106	20
Toluene	0.092	0.094	mg/L	1	0.10	<0.001	92	2	82 - 108	20
Ethylbenzene	0.094	0.096	mg/L	1	0.10	<0.001	94	2	86 - 115	20
M,P,O-Xylene	0.283	0.286	mg/L	1	0.30	<0.001	94	1	79 - 122	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.085	0.088	mg/L	1	0.10	85	88	70 - 130
4-BFB	0.087	0.088	mg/L	1	0.10	87	88	70 - 130

Laboratory Control Spikes

QCBatch: QC18622

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	6.75	6.84	mg/L	1	8.50	<0.500	79	1	70 - 130	20

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

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QCBatch: QC18523

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.092	92	85 - 115	2/28/02
Benzene		mg/L	0.10	0.090	90	85 - 115	2/28/02
Toluene		mg/L	0.10	0.090	90	85 - 115	2/28/02
Ethylbenzene		mg/L	0.10	0.092	92	85 - 115	2/28/02
M,P,O-Xylene		mg/L	0.30	0.274	91	85 - 115	2/28/02

CCV (2) QCBatch: QC18523

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.091	91	85 - 115	2/28/02
Benzene		mg/L	0.10	0.087	87	85 - 115	2/28/02
Toluene		mg/L	0.10	0.089	89	85 - 115	2/28/02
Ethylbenzene		mg/L	0.10	0.09	90	85 - 115	2/28/02
M,P,O-Xylene		mg/L	0.30	0.268	89	85 - 115	2/28/02

ICV (1) QCBatch: QC18523

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.097	97	85 - 115	2/28/02
Benzene		mg/L	0.10	0.096	96	85 - 115	2/28/02
Toluene		mg/L	0.10	0.097	97	85 - 115	2/28/02
Ethylbenzene		mg/L	0.10	0.098	98	85 - 115	2/28/02
M,P,O-Xylene		mg/L	0.30	0.292	97	85 - 115	2/28/02

CCV (1) QCBatch: QC18622

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/L	100	93	93	75 - 125	3/6/02

ICV (1)

QCBatch: QC18622

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/L	100	92.5	92	75 - 125	3/6/02

975-631-6591

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

TraceAnalysis, Inc.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0202281̲2

Company Name: Enercon Services Inc — Phone #: 915-570-8726

Address: (Street, City, Zip) 306 West Wall Suite 1312, Midland, Tx 79701 — Fax #: 915-684-7587

Contact Person: JeFFrey Kindley

Invoice to: (If different from above) Kyle Landoneau, Equiva Services Inc

Project #: ES-533 — Project Name: Winnie Kennan

Project Location: Lea Co, New Mexico — Sampler Signature: Jeffrey Kindley

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	Matrix: WATER	SOIL	AIR	SLUDGE	Preservative: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	Sampling: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602 *	TPH 418.1/TX1005 418.1 *	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
91791	TMW-1	4	2 Liter 40ml	✓				✓				✓	✓	02/27/02	930		✓	✓														

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	02/27/02	1600	Glen Shelton	2/27/02	1600
Glen Shelton	2/27/02	1830			
			Received at Laboratory by: Vicki Clews	2-28-02	700

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp 4 °
Log-in Review MJ

REMARKS:
* IF benzene is ≥ 0.01 mg/L
Toluene is ≥ 0.75 mg/L
Ethylbenzene is ≥ 0.75 mg/L
Xylenes is ≥ 0.62 mg/L
then run PAH on samples
☐ Check If Special Reporting Limits Are Needed
No PAH per BC 3-4
FXP 3/6/02

Carrier # Greyhound GLI 163-566-874-9

4 samples - HS

Summary Report

Kyle Landreneau
Equilon Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 13, 2002

Order ID Number: A02030115

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
191904	TMW-1 (53-55)	Soil	2/26/02	8:10	3/1/02
191905	TMW-1 (63-65)	Soil	2/26/02	9:30	3/1/02

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

	BTEX						TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	Test Comments	DRO	GRO
Sample - Field Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
191904 - TMW-1 (53-55)	<0.100	<0.100	13.7	28.7	42.4	* [1]	1320	751
191905 - TMW-1 (63-65)	0.0136	0.271	0.612	1.51	2.41	-	5520	3173

Sample: 191905 - TMW-1 (63-65)

Param	Flag	Result	Units
Naphthalene		2.75	mg/Kg
Acenaphthylene		<0.25	mg/Kg
Acenaphthene		<0.25	mg/Kg
Fluorene		<0.25	mg/Kg
Phenanthrene		<0.25	mg/Kg
Anthracene		<0.25	mg/Kg
Fluoranthene		<0.25	mg/Kg
Pyrene		<0.25	mg/Kg
Benzo(a)anthracene		<0.25	mg/Kg
Chrysene		<0.25	mg/Kg
Benzo(b)fluoranthene		<0.25	mg/Kg
Benzo(k)fluoranthene		<0.25	mg/Kg
Benzo(a)pyrene		<0.25	mg/Kg
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg
Dibenzo(a,h)anthracene		<0.25	mg/Kg
Benzo(g,h,i)perylene		<0.25	mg/Kg

[1]Sample diluted due to hydrocarbons beyond xylene. Sample contains less than 0.0032 mg/Kg Benzene wich is the MDL.

Summary Report

Kyle Landreneau
Equilon Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 12, 2002

Order ID Number: A02030115

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
191905	TMW-1 (63-65)	Soil	2/26/02	9:30	3/1/02

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

	SPLP BTEX				
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)
191905 - TMW-1 (63-65)	0.0071	0.241	0.568	1.36	2.1761

Sample: 191905 - TMW-1 (63-65)

Param	Flag	Result	Units
SPLP DRO		<5.00	mg/L
SPLP GRO		6.85	mg/L

TRACEANALYSIS, INC.

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

Analytical and Quality Control Report

Kyle Landreneau
Equilon Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 13, 2002

Order ID Number: A02030115

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
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
191904	TMW-1 (53-55)	Soil	2/26/02	8:10	3/1/02
191905	TMW-1 (63-65)	Soil	2/26/02	9:30	3/1/02

0
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 191904 - TMW-1 (53-55)

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18564	Date Analyzed:	3/1/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB18021	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.100	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		13.7	mg/Kg	100	0.001
M,P,O-Xylene		28.7	mg/Kg	100	0.001
Total BTEX		42.4	mg/Kg	100	0.001
Test Comments	[1]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[2]	0.592	mg/Kg	100	1	59	70 - 130
4-BFB	[3]	9.68	mg/Kg	100	1	968	70 - 130

Sample: 191904 - TMW-1 (53-55)

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18552	Date Analyzed:	3/3/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB18014	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
DRO		1320	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[4]	233	mg/Kg	10	150	155	70 - 130

Sample: 191904 - TMW-1 (53-55)

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18565	Date Analyzed:	3/1/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB18021	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
GRO		751	mg/Kg	100	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[5]	1.57	mg/Kg	100	1	157	70 - 130
4-BFB	[6]	7.44	mg/Kg	100	1	744	70 - 130

[1]Sample diluted due to hydrocarbons beyond xylene. Sample contains less than 0.0032 mg/Kg Benzene wich is the MDL.
[2]Low surrogate recovery due to matrix interference.
[3]High surrogate recovery due to peak interference.
[4]Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.
[5]High surrogate recovery due to peak interference.
[6]High surrogate recovery due to peak interference.

Sample: 191905 - TMW-1 (63-65)

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18564	Date Analyzed:	3/1/02
Analyst:	CG	Preparation Method:	N/A	Prep Batch:	PB18021	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.0136	mg/Kg	5	0.001
Toluene		0.271	mg/Kg	5	0.001
Ethylbenzene		0.612	mg/Kg	5	0.001
M,P,O-Xylene		1.51	mg/Kg	5	0.001
Total BTEX		2.41	mg/Kg	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.097	mg/Kg	5	1	97	70 - 130
4-BFB		0.097	mg/Kg	5	1	97	70 - 130

Sample: 191905 - TMW-1 (63-65)

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC18684	Date Analyzed:	3/6/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB18060	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		2.75	mg/Kg	1	0.25
Acenaphthylene		<0.25	mg/Kg	1	0.25
Acenaphthene		<0.25	mg/Kg	1	0.25
Fluorene		<0.25	mg/Kg	1	0.25
Phenanthrene		<0.25	mg/Kg	1	0.25
Anthracene		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Pyrene		<0.25	mg/Kg	1	0.25
Benzo(a)anthracene		<0.25	mg/Kg	1	0.25
Chrysene		<0.25	mg/Kg	1	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(a)pyrene		<0.25	mg/Kg	1	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	1	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		71.44	mg/Kg	1	80	89	23 - 120
2-Fluorobiphenyl		46.875	mg/Kg	1	80	46	30 - 115
Terphenyl-d14		63.99	mg/Kg	1	80	79	28 - 137

Sample: 191905 - TMW-1 (63-65)

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18552	Date Analyzed:	3/3/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB18014	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
DRO		5520	mg/Kg	10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[7]	306	mg/Kg	10	150	204	70 - 130

Sample: 191905 - TMW-1 (63-65)

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18565	Date Analyzed:	3/1/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB18021	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
GRO		3173	mg/Kg	200	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[8]	1.69	mg/Kg	200	1	169	70 - 130
4-BFB	[9]	74.7	mg/Kg	200	1	7470	70 - 130

[7]Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.
[8]High surrogate recovery due to peak interference.
[9]High surrogate recovery due to peak interference.

Quality Control Report
Method Blank

Method Blank

QCBatch: QC18552

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		120	mg/Kg	1	150	80	70 - 130

Method Blank

QCBatch: QC18564

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.855	mg/Kg	10	1	85	70 - 130
4-BFB		0.757	mg/Kg	10	1	75	70 - 130

Method Blank

QCBatch: QC18565

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.01	mg/Kg	10	1	101	70 - 130
4-BFB		0.810	mg/Kg	10	1	81	70 - 130

Method Blank

QCBatch: QC18684

Param	Flag	Results	Units	Reporting Limit
Naphthalene		<0.25	mg/Kg	0.25
Acenaphthylene		<0.25	mg/Kg	0.25

Continued ...

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Param	Flag	Results	Units	Reporting Limit
Acenaphthene		<0.25	mg/Kg	0.25
Fluorene		<0.25	mg/Kg	0.25
Phenanthrene		<0.25	mg/Kg	0.25
Anthracene		<0.25	mg/Kg	0.25
Fluoranthene		<0.25	mg/Kg	0.25
Pyrene		<0.25	mg/Kg	0.25
Benzo(a)anthracene		<0.25	mg/Kg	0.25
Chrysene		<0.25	mg/Kg	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25
Benzo(a)pyrene		<0.25	mg/Kg	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		58.28	mg/Kg	1	80	72	23 - 120
2-Fluorobiphenyl		61.45	mg/Kg	1	80	76	30 - 115
Terphenyl-d14		62.83	mg/Kg	1	80	78	28 - 137

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC18552

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	243	232	mg/Kg	1	250	<50.0	97	5	70 - 130	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	134	127	mg/Kg	1	150	89	85	70 - 130

Laboratory Control Spikes

QCBatch: QC18564

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.853	0.872	mg/Kg	10	1	<0.010	85	2	79 - 113	20
Benzene	0.914	0.926	mg/Kg	10	1	<0.010	91	1	88 - 107	20
Toluene	0.915	0.931	mg/Kg	10	1	<0.010	91	1	86 - 110	20
Ethylbenzene	0.914	0.934	mg/Kg	10	1	<0.010	91	2	85 - 110	20
M,P,O-Xylene	2.8	2.85	mg/Kg	10	3	<0.010	93	1	86 - 112	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.863	0.886	mg/Kg	10	1	86	88	70 - 130
4-BFB	0.868	0.875	mg/Kg	10	1	86	87	70 - 130

Laboratory Control Spikes

QCBatch: QC18565

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	9.14	8.38	mg/Kg	10	1	<1	91	8	82 - 115	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.968	0.931	mg/Kg	10	1	97	93	70 - 130
4-BFB	0.904	0.897	mg/Kg	10	1	90	90	70 - 130

Laboratory Control Spikes

QCBatch: QC18684

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Naphthalene	50.9	56	mg/Kg	1	80	<0.25	63	9	21 - 133	20
Acenaphthylene	56.5	61.4	mg/Kg	1	80	<0.25	70	8	33 - 145	20
Acenaphthene	54.1	59.1	mg/Kg	1	80	<0.25	67	8	47 - 145	20
Fluorene	55	61.1	mg/Kg	1	80	<0.25	68	10	59 - 121	20
Phenanthrene	58.5	61.8	mg/Kg	1	80	<0.25	73	5	54 - 120	20
Anthracene	62.5	65.9	mg/Kg	1	80	<0.25	78	5	27 - 133	20
Fluoranthene	66.3	67.9	mg/Kg	1	80	<0.25	82	2	26 - 137	20
Pyrene	56.1	56.9	mg/Kg	1	80	<0.25	70	1	52 - 115	20
Benzo(a)anthracene	60.4	65.8	mg/Kg	1	80	<0.25	75	8	33 - 143	20
Chrysene	64.6	66.2	mg/Kg	1	80	<0.25	80	2	17 - 168	20
Benzo(b)fluoranthene	57	65	mg/Kg	1	80	<0.25	71	13	33 - 143	20
Benzo(k)fluoranthene	71.0	73.8	mg/Kg	1	80	<0.25	88	3	17 - 168	20
Benzo(a)pyrene	61.2	64.2	mg/Kg	1	80	<0.25	76	4	24 - 159	20
Indeno(1,2,3-cd)pyrene	49.4	50.8	mg/Kg	1	80	<0.25	61	2	0 - 171	20
Dibenzo(a,h)anthracene	39.9	48.0	mg/Kg	1	80	<0.25	49	18	0 - 227	20
Benzo(g,h,i)perylene	58.8	63.1	mg/Kg	1	80	<0.25	73	7	0 - 219	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Nitrobenzene-d5	51.9	62.4	mg/Kg	1	80	64	78	23 - 120
2-Fluorobiphenyl	58.6	65.0	mg/Kg	1	80	73	81	30 - 115
Terphenyl-d14	62.4	67.7	mg/Kg	1	80	78	84	28 - 137

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC18552

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	2560	2530	mg/Kg	5	250	2290	108	1	70 - 130	20

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

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
n-Triacontane	[10] 219	196	mg/Kg	5	150	146	131	70 - 130

Matrix Spikes

QCBatch: QC18564

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.895	0.926	mg/Kg	10	1	<0.010	90	3	68 - 102	20
Toluene	0.907	0.938	mg/Kg	10	1	<0.010	91	3	69 - 105	20
Ethylbenzene	0.904	0.932	mg/Kg	10	1	<0.010	90	3	65 - 108	20
M,P,O-Xylene	2.78	2.87	mg/Kg	10	3	<0.010	93	3	63 - 114	20

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

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.708	0.826	mg/Kg	10	1	71	83	70 - 130
4-BFB	0.721	0.856	mg/Kg	10	1	72	86	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC18552

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	258	103	75 - 125	3/3/02

ICV (1)

QCBatch: QC18552

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	98	75 - 125	3/3/02

[10]Surrogate recovery high due to coelution with analytes.

CCV (1) QCBatch: QC18564

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0946	94	85 - 115	3/1/02
Benzene		mg/L	0.10	0.0925	92	85 - 115	3/1/02
Toluene		mg/L	0.10	0.0934	93	85 - 115	3/1/02
Ethylbenzene		mg/L	0.10	0.0925	92	85 - 115	3/1/02
M,P,O-Xylene		mg/L	0.30	0.2843	94	85 - 115	3/1/02

CCV (2) QCBatch: QC18564

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0875	87	85 - 115	3/1/02
Benzene		mg/L	0.10	0.0919	91	85 - 115	3/1/02
Toluene		mg/L	0.10	0.0924	92	85 - 115	3/1/02
Ethylbenzene		mg/L	0.10	0.0919	91	85 - 115	3/1/02
M,P,O-Xylene		mg/L	0.30	0.2824	94	85 - 115	3/1/02

ICV (1) QCBatch: QC18564

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0874	87	85 - 115	3/1/02
Benzene		mg/L	0.10	0.0905	90	85 - 115	3/1/02
Toluene		mg/L	0.10	0.091	91	85 - 115	3/1/02
Ethylbenzene		mg/L	0.10	0.091	91	85 - 115	3/1/02
M,P,O-Xylene		mg/L	0.30	0.279	93	85 - 115	3/1/02

CCV (1) QCBatch: QC18565

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.911	91	75 - 125	3/1/02

ICV (1) QCBatch: QC18565

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.955	95	75 - 125	3/1/02

CCV (1)

QCBatch: QC18684

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/Kg	60	58.36	97	80 - 120	3/6/02
Acenaphthylene		mg/Kg	60	54.8	91	80 - 120	3/6/02
Acenaphthene		mg/Kg	60	54.9	91	80 - 120	3/6/02
Fluorene		mg/Kg	60	57.1	95	80 - 120	3/6/02
Phenanthrene		mg/Kg	60	61.9	103	80 - 120	3/6/02
Anthracene		mg/Kg	60	60.5	100	80 - 120	3/6/02
Fluoranthene		mg/Kg	60	66.0	110	80 - 120	3/6/02
Pyrene		mg/Kg	60	49.7	82	80 - 120	3/6/02
Benzo(a)anthracene		mg/Kg	60	63.1	105	80 - 120	3/6/02
Chrysene		mg/Kg	60	61.0	101	80 - 120	3/6/02
Benzo(b)fluoranthene		mg/Kg	60	69.4	115	80 - 120	3/6/02
Benzo(k)fluoranthene		mg/Kg	60	51.6	86	80 - 120	3/6/02
Benzo(a)pyrene		mg/Kg	60	58.1	96	80 - 120	3/6/02
Indeno(1,2,3-cd)pyrene		mg/Kg	60	63.5	105	80 - 120	3/6/02
Dibenzo(a,h)anthracene		mg/Kg	60	51.7	86	80 - 120	3/6/02
Benzo(g,h,i)perylene		mg/Kg	60	51.6	86	80 - 120	3/6/02
Nitrobenzene-d5		mg/Kg	60	61.6	102	80 - 120	3/6/02
2-Fluorobiphenyl		mg/Kg	60	57.8	96	80 - 120	3/6/02
Terphenyl-d14		mg/Kg	60	50.1	83	80 - 120	3/6/02

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Analytical and Quality Control Report

Kyle Landreneau
Equilon Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 12, 2002

Order ID Number: A02030115

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
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
191905	TMW-1 (63-65)	Soil	2/26/02	9:30	3/1/02

0
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

This report consists of a total of 5 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 191905 - TMW-1 (63-65)

Analysis:	SPLP BTEX	Analytical Method:	S 8021B	QC Batch:	QC18688	Date Analyzed:	3/7/02
Analyst:	CG	Preparation Method:	1312	Prep Batch:	PB18125	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.0071	mg/L	1	0.001
Toluene		0.241	mg/L	1	0.001
Ethylbenzene		0.568	mg/L	1	0.001
M,P,O-Xylene		1.36	mg/L	1	0.001
Total BTEX		2.1761	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.082	mg/Kg	5	0.10	82	72 - 128
4-BFB		0.095	mg/Kg	5	0.10	95	72 - 128

Sample: 191905 - TMW-1 (63-65)

Analysis:	SPLP DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18741	Date Analyzed:	3/10/02
Analyst:	MM	Preparation Method:	1312	Prep Batch:	PB18157	Date Prepared:	3/10/02

Param	Flag	Result	Units	Dilution	RDL
SPLP DRO		<5.00	mg/L	1	50

Sample: 191905 - TMW-1 (63-65)

Analysis:	SPLP GRO	Analytical Method:	8015	QC Batch:	QC18703	Date Analyzed:	3/7/02
Analyst:	CG	Preparation Method:	1312	Prep Batch:	PB18126	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
SPLP GRO		6.85	mg/L	5	0.10

Quality Control Report
Method Blank

Method Blank

QCBatch: QC18688

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.089	mg/Kg	1	0.10	89	72 - 128
4-BFB		0.091	mg/Kg	1	0.10	91	72 - 128

Method Blank

QCBatch: QC18703

Param	Flag	Results	Units	Reporting Limit
SPLP GRO		<0.1	mg/L	0.10

Method Blank

QCBatch: QC18741

Param	Flag	Results	Units	Reporting Limit
SPLP DRO		<5.00	mg/L	50

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC18688

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.097	0.096	mg/L	1	0.10	<0.001	97	1	80 - 120	20
Benzene	0.093	0.090	mg/L	1	0.10	<0.001	93	3	80 - 120	20
Toluene	0.094	0.092	mg/L	1	0.10	<0.001	94	2	80 - 120	20
Ethylbenzene	0.097	0.095	mg/L	1	0.10	<0.001	97	2	80 - 120	20
M,P,O-Xylene	0.287	0.284	mg/L	1	0.30	<0.001	95	1	80 - 120	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.087	0.083	mg/Kg	1	0.10	87	83	72 - 128

Continued ...

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
4-BFB	0.093	0.089	mg/Kg	1	0.10	93	89	72 - 128

Laboratory Control Spikes

QCBatch: QC18703

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
SPLP GRO	0.866	0.861	mg/L	1	1	<0.1	86	0	82 - 115	20

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

Laboratory Control Spikes

QCBatch: QC18741

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
SPLP DRO	24.8	23.5	mg/L	0.10	250	<5.00	99	5	70 - 130	20

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

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC18688

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.103	103	80 - 120	3/7/02
Benzene		mg/L	0.10	0.103	103	80 - 120	3/7/02
Toluene		mg/L	0.10	0.103	103	80 - 120	3/7/02
Ethylbenzene		mg/L	0.10	0.106	106	80 - 120	3/7/02
M,P,O-Xylene		mg/L	0.30	0.312	104	80 - 120	3/7/02

ICV (1)

QCBatch: QC18688

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.099	99	80 - 120	3/7/02
Benzene		mg/L	0.10	0.095	95	80 - 120	3/7/02
Toluene		mg/L	0.10	0.096	96	80 - 120	3/7/02
Ethylbenzene		mg/L	0.10	0.099	99	80 - 120	3/7/02
M,P,O-Xylene		mg/L	0.30	0.294	98	80 - 120	3/7/02

CCV (1)

QCBatch: QC18703

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP GRO		mg/L	1	0.946	94	80 - 120	3/7/02

ICV (1) QCBatch: QC18703

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP GRO		mg/L	1	0.887	88	80 - 120	3/7/02

CCV (1) QCBatch: QC18741

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP DRO		mg/L	250	250	100	70 - 130	3/10/02

ICV (1) QCBatch: QC18741

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP DRO		mg/L	250	241	96	70 - 130	3/10/02

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El Paso, Texas 79922-1028
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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A02030115

Company Name: Enercon Services Inc.
Phone #: 915-570-8726
Address: (Street, City, Zip) 306 West Wall, Suite 1312, Midland, Tx 79701
Fax #: 915-684-7587
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Kyle Landenaw, Equiva Services Inc.
Project #: ES-533
Project Name: Winnie Konnan
Project Location: Lea Co. New Mexico
Sampler Signature: Jeffrey Kindley

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	$NaHSO_4$	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 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~~ SPLP BTEX 191905 per BL3-5	TPH (8015 M) * GRO DRO	SPLP DRO 191905 per BL3-4	SPLP GRO 191905 per BL3-5	PAH 191905 per BL3-5	Turn Around Time if different from standard 24 to 48 hrs
191904	TMW-1 (53-55)	1	4oz		✓										02/26/02	810		✓														✓				✓
905	TMW-1 (63-65)	1	4oz		✓										02/26/02	930		✓														✓	X	X	X	✓

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	02/28/02	1600	Helen Shelton	2/28/02	1600
Helen Shelton	02/28/02	1830			
			Received at Laboratory by: Vicki Deus[?]	3-1-02	1050

2 samples - AS

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp °
Log-in Review
Carrier # See attached [illegible]

REMARKS:
* Run SPLP TPH + PAH on highest TPH that exceeds 1,000ppm 3/H
* Run SPLP on ~~BTEX if~~ highest BTEX + Benzene if it exceeds 10ppm benzene + 50ppm BTEX on highest of 3 submitted to include sample TMW-1 (75')

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

111712

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El Paso, Texas 79932
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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0202813

Company Name: Enercon Services Inc
Phone #: 915-570-8726
Address: (Street, City, Zip) 306 West Wall, Suite 1312 Midland Tx 79701
Fax #: 915-684-7587
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Kyle Landreneau, Equiva Services
Project #: ES-533
Project Name: Winnie Kennan
Project Location: Lea Co, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
191702	TMW-1 (75')	1	40z		✓							✓	✓	02/26/02	1330

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 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) M * BTEX 8021	Turn Around Time if different from standard	Hold
	✓														✓		

PAH
Run SPLP 6RO
SPLP ORO

191702 per Jeff 3/7

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	02/27/02	1600	Helen Shelton	2/27/02	1600
Helen Shelton	2/27/02	1830			
			Received at Laboratory by:	Date:	Time:
			Vicki Chung	2.28.02	10:00

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

ORIGINAL COPY

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp 4 °
Log-in Review MM
Carrier # Greyhound

REMARKS:
* If Benzene is ≥ 10 mg/Kg or Total BTEX is ≥ 50 mg/Kg then analyte that exceeds these levels should be analyzed for SPLP for that analyte. per on 191905 per BL 3-5
Check If Special Reporting Limits Are Needed
Also if TPH is ≥ 1000 mg/Kg (DRO/GRO) run SPLP TPH on sample and PAH
GLI-163-566-874-9 PTF 3/6/02

FYI 3/14/02

Summary Report

Kyle Landreneau
Equiva Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 13, 2002

Order ID Number: A02022813

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
191792	TMW-1 (75')	Soil	2/26/02	13:30	2/28/02

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

	BTEX						TPH DRO	TPH GRO	
Sample - Field Code	MTBE (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	DRO (ppm)	GRO (ppm)	GRO (ppm)
191792 - TMW-1 (75')	<0.005	<0.005	<0.005	0.0405	0.132	0.173	2290	673	673

Sample: 191792 - TMW-1 (75')

Param	Flag	Result	Units
Naphthalene		1.08	mg/Kg
Acenaphthylene		<0.25	mg/Kg
Acenaphthene		<0.25	mg/Kg
Fluorene		<0.25	mg/Kg
Phenanthrene		<0.25	mg/Kg
Anthracene		<0.25	mg/Kg
Fluoranthene		<0.25	mg/Kg
Pyrene		<0.25	mg/Kg
Benzo(a)anthracene		<0.25	mg/Kg
Chrysene		<0.25	mg/Kg
Benzo(b)fluoranthene		<0.25	mg/Kg
Benzo(k)fluoranthene		<0.25	mg/Kg
Benzo(a)pyrene		<0.25	mg/Kg
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg
Dibenzo(a,h)anthracene		<0.25	mg/Kg
Benzo(g,h,i)perylene		<0.25	mg/Kg

Summary Report

Kyle Landreneau
Equiva Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 13, 2002

Order ID Number: A02022813

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
Project Address:
Enercon Services Inc. / Midland / Jeff Kindley

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
191792	TMW-1 (75')	Soil	2/26/02	13:30	2/28/02

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

Sample: 191792 - TMW-1 (75')

Param	Flag	Result	Units
SPLP DRO		<5.00	mg/L
SPLP GRO		1.55	mg/L

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Kyle Landreneau
Equiva Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 13, 2002

Order ID Number: A02022813

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
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
191792	TMW-1 (75')	Soil	2/26/02	13:30	2/28/02

0
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 191792 - TMW-1 (75')

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18564	Date Analyzed:	3/1/02
Analyst:	CG	Preparation Method:	N/A	Prep Batch:	PB18021	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
MTBE		<0.005	mg/Kg	5	0.001
Benzene		<0.005	mg/Kg	5	0.001
Toluene		<0.005	mg/Kg	5	0.001
Ethylbenzene		0.0405	mg/Kg	5	0.001
M,P,O-Xylene		0.132	mg/Kg	5	0.001
Total BTEX		0.173	mg/Kg	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.094	mg/Kg	5	1	94	70 - 130
4-BFB	[1]	0.087	mg/Kg	5	1	87	70 - 130

Sample: 191792 - TMW-1 (75')

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC18767	Date Analyzed:	3/10/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB18134	Date Prepared:	3/9/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		1.08	mg/Kg	1	0.25
Acenaphthylene		<0.25	mg/Kg	1	0.25
Acenaphthene		<0.25	mg/Kg	1	0.25
Fluorene		<0.25	mg/Kg	1	0.25
Phenanthrene		<0.25	mg/Kg	1	0.25
Anthracene		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Pyrene		<0.25	mg/Kg	1	0.25
Benzo(a)anthracene		<0.25	mg/Kg	1	0.25
Chrysene		<0.25	mg/Kg	1	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(a)pyrene		<0.25	mg/Kg	1	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	1	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		84.2	mg/Kg	1	80	105	23 - 120
2-Fluorobiphenyl		57.74	mg/Kg	1	80	72	30 - 115
Terphenyl-d14		58.64	mg/Kg	1	80	73	28 - 137

[1] High surrogate recovery due to peak interference.

Sample: 191792 - TMW-1 (75')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18552	Date Analyzed:	3/3/02
Analyst:	MM	Preparation Method:	3550 B	Prep Batch:	PB18014	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
DRO		2290	mg/Kg	5	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[2]	221	mg/Kg	5	150	147	70 - 130

Sample: 191792 - TMW-1 (75')

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18565	Date Analyzed:	3/1/02
Analyst:	CG	Preparation Method:	5035	Prep Batch:	PB18021	Date Prepared:	3/1/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10
GRO		673	mg/Kg	100	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[3]	0.68	mg/Kg	100	0.10	68	70 - 130
4-BFB	[4]	7.69	mg/Kg	100	0.10	769	70 - 130

[2]High surrogate due to peak interference.
[3]Low surrogate recovery due to matrix interference.
[4]High surrogate recovery due to peak interference.

Quality Control Report
Method Blank

Method Blank

QCBatch: QC18552

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		120	mg/Kg	1	150	80	70 - 130

Method Blank

QCBatch: QC18564

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0855	mg/Kg	10	1	85	70 - 130
4-BFB		0.0757	mg/Kg	10	1	75	70 - 130

Method Blank

QCBatch: QC18565

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.101	mg/Kg	1	0.10	101	70 - 130
4-BFB		0.081	mg/Kg	1	0.10	81	70 - 130

Method Blank

QCBatch: QC18767

Param	Flag	Results	Units	Reporting Limit
Naphthalene		<0.25	mg/Kg	0.25

Continued ...

... Continued

Param	Flag	Results	Units	Reporting Limit
Acenaphthylene		<0.25	mg/Kg	0.25
Acenaphthene		<0.25	mg/Kg	0.25
Fluorene		<0.25	mg/Kg	0.25
Phenanthrene		<0.25	mg/Kg	0.25
Anthracene		<0.25	mg/Kg	0.25
Fluoranthene		<0.25	mg/Kg	0.25
Pyrene		<0.25	mg/Kg	0.25
Benzo(a)anthracene		<0.25	mg/Kg	0.25
Chrysene		<0.25	mg/Kg	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25
Benzo(a)pyrene		<0.25	mg/Kg	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		53.84	mg/Kg	1	80	67	23 - 120
2-Fluorobiphenyl		53.98	mg/Kg	1	80	67	30 - 115
Terphenyl-d14		55.4	mg/Kg	1	80	69	28 - 137

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC18552

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	243	232	mg/Kg	1	250	<50.0	97	5	70 - 130	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	134	127	mg/Kg	1	150	89	85	70 - 130

Laboratory Control Spikes

QCBatch: QC18564

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.853	0.872	mg/Kg	10	1	<0.010	85	2	79 - 113	20
Benzene	0.914	0.926	mg/Kg	10	1	<0.010	91	1	88 - 107	20
Toluene	0.915	0.931	mg/Kg	10	1	<0.010	91	1	86 - 110	20
Ethylbenzene	0.914	0.934	mg/Kg	10	1	<0.010	91	2	85 - 110	20
M,P,O-Xylene	2.8	2.85	mg/Kg	10	3	<0.010	93	1	86 - 112	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.863	0.886	mg/Kg	10	1	86	88	70 - 130
4-BFB	0.868	0.875	mg/Kg	10	1	86	87	70 - 130

Laboratory Control Spikes

QCBatch: QC18565

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	9.14	8.38	mg/Kg	10	1	<1	91	8	82 - 115	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.968	0.931	mg/Kg	10	1	97	93	70 - 130
4-BFB	0.904	0.897	mg/Kg	10	1	90	90	70 - 130

Laboratory Control Spikes

QCBatch: QC18767

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Naphthalene	53.55	55.09	mg/Kg	1	80	<0.25	66	2	21 - 133	20
Acenaphthylene	60.2	61.57	mg/Kg	1	80	<0.25	75	2	33 - 145	20
Acenaphthene	58.02	60.1	mg/Kg	1	80	<0.25	72	3	47 - 145	20
Fluorene	56.92	59.81	mg/Kg	1	80	<0.25	71	4	59 - 121	20
Phenanthrene	60.08	61.21	mg/Kg	1	80	<0.25	75	1	54 - 120	20
Anthracene	61.41	62.19	mg/Kg	1	80	<0.25	76	1	27 - 133	20
Fluoranthene	51.5	54.17	mg/Kg	1	80	<0.25	64	5	26 - 137	20
Pyrene	56.19	53.88	mg/Kg	1	80	<0.25	70	4	52 - 115	20
Benzo(a)anthracene	64.09	64.5	mg/Kg	1	80	<0.25	80	0	33 - 143	20
Chrysene	62.93	64.09	mg/Kg	1	80	<0.25	78	1	17 - 168	20
Benzo(b)fluoranthene	57.56	59.36	mg/Kg	1	80	<0.25	71	3	33 - 143	20
Benzo(k)fluoranthene	63.65	63.42	mg/Kg	1	80	<0.25	79	0	17 - 168	20
Benzo(a)pyrene	62.43	61.64	mg/Kg	1	80	<0.25	78	1	24 - 159	20
Indeno(1,2,3-cd)pyrene	68.38	65.01	mg/Kg	1	80	<0.25	85	5	0 - 171	20
Dibenzo(a,h)anthracene	49.85	47.05	mg/Kg	1	80	<0.25	62	5	0 - 227	20
Benzo(g,h,i)perylene	60.74	59.42	mg/Kg	1	80	<0.25	75	2	0 - 219	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Nitrobenzene-d5	56.62	58.08	mg/Kg	1	80	70	72	23 - 120
2-Fluorobiphenyl	59.21	60.84	mg/Kg	1	80	74	76	30 - 115
Terphenyl-d14	59.54	56.4	mg/Kg	1	80	74	70	28 - 137

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC18552

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	2560	2530	mg/Kg	5	250	2290	108	1	70 - 130	20

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

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
n-Triacontane	[5] 219	196	mg/Kg	5	150	146	131	70 - 130

Matrix Spikes

QCBatch: QC18564

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.749	0.755	mg/Kg	10	1		74	0	47 - 138	20
Benzene	0.895	0.926	mg/Kg	10	1	<0.010	90	3	68 - 102	20
Toluene	0.907	0.938	mg/Kg	10	1	<0.010	91	3	69 - 105	20
Ethylbenzene	0.904	0.932	mg/Kg	10	1	<0.010	90	3	65 - 108	20
M,P,O-Xylene	2.78	2.87	mg/Kg	10	3	<0.010	93	3	63 - 114	20

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

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.708	0.826	mg/Kg	10	1	71	83	70 - 130
4-BFB	0.721	0.856	mg/Kg	10	1	72	86	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC18552

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	258	103	75 - 125	3/3/02

ICV (1)

QCBatch: QC18552

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	98	75 - 125	3/3/02

[5]Poor surrogate recoveries due to matrix difficulties. LCS/LCSD shows analysis in control.

CCV (1) QCBatch: QC18564

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0946	94	85 - 115	3/1/02
Benzene		mg/L	0.10	0.0925	92	85 - 115	3/1/02
Toluene		mg/L	0.10	0.0934	93	85 - 115	3/1/02
Ethylbenzene		mg/L	0.10	0.0925	92	85 - 115	3/1/02
M,P,O-Xylene		mg/L	0.30	0.2843	94	85 - 115	3/1/02

CCV (2) QCBatch: QC18564

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0875	87	85 - 115	3/1/02
Benzene		mg/L	0.10	0.0919	91	85 - 115	3/1/02
Toluene		mg/L	0.10	0.0924	92	85 - 115	3/1/02
Ethylbenzene		mg/L	0.10	0.0919	91	85 - 115	3/1/02
M,P,O-Xylene		mg/L	0.30	0.2824	94	85 - 115	3/1/02

ICV (1) QCBatch: QC18564

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0874	87	85 - 115	3/1/02
Benzene		mg/L	0.10	0.0905	90	85 - 115	3/1/02
Toluene		mg/L	0.10	0.091	91	85 - 115	3/1/02
Ethylbenzene		mg/L	0.10	0.091	91	85 - 115	3/1/02
M,P,O-Xylene		mg/L	0.30	0.279	93	85 - 115	3/1/02

CCV (1) QCBatch: QC18565

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.911	91	75 - 125	3/1/02

ICV (1) QCBatch: QC18565

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.955	95	75 - 125	3/1/02

CCV (1) QCBatch: QC18767

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/Kg	60	58.87	98	80 - 120	3/10/02
Acenaphthylene		mg/Kg	60	58.18	96	80 - 120	3/10/02
Acenaphthene		mg/Kg	60	58.3	97	80 - 120	3/10/02
Fluorene		mg/Kg	60	57.16	95	80 - 120	3/10/02
Phenanthrene		mg/Kg	60	59.09	98	80 - 120	3/10/02
Anthracene		mg/Kg	60	59.31	98	80 - 120	3/10/02
Fluoranthene		mg/Kg	60	50.86	84	80 - 120	3/10/02
Pyrene		mg/Kg	60	50.92	84	80 - 120	3/10/02
Benzo(a)anthracene		mg/Kg	60	59.19	98	80 - 120	3/10/02
Chrysene		mg/Kg	60	58.21	97	80 - 120	3/10/02
Benzo(b)fluoranthene		mg/Kg	60	52.92	88	80 - 120	3/10/02
Benzo(k)fluoranthene		mg/Kg	60	59.59	99	80 - 120	3/10/02
Benzo(a)pyrene		mg/Kg	60	57.65	96	80 - 120	3/10/02
Indeno(1,2,3-cd)pyrene		mg/Kg	60	61.12	101	80 - 120	3/10/02
Dibenzo(a,h)anthracene		mg/Kg	60	61.02	101	80 - 120	3/10/02
Benzo(g,h,i)perylene		mg/Kg	60	54.7	91	80 - 120	3/10/02
Nitrobenzene-d5		mg/Kg	60	57.44	95	80 - 120	3/10/02
2-Fluorobiphenyl		mg/Kg	60	57.6	96	80 - 120	3/10/02
Terphenyl-d14		mg/Kg	60	50.83	84	80 - 120	3/10/02

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

Kyle Landreneau
Equiva Kyle Landreneau
PMB 284 40 FM 1960 West
Houston, TX 77090

Report Date: March 13, 2002

Order ID Number: A02022813

Project: ES-533
TA Job Code: Equiva Penrose
Casualty Code: ES-533
Project Location: Eunice ,Lea County New Mexico
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
191792	TMW-1 (75')	Soil	2/26/02	13:30	2/28/02

0
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 191792 - TMW-1 (75')

Analysis:	SPLP DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18741	Date Analyzed:	3/10/02
Analyst:	MM	Preparation Method:	1312	Prep Batch:	PB18157	Date Prepared:	3/10/02

Param	Flag	Result	Units	Dilution	RDL
SPLP DRO		<5.00	mg/L	1	50

Sample: 191792 - TMW-1 (75')

Analysis:	SPLP GRO	Analytical Method:	8015	QC Batch:	QC18703	Date Analyzed:	3/7/02
Analyst:	CG	Preparation Method:	1312	Prep Batch:	PB18126	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
SPLP GRO		1.55	mg/L	5	0.10

Quality Control Report
Method Blank

Method Blank

QCBatch: QC18703

Param	Flag	Results	Units	Reporting Limit
SPLP GRO		<0.1	mg/L	0.10

Method Blank

QCBatch: QC18741

Param	Flag	Results	Units	Reporting Limit
SPLP DRO		<5.00	mg/L	50

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC18703

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
SPLP GRO	0.866	0.861	mg/L	1	1	<0.1	86	0	82 - 115	20

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

Laboratory Control Spikes

QCBatch: QC18741

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
SPLP DRO	24.8	23.5	mg/L	0.10	250	<5.00	99	5	70 - 130	20

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

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC18703

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP GRO		mg/L	1	0.946	94	80 - 120	3/7/02

ICV (1) QCBatch: QC18703

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP GRO		mg/L	1	0.887	88	80 - 120	3/7/02

CCV (1) QCBatch: QC18741

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP DRO		mg/L	250	250	100	70 - 130	3/10/02

ICV (1) QCBatch: QC18741

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
SPLP DRO		mg/L	250	241	96	70 - 130	3/10/02

ATTACHMENT E

Site Photographs

Photo 1: Drilling of Temporary Monitor Well TMW-1.

Photo 2: Drilling of Temporary Monitor Well TMW-1.

Photo 3: Drilling of Temporary Monitor Well TMW-1.

Photo 4: Drilling of Temporary Monitor Well TMW-1.

Photo 5: Installation of piping for Temporary Monitor Well TMW-1.

Photo 6: Completed Temporary Monitor Well TMW-1.