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# REPORTS

**DATE:**

2002

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August 7, 2002

Mr. William Olsen  
New Mexico Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

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ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

RE Shell Oil Products  
Barber Estates Release Sites 6 & 7  
SW 1/4 of Section 32, Township 19 South, Range 37 East, Lea County  
Monument, New Mexico

1 R 3 88

Mr. Olsen,

Attached is an investigation report for Shell Oil Products' historical release sites 6 & 7 located on the referenced property. Equiva Services has installed monitoring wells and borings at the site to delineate the extent of soil and groundwater impacts. As indicated in the report, additional groundwater delineation is required south and east of Spill Site 6. Equiva's contractor is currently installing additional wells in this area. Once the groundwater impacts have been completely delineated, Equiva will submit a workplan to remediate the site. Until the investigation is complete and a remedial plan has been approved by the NMOCD, Equiva will implement quarterly groundwater monitoring of non-PSH impacted wells and weekly hand-bailing of PSH impacted wells. Should you have any questions concerning this letter, please contact me at (281) 353-2069 or by email at eklandreneau@equiva.com.

Sincerely  
EQUIVA SERVICES LLC

Kyle Landreneau CPG  
Sr. Environmental Geologist  
HSE/Science & Engineering

*"Equiva Services LLC provides miscellaneous services, including environmental services, on behalf of its owners Motiva Enterprises LLC and Equilon Enterprises LLC dba Shell Oil Products US, and on behalf of Shell Oil Company, and Star Enterprise."*

Cc: Bennett Howell -Enercon Services  
Larry Johnson NMOCD-Hobbs

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**EQUIVA SERVICES, INC.  
BARBER RANCH LEAK SITES  
BARBER RANCH  
MONUMENT, LEA COUNTY,  
NEW MEXICO**

**ENERCON PROJECT NO. EQ-112**

**Prepared for:**

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EQUIVA SERVICES, LLC.  
PMB 284  
40 FM 1960 WEST  
HOUSTON, TEXAS 77090**

August 7, 2002

**Prepared by:**

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## 1.0 INTRODUCTION

Enercon Services, Incorporated (Enercon) has completed the Phase II Site Groundwater and Soil Characterization for the former Equilon Pipeline Company (Equilon) Barber Ranch pipeline release site ("the site") located in the southwest quarter of Section 32, Township 19 South, Range 37 East, approximately 1 ¼ miles southwest of Monument, Lea County, New Mexico (**Figure 1**). This report details the installation of nineteen (19) monitor wells and twelve (12) soil borings in order to aid in determining the vertical and horizontal extent of impacts to both the soil and groundwater from the historic pipeline release at the site.

The Equilon Barber Ranch pipeline release consists of two leak sites (northern and southern) which occurred at an undetermined time in the past. In order to determine the vertical and horizontal extent of hydrocarbon impacts at the site, Enercon installed nineteen (19) monitor wells (MW-1 to MW-19) and twelve (12) soil borings (SB-1 to SB-14) from April 30 to June 28, 2002. This report details the findings from the installation of the 19 monitor wells and 12 soil borings at the site.

## 2.0 SUBSURFACE INVESTIGATION

As per Enercon's Workplan dated March 2002, Enercon field personnel were on-site April 30, through June 28, 2002, to oversee the installation of nineteen (19) monitor wells to a depth of approximately 37 to 38 feet below ground surface (bgs) and twelve (12) soil borings to a depth of approximately 30 feet bgs around the perimeter of the two spill sites (**Figure 2**).

Soil samples were collected in each of the nineteen (19) monitor wells and twelve (12) soil borings at 5-foot intervals using a split spoon sampling device and were screened in the field for volatile organic constituents by an Enercon representative using a Photoionization Detector (PID) and head space techniques. Boreholes were advanced until groundwater was encountered. Two (2) soil samples, one from the zone above the groundwater and one sample from the zone exhibiting the highest PID measurements were collected and submitted to Trace Analysis Inc. (Trace) in Lubbock, Texas for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH Dro/Gro) using EPA methods 8020 and 8015M for Diesel and Gasoline, respectively. In addition, select samples with a TPH (Dro/Gro) concentration that exceeded the NMOC regulations of 100 ppm were further analyzed for SPLP TPH (Dro/Gro) using EPA Method 8015B. For remedial design purposes, a few select samples were further analyzed for TPH using method TX1005. Several non-hydrocarbon impacted samples from monitor wells MW-1, MW-4 and MW-6 were also analyzed for general chemistry using EPA Method E 310.1, SM 2510 B, Hach IR-1, E 300.0, and E 150.1.

Two separate subsurface geological conditions were noted across the site (**Appendix A - Boring Logs**). The first geologic unit, represented by monitor wells MW-8, MW-18 and soil boring S-5, indicated that soils from the surface to an approximate depth of 4 feet consist of backfill material. A chert layer was encountered from approximately 4 to 5 feet bgs. From 5 feet to a depth of approximately 23 feet bgs the soils were a mixture of sandy limestone to calcareous sand with gypsum and some gray clay encountered at the bottom. From 23 feet bgs to the terminus of the borings at approximately 32 to 38 feet soils consisted of red clay of high plasticity. The red clay was the underlying bottom layer of the Ogallala Aquifer. A second geologic unit represented by the remaining monitor wells and soil borings consisted of backfill material of clayey sand to a depth of 4 feet bgs. From 4 feet bgs to approximately 28 to 30 feet bgs, the soils were a mixture of

predominately sandy limestone with lesser amounts of calcareous sand intermixed throughout. About half the borings/monitor wells had chert layers approximately 1 to 2 feet thick from 10 to 12 feet and from 23 to 25 feet bgs. At approximately 28 to 30 feet to the terminus of the borings/monitor wells at 37 to 38 feet bgs, the soils consisted of sandy clay to a clayey sand.

The nineteen (19) monitor wells (MW-1 to MW-19) were constructed of 4-inch diameter schedule 40 PVC casing with 0.02-inch factory slotted well screen (**Appendix B** - Monitor Well Completion). Fifteen feet of screen was placed at the bottom of each boring with the exception of monitor well MW-16 in which 20 feet of slotted screen was placed at the bottom. A sand pack was then installed from the bottom of each boring to approximately 2 feet above the casing/screen junction. A clean silica sand with a grain size larger than the well screen (sieve size 8 to 16) was used as the sand pack in the annular space between the casing and borehole. From approximately 2 feet above the screen to 3 feet bgs, a bentonite plug was installed in the annulus. Above the bentonite plug, a non-shrinking grout with 3 to 5% bentonite was installed in the annulus to the surface. The surface completion for the nineteen (19) monitor wells included an eight-inch diameter steel surface monument style riser, a four-foot by four-foot by four-inch thick concrete pad, and a locking cap on the outer protective casing (**Appendix C** - Site Photographs). The monitor wells were installed to a depth of 37 to 38 feet bgs.

Upon collection of two soil samples per boring, the twelve (12) soil borings (S-1 to S-14) were grouted to the surface using a bentonite plug. Soil borings S-2 and S-3 were converted to monitor wells MW-2 and MW-3, respectively.

### 3.0 ANALYTICAL RESULTS

#### 3.1 Soil Analytical

Two soil samples were collected from each of the nineteen (19) monitor wells and the twelve (12) soil borings and submitted to Trace Analysis of Lubbock, Texas for BTEX and TPH modified for Dro and Gro ranges. In addition, select samples with an analysis of TPH (Dro/Gro) concentration of greater than 100 mg/kg were further analyzed for SPLP TPH (Dro/Gro) using EPA Method 8015B (**Table 1**). For remedial design purposes, a few select samples were also analyzed for TPH using method TX1005. Several non-hydrocarbon impacted samples from monitor wells MW-1, MW-4 and MW-6 were also analyzed for general chemistry using EPA Method E 310.1, SM 2510 B, Hach IR-1, E 300.0, and E 150.1 (**Table 2**)

Total BTEX concentrations analyzed were below the New Mexico Oil Conservation Division (NMOCD) standards of 10 milligrams per kilogram (mg/kg) benzene and 50 mg/kg total BTEX for all samples collected and analyzed except for soil boring S-5 (8-10 ft), which had a concentration of 66.40 mg/kg total BTEX. Eighteen of the 62 samples submitted for TPH (Dro/Gro) analysis had concentrations that were above the NMOCD standards of 100 mg/kg (See **Table 1** for summarized analytical results. Of these eighteen samples that exceed the NMOCD standards of 100 mg/kg, the concentrations ranged from a low of 103 mg/kg in S-11 (25-27 ft) to a high of 2,701.31 mg/kg in MW-7 (8-10 ft). Of the eighteen samples that exceeded the NMOCD standards of 100 mg/Kg TPH, fourteen (14) were further analyzed for SPLP TPH (Dro/Gro) to determine the probability of leaching from the soil into the groundwater. The analytical results were below detection limits for all the SPLP Dro samples analyzed. Five of the SPLP Gro samples analyzed were above detection limits with results of 1.31 mg/kg in MW-7 (8-10 ft), 2.32 mg/kg in S-5 (8-10 ft), 1.10 mg/kg in S-6 (8-10 ft), 0.751 mg/kg in S-7 (3-5 ft), and 0.232 mg/kg in S-10 (26-28ft). Samples MW-1 (13-15ft), MW-4 (13-15 ft), MW-4 (18-20 ft) and MW-6 (13-

15 ft) were further analyzed for General Chemistry and is included as Table 2. Four additional samples were submitted for analysis of TPH TX 1005. The TPH TX 1005 results were within a factor of 10 of the results of the TPH (Dro/Gro) analysis for the same samples.

### *3.2 Groundwater Analytical*

From April 30 to June 25, 2002, Enercon field personnel gauged and collected groundwater samples with disposable bailers from the nineteen (19) monitor wells (MW-1 to MW-19) for laboratory analysis of total BTEX using EPA method 8020 and Polynuclear Aromatic Hydrocarbons (PAH) using EPA Method 8270. For remedial design purposes, several samples were further analyzed for TPH TX 1005 using EPA Method TX 1005 and for General Chemistry using EPA Methods E 310.1, SM2510B, Hach IR-1, E 300.0, and E 150.1. Samples were placed in laboratory bottles, labeled, and stored on ice at 4° Celsius until being transported to Trace Analysis Inc. (Trace) in Lubbock, Texas for analysis.

Analytical results exceeded the NMOCD standards of 0.01 mg/l benzene in the following four (4) monitor wells: 1) MW-1 with a benzene concentration of 0.0128 mg/l, 2) MW-5 with a benzene concentration of 0.0351 mg/l, 3) MW-6 with a benzene concentration of 0.0262 mg/l, and 4) MW-7 with a benzene concentration of 0.0116 mg/l (**Table 3**). The remaining BTEX concentrations were below NMOCD standards.

Polynuclear Aromatic Hydrocarbon (PAH) concentrations were detected in six (6) of the fifteen (15) monitor wells sampled. Monitor well MW-5 had measurable concentrations of Napthalene, Fluorene, and Phenanthrene, while MW-12 had measurable concentrations of Napthalene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, and Benzo(a)pyrene. The remaining monitor wells (MW-6, MW-7, MW-9, and MW-11) had measurable concentrations of Napthalene (**Table 4**) (**Appendix D** - Laboratory Analytical). All samples were below current New Mexico Water Quality Control Commission Ground Water Standards (NMWQCC).

Monitor wells MW-1 and MW4 were further analyzed for TPH TX 1005 and General Chemistry. The TPH TX 1005 results were below detection limits for both samples. The General Chemistry results are presented in **Table 3**.

Phase separated hydrocarbons (PSH) were measured in monitor wells MW-2, MW-10, MW-13, and MW-19. The thickness of the PSH ranged from a low of 0.01 feet in MW-19 to a high of 0.18 feet in monitor well MW-10. Since PSH was measured in these four monitor wells, no samples were collected and submitted for analysis.

## **4.0 GROUNDWATER GRADIENT**

Based on gauging data collected on July 1, 2002 from the nineteen (19) monitor wells, the groundwater gradient for the site is to the south/southeast. (**Figure 3**). The gradient is fairly steep near the northern spill site and spreads out along the southern spill site.

## **5.0 GROUNDWATER PLUME DELINEATION**

As of this report, the BTEX concentration plume has neither been delineated to southwest of the northern spill site, nor to the west, southeast and east of the southern spill site (**Figure 4**). The benzene concentrations that exceed the NMOCD standards of 0.01 mg/L are

found in monitor wells MW-1, MW-5, MW-6, and MW-7, located along the former pipeline right-of-way.

Phase separated hydrocarbons (PSH) are located to the east and southeast of the southern spill site. Monitor wells MW-2, MW-10, MW-13, and MW-19 have PSH levels of 0.16 ft, 0.18 ft, 0.02 ft, and 0.01 ft, respectively. As of this report, the PSH plume has not been delineated to the northeast, east or southeast of these monitor wells (**Figure 5**).

## 6.0 CONCLUSIONS

The results of Enercon's investigation has determined the following:

- Groundwater has been impacted at the site with PSH in monitor wells MW-2 (0.16 ft), MW-10 (0.18 ft), MW-13 (0.02 ft), and MW-19 (0.01 ft). In addition benzene concentrations are above the NMOCD guidelines of 0.01 mg/l in monitor wells MW-1 (0.0128 mg/l), MW-5 (0.0351 mg/l), MW-6 (0.0262 mg/l), and MW-7 (0.0116 mg/l). The remaining PAH and BTEX analytes were below the NMOCD and NMWQCC groundwater standards.
- Eighteen (18) of the sixty-two (62) soil samples collected from the nineteen (19) monitor wells and twelve (12) soil borings had TPH (Dro/Gro) concentrations in excess of the NMOCD recommended concentrations of 100 mg/kg. Monitor wells MW-2, MW-5, MW-7, MW-10, MW-17, MW-18 and soil borings S-5, S-6, S-7, S-9, S-10, S-11, S-13, and S-14 were impacted with levels of TPH (Dro/Gro) ranging from a low of 103 mg/kg in S-11 (25-27 ft) to a high of 2,701.31 mg/kg in MW-7 (8-10 ft). Further analysis of a majority of these samples for SPLP TPH (Dro/Gro) found the samples were below detection limits except for the five following samples: 1) MW-7 at 8 to 10 feet bgs (1.31 mg/kg), 2) S-5 at 8 to 10 feet bgs (2.32 mg/kg), 3) S-6 at 8 to 10 feet bgs 1.10 mg/kg, 4) S-7 at 3 to 5 feet bgs (0.751 mg/kg) and 5) S-10 26 to 28 feet bgs (0.232 mg/kg). Further analysis on the samples for BTEX indicates that only one sample, S-5 (8-10 ft), exceeds the current NMOCD standards of 50 mg/kg total BTEX with a total BTEX concentration of 66.4 mg/kg.





TABLE 2  
 SOIL ANALYSIS-GENERAL CHEMISTRY  
 BARBER RANCH  
 MONUMENT, LEA COUNTY, NEW MEXICO

| Monitor Well  | Date     | Hydroxide Alkalinity (mg/kg as CaCo3) | Carbonate Alkalinity (mg/kg as CaCo3) | Bicarbonate Alkalinity (mg/kg as CaCo3) | Total Alkalinity (mg/kg as CaCo3) | Specific Conductance (in OHMS) | FOC (%) | Ferrous Iron (mg/Kg) | Bromide (mg/Kg) | Nitrate-N (mg/Kg) | Phosphate (mg/Kg) | pH  |
|---------------|----------|---------------------------------------|---------------------------------------|---|-----------------------------------|--------------------------------|---------|----------------------|-----------------|-------------------|-------------------|-----|
| MW-1 (13-15') | 04/30/02 | <1.0                                  | <1.0                                  | 145                                     | 145                               | 143                            | 1.06    | 0.28                 | <0.2            | 0.48              | <0.5              | 8.4 |
| MW-4 (13-15') | 04/30/02 | <1.0                                  | <1.0                                  | 60                                      | 60                                | 156                            | 0.62    | 0.28                 | <0.2            | 0.41              | <0.5              | 8.3 |
| MW-4 (18-20') | 04/30/02 | <1.0                                  | <1.0                                  | 116                                     | 116                               | 144                            | 0.72    | 0.28                 | <0.2            | 0.57              | <0.5              | 8.5 |
| MW-6 (13-15') | 05/02/02 | <1.0                                  | <1.0                                  | 180                                     | 180                               | 189                            | 1.04    | 0.28                 | <0.2            | 0.73              | <0.5              | 8.4 |

TABLE 3  
GROUNDWATER ANALYSIS  
BARBER RANCH  
MONUMENT, LEA COUNTY, NEW MEXICO

| Monitor Well    | Date     | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Xylenes (mg/l) | Total BTEX (mg/l) | TPH - TX1005 C6-C12 (mg/l) | TPH - TX1005 C12-C35 (mg/l) | TPH - TX1005 C6-C35 (mg/l) | Hydrox Alkalinity (mg/l) | Carbon Alkalinity (mg/l) | Bicarb Alkalinity (mg/l) | Total Alkalinity (mg/l) | Ferrous Iron (mg/l) | Bromide (mg/l) | Phosphate (mg/l) | Nitrate (mg/l) |
|-----------------|----------|----------------|----------------|---------------------|----------------|-------------------|----------------------------|-----------------------------|----------------------------|--------------------------|--------------------------|--------------------------|-------------------------|---------------------|----------------|------------------|----------------|
| MW-1            | 04/30/02 | 0.0128         | <0.001         | <0.001              | <0.001         | 0.0128            | <5.00                      | <5.00                       | <5.00                      | <1.0                     | <1.0                     | 452                      | 452                     | 0.28                | 1.18           | 0.0475           | <1.00          |
| MW-2            | 04/30/02 | PSH            | PSH            | PSH                 | PSH            | PSH               | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-3            | 05/01/02 | <0.001         | <0.001         | <0.001              | <0.001         | <0.001            | <5.00                      | <5.00                       | <5.00                      | <1.0                     | <1.0                     | 402                      | 402                     | 0.28                | 1.25           | <0.04            | 1.87           |
| MW-4            | 05/01/02 | 0.0351         | <0.010         | 0.0317              | 0.122          | 0.189             | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-5            | 05/02/02 | 0.0262         | <0.005         | <0.005              | <0.005         | 0.0262            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-6            | 05/03/02 | 0.0116         | <0.001         | 0.0021              | 0.0012         | 0.0149            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-7            | 05/03/02 | <0.005         | <0.005         | <0.005              | <0.005         | <0.005            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-8            | 05/06/02 | <0.005         | <0.005         | <0.005              | <0.005         | <0.005            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-9            | 05/06/02 | PSH            | PSH            | PSH                 | PSH            | PSH               | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-10           | 05/06/02 | <0.005         | <0.005         | <0.005              | <0.005         | <0.005            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-11           | 05/08/02 | 0.002          | <0.001         | <0.001              | 0.0026         | 0.0046            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-12           | 05/08/02 | PSH            | PSH            | PSH                 | PSH            | PSH               | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-13           | 06/25/02 | 0.0032         | <0.001         | <0.001              | <0.001         | 0.0032            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-14           | 06/25/02 | <0.001         | <0.001         | <0.001              | <0.001         | <0.001            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-15           | 06/25/02 | <0.005         | <0.005         | <0.005              | <0.005         | <0.005            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-16           | 07/01/02 | <0.005         | <0.005         | <0.005              | <0.005         | <0.005            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-17           | 06/25/02 | 0.0014         | <0.001         | <0.001              | <0.001         | 0.0014            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-18           | 06/25/02 | PSH            | PSH            | PSH                 | PSH            | 0.0014            | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MW-19           | 07/01/02 | 0.01           | 0.75           | 0.75                | 0.62           | 2.13              | NA                         | NA                          | NA                         | NA                       | NA                       | NA                       | NA                      | NA                  | NA             | NA               | NA             |
| MMOCD Standards |          |                |                |                     |                |                   |                            |                             |                            |                          |                          |                          |                         |                     |                |                  |                |

ND = Not detected, NA = Not analyzed  
PSH - Phase Separated Hydrocarbons

PSH - Phase Separated Hydrocarbon, any monitor well exhibiting PSH was not sampled

TABLE 4  
GROUNDWATER ANALYSIS-POLYNUCLEAR AROMATIC HYDROCARBONS  
BARBER RANCH  
MONUMENT, LEA COUNTY, NEW MEXICO

| Monitor Well     | Date     | Naphthalene (mg/l) | Acenaphthylene (mg/l) | Acenaphthene (mg/l) | Fluorene (mg/l) | Phenanthrene (mg/l) | Anthracene (mg/l) | Fluoranthene (mg/l) | Pyrene (mg/l) | Benzo(a)anthracene (mg/l) | Chrysene (mg/l) | Benzo(b)fluoranthene (mg/l) | Benzo(k)fluoranthene (mg/l) | Benzo(a)pyrene (mg/l) | Indeno(1,2,3-cd)pyrene (mg/l) | Dibenz(a,h)anthracene (mg/l) | Benzo(g,h,i)perylene (mg/l) |
|------------------|----------|--------------------|-----------------------|---------------------|-----------------|---------------------|-------------------|---------------------|---------------|---------------------------|-----------------|-----------------------------|-----------------------------|-----------------------|-------------------------------|------------------------------|-----------------------------|
| MW-1             | 05/20/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-2             | 04/10/02 | PSH                | PSH                   | PSH                 | PSH             | PSH                 | PSH               | PSH                 | PSH           | PSH                       | PSH             | PSH                         | PSH                         | PSH                   | PSH                           | PSH                          | PSH                         |
| MW-3             | 05/01/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-4             | 05/01/02 | <0.0002            | <0.0002               | <0.0002             | 0.0003          | 0.0002              | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-5             | 05/02/02 | 0.0068             | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-6             | 05/03/02 | 0.0008             | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-7             | 05/03/02 | 0.0008             | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-8             | 05/06/02 | 0.00089            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-9             | 05/06/02 | PSH                | PSH                   | PSH                 | PSH             | PSH                 | PSH               | PSH                 | PSH           | PSH                       | PSH             | PSH                         | PSH                         | PSH                   | PSH                           | PSH                          | PSH                         |
| MW-10            | 05/06/02 | 0.0008             | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-11            | 05/08/02 | 0.0008             | <0.0002               | <0.0002             | 0.0002          | <0.0002             | 0.0006            | <0.0002             | <0.0002       | 0.0007                    | 0.0008          | 0.0013                      | 0.0015                      | 0.0014                | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-12            | 06/25/02 | 0.0008             | <0.0002               | <0.0002             | PSH             | PSH                 | PSH               | PSH                 | PSH           | PSH                       | PSH             | PSH                         | PSH                         | PSH                   | PSH                           | PSH                          | PSH                         |
| MW-13            | 06/25/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-14            | 06/25/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-15            | 07/01/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-16            | 07/01/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-17            | 06/25/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-18            | 06/25/02 | <0.0002            | <0.0002               | <0.0002             | <0.0002         | <0.0002             | <0.0002           | <0.0002             | <0.0002       | <0.0002                   | <0.0002         | <0.0002                     | <0.0002                     | <0.0002               | <0.0002                       | <0.0002                      | <0.0002                     |
| MW-19            | 07/01/02 | PSH                | PSH                   | PSH                 | PSH             | PSH                 | PSH               | PSH                 | PSH           | PSH                       | PSH             | PSH                         | PSH                         | PSH                   | PSH                           | PSH                          | PSH                         |
| NAWQCC Standards | 0.03     | NA                 | NA                    | NA                  | NA              | NA                  | NA                | NA                  | NA            | NA                        | NA              | NA                          | NA                          | NA                    | NA                            | NA                           | NA                          |

PSH - Phase Separated Hydrocarbons

NA - Not Available

| TABLE 5<br>BARBER RANCH<br>RELATIVE GROUNDWATER ELEVATIONS |             |  |                   |                             |                               |                         |  |
|--|-------------|--|-------------------|-----------------------------|-------------------------------|-------------------------|--|
| Monitor Well   | Date Gauged | Relative Top of Casing Elevation (in feet) | PSH PSH (in feet) | Water Below Water (in feet) | Relative Elevation (in feet)* | PSH Thickness (in feet) |  |
| MW-1   | 07/01/02    | 3,567.05                                   |                   | 30.08                       | 3,536.97                      | 0.00                    |  |
| MW-2   | 07/01/02    | 3,566.63                                   | 29.63             | 29.79                       | 3,536.98                      | 0.16                    |  |
| MW-3   | 07/01/02    | 3,566.64                                   |                   | 29.50                       | 3,537.14                      | 0.00                    |  |
| MW-4   | 07/01/02    | 3,567.14                                   |                   | 30.05                       | 3,537.09                      | 0.00                    |  |
| MW-5   | 07/01/02    | 3,566.21                                   |                   | 29.00                       | 3,537.21                      | 0.00                    |  |
| MW-6   | 07/01/02    | 3,567.29                                   |                   | 29.35                       | 3,537.94                      | 0.00                    |  |
| MW-7   | 07/01/02    | 3,567.56                                   |                   | 28.11                       | 3,539.45                      | 0.00                    |  |
| MW-8   | 07/01/02    | 3,569.77                                   |                   | 23.21                       | 3,546.56                      | 0.00                    |  |
| MW-9   | 07/01/02    | 3,567.74                                   |                   | 28.46                       | 3,539.28                      | 0.00                    |  |
| MW-10  | 07/01/02    | 3,565.97                                   | 28.95             | 29.13                       | 3,537.00                      | 0.18                    |  |
| MW-11  | 07/01/02    | 3,566.99                                   |                   | 29.27                       | 3,537.72                      | 0.00                    |  |
| MW-12  | 07/01/02    | 3,567.18                                   |                   | 29.64                       | 3,537.54                      | 0.00                    |  |
| MW-13  | 07/01/02    | 3,566.65                                   | 29.67             | 29.69                       | 3,536.98                      | 0.02                    |  |
| MW-14  | 07/01/02    | 3,566.03                                   |                   | 29.53                       | 3,536.50                      | 0.00                    |  |
| MW-15  | 07/01/02    | 3,566.79                                   |                   | 30.77                       | 3,536.02                      | 0.00                    |  |
| MW-16  | 07/01/02    | 3,568.55                                   |                   | 39.31                       | 3,529.24                      | 0.00                    |  |
| MW-17  | 07/01/02    | 3,569.45                                   |                   | 28.63                       | 3,540.82                      | 0.00                    |  |
| MW-18  | 07/01/02    | 3,568.38                                   |                   | 28.92                       | 3,539.46                      | 0.00                    |  |
| MW-19  | 07/01/02    | 3,566.22                                   | 29.25             | 29.26                       | 3,536.97                      | 0.01                    |  |

\* Correction Equation for Phase-Separated Hydrocarbons: Corrected Groundwater Elevation = Top of Casing Elevation - [Depth to Water Below Top of Casing - (SG)(PSH Thickness)]. Specific Gravity (SG) = 0.9 for crude oil.

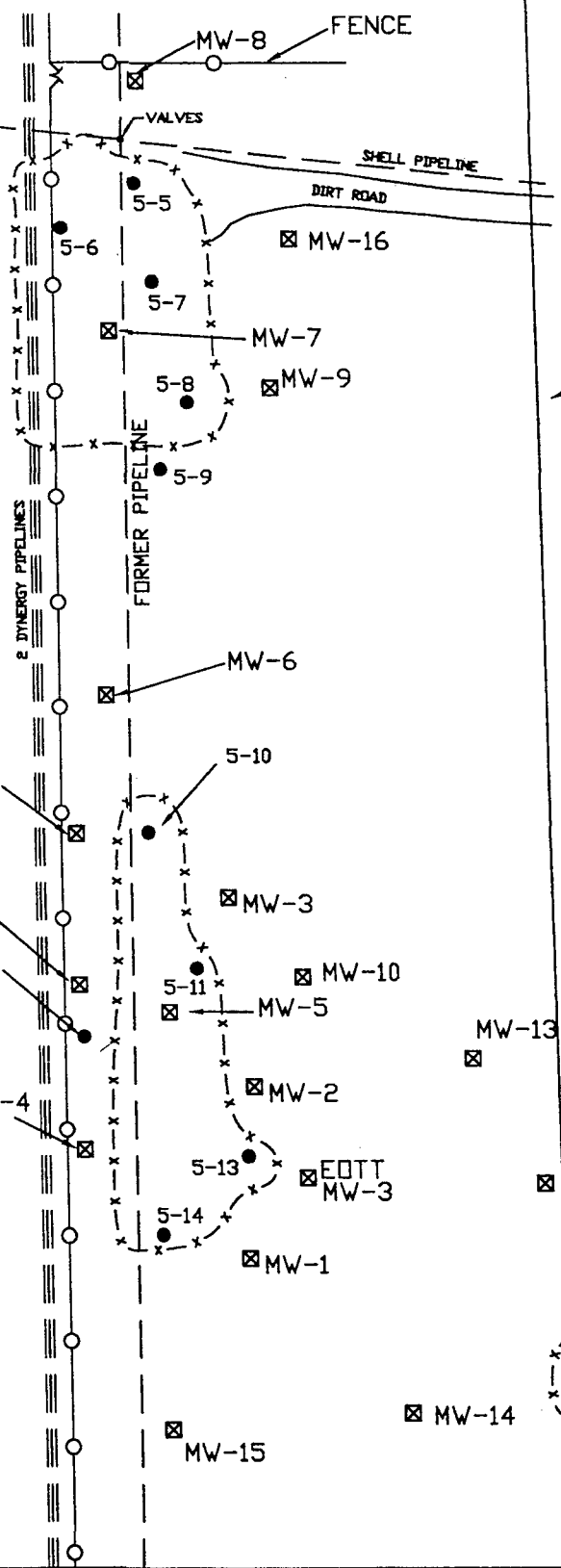


# SITE MAP



SPILL SITE 7

SPILL SITE 6



- EXTENT OF GROUND STAIN
- MONITOR WELLS
- SOIL BORINGS



SHELL PIPELINE CORPORATION  
 BARBER RANCH  
 SPILL SITES 6 AND 7  
 LEA COUNTY, NEW MEXICO



ENERCON SERVICES, INC.  
 2775 VILLA CREEK, SUITE 120  
 DALLAS, TEXAS 75234  
 972/484-3854

DATE  
 JULY, 2002

PROJECT NO.  
 EQ-112

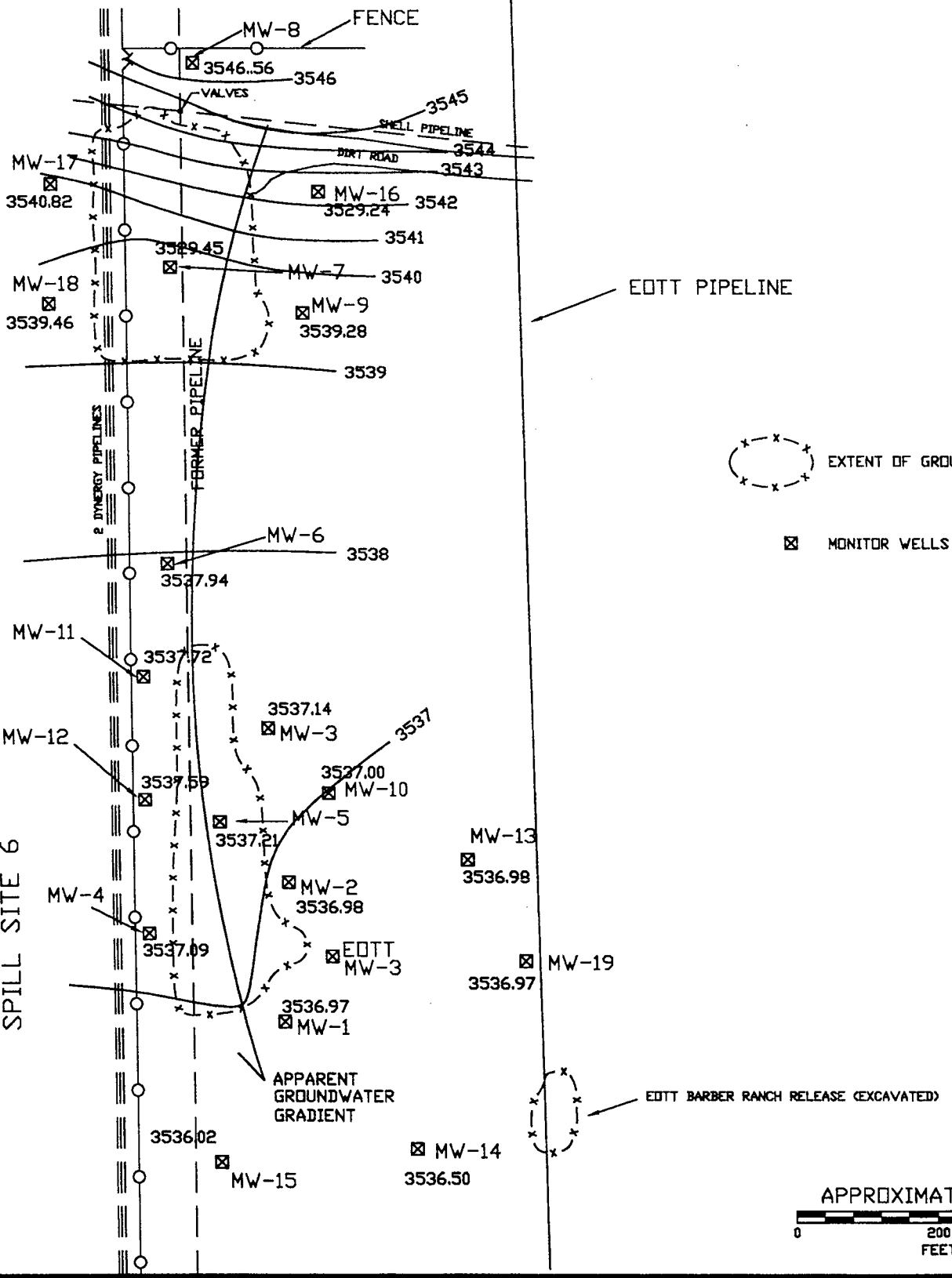
FIGURE  
 2

# GROUNDWATER GRADIENT MAP



SPILL SITE 7

SPILL SITE 6



SHELL PIPELINE CORPORATION  
 BARBER RANCH  
 SPILL SITES 6 AND 7  
 LEA COUNTY, NEW MEXICO



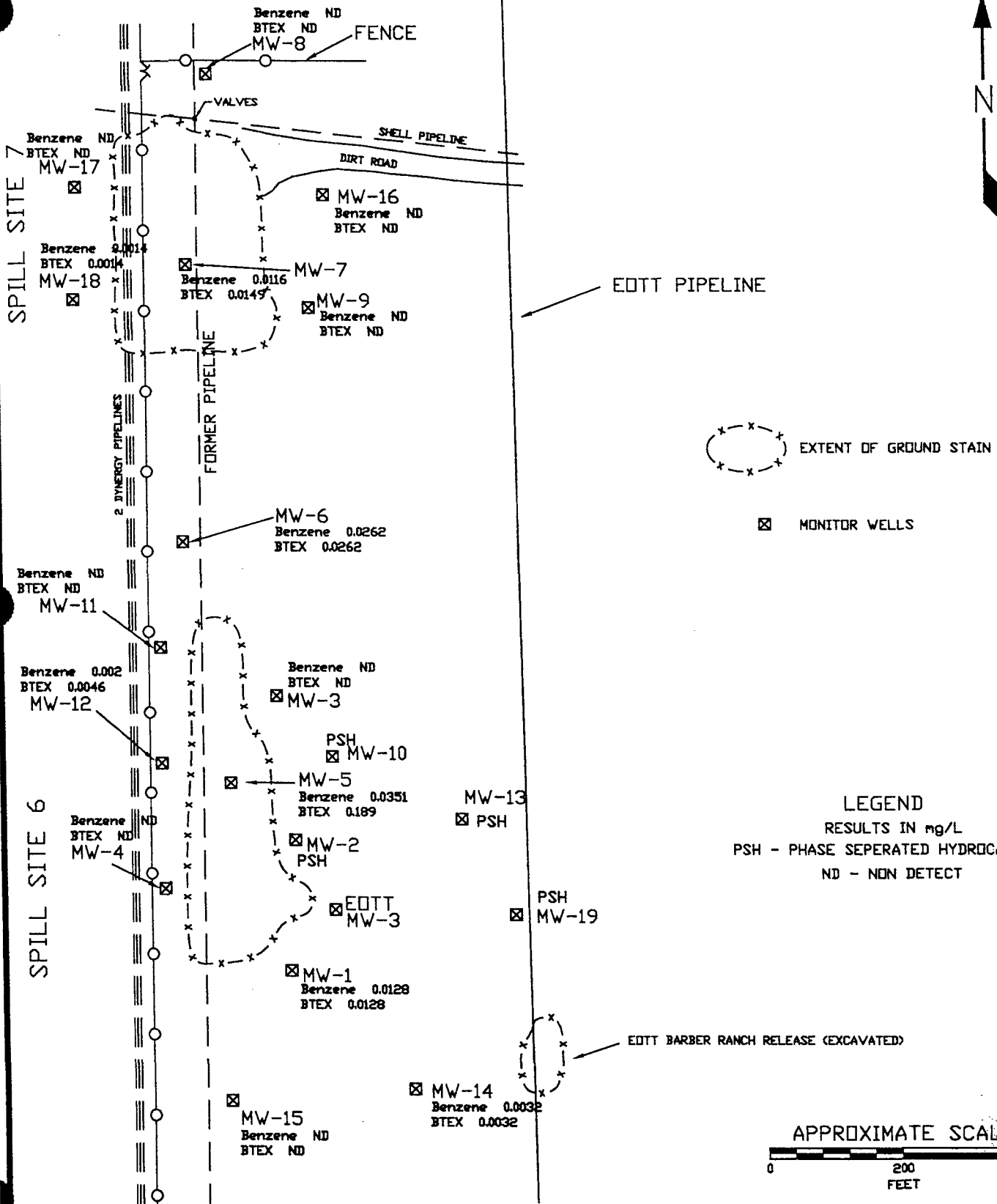
ENERCON SERVICES, INC.  
 2775 VILLA CREEK, SUITE 120  
 DALLAS, TEXAS 75234  
 972/484-3854

DATE  
 JULY, 2002  
 PROJECT NO.  
 EQ-112

FIGURE  
 3



# BTEX CONCENTRATION MAP



SHELL PIPELINE CORPORATION  
 BARBER RANCH  
 SPILL SITES 6 AND 7  
 LEA COUNTY, NEW MEXICO

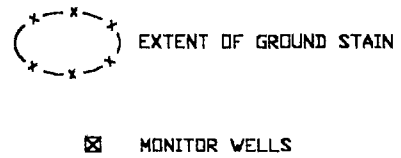
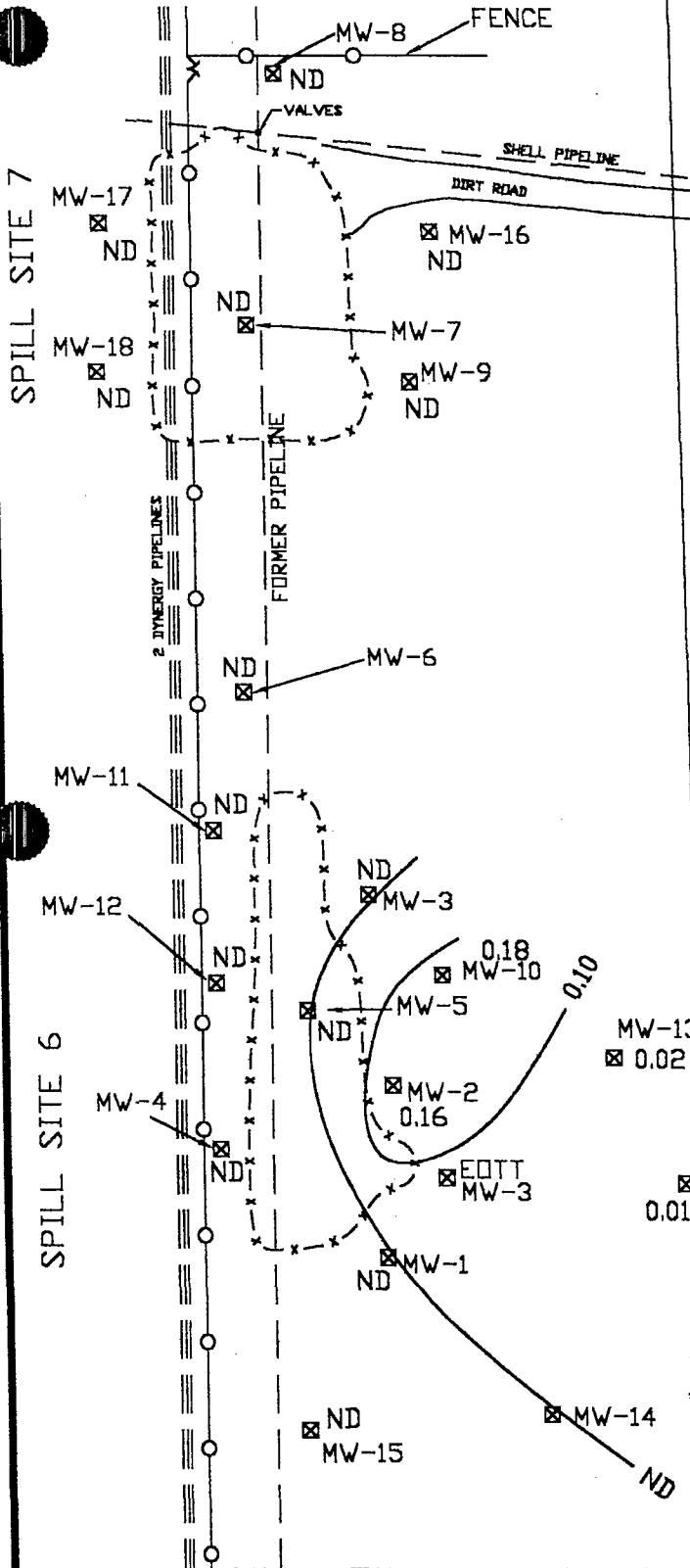


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 972/484-3854

DATE  
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 PROJECT NO.  
 EQ-112

FIGURE  
 4

# PSH THICKNESS MAP



**LEGEND**  
 MEASUREMENTS IN TENTHS OF FEET  
 CONTOUR INTERVAL - 0.10'  
 ND - NON DETECT



SHELL PIPELINE CORPORATION  
 BARBER RANCH  
 SPILL SITES 6 AND 7  
 LEA COUNTY, NEW MEXICO



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DATE  
 JULY, 2002  
 PROJECT NO.  
 EQ-112

FIGURE  
 5



**APPENDIX A**  
**BORING LOGS**

ENERCON SERVICES, INC.  
306 West Wall, Suite 1312  
Midland, Texas 79701

RECORD OF SUBSURFACE EXPLORATION

|            |   |                   |                |                  |            |
|------------|---|-------------------|----------------|------------------|------------|
| Project #: | EQ-112  | Well/Boring #:    | S-1            | Date Drilled:    | 5/7/2002   |
| Project:   | Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico | 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                         |
|--------------|--|---------------|-------------|-----------|---------------------------------|
| 0.0          | Tan fine grain sand  |               |             |           |                                 |
| 5.0          | Buff limestone with a 1 foot thick chert layer at 9 to 10 feet |               | SS          | 0         | No hydrocarbon odor or staining |
| 10.0         |  |               | SS          | 0         | No hydrocarbon odor or staining |
| 15.0         | Tan fine grain calcareous sand                                 | S-1 (13-15')  | SS          | 0         | No hydrocarbon odor or staining |
| 20.0         |  |               | SS          | 0         | No hydrocarbon odor or staining |
| 25.0         | Buff hard limestone  |               | SS          | 0         | No hydrocarbon odor or staining |
| 30.0         | Fine grain calcareous sand                                     | S-1 (27-28')  | SS          | 1         | Water encountered at 28 feet    |
|              | Boring terminated at 30 feet.                                  |               |             |           |                                 |
| 35.0         |  |               |             |           |                                 |
| 40.0         |  |               |             |           |                                 |

ABBREVIATIONS AND SYMBOLS

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 - Continous Flight Augers  
DC - Driving Casing  
MD - Mud Drilling

| ENERCON SERVICES, INC.<br>306 West Wall, Suite 1312<br>Midland, Texas 79701 |   | RECORD OF SUBSURFACE EXPLORATION               |             |   |                                 |  |
|---|---|--|-------------|---|---------------------------------|--|
| Project #: EQ-112   |   | Well/Boring #: S-4                             |             | Date Drilled: 5/6/2002                        |                                 |  |
| Project: Barber Ranch<br>Northern Spill Site<br>Lea County, New Mexico      |   | Drilling Company: Eades Drilling<br>Alan Eades |             | Drilling Method: Air Rotary<br>Logged By: JWK |                                 |  |
| DEPTH (FEET)  | SOIL DESCRIPTION  | SAMPLE NUMBER                                  | SAMPLE TYPE | OVA (PPM)                                     | REMARKS                         |  |
| 0.0   |   |  |             |   |                                 |  |
| 5.0   | Hard buff cherty limestone with small amount of sand intermixed |  | SS          | 0   | No hydrocarbon odor or staining |  |
| 10.0  | without chert   |  | SS          | 0   | No hydrocarbon odor or staining |  |
| 15.0  |   | S-4 (13-15')                                   | SS          | 0   | No hydrocarbon odor or staining |  |
| 20.0  | with hard chert layer 1 foot thick                              |  | SS          | 0   | No hydrocarbon odor or staining |  |
| 25.0  |   |  | SS          | 0   | No hydrocarbon odor or staining |  |
| 30.0  | Tan fine grain calcareous sand<br>Boring terminated at 29 feet  | S-4 (28-29')                                   | SS          | 0   | Water encountered at 29 feet    |  |
| 35.0  |   |  |             |   |                                 |  |
| 40.0  |   |  |             |   |                                 |  |

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| ENERCON SERVICES, INC.<br>306 West Wall, Suite 1312<br>Midland, Texas 79701 |  | RECORD OF SUBSURFACE EXPLORATION |             |                             |  |  |
|---|--|----------------------------------|-------------|-----------------------------|--|--|
| Project #: EQ-112   |  | Well/Boring #: S-5               |             | Date Drilled: 6/25/2002     |  |  |
| Project: Barber Ranch<br>Southern Spill Site<br>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                                  |  |
| 0.0   | Brown asphaltic sand                                 |                                  | SS          | 207                         | Strong hydrocarbon odor with staining    |  |
| 5.0   | Black layer of chert                                 |                                  |             |                             |  |  |
| 10.0  | Brown stained calcareous fine grain sand with gypsum | S-5 (8-10)                       | SS          | 325                         | Strong hydrocarbon odor with staining    |  |
| 15.0  |  |                                  | SS          | 301                         | Strong hydrocarbon odor with staining    |  |
| 20.0  | tan colored  |                                  | SS          | 300                         | Strong hydrocarbon odor with no staining |  |
| 25.0  | Reddish/tan clay of high plasticity moist at 24'     | S-5 (25-27')                     | SS          | 240                         | Strong hydrocarbon odor with no staining |  |
|   | Red clay (red bed)                                   |                                  |             |                             | Slight water encountered around 25 feet  |  |
| 30.0  | Dry  |                                  | SS          | 0                           |  |  |
|   | Boring terminated at 32 feet                         |                                  |             |                             |  |  |
| 35.0  |  |                                  |             |                             |  |  |
| 40.0  |  |                                  |             |                             |  |  |

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ENERCON SERVICES, INC.  
306 West Wall, Suite 1312  
Midland, Texas 79701

RECORD OF SUBSURFACE EXPLORATION

|            |   |                   |                |                  |            |
|------------|---|-------------------|----------------|------------------|------------|
| Project #: | EQ-112  | Well/Boring #:    | S-6            | Date Drilled:    | 6/25/2002  |
| Project:   | Barber Ranch<br>Southern Spill Site<br>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                                  |
|--------------|---|---------------|-------------|-----------|--|
| 0.0          |   |               |             |           |  |
| 5.0          | Dark brown stained fine grain sandy limestone |               | SS          | 308       | Strong hydrocarbon odor with staining    |
| 10.0         | Brown hard cherty limestone                   | S-6 (8-10")   | SS          | 310       | Strong hydrocarbon odor with staining    |
| 15.0         | Buff fine grain sandy limestone               |               | SS          | 80        | Strong hydrocarbon odor with no staining |
| 20.0         | with some gray clay intermixed                |               | SS          | 90        | Strong hydrocarbon odor with no staining |
| 25.0         | Buff fine grain sandy clay moist              | S-6 (25-27")  | SS          | 165       | Strong hydrocarbon odor with no staining |
|              | Boring terminated at 28 feet                  |               |             |           | Water encountered at 28 feet             |
| 30.0         |   |               |             |           |  |
| 35.0         |   |               |             |           |  |
| 40.0         |   |               |             |           |  |

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| ENERCON SERVICES, INC.<br>306 West Wall, Suite 1312<br>Midland, Texas 79701 |  | RECORD OF SUBSURFACE EXPLORATION     |             |                                 |  |  |
|---|--|--------------------------------------|-------------|---------------------------------|--|--|
| Project #: EQ-112   |  | Well/Boring #: S-7                   |             | Date Drilled: 6/26/2002         |  |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM              |  | Drilling: Eades Drilling<br>Company: |             | Drilling: Air Rotary<br>Method: |  |  |
|   |  | Driller: Alan Eades                  |             | Logged By: JWK                  |  |  |
| DEPTH (FEET)  | SOIL DESCRIPTION   | SAMPLE NUMBER                        | SAMPLE TYPE | OVA (PPM)                       | REMARKS  |  |
| 0.0   |  |                                      |             |                                 |  |  |
| 5.0   | Brown calcareous fine grain sand                               | S-7 (3-5')                           | SS          | 547                             | Strong hydrocarbon odor with staining  |  |
| 10.0  | Tan fine grain calcareous sand                                 |                                      | SS          | 0                               | No hydrocarbon odor or staining  |  |
| 15.0  | Tan fine grain sandy clay slight moisture                      |                                      | SS          | 0                               | No hydrocarbon odor or staining  |  |
| 20.0  | Buff fine grain slightly sandy limestone with chert intermixed |                                      | SS          | 0                               | No hydrocarbon odor or staining  |  |
| 25.0  | Hard chert layer to terminus                                   | S-7 (25-27')                         | SS          | 0                               | Strong hydrocarbon odor with no No hydrocarbon odor or staining Water encountered at 28 feet |  |
| 30.0  | Boring terminated at 28 feet                                   |                                      |             |                                 |  |  |
| 35.0  |  |                                      |             |                                 |  |  |
| 40.0  |  |                                      |             |                                 |  |  |

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| ENERCON SERVICES, INC.<br>306 West Wall, Suite 1312<br>Midland, Texas 79701 |   | RECORD OF SUBSURFACE EXPLORATION                        |             |  |  |  |
|---|---|---|-------------|--|--|--|
| Project #: EQ-112   |   | Well/Boring #: S-8                                      |             | Date Drilled: 6/26/2002                    |  |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM              |   | Drilling Company: Eades Drilling<br>Company: Alan Eades |             | Drilling Method: Air Rotary<br>Method: JWK |  |  |
| DEPTH (FEET)  | SOIL DESCRIPTION  | SAMPLE NUMBER   | SAMPLE TYPE | OVA (PPM)                                  | REMARKS                                  |  |
| 0.0   |   |   |             |  |  |  |
| 5.0   | Buff fine grain sandy limestone                                 |   | SS          | 0  | No hydrocarbon odor or staining          |  |
| 10.0  | Tan fine grain calcareous sand                                  |   | SS          | 0  | No hydrocarbon odor or staining          |  |
| 15.0  | Tan fine grain sandy clay                                       |   | SS          | 8  | Slight hydrocarbon odor with no staining |  |
| 20.0  | Tan interbedded layers of sandy with fine grain sandy limestone |   | SS          | 3  | Slight hydrocarbon odor with no staining |  |
| 25.0  | Hard chert layer  |   | SS          | 0  | No hydrocarbon odor or staining          |  |
| 30.0  | Tan calcareous sand   | S-8 (30-32')  | SS          | 0  | No hydrocarbon odor or staining          |  |
| 35.0  | Red clay (red bed)  |   |             |  | Water encountered at 33 feet             |  |
|   | Boring terminated at 35 feet                                    |   |             |  |  |  |
| 40.0  |   |   |             |  |  |  |

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| ENERCON SERVICES, INC.<br>306 West Wall, Suite 1312<br>Midland, Texas 79701 |                                      | RECORD OF SUBSURFACE EXPLORATION                        |             |  |  |  |
|---|--------------------------------------|---|-------------|--|--|--|
| Project #: EQ-112   |                                      | Well/Boring #: S-9                                      |             | Date Drilled: 6/27/2002                    |  |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM              |                                      | Drilling Company: Eades Drilling<br>Company: Alan Eades |             | Drilling Method: Air Rotary<br>Method: JWK |  |  |
| DEPTH (FEET)  | SOIL DESCRIPTION                     | SAMPLE NUMBER   | SAMPLE TYPE | OVA (PPM)                                  | REMARKS                                  |  |
| 0.0   |                                      |   |             |  |  |  |
| 5.0   | Brown tan calcareous fine grain sand |   | SS          | 0  | No hydrocarbon odor or staining          |  |
| 10.0  | Tan/buff fine grain sandy limestone  |   | SS          | 0  | No hydrocarbon odor or staining          |  |
| 15.0  | Tan fine grain calcareous sand       | S-9 (13-15')  | SS          | 0  | No hydrocarbon odor or staining          |  |
| 20.0  | Tan fine grain sandy clay            |   | SS          | 0  | No hydrocarbon odor or staining          |  |
| 25.0  | Tan fine grain calcareous sand       |   |             |  |  |  |
| 25.0  | Buff fine grain sandy limestone      | S-9 (25-27')  | SS          | 441  | Strong hydrocarbon odor with no staining |  |
| 30.0  | Tan sandy clay                       |   |             |  | Water encountered at 29 feet             |  |
| 30.0  | Boring terminated at 29 feet         |   |             |  |  |  |
| 35.0  |                                      |   |             |  |  |  |
| 40.0  |                                      |   |             |  |  |  |

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| ENERCON SERVICES, INC.<br>306 West Wall, Suite 1312<br>Midland, Texas 79701 |                                   | RECORD OF SUBSURFACE EXPLORATION     |             |                                 |  |
|---|-----------------------------------|--------------------------------------|-------------|---------------------------------|--|
| Project #: EQ-112   |                                   | Well/Boring #: S-10                  |             | Date Drilled: 6/27/2002         |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM              |                                   | Drilling: Eades Drilling<br>Company: |             | Drilling: Air Rotary<br>Method: |  |
|   |                                   | Driller: Alan Eades                  |             | Logged By: JWK                  |  |
| DEPTH (FEET)  | SOIL DESCRIPTION                  | SAMPLE NUMBER                        | SAMPLE TYPE | OVA (PPM)                       | REMARKS                                  |
| 0.0   |                                   |                                      |             |                                 |  |
| 5.0   | Buff fine grain sandy limestone   |                                      | SS          | 0                               | No hydrocarbon odor or staining          |
| 10.0  | Hard brown cherty sandy limestone | S-10 (8-10')                         | SS          | 115                             | Strong hydrocarbon odor with staining    |
| 15.0  | buff fine grain sandy limestone   |                                      | SS          | 0                               | No hydrocarbon odor or staining          |
| 20.0  |                                   |                                      | SS          | 0                               | No hydrocarbon odor or staining          |
| 25.0  | Hard cherty limestone to 26 feet  | S-10 (25-26')                        | SS          | 491                             | Strong hydrocarbon odor with no staining |
| 30.0  | Boring terminated at 28 feet      |                                      |             |                                 | Water and oil encountered at 28 feet     |
| 35.0  |                                   |                                      |             |                                 |  |
| 40.0  |                                   |                                      |             |                                 |  |

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## RECORD OF SUBSURFACE EXPLORATION

|  |   |   |
|--|---|---|
| Project #: EQ-112  | Well/Boring #: S-11   | Date Drilled: 6/27/2002                           |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM | Drilling: Eades Drilling<br>Company:<br>Driller: Alan Eades | Drilling: Air Rotary<br>Method:<br>Logged By: JWK |

| DEPTH (FEET) | SOIL DESCRIPTION                                       | SAMPLE NUMBER | SAMPLE TYPE | OVA (PPM) | REMARKS                                  |
|--------------|--|---------------|-------------|-----------|--|
| 0.0          |  |               |             |           |  |
| 5.0          | Backfill to 5 feet with clayey sand                    |               | SS          | 0         | No hydrocarbon odor or staining          |
| 10.0         | Brown Hard chert layer intermixed with sandy limestone | S-11 (8-10')  | SS          | 405       | Strong hydrocarbon odor with staining    |
| 15.0         | Tan calcareous fine grain sand with clay               |               | SS          | 140       | Strong hydrocarbon odor with no staining |
| 20.0         |  |               | SS          | 30        | Slight hydrocarbon odor with no staining |
| 25.0         | Tan buff calcareous fine grain sand                    | S-11 (25-27') | SS          | 0         | No hydrocarbon odor or staining          |
| 30.0         | Buff fine grain sandy limestone                        |               |             |           | Water encountered at 30 feet             |
| 30.0         | Boring terminated at 30 feet                           |               |             |           |  |
| 35.0         |  |               |             |           |  |
| 40.0         |  |               |             |           |  |

### ABBREVIATIONS AND SYMBOLS

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

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|---|--|----------------------------------|-------------|-----------------------------|--|--|
| Project #: EQ-112   |  | Well/Boring #: S-12              |             | Date Drilled: 6/27/2002     |  |  |
| Project: Barber Ranch<br>Southern Spill Site<br>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                                  |  |
| 0.0   |  |                                  |             |                             |  |  |
| 5.0   | Tan fine grain calcareous sand                       |                                  | SS          | 0                           | No hydrocarbon odor or staining          |  |
| 10.0  | Hard chert layer intermixed with sandy limestone     |                                  | SS          | 376                         | Strong hydrocarbon odor with staining    |  |
| 15.0  | Tan calcareous sand intermixed with clay             | S-12 (13-15')                    | SS          | 576                         | Strong hydrocarbon odor with no staining |  |
| 20.0  | Buff tan fine grain sandy limestone with clay lenses |                                  | SS          | 10                          | Slight hydrocarbon odor with no staining |  |
| 25.0  | Hard cherty limestone                                |                                  | SS          | 0                           | No hydrocarbon odor or staining          |  |
| 30.0  |  | S-12 (30-32')                    | SS          | 0                           | No hydrocarbon odor or staining          |  |
|   | Gray clay of high plasticity                         |                                  |             |                             |  |  |
| 35.0  | Red clay (red bed)                                   |                                  |             |                             | Water encountered at 34 feet             |  |
|   | Boring terminated at 35 feet                         |                                  |             |                             |  |  |
| 40.0  |  |                                  |             |                             |  |  |

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|---|--|--------------------------------------|-------------|---------------------------------|---|--|
| Project #: EQ-112   |  | Well/Boring #: S-13                  |             | Date Drilled: 6/28/2002         |   |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM              |  | Drilling: Eades Drilling<br>Company: |             | Drilling: Air Rotary<br>Method: |   |  |
|   |  | Driller: Alan Eades                  |             | Logged By: JWK                  |   |  |
| DEPTH (FEET)  | SOIL DESCRIPTION                                     | SAMPLE NUMBER                        | SAMPLE TYPE | OVA (PPM)                       | REMARKS   |  |
| 0.0   | Backfill material                                    |                                      | SS          | 0                               | Slight hydrocarbon odor with no staining                        |  |
| 5.0   | Brown sandy limestone with sand streamers intermixed |                                      |             |                                 |   |  |
| 10.0  | Brown clay of high plasticity                        |                                      | SS          | 569                             | Strong hydrocarbon odor with staining                           |  |
| 15.0  | Tan brown fine grain sandy limestone                 | S-13 (13-15')                        | SS          | 576                             | Strong hydrocarbon odor with staining                           |  |
| 20.0  | Brown tan sandy clay                                 |                                      |             |                                 | Slight hydrocarbon odor with no staining                        |  |
| 25.0  | Buff fine grain sandy limestone                      |                                      | SS          | 375                             |   |  |
| 25.0  |  | S-13 (25-27')                        | SS          | 40                              | Slight hydrocarbon odor with no staining                        |  |
| 30.0  | Buff wet limestone                                   |                                      |             |                                 | Water encountered at 28 feet<br>No hydrocarbon odor or staining |  |
| 35.0  | Boring terminated at 32 feet                         |                                      |             |                                 |   |  |
| 40.0  |  |                                      |             |                                 |   |  |

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## RECORD OF SUBSURFACE EXPLORATION

|  |                                      |                                 |
|--|--------------------------------------|---------------------------------|
| Project #: EQ-112  | Well/Boring #: S-14                  | Date Drilled: 6/28/2002         |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM | Drilling: Eades Drilling<br>Company: | Drilling: Air Rotary<br>Method: |
|  | Driller: Alan Eades                  | Logged By: JWK                  |

| DEPTH (FEET) | SOIL DESCRIPTION                                     | SAMPLE NUMBER | SAMPLE TYPE | OVA (PPM) | REMARKS  |
|--------------|--|---------------|-------------|-----------|--|
| 0.0          | Backfill material                                    |               | SS          | 0         | Slight hydrocarbon odor with no staining                                 |
| 5.0          | Brown sandy limestone with sand streamers intermixed |               |             |           |  |
| 10.0         |  | S-14 (8-10")  | SS          | 581       | Strong hydrocarbon odor with staining                                    |
| 15.0         | Tan calcareous fine grain sand                       |               | SS          | 577       | Strong hydrocarbon odor with staining                                    |
| 20.0         | Buff fine grain sandy limestone                      |               | SS          | 30        | Slight hydrocarbon odor with no staining                                 |
| 25.0         | Buff calcareous sand with some limestone intermixed  |               |             |           | Slight hydrocarbon odor with no staining<br>Water encountered at 28 feet |
| 30.0         | Wet tan fine grain calcareous sand                   | S-14 (25-27") | SS          | 0         |  |
| 35.0         | Boring terminated at 32 feet                         |               |             |           | No hydrocarbon odor or staining  |
| 40.0         |  |               |             |           |  |

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|---|--|--------------------------------------|-------------|---------------------------------|--|--|
| Project #: EQ-112   |  | Well/Boring #: MW-1                  |             | Date Drilled: 4/29/2002         |  |  |
| Project: Barber Lease<br>Southern Release Area<br>Lea County, NM            |  | Drilling: Eades Drilling<br>Company: |             | Drilling: Air Rotary<br>Method: |  |  |
|   |  | Driller: Alan Eades                  |             | Logged By: JWK                  |  |  |
| DEPTH (FEET)  | SOIL DESCRIPTION   | SAMPLE NUMBER                        | SAMPLE TYPE | OVA (PPM)                       | REMARKS  |  |
| 0.0   | Dry fine grain clayey sand (dry)                             |                                      |             |                                 |  |  |
| 5.0   | Buff hard limestone (dry)                                    |                                      | SS          | 0                               | No hydrocarbon odor or staining  |  |
| 10.0  | Tan/buff fine grain sandy limestone dry and hard             |                                      | SS          | 0                               | Strong hydrocarbon odor and staining   |  |
|   | Hard chert layer   |                                      |             |                                 |  |  |
| 15.0  | Tan/buff fine grain sandy limestone                          | MW-1 (13-15')                        | SS          | 0                               | Strong hydrocarbon odor with no staining                                       |  |
| 20.0  | Tan fine grain clayey sandy limestone slight moisture        |                                      | SS          | 0                               | Strong hydrocarbon odor with no staining.                                      |  |
| 25.0  | Buff limestone with clay intermixed.                         | MW-1 (23-25')                        | SS          | 0                               | Strong hydrocarbon odor with oil on rods<br>Groundwater encountered at 26 feet |  |
| 30.0  |  |                                      |             |                                 |  |  |
| 35.0  | Tan calcareous fine grain clayey sand                        |                                      |             |                                 |  |  |
| 40.0  | Boring terminated at 37 feet and converted to a monitor well |                                      |             |                                 |  |  |

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|---|--|--------------------------------------|-------------|---------------------------------|--|--|
| Project #: EQ-112   |  | Well/Boring #: MW-2                  |             | Date Drilled: 4/29/2002         |  |  |
| Project: Barber Lease<br>Southern Release Area<br>Lea County, NM            |  | Drilling: Eades Drilling<br>Company: |             | Drilling: Air Rotary<br>Method: |  |  |
|   |  | Driller: Alan Eades                  |             | Logged By: JWK                  |  |  |
| DEPTH (FEET)  | SOIL DESCRIPTION   | SAMPLE NUMBER                        | SAMPLE TYPE | OVA (PPM)                       | REMARKS  |  |
| 0.0   | Hard dry brown sand  |                                      |             |                                 |  |  |
| 5.0   | Hard dry fine grain sandy limestone                          |                                      | SS          | 0                               | No hydrocarbon odor or staining  |  |
| 10.0  | Buff fine grain clayey sandy limestone                       |                                      | SS          | 60                              | Strong hydrocarbon odor and staining   |  |
|   | Hard chert layer   |                                      |             |                                 |  |  |
| 15.0  | Tan/buff fine grain sandy limestone                          | MW-2 (13-15')                        | SS          | 165                             | Strong hydrocarbon odor with no staining                                       |  |
| 20.0  |  |                                      | SS          | 149                             | Strong hydrocarbon odor with no staining.                                      |  |
| 25.0  | Buff limestone with quartz and chert intermixed              | MW-2 (23-25')                        | SS          | 98                              | Strong hydrocarbon odor with oil on rods<br>Groundwater encountered at 25 feet |  |
| 30.0  | Tan fine grain calcareous sand                               |                                      |             |                                 |  |  |
| 35.0  |  |                                      |             |                                 |  |  |
| 40.0  | Boring terminated at 37 feet and converted to a monitor well |                                      |             |                                 |  |  |

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|---|--|----------------------------------|-------------|-----------------------------|------------------------------------|--|
| Project #: EQ-112   |  | Well/Boring #: MW-3              |             | Date Drilled: 4/30/2002     |                                    |  |
| Project: Barber Lease<br>Southern Release Area<br>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                            |  |
| 0.0   | Tan brown clayey sand (very dry)   |                                  |             |                             |                                    |  |
| 5.0   | Buff fractured limestone   |                                  | SS          | 0                           | No hydrocarbon odor or staining    |  |
| 10.0  | Tan/buff fine grain sandy limestone (dry and moderately hard to crumble) |                                  | SS          | 0                           | No hydrocarbon odor or staining    |  |
|   | Tan fine grain calcareous sand   |                                  |             |                             |                                    |  |
| 15.0  |  | MW-4 (13-15')                    | SS          | 0                           | No hydrocarbon odor or staining    |  |
| 20.0  | Tan/buff clayey sandy limestone (moist)                                  |                                  | SS          | 0                           | No hydrocarbon odor or staining    |  |
| 25.0  | Hard dry buff limestone  |                                  | SS          | 0                           | No hydrocarbon odor or staining    |  |
| 30.0  | Buff clayey limestone  | MW-4 (28-30')                    | SS          | 0                           | No hydrocarbon odor or staining    |  |
|   | Grey sandy clay  |                                  |             |                             | Groundwater encountered at 30 feet |  |
| 35.0  |  |                                  |             |                             |                                    |  |
| 40.0  | Boring terminated at 37 feet and converted to a monitor well             |                                  |             |                             |                                    |  |

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|---|--|--------------------------------------|-------------|---------------------------------|---|--|
| Project #: EQ-112   |  | Well/Boring #: MW-5                  |             | Date Drilled: 5/1/2002          |   |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, NM              |  | Drilling: Eades Drilling<br>Company: |             | Drilling: Air Rotary<br>Method: |   |  |
|   |  | Driller: Alan Eades                  |             | Logged By: JWK                  |   |  |
| DEPTH (FEET)  | SOIL DESCRIPTION   | SAMPLE NUMBER                        | SAMPLE TYPE | OVA (PPM)                       | REMARKS   |  |
| 0.0   | Brown asphaltic sand   |                                      |             |                                 |   |  |
| 5.0   | Dark yellow to brown calcitic limestone                      |                                      | SS          | 3                               | Slight hydrocarbon odor with staining   |  |
| 10.0  | with sandy clay lenses intermixed                            | MW-5 (8-10)                          | SS          | 201                             | Strong hydrocarbon odor with staining   |  |
| 15.0  | buff tan clayey sandy limestone                              |                                      | SS          | 23                              | Slight hydrocarbon odor with no staining  |  |
| 20.0  |  |                                      | SS          | 9                               | Slight hydrocarbon odor with no staining  |  |
| 25.0  |  |                                      | SS          | 0                               | No hydrocarbon odor or staining   |  |
| 30.0  | Gray clay with limestone intermixed                          | MW-5 (28-30)                         | SS          | 0                               | No hydrocarbon odor or staining<br>Water encountered at 30 feet<br>slight hydrocarbon odor on groundwater |  |
| 35.0  | Red clay (red bed) at 36 feet                                |                                      |             |                                 |   |  |
| 40.0  | Boring terminated and completed as a monitor well at 37 feet |                                      |             |                                 |   |  |

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## RECORD OF SUBSURFACE EXPLORATION

|            |                        |                |                |               |            |            |
|------------|------------------------|----------------|----------------|---------------|------------|------------|
| Project #: | EQ-112                 | Well/Boring #: | MW-6           | Date Drilled: | 5/2/2002   |            |
| Project:   | Barber Ranch           | Drilling       | Eades Drilling |               | Drilling   | Air Rotary |
|            | Southern Release Site  | Company:       |                |               | Method:    |            |
|            | Lea County, New Mexico | Driller:       | Alan Eades     |               | Logged By: | JWK        |

| DEPTH (FEET) | SOIL DESCRIPTION   | SAMPLE NUMBER | SAMPLE TYPE | OVA (PPM) | REMARKS                         |
|--------------|--|---------------|-------------|-----------|---------------------------------|
| 0.0          | Brown clayey sand  |               |             |           |                                 |
| 5.0          | Buff sandy limestone   |               | SS          | 0         | No hydrocarbon odor or staining |
| 10.0         |  |               | SS          | 0         | No hydrocarbon odor or staining |
| 15.0         | Buff fine grain sandy limestone                                | MW-6 (13-15') | SS          | 0         | No hydrocarbon odor or staining |
| 20.0         |  |               | SS          | 0         | No hydrocarbon odor or staining |
| 25.0         | Buff sandy limestone with hard chert layer about 1 foot thick. | MW-6 (23-25') | SS          | 0         | No hydrocarbon odor or staining |
| 30.0         |  |               |             |           | Water encountered at 28 feet    |
| 35.0         | Tan fine grain calcareous sand                                 |               |             |           |                                 |
| 40.0         | Boring terminated and completed as a monitor well at 38 feet   |               |             |           |                                 |

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|---|--|---|-------------|---|--------------------------------------|--|
| Project #: EQ-112   |  | Well/Boring #: MW-7                                     |             | Date Drilled: 5/2/2002                        |                                      |  |
| Project: Barber Ranch<br>Northern Spill Site<br>Lea County, New Mexico      |  | Drilling Company: Eades Drilling<br>Driller: Alan Eades |             | Drilling Method: Air Rotary<br>Logged By: JWK |                                      |  |
| DEPTH (FEET)  | SOIL DESCRIPTION   | SAMPLE NUMBER   | SAMPLE TYPE | OVA (PPM)                                     | REMARKS                              |  |
| 0.0   |  |   |             |   |                                      |  |
| 5.0   | Light yellow limestone with hard chert intermixed                |   | SS          | 207   | Strong hydrocarbon odor and staining |  |
| 10.0  |  | MW-7 (8-10')  | SS          | 207   | Strong hydrocarbon odor and staining |  |
| 15.0  | Light yellow very fine grain sandy limestone                     |   | SS          | 205   | Strong hydrocarbon odor and staining |  |
| 20.0  | Tan fine grain calcareous sand                                   |   |             |   | Not able to recover any sample       |  |
| 25.0  | Buff hard limestone with chert layer approximately 1 foot thick. | MW-7 (25-27')   | SS          | 0   | No hydrocarbon odor or staining      |  |
| 30.0  |  |   |             |   | Water encountered at 27 feet         |  |
| 35.0  | Tan fine grain calcareous sand                                   |   |             |   |                                      |  |
| 40.0  | Boring terminated and completed as a monitor well at 38 feet     |   |             |   |                                      |  |

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|---|--|----------------------------------|-------------|-----------------------------|---------------------------------|--|
| Project #: EQ-112   |  | Well/Boring #: MW-8              |             | Date Drilled: 5/3/2002      |                                 |  |
| Project: Barber Ranch<br>Northern Spill Site<br>Lea County, New Mexico      |  | 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                         |  |
| 0.0   |  |                                  |             |                             |                                 |  |
| 5.0   | Hard buff limestone with rounded pebbles intermixed          |                                  | SS          | 0                           | No hydrocarbon odor or staining |  |
| 10.0  | has streamers of gypsum intermixed                           | MW-8 (8-10')                     | SS          | 0                           | No hydrocarbon odor or staining |  |
| 15.0  | Hard buff calcitic limestone                                 |                                  | SS          | 0                           | No hydrocarbon odor or staining |  |
| 20.0  | Tan fine grain calcareous sand                               |                                  | SS          | 0                           | No hydrocarbon odor or staining |  |
| 25.0  | Light grey clay  | MW-8 (23-25')                    | SS          | 0                           | No hydrocarbon odor or staining |  |
| 30.0  | Red clay (red bed at 29 feet)                                |                                  |             |                             | Water encountered at 26 feet    |  |
| 35.0  |  |                                  |             |                             |                                 |  |
| 40.0  | Boring terminated and completed as a monitor well at 37 feet |                                  |             |                             |                                 |  |

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## RECORD OF SUBSURFACE EXPLORATION

|  |   |   |
|--|---|---|
| Project #: EQ-112  | Well/Boring #: MW-9   | Date Drilled: 5/6/2002                            |
| Project: Barber Ranch<br>Northern Spill Site<br>Lea County, New Mexico | Drilling: Eades Drilling<br>Company:<br>Driller: Alan Eades | Drilling: Air Rotary<br>Method:<br>Logged By: JWK |

| DEPTH (FEET) | SOIL DESCRIPTION   | SAMPLE NUMBER | SAMPLE TYPE | OVA (PPM) | REMARKS                         |
|--------------|--|---------------|-------------|-----------|---------------------------------|
| 0.0          |  |               |             |           |                                 |
| 5.0          | Hard buff fine grain sandy limestone                         |               | SS          | 0         | No hydrocarbon odor or staining |
| 10.0         |  |               | SS          | 0         | No hydrocarbon odor or staining |
| 15.0         | Tan fine grain calcareous sand                               | MW-9 (13-15') | SS          | 0         | No hydrocarbon odor or staining |
| 20.0         | Tan/Buff fine grain sandy limestone                          |               | SS          | 0         | No hydrocarbon odor or staining |
| 25.0         | hard chert layer at 24 to 25 feet                            | MW-9 (25-27') | SS          | 0         | No hydrocarbon odor or staining |
| 30.0         | Tan fine grain sand  |               |             |           | Water encountered at 28 feet.   |
| 35.0         |  |               |             |           |                                 |
| 40.0         | Boring terminated and completed as a monitor well at 37 feet |               |             |           |                                 |

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|---|--|----------------------------------|-------------|-----------------------------|---|--|
| Project #: EQ-112   |  | Well/Boring #: MW-10             |             | Date Drilled: 5/7/2002      |   |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico      |  | 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                                     |  |
| 0.0   | Tan fine grain sand  |                                  |             |                             | No hydrocarbon odor or staining             |  |
| 5.0   | Brown fine grain sandy limestone                             |                                  | SS          | 0                           |   |  |
| 10.0  | Buff fine grain sandy limestone                              | MW-10 (8-10")                    | SS          | 206                         | Strong hydrocarbon odor and slight staining |  |
| 15.0  |  |                                  | SS          | 8                           | Slight hydrocarbon odor with no staining    |  |
| 20.0  |  |                                  | SS          | 96                          | Slight hydrocarbon odor with no staining    |  |
| 25.0  |  | MW-10 (25-27")                   | SS          | 23                          | Slight hydrocarbon odor with no staining    |  |
|   |  |                                  |             |                             | Water encountered at 27 feet                |  |
| 30.0  | Tan fine grain calcareous sand                               |                                  |             |                             |   |  |
| 40.0  | Boring terminated and completed as a monitor well at 38 feet |                                  |             |                             |   |  |

ABBREVIATIONS AND SYMBOLS

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

HSA - Hollow Stem Auger  
 CFA - Continous Flight Augers  
 DC - Driving Casing  
 MD - Mud Drilling

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|---|--|--|-------------|---|---------------------------------|--|
| Project #: EQ-112   |  | Well/Boring #: MW-11                           |             | Date Drilled: 5/8/2002                        |                                 |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico      |  | Drilling Company: Eades Drilling<br>Alan Eades |             | Drilling Method: Air Rotary<br>Logged By: JWK |                                 |  |
| DEPTH (FEET)  | SOIL DESCRIPTION   | SAMPLE NUMBER                                  | SAMPLE TYPE | OVA (PPM)                                     | REMARKS                         |  |
| 0.0   | Tan fine grain sand  |  |             |   |                                 |  |
| 5.0   | Buff to tan sandy limestone                                    |  | SS          | 0   | No hydrocarbon odor or staining |  |
| 10.0  | Buff hard limestone with chert layer about 1 foot thick        |  | SS          | 0   | No hydrocarbon odor or staining |  |
| 15.0  | Buff to tan sandy limestone                                    | MW-11 (13-15")                                 | SS          | 0   | No hydrocarbon odor or staining |  |
| 20.0  |  |  | SS          | 0   | No hydrocarbon odor or staining |  |
| 25.0  | Tan limestone with clay intermixed                             | MW-11 (23-25")                                 | SS          | 0   | No hydrocarbon odor or staining |  |
| 30.0  |  |  | SS          | 1   | Water encountered at 28 feet    |  |
| 35.0  | Fine grain calcareous sand                                     |  |             |   |                                 |  |
| 40.0  | Boring terminated at 38 feet and converted into a monitor well |  |             |   |                                 |  |

ABBREVIATIONS AND SYMBOLS

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|---|--|----------------------------------|-------------|-----------------------------|---|--|
| Project #: EQ-112   |  | Well/Boring #: MW-12             |             | Date Drilled: 5/8/2002      |   |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico      |  | 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   |  |
| 0.0   | Tan to brown fine grain sand                                   |                                  |             |                             |   |  |
| 5.0   | Buff to tan sandy limestone                                    |                                  | SS          | 0                           | No hydrocarbon odor or staining                                 |  |
| 10.0  |  |                                  | SS          | 0                           | No hydrocarbon odor or staining                                 |  |
| 15.0  |  | MW-12 (13-15')                   | SS          | 0                           | No hydrocarbon odor or staining                                 |  |
| 20.0  |  |                                  | SS          | 0                           | No hydrocarbon odor or staining                                 |  |
| 25.0  | Buff hard limestone  |                                  | SS          | 0                           | No hydrocarbon odor or staining                                 |  |
| 30.0  | Tan fine grain calcareous clayey sand                          | MW-12 (27-28')                   | SS          | 3                           | No hydrocarbon odor or staining<br>Water encountered at 28 feet |  |
| 40.0  | Boring terminated at 38 feet and converted into a monitor well |                                  |             |                             |   |  |

ABBREVIATIONS AND SYMBOLS

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## RECORD OF SUBSURFACE EXPLORATION

|            |   |                   |                |                  |            |
|------------|---|-------------------|----------------|------------------|------------|
| Project #: | EQ-112  | Well/Boring #:    | MW-13          | Date Drilled:    | 6/19/2002  |
| Project:   | Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico | 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                                  |
|--------------|--|----------------|-------------|-----------|--|
| 0.0          | Backfill of clayey sand  |                |             |           |  |
| 5.0          | Buff to tan sandy limestone dry and hard                       |                | SS          | 0         | No hydrocarbon odor or staining          |
|              | Hard gray chert  |                |             |           |  |
| 10.0         |  |                | SS          | 0         | No hydrocarbon odor or staining          |
| 15.0         | Buff sandy limestone with calcite                              | MW-13 (13-15') | SS          | 0         | No hydrocarbon odor or staining          |
| 20.0         | Tan calcareous clayey sand                                     |                | SS          | 0         | No hydrocarbon odor or staining          |
|              | Hard gray chert  |                |             |           |  |
| 25.0         |  | MW-13 (25-27') | SS          | 7.2       | Slight hydrocarbon odor with no staining |
|              | Tan fine grain sandy limestone                                 |                |             |           | Water encountered at 27 feet             |
| 30.0         |  |                |             |           |  |
|              | Fine grain calcareous sand                                     |                |             |           |  |
| 35.0         |  |                |             |           |  |
| 40.0         | Boring terminated at 37 feet and converted into a monitor well |                |             |           |  |

### ABBREVIATIONS AND SYMBOLS

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## RECORD OF SUBSURFACE EXPLORATION

|            |   |                   |                |                  |            |
|------------|---|-------------------|----------------|------------------|------------|
| Project #: | EQ-112  | Well/Boring #:    | MW-14          | Date Drilled:    | 6/20/2002  |
| Project:   | Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico | 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                            |
|--------------|--|----------------|-------------|-----------|------------------------------------|
| 0.0          | Backfill of clayey sand<br>dark brown  |                |             |           |                                    |
| 5.0          | Buff to tan sandy limestone<br>dry and hard  |                | SS          | 0         | No hydrocarbon odor<br>or staining |
| 10.0         |  |                | SS          | 0         | No hydrocarbon odor<br>or staining |
| 15.0         | with sand seams intermixed   | MW-14 (13-15') | SS          | 0         | No hydrocarbon odor<br>or staining |
| 20.0         | White buff fine grain clayey calareous<br>sand with gypsum streamers<br>intermixed |                | SS          | 0         | No hydrocarbon odor<br>or staining |
| 25.0         |  | MW-14 (25-27') | SS          | 0         | No hydrocarbon odor or staining    |
|              | Hard chert layer   |                |             |           |                                    |
| 30.0         | Buff hard dry slightly sandy limestone   |                |             |           | Water encountered at 28 feet       |
| 35.0         | increasing amounts of sand   |                |             |           |                                    |
| 40.0         | Boring terminated at 37 feet and<br>converted into a monitor well                  |                |             |           |                                    |

### ABBREVIATIONS AND SYMBOLS

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|---|---|----------------------------------|-------------|-----------------------------|--|--|
| Project #: EQ-112   |   | Well/Boring #: MW-15             |             | Date Drilled: 6/21/2002     |  |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico      |   | 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                                  |  |
| 0.0   | Backfill of clayey sand<br>dark brown   |                                  |             |                             |  |  |
| 5.0   | Buff to tan sandy limestone<br>dry and hard                                   | MW-15 (3-5')                     | SS          | 30                          | Slight hydrocarbon odor with no staining |  |
| 10.0  | Buff/tan fine grain calcareous sand   |                                  | SS          | 0                           | No hydrocarbon odor or staining          |  |
| 15.0  | with sand seams intermixed  |                                  | SS          | 0                           | No hydrocarbon odor or staining          |  |
| 20.0  | White buff fine grain clayey calcareous sand with gypsum streamers intermixed |                                  | SS          | 0                           | No hydrocarbon odor or staining          |  |
| 25.0  | Buff fine grain sandy limestone with calcite and chert intermixed             | MW-15 (25-27')                   | SS          | 0                           | No hydrocarbon odor or staining          |  |
| 30.0  | Tan sandy clay of high plasticity   |                                  |             |                             | Water encountered at 28 feet             |  |
| 35.0  |   |                                  |             |                             |  |  |
| 40.0  | Boring terminated at 38 feet and converted to a monitor well                  |                                  |             |                             |  |  |

ABBREVIATIONS AND SYMBOLS

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| ENERCON SERVICES, INC.<br>306 West Wall, Suite 1312<br>Midland, Texas 79701 |  | RECORD OF SUBSURFACE EXPLORATION |             |                             |  |  |
|---|--|----------------------------------|-------------|-----------------------------|--|--|
| Project #: EQ-112   |  | Well/Boring #: MW-17             |             | Date Drilled: 6/24/2002     |  |  |
| Project: Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico      |  | 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  |  |
| 0.0   | Backfill of clayey sand<br>dark brown                        |                                  |             |                             |  |  |
|   | Hard chert layer to 4 feet                                   |                                  |             |                             |  |  |
| 5.0   | Tan fine grain calcareous sand                               |                                  | SS          | 0                           | No hydrocarbon odor or staining  |  |
| 10.0  | Buff fine grain sandy limestone with chert intermixed        |                                  | SS          | 0                           | No hydrocarbon odor or staining  |  |
| 15.0  |  | MW-17 (13-15')                   | SS          | 0                           | No hydrocarbon odor or staining  |  |
| 20.0  |  |                                  | SS          | 0                           | No hydrocarbon odor or staining  |  |
| 25.0  | Buff very hard cherty limestone with small amounts of sand.  | MW-17 (25-26')                   | SS          | 6                           | Slight hydrocarbon odor with slight staining<br>Groundwater encountered at 28 feet |  |
| 30.0  | Tan clay of high plasticity                                  |                                  |             |                             |  |  |
| 40.0  | Boring terminated at 38 feet and converted to a monitor well |                                  |             |                             |  |  |

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ENERCON SERVICES, INC.  
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RECORD OF SUBSURFACE EXPLORATION

|            |   |                   |                |                  |            |
|------------|---|-------------------|----------------|------------------|------------|
| Project #: | EQ-112  | Well/Boring #:    | MW-18          | Date Drilled:    | 6/24/2002  |
| Project:   | Barber Ranch<br>Southern Spill Site<br>Lea County, New Mexico | 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                              |
|--------------|--|----------------|-------------|-----------|--------------------------------------|
| 0.0          | Backfill of clayey sand dark brown                                       |                |             |           |                                      |
| 5.0          | Tan hard chert with fine grain sand intermixed                           |                | SS          | 0         | No hydrocarbon odor or staining      |
| 10.0         | Tan fine grain calcareous sand   |                | SS          | 0         | No hydrocarbon odor or staining      |
| 15.0         |  | MW-18 (13-15') | SS          | 0         | No hydrocarbon odor or staining      |
| 20.0         | Buff fine grain sandy limestone with chert layers approximately 1" thick |                | SS          | 0         | No hydrocarbon odor or staining      |
| 25.0         | Hard chert layer   | MW-18 (25-26') | SS          | 142       | Strong hydrocarbon odor and staining |
| 30.0         | Buff fine grain sandy limestone  |                |             |           | Groundwater encountered at 28 feet   |
| 30.0         | Tan clay of high plasticity  |                |             |           |                                      |
| 40.0         | Boring terminated at 38 feet and converted to a monitor well             |                |             |           |                                      |

ABBREVIATIONS AND SYMBOLS

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ENERCON SERVICES, INC.  
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## RECORD OF SUBSURFACE EXPLORATION

|            |   |                   |                |                  |            |
|------------|---|-------------------|----------------|------------------|------------|
| Project #: | EQ-112  | Well/Boring #:    | MW-19          | Date Drilled:    | 6/28/2002  |
| Project:   | Barber Ranch                                  | Drilling Company: | Eades Drilling | Drilling Method: | Air Rotary |
|            | Southern Spill Site<br>Lea County, New Mexico | Driller:          | Alan Eades     | Logged By:       | JWK        |

| DEPTH (FEET) | SOIL DESCRIPTION  | SAMPLE NUMBER  | SAMPLE TYPE | OVA (PPM) | REMARKS   |
|--------------|---|----------------|-------------|-----------|---|
| 0.0          | Backfill of clayey sand dark brown                              |                |             |           |   |
| 5.0          | Buff fine grain sandy limestone                                 |                | SS          | 0         | No hydrocarbon odor or staining   |
| 10.0         | Tan calcareous fine grain sand.                                 |                | SS          | 0         | No hydrocarbon odor or staining   |
| 15.0         |   | MW-19 (13-15') | SS          | 0         | No hydrocarbon odor or staining   |
| 20.0         | Buff fine grain sandy limestone with some sandy clay intermixed |                | SS          | 0         | No hydrocarbon odor or staining   |
|              | Hard chert layer  |                |             |           |   |
| 25.0         | Buff fine grain sandy limestone                                 | MW-19 (25-27') | SS          | 25        | Slight hydrocarbon odor and no staining<br>Groundwater encountered at 28 feet |
| 30.0         | Chert, pebbles intermixed                                       |                |             |           |   |
| 35.0         | Tan clay  |                |             |           |   |
| 40.0         | Boring terminated at 37 feet and converted to a monitor well    |                |             |           |   |

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**APPENDIX B**  
**MONITOR WELL COMPLETION**

# MONITOR WELL MW-1

DATE STARTED: 04/29/02  
DATE COMPLETED: 04/29/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
26 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH  
MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-2

DATE STARTED: 04/29/02  
DATE COMPLETED: 04/29/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
25 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-3

DATE STARTED: 04/30/02  
DATE COMPLETED: 04/30/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
27 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-4

DATE STARTED: 04/30/02  
DATE COMPLETED: 04/30/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
30 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-5

DATE STARTED: 05/01/02  
DATE COMPLETED: 05/01/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
29 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-6

DATE STARTED: 05/02/02  
DATE COMPLETED: 05/02/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.**

**BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**



# MONITOR WELL MW-7

DATE STARTED: 05/02/02  
DATE COMPLETED: 05/02/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
27 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-8

DATE STARTED: 05/03/02  
DATE COMPLETED: 05/03/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

BENTONITE SEAL

SAND PACK

DEPTH IN FEET BELOW LAND SURFACE

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

**STATIC GROUNDWATER DEPTH:  
27 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.**

**BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-9

DATE STARTED: 05/06/02

DATE COMPLETED: 05/06/02

INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

Surface TOP OF GROUT

BENTONITE SEAL

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC

SCREEN TYPE: SCH. 40 PVC 0.020 SLOT

GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.**

**BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-10

DATE STARTED: 05/07/02  
DATE COMPLETED: 05/07/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
27 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-11

DATE STARTED: 05/08/02  
DATE COMPLETED: 05/08/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-12

DATE STARTED: 05/08/02  
DATE COMPLETED: 05/08/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-13

DATE STARTED: 06/19/02

DATE COMPLETED: 06/19/02

INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

Surface TOP OF GROUT

BENTONITE SEAL

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
27 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC

SCREEN TYPE: SCH. 40 PVC 0.020 SLOT

GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.**

**BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-14

DATE STARTED: 06/20/02  
DATE COMPLETED: 06/20/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

STATIC GROUNDWATER DEPTH:  
27 feet

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

ENERCON SERVICES CORPORATION

Monitor Well Installation Diagram

EQUIVA SERVICES INC.  
BARBER RANCH

MONUMENT, LEA COUNTY NEW MEXICO



**MONITOR WELL MW-15**

DATE STARTED: 06/21/02  
 DATE COMPLETED: 06/21/02  
 INSTALLED BY: Eades Drilling

MONUMENT  
 COMPLETION  
 3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

Surface TOP OF GROUT

BENTONITE SEAL

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
 28 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
 SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
 GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
 BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-16

DATE STARTED: 06/21/02  
DATE COMPLETED: 06/21/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

BENTONITE SEAL

Surface TOP OF GROUT

3.0' TOP OF BENTONITE SEAL

16.0' TOP OF SAND PACK

18.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-17

DATE STARTED: 06/24/02  
DATE COMPLETED: 06/24/02  
INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

Surface TOP OF GROUT

BENTONITE SEAL

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC  
SCREEN TYPE: SCH. 40 PVC 0.020 SLOT  
GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.  
BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-18

DATE STARTED: 06/24/02

DATE COMPLETED: 06/24/02

INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

Surface TOP OF GROUT

BENTONITE SEAL

3.0' TOP OF BENTONITE SEAL

21.0' TOP OF SAND PACK

23.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

38.0' BOTTOM OF SCREEN

38.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC

SCREEN TYPE: SCH. 40 PVC 0.020 SLOT

GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.**

**BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**

# MONITOR WELL MW-19

DATE STARTED: 06/28/02

DATE COMPLETED: 06/28/02

INSTALLED BY: Eades Drilling

MONUMENT  
COMPLETION  
3' STICK-UP

LOCKING COVER

CONCRETE PAD

GROUT

DEPTH IN FEET BELOW LAND SURFACE

Surface TOP OF GROUT

BENTONITE SEAL

3.0' TOP OF BENTONITE SEAL

20.0' TOP OF SAND PACK

22.0' TOP OF SCREEN

SAND PACK

**STATIC GROUNDWATER DEPTH:  
28 feet**

37.0' BOTTOM OF SCREEN

37.0' TOTAL DEPTH

CASING TYPE: 4" SCH. 40 PVC

SCREEN TYPE: SCH. 40 PVC 0.020 SLOT

GRAVEL PACK: 08/16 VOLUME SILICA SAND

**ENERCON SERVICES CORPORATION**

**Monitor Well Installation Diagram**

**EQUIVA SERVICES INC.**

**BARBER RANCH**

**MONUMENT, LEA COUNTY NEW MEXICO**



**APPENDIX C**  
**SITE PHOTOGRAPHS**

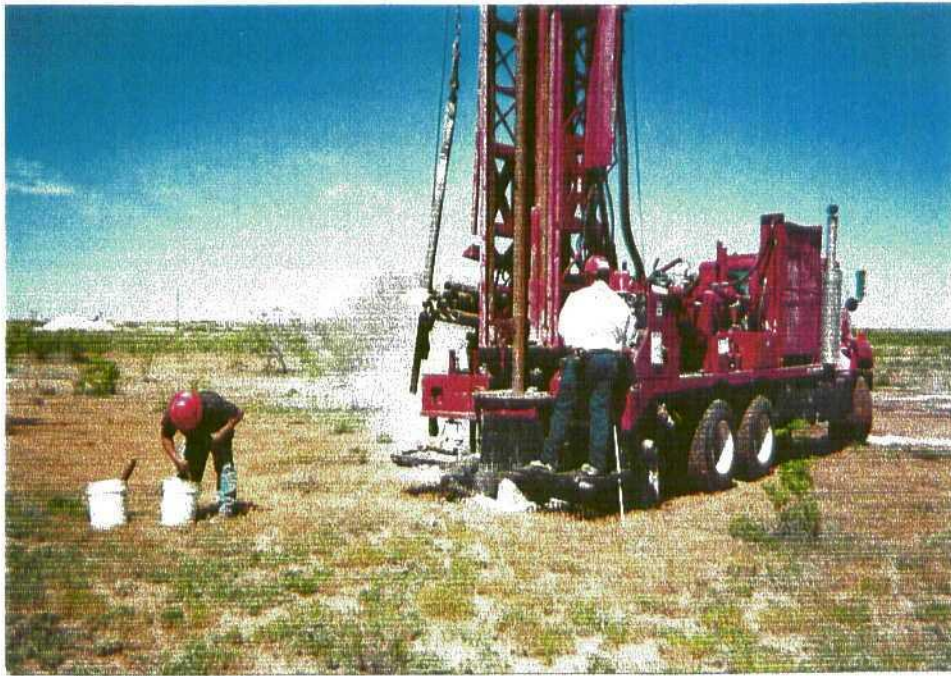


Photo 1: Drilling of soil boring S-1.



Photo 2: Drilling of soil boring S-4.



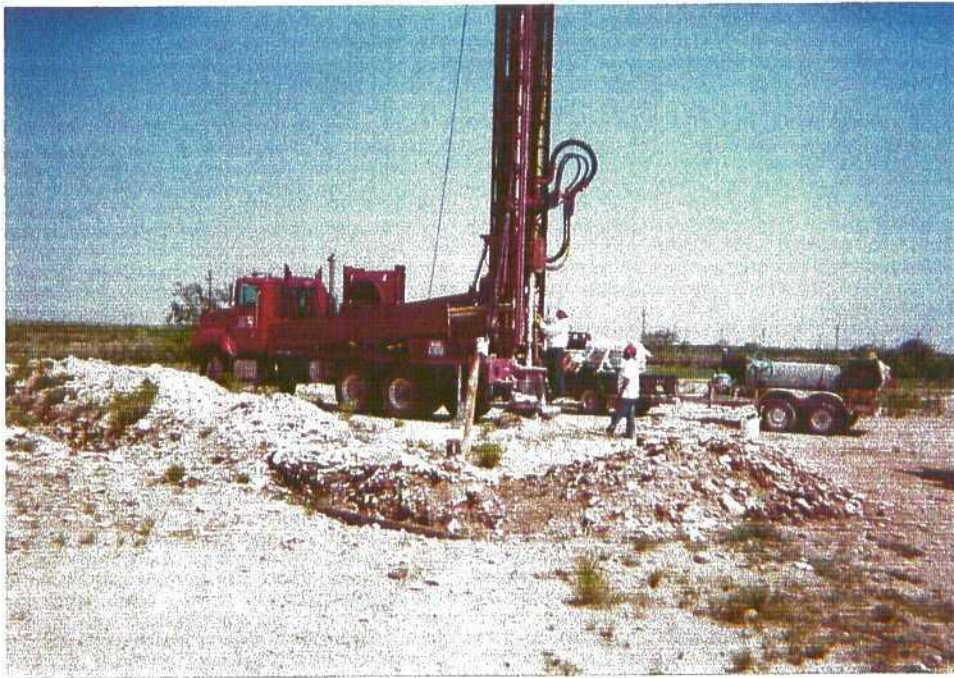


Photo 3: Drilling of soil boring S-5.



Photo 4: Grouting of soil boring S-5.

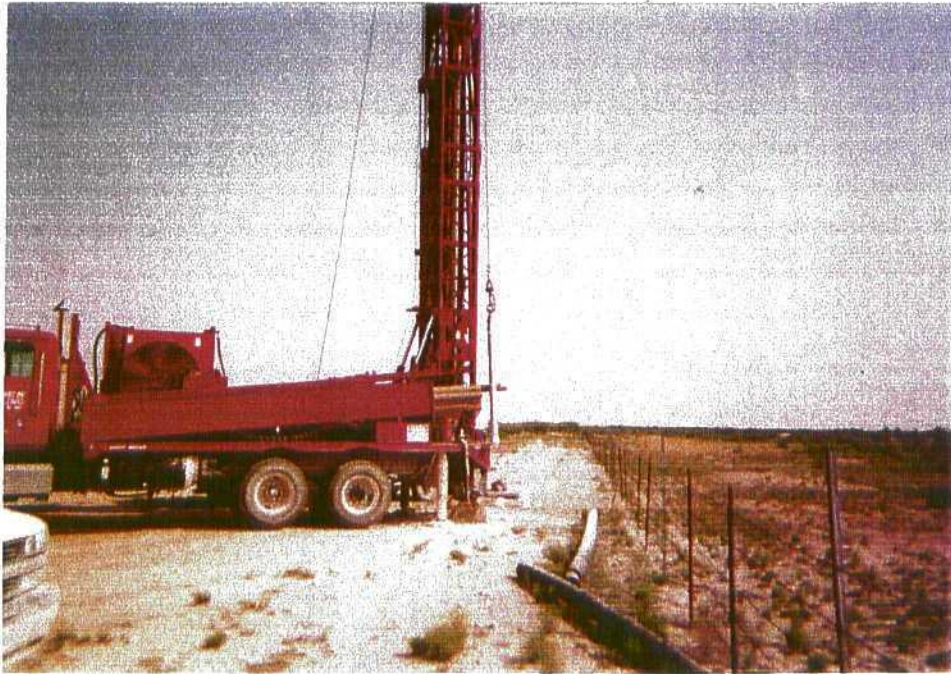


Photo 5: Drilling of soil boring S-6.



Photo 6: Drilling of soil boring S-7.



Photo 7: Drilling of soil boring S-8.



Photo 8: Drilling of soil boring S-9.

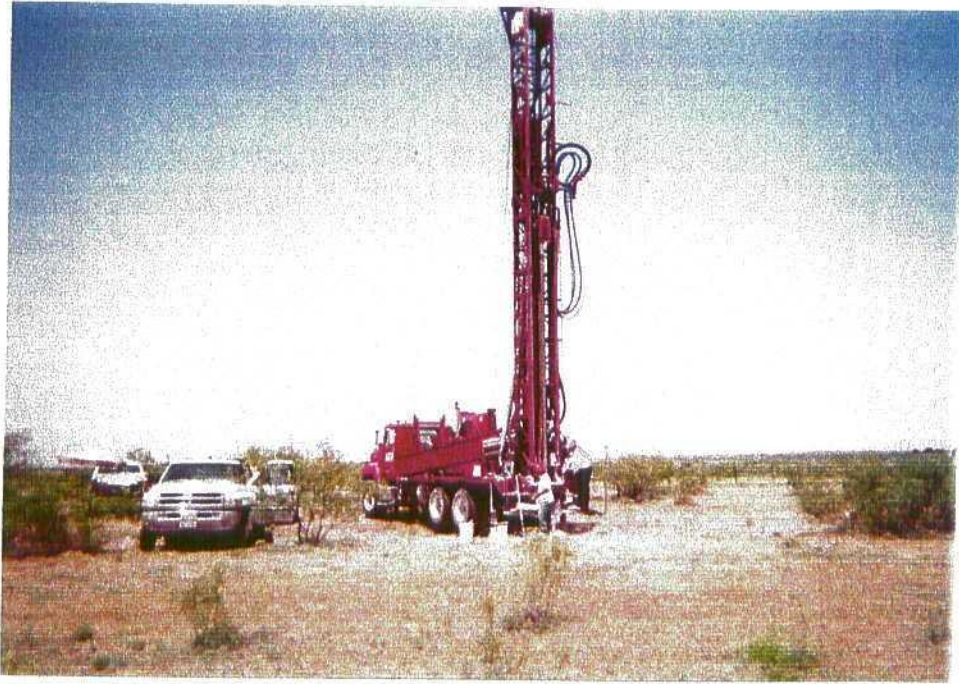


Photo 9: Drilling of soil boring S-10.



Photo 10: Drilling of soil boring S-11.



Photo 11: Drilling of soil boring S-12.



Photo 12: Drilling of soil boring S-13.



Photo 13: Drilling of soil boring S-14.



Photo 14: Drilling of monitor well MW-1.



Photo 15: Installation of piping for monitor well MW-1.



Photo 16: Completed monitor well MW-1.



Photo 17: Drilling of monitor well MW-2.



Photo 18: Completed installation of piping in monitor well MW-2.





Photo 19: Completed monitor well MW-2.



Photo 20: Drilling of monitor well MW-3.



Photo 21: Completed monitor well MW-3.



Photo 22: Drilling of monitor well MW-4.



Photo 23: Placing bentonite inside monitor well MW-4.



Photo 24: Completed monitor well MW-4.



Photo 25: Drilling of monitor well MW-5.



Photo 26: Completed monitor well MW-5.



Photo 27: Drilling of monitor well MW-6.



Photo 28: Completed monitor well MW-6.



Photo 29: Drilling of monitor well MW-7.

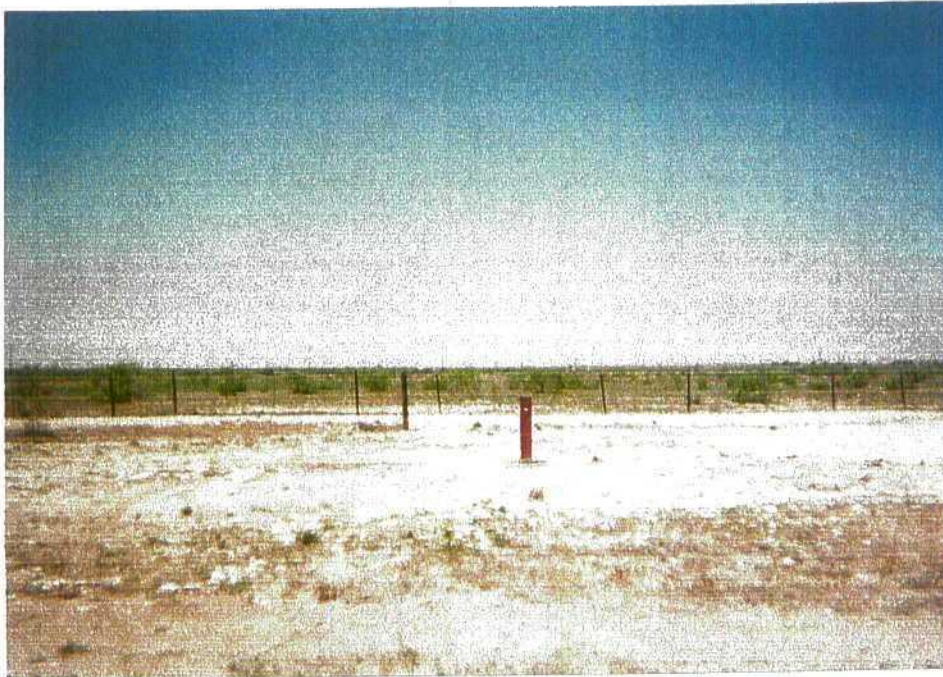


Photo 30: Completed monitor well MW-7.



Photo 31: Drilling of monitor well MW-8.



Photo 32: Underlying confining layer of the Ogallala Aquifer encountered in monitor well MW-8.



Photo 33: Completed monitor well MW-8.



Photo 34: Foreground: Excavated Eott Pipeline located on northern spill site. Background: Drilling of monitor well MW-9.





Photo 35: Installation of piping for monitor well MW-9.



Photo 36: Completed monitor well MW-9.



Photo 37: Drilling of monitor well MW-10.



Photo 38: Placing bentonite around the piping in monitor well MW-10.



Photo 39: Completed monitor well MW-10.



Photo 40: Drilling of monitor well MW-11.



Photo 41: Completed monitor well MW-11.



Photo 42: Drilling of monitor well MW-12.



Photo 43: Completed monitor well MW-12.



Photo 44: Drilling of monitor well MW-13.



Photo 45: Installation of piping for monitor well MW-13.

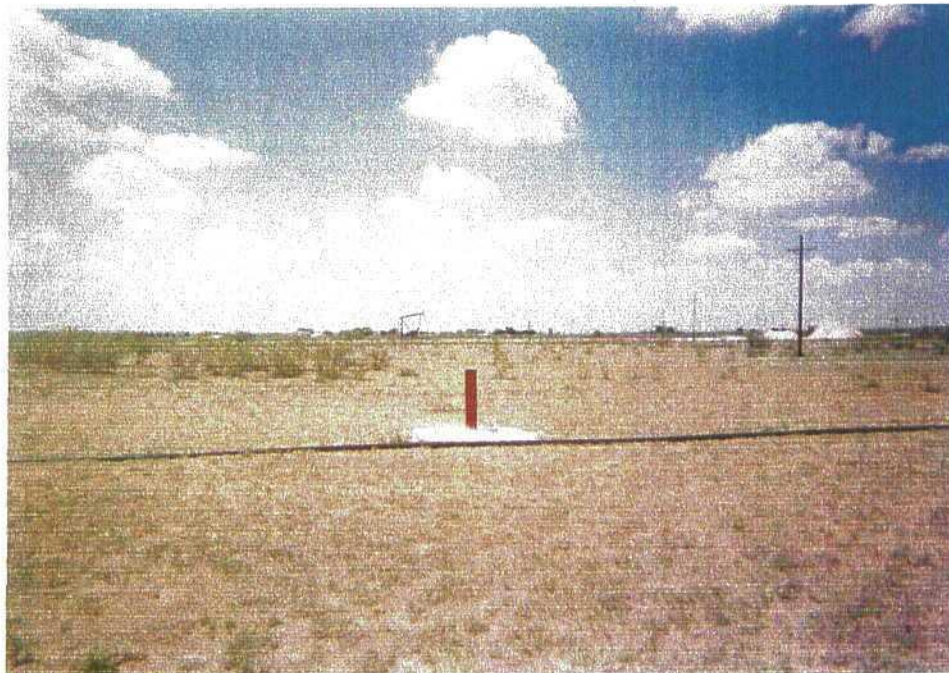


Photo 46: Completed monitor well MW-13.



Photo 47: Drilling of monitor well MW-14.



Photo 48: Installed piping for monitor well MW-14.



Photo 49: Completed monitor well MW-14.



Photo 50: Drilling of monitor well MW-15.



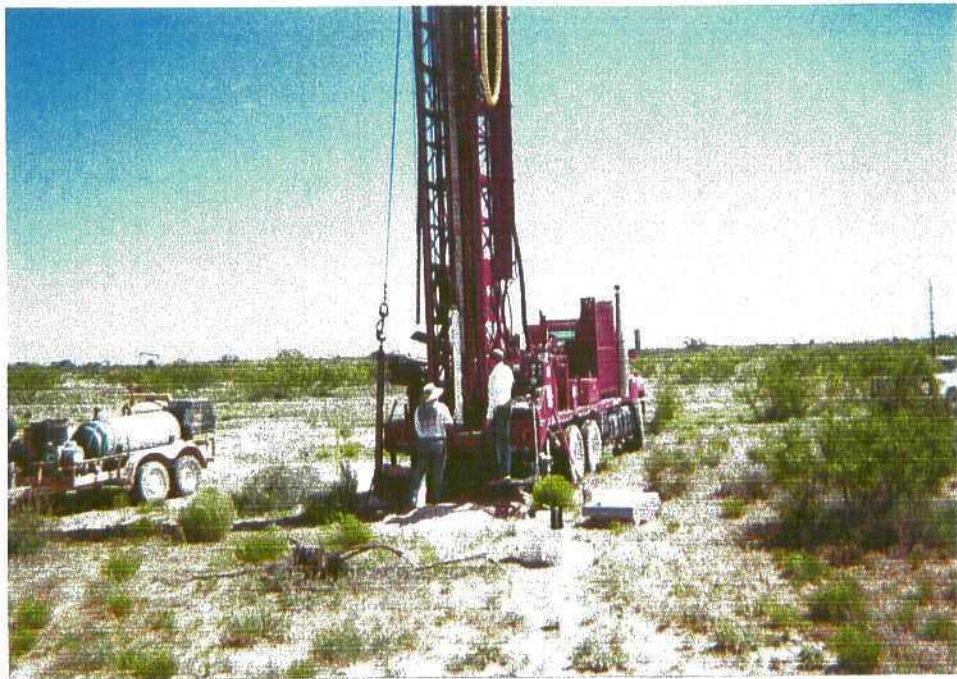


Photo 51: Installation of piping for monitor well MW-15.



Photo 52: Completed monitor well MW-15.

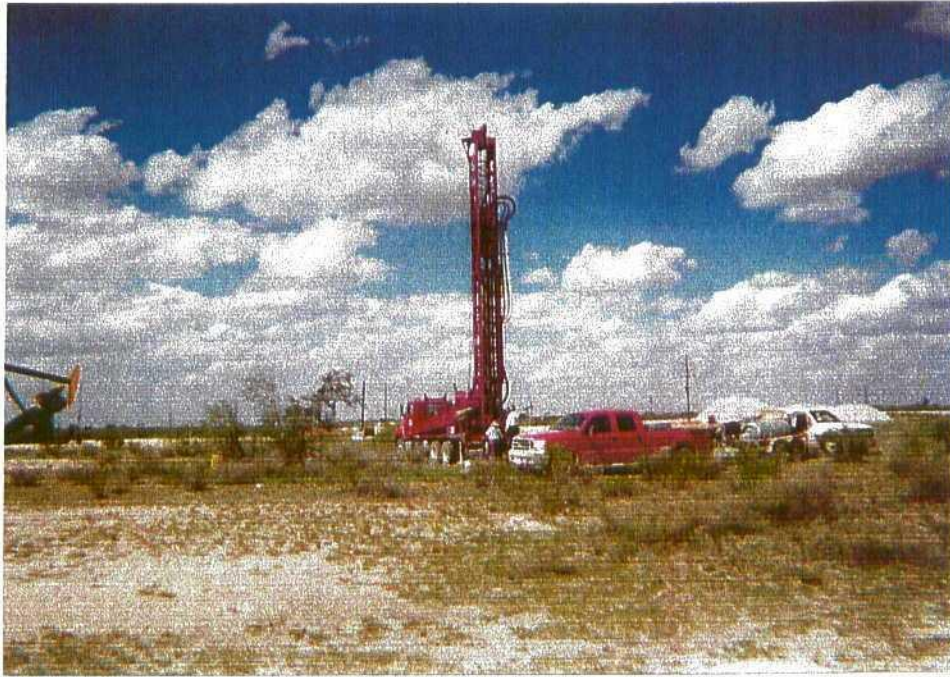


Photo 53: Drilling of monitor well MW-16.



Photo 54: View of the underlying confining layer of the Ogallala Aquifer encountered in monitor well MW-16.

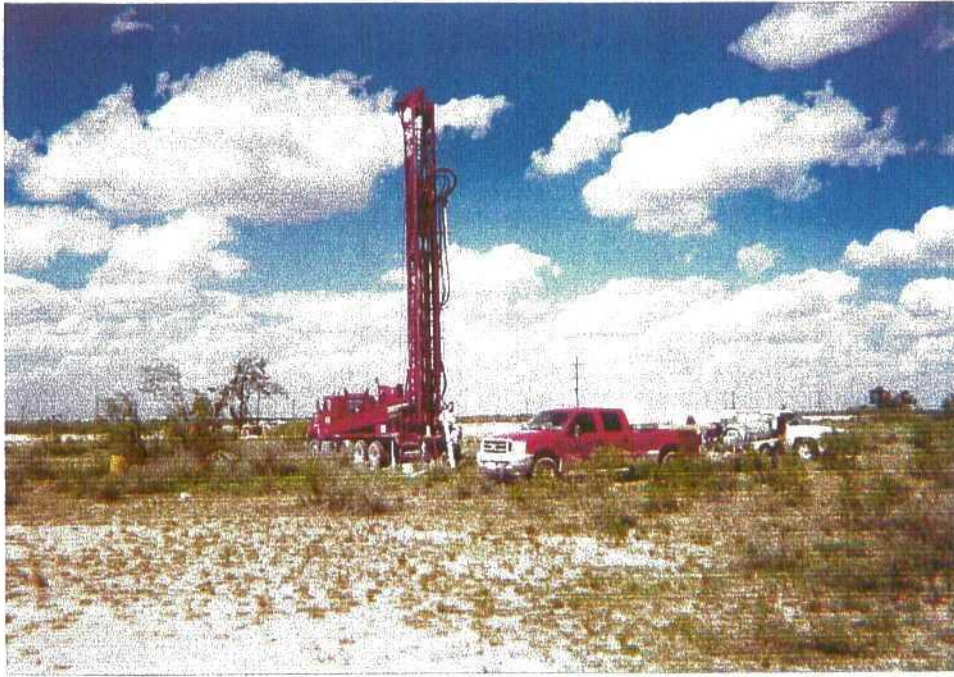


Photo 55: Installation of piping in monitor well MW-16.



Photo 56: Completed monitor well MW-16.



Photo 57: Drilling of monitor well MW-17.



Photo 58: Installation of piping for monitor well MW-17.



Photo 59: Completed monitor well MW-17.



Photo 60: Drilling of monitor well MW-18.



Photo 61: Installation of piping for monitor well MW-18.



Photo 62: Completed monitor well MW-18.

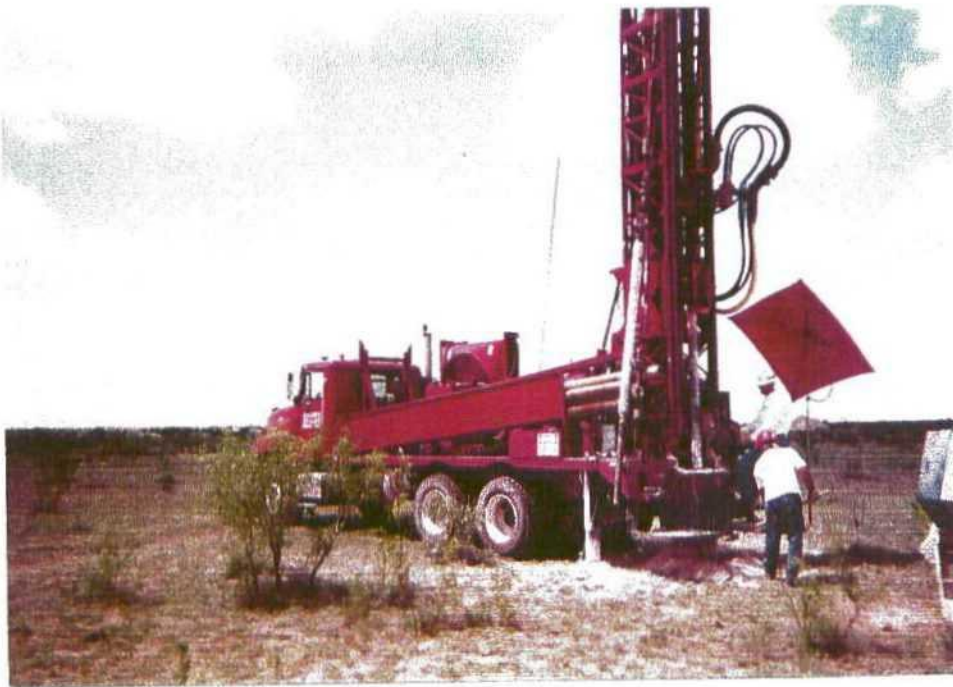


Photo 63: Drilling of monitor well MW-19.

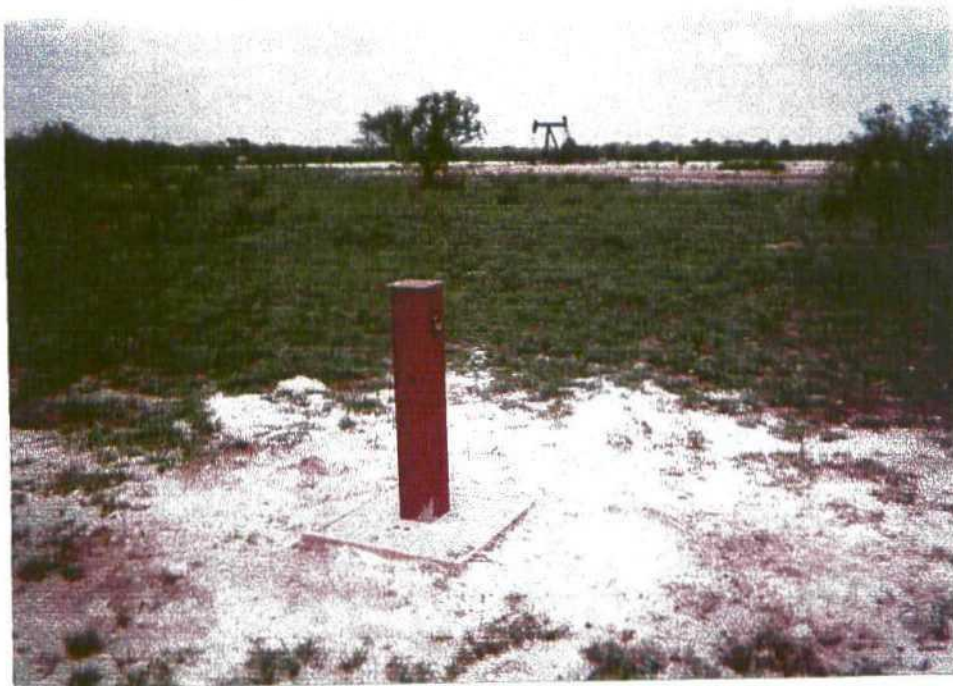


Photo 64: Completed monitor well MW-19.





**APPENDIX D**  
**LABORATORY ANALYTICAL**

(EQUWA)

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

# Trace Analysis, Inc.

155 McCutcheon, Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (866) 585-3443

Company Name: Emercom Services Inc. Phone #: 915-570-8726  
 Address: (Street, City, Zip) Fax #:                       
306 West Wall, Suite 1312 Midland, Tx 79701 915-684-7587  
 Contact Person: Jeffrey Kindley  
 Office to: Kyle Landwehr Incident # 97236398  
 different from above) Equipment Services  
 Project #: EQ-102 Project Name: Lea Station  
 Project Location: Lea County, New Mexico Sampler Signature: Jeffrey Kindley

| LAB #<br>(LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING DATE | TIME |
|-------------------------|------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|---------------|------|
|                         |            |              |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH |               |      |
| 9757                    | MW-3       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1450 |      |
| 58                      | MW-4       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1200 |      |
| 59                      | MW-5       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1330 |      |
| 60                      | MW-6       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1315 |      |
| 61                      | MW-7       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1240 |      |
| 62                      | MW-8       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1400 |      |
| 63                      | MW-9       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1320 |      |
| 64                      | MW-10      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1220 |      |
| 65                      | MW-11      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1510 |      |
| 66                      | MW-12      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1440 |      |
| 67                      | MW-13      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 04/10/02 1420 |      |

Inquired by: Jeffrey Kindley Date: 04/11/02 Time: 11:00 AM  
 Received by: Jeffrey Kindley Date: 04/10/02 Time: 11:00 AM  
 Inquired by: Jeffrey Kindley Date: 04/11/02 Time: 1800  
 Received by: Jeffrey Kindley Date: 4-12-02 Time: 10:00

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A02041213

### 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 Semivolatiles                               | ✓ |
| TCLP Volatiles                                   | ✓ |
| TCLP Semivolatiles                               | ✓ |
| TCLP Pesticides                                  | ✓ |
| FCI  | ✓ |
| GC/MS Vol. 8260B/624                             | ✓ |
| GC/MS Semi. Vol. 8270C/625                       | ✓ |
| PCB's 8082/608                                   | ✓ |
| Pesticides 8081A/608                             | ✓ |
| BOD, TSS, pH                                     | ✓ |
| Hold   | ✓ |

REMARKS: Normal  
 LAB USE ONLY  
 Intact: (X) / N  
 Headspace: Y / N  
 Temp: 2  
 Login Review: MS  
 Check if Special Reporting Limits Are Needed

Carrier # Jeffrey Kindley 11351108012

Printed of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 22 samples HS

**EQUIVA**

3701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

# Trace Analysis, Inc.

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

Company Name: Environ Services Inc Phone #: 915-570-8726  
 Address: 306 West Wall, Suite 1312 Fax #: 915-684-7587  
 Contact Person: Jeffrey Kindley  
 Office to: Kyle Lamberson  
 (different from above) Equiva Servicio Incident # 97236398  
 Project #: EQ-102 Project Name: Lia Station  
 Project Location: Lia County New Mexico Sampler Signature: Jeffrey Kindley

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD204/213

### ANALYSIS REQUEST

(Circle or Specify Method No.)

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 |
| <input type="checkbox"/> | TCP Metals Ag As Ba Cd Cr Pb Se Hg               |
| <input type="checkbox"/> | TCP Volatiles                                    |
| <input type="checkbox"/> | TCP Semi Volatiles                               |
| <input type="checkbox"/> | TCLP Pesticides                                  |
| <input type="checkbox"/> | FCI  |
| <input type="checkbox"/> | GC/MS Vol. 8260B/624                             |
| <input type="checkbox"/> | GC/MS Semi. Vol. 8270C/625                       |
| <input type="checkbox"/> | PCB's 8082/608                                   |
| <input type="checkbox"/> | Pesticides 8081A/608                             |
| <input type="checkbox"/> | BOD, TSS, pH                                     |
| <input type="checkbox"/> | Turn Around Time if different from standard      |
| <input type="checkbox"/> | Hold   |

| LAB #<br>LAB USE ONLY | FIELD CODE | # CONTAINERS | MATRIX                              |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING                            |          |      |
|-----------------------|------------|--------------|-------------------------------------|------|-----|--------|---------------------|------------------|--------------------------------|------|-------------------------------------|----------|------|
|                       |            |              | WATER                               | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE                                 | NONE     | DATE |
| 91768                 | EFFluent   | 1            | <input checked="" type="checkbox"/> |      |     |        |                     |                  |                                |      | <input checked="" type="checkbox"/> | 04/11/02 | 1600 |

LAB USE ONLY  
 Intact: Y/N  
 Headspace: Y/N  
 Temp: °C  
 Log-in Review: M  
 REMARKS: Normal  
 Check If Special Reporting Limits Are Needed  
 Carrier # Equiband 1035106 8012

|   |   |
|---|---|
| Inquired by: <u>Jeffrey Kindley</u> Date: <u>04/11/02</u> Time: <u>11:00 AM</u> | Received by: <u>John Shelton</u> Date: <u>4/11/02</u> Time: <u>11:00 AM</u> |
| Acquired by: <u>John Shelton</u> Date: <u>4/11/02</u> Time: <u>1800</u>         | Received by: <u>John Shelton</u> Date: <u>4/11/02</u> Time: <u>10:00</u>    |

Receipt of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. (Sample -15)

Report Date: April 17, 2002 Order Number: A02041213  
EQ 102 97236398

Page Number: 1 of 1  
Lea Station

## Summary Report

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

Report Date: April 17, 2002

Order ID Number: A02041213

Project Number: EQ 102  
Project Name: 97236398  
Project Location: Lea Station

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 194757 | MW-3        | Water  | 4/10/02    | 14:50      | 4/12/02       |
| 194758 | MW-4        | Water  | 4/10/02    | 12:00      | 4/12/02       |
| 194759 | MW-5        | Water  | 4/10/02    | 13:30      | 4/12/02       |
| 194760 | MW-6        | Water  | 4/10/02    | 13:15      | 4/12/02       |
| 194761 | MW-7        | Water  | 4/10/02    | 12:40      | 4/12/02       |
| 194762 | MW-8        | Water  | 4/10/02    | 14:00      | 4/12/02       |
| 194763 | MW-9        | Water  | 4/10/02    | 12:10      | 4/12/02       |
| 194764 | MW-10       | Water  | 4/10/02    | 13:20      | 4/12/02       |
| 194765 | MW-11       | Water  | 4/10/02    | 15:10      | 4/12/02       |
| 194766 | MW-12       | Water  | 4/10/02    | 14:40      | 4/12/02       |
| 194767 | MW-13       | Water  | 4/10/02    | 14:20      | 4/12/02       |

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

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 194757 - MW-3       | 1.47          | 0.0058        | 0.341              | 0.399              | 2.22             |
| 194758 - MW-4       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194759 - MW-5       | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 194760 - MW-6       | 0.0013        | <0.001        | 0.0032             | 0.0034             | 0.0079           |
| 194761 - MW-7       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194762 - MW-8       | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 194763 - MW-9       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194764 - MW-10      | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 194765 - MW-11      | 2.89          | 0.193         | 0.968              | 0.538              | 4.59             |
| 194766 - MW-12      | 0.301         | <0.005        | 0.164              | <0.005             | 0.465            |
| 194767 - MW-13      | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |

Report Date: April 17, 2002 Order Number: A02041213  
 EQ 102 97236398

Page Number: 1 of 1  
 Lea Station

## Summary Report

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

Report Date: April 17, 2002

Order ID Number: A02041213

Project: EQ 102  
 TA Job Code: 97236398  
 Casualty Code: EQ 102  
 Project Location: Lea Station  
 Project Address:  
 Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 194768 | Effluent    | Air    | 4/10/02    | 16:00      | 4/12/02       |

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

| Sample - Field Code | BTEX             |                  |                       |                       | Total BTEX<br>(ppm) |
|---------------------|------------------|------------------|-----------------------|-----------------------|---------------------|
|                     | Benzene<br>(ppm) | Toluene<br>(ppm) | Ethylbenzene<br>(ppm) | M,P,O-Xylene<br>(ppm) |                     |
| 194768 - Effluent   | <1.00            | <1.00            | <1.00                 | <1.00                 | <1.00               |

# TRACE ANALYSIS, INC.

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

## Analytical and Quality Control Report

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

Report Date: April 17, 2002

Order ID Number: A02041213

Project: EQ 102  
TA Job Code: 97236398  
Casualty Code: EQ 102  
Project Location: Lea Station  
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 |
|--------|-------------|--------|------------|------------|---------------|
| 194768 | Effluent    | Air    | 4/10/02    | 16:00      | 4/12/02       |

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

This report consists of a total of 4 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: 194768 - Effluent**

Analysis: BTEX      Analytical Method: E 602      QC Batch: QC19612      Date Analyzed: 4/15/02  
Analyst: CG      Preparation Method: N/A      Prep Batch: PB18881      Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <1.00  | mg/L  | 1000     | 0.001 |
| Toluene      |      | <1.00  | mg/L  | 1000     | 0.001 |
| Ethylbenzene |      | <1.00  | mg/L  | 1000     | 0.001 |
| M,P,O-Xylene |      | <1.00  | mg/L  | 1000     | 0.001 |
| Total BTEX   |      | <1.00  | mg/L  | 1000     | 0.001 |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC19612

| Param        | Flag | Results | Units | Reporting Limit |
|--------------|------|---------|-------|-----------------|
| Benzene      |      | <0.001  | mg/m3 | 0.001           |
| Toluene      |      | <0.001  | mg/m3 | 0.001           |
| Ethylbenzene |      | <0.001  | mg/m3 | 0.001           |
| M,P,O-Xylene |      | <0.001  | mg/m3 | 0.001           |
| Total BTEX   |      | <0.001  | mg/m3 | 0.001           |

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |              | 0.0917 | mg/m3 | 1        | 0.10         | 91               | 70 - 130        |
| 4-BFB     | <sup>1</sup> | 0.0627 | mg/m3 | 1        | 0.10         | 62               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC19612

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.103      | 0.0987      | mg/m3 | 1    | 0.10               | <0.001        | 103   | 4   | 70 - 130    | 20        |
| Benzene      | 0.0966     | 0.094       | mg/m3 | 1    | 0.10               | <0.001        | 96    | 2   | 70 - 130    | 20        |
| Toluene      | 0.0971     | 0.095       | mg/m3 | 1    | 0.10               | <0.001        | 97    | 2   | 70 - 130    | 20        |
| Ethylbenzene | 0.0973     | 0.0957      | mg/m3 | 1    | 0.10               | <0.001        | 97    | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.301      | 0.297       | mg/m3 | 1    | 0.30               | <0.001        | 100   | 1   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0917     | 0.0909      | mg/m3 | 1        | 0.10         | 91        | 90         | 70 - 130        |
| 4-BFB     | 0.0885     | 0.0865      | mg/m3 | 1        | 0.10         | 88        | 86         | 70 - 130        |

### Quality Control Report Continuing Calibration Verification Standards

CCV (1)      QCBatch:    QC19612

<sup>1</sup>Low BFB surrogate recovery due to prep. TFT surrogate recovery shows the method to be in control.



| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/m3 | 0.10                  | 0.114                  | 114                         | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/m3 | 0.10                  | 0.112                  | 112                         | 85 - 115                      | 4/15/02          |
| Toluene      | 2    | mg/m3 | 0.10                  | 0.127                  | 127                         | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/m3 | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/m3 | 0.30                  | 0.324                  | 108                         | 85 - 115                      | 4/15/02          |

ICV (1)            QCBatch:    QC19612

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/m3 | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/m3 | 0.10                  | 0.0966                 | 96                          | 85 - 115                      | 4/15/02          |
| Toluene      |      | mg/m3 | 0.10                  | 0.0993                 | 99                          | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/m3 | 0.10                  | 0.0994                 | 99                          | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/m3 | 0.30                  | 0.304                  | 101                         | 85 - 115                      | 4/15/02          |

<sup>2</sup>Toluene outside normal range. Average (113) of CCV components within acceptable range.

# TRACE ANALYSIS, 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: April 17, 2002

Order ID Number: A02041213

Project: EQ 102  
TA Job Code: 97236398  
Casualty Code: EQ 102  
Project Location: Lea Station  
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 |
|--------|-------------|--------|------------|------------|---------------|
| 194757 | MW-3        | Water  | 4/10/02    | 14:50      | 4/12/02       |
| 194758 | MW-4        | Water  | 4/10/02    | 12:00      | 4/12/02       |
| 194759 | MW-5        | Water  | 4/10/02    | 13:30      | 4/12/02       |
| 194760 | MW-6        | Water  | 4/10/02    | 13:15      | 4/12/02       |
| 194761 | MW-7        | Water  | 4/10/02    | 12:40      | 4/12/02       |
| 194762 | MW-8        | Water  | 4/10/02    | 14:00      | 4/12/02       |
| 194763 | MW-9        | Water  | 4/10/02    | 12:10      | 4/12/02       |
| 194764 | MW-10       | Water  | 4/10/02    | 13:20      | 4/12/02       |
| 194765 | MW-11       | Water  | 4/10/02    | 15:10      | 4/12/02       |
| 194766 | MW-12       | Water  | 4/10/02    | 14:40      | 4/12/02       |
| 194767 | MW-13       | Water  | 4/10/02    | 14:20      | 4/12/02       |

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

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Dr. Blair Leftwich, Director

## Analytical Report

### Sample: 194757 - MW-3

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19553 Date Analyzed: 4/13/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB18831 Date Prepared: 4/13/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 1.47   | mg/L  | 5        | 0.001 |
| Toluene      |      | 0.0058 | mg/L  | 5        | 0.001 |
| Ethylbenzene |      | 0.341  | mg/L  | 5        | 0.001 |
| M,P,O-Xylene |      | 0.399  | mg/L  | 5        | 0.001 |
| Total BTEX   |      | 2.22   | mg/L  | 5        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0885 | mg/L  | 5        | 0.10         | 88               | 70 - 130        |
| 4-BFB     |      | 0.0955 | mg/L  | 5        | 0.10         | 95               | 70 - 130        |

### Sample: 194758 - MW-4

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19541 Date Analyzed: 4/12/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18823 Date Prepared: 4/12/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.094  | mg/L  | 1        | 0.10         | 94               | 70 - 130        |
| 4-BFB     | 1    | 0.061  | mg/L  | 1        | 0.10         | 61               | 70 - 130        |

### Sample: 194759 - MW-5

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19553 Date Analyzed: 4/13/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB18831 Date Prepared: 4/13/02

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

<sup>1</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0855 | mg/L  | 5        | 0.10         | 85               | 70 - 130        |
| 4-BFB     |      | 0.0859 | mg/L  | 5        | 0.10         | 85               | 70 - 130        |

**Sample: 194760 - MW-6**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19541 Date Analyzed: 4/12/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18823 Date Prepared: 4/12/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0013 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | 0.0032 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | 0.0034 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | 0.0079 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.099  | mg/L  | 1        | 0.10         | 99               | 70 - 130        |
| 4-BFB     |      | 0.0947 | mg/L  | 1        | 0.10         | 95               | 70 - 130        |

**Sample: 194761 - MW-7**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19541 Date Analyzed: 4/12/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18823 Date Prepared: 4/12/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |              | 0.0961 | mg/L  | 1        | 0.10         | 96               | 70 - 130        |
| 4-BFB     | <sup>2</sup> | 0.0684 | mg/L  | 1        | 0.10         | 68               | 70 - 130        |

**Sample: 194762 - MW-8**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19553 Date Analyzed: 4/13/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB18831 Date Prepared: 4/13/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.005 | mg/L  | 5        | 0.001 |
| Toluene      |      | <0.005 | mg/L  | 5        | 0.001 |
| Ethylbenzene |      | <0.005 | mg/L  | 5        | 0.001 |

Continued ...

<sup>2</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

... Continued Sample: 194762 Analysis: BTEX

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| M,P,O-Xylene |      | <0.005 | mg/L  | 5        | 0.001 |
| Total BTEX   |      | <0.005 | mg/L  | 5        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0865 | mg/L  | 5        | 0.10         | 86               | 70 - 130        |
| 4-BFB     |      | 0.0884 | mg/L  | 5        | 0.10         | 88               | 70 - 130        |

Sample: 194763 - MW-9

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19541 Date Analyzed: 4/12/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18823 Date Prepared: 4/12/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0972 | mg/L  | 1        | 0.10         | 97               | 70 - 130        |
| 4-BFB     | 3    | 0.0693 | mg/L  | 1        | 0.10         | 69               | 70 - 130        |

Sample: 194764 - MW-10

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19589 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18857 Date Prepared: 4/15/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0955 | mg/L  | 5        | 0.10         | 95               | 70 - 130        |
| 4-BFB     |      | 0.0921 | mg/L  | 5        | 0.10         | 92               | 70 - 130        |

Sample: 194765 - MW-11

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19553 Date Analyzed: 4/13/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB18831 Date Prepared: 4/13/02

<sup>3</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 2.89   | mg/L  | 50       | 0.001 |
| Toluene      |      | 0.193  | mg/L  | 50       | 0.001 |
| Ethylbenzene |      | 0.968  | mg/L  | 50       | 0.001 |
| M,P,O-Xylene |      | 0.538  | mg/L  | 50       | 0.001 |
| Total BTEX   |      | 4.59   | mg/L  | 50       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0876 | mg/L  | 50       | 0.10         | 87               | 70 - 130        |
| 4-BFB     |      | 0.0884 | mg/L  | 50       | 0.10         | 88               | 70 - 130        |

**Sample: 194766 - MW-12**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19553 Date Analyzed: 4/13/02  
 Analyst: CG Preparation Method: S 5030B Prep Batch: PB18831 Date Prepared: 4/13/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.301  | mg/L  | 5        | 0.001 |
| Toluene      |      | <0.005 | mg/L  | 5        | 0.001 |
| Ethylbenzene |      | 0.164  | mg/L  | 5        | 0.001 |
| M,P,O-Xylene |      | <0.005 | mg/L  | 5        | 0.001 |
| Total BTEX   |      | 0.465  | mg/L  | 5        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0848 | mg/L  | 5        | 0.10         | 84               | 70 - 130        |
| 4-BFB     |      | 0.0931 | mg/L  | 5        | 0.10         | 93               | 70 - 130        |

**Sample: 194767 - MW-13**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19553 Date Analyzed: 4/13/02  
 Analyst: CG Preparation Method: S 5030B Prep Batch: PB18831 Date Prepared: 4/13/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0904 | mg/L  | 1        | 0.10         | 90               | 70 - 130        |
| 4-BFB     |      | 0.0907 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |

## Quality Control Report Method Blank

Method Blank            QCBatch:    QC19541

| 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       |              | 0.094  | mg/L  | 1        | 0.10         | 94               | 70 - 130        |
| 4-BFB     | <sup>4</sup> | 0.0617 | mg/L  | 1        | 0.10         | 61               | 70 - 130        |

Method Blank            QCBatch:    QC19553

| 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       |      | 0.0929 | mg/L  | 1        | 0.10         | 93               | 70 - 130        |
| 4-BFB     |      | 0.0959 | mg/L  | 1        | 0.10         | 96               | 70 - 130        |

Method Blank            QCBatch:    QC19589

| 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           |

<sup>4</sup>Low BFB surrogate recovery due to prep. TFT surrogate recovery shows the method to be in control.

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0934 | mg/L  | 1        | 0.10         | 93               | 70 - 130        |
| 4-BFB     |      | 0.0888 | mg/L  | 1        | 0.10         | 89               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

#### Laboratory Control Spikes

QC Batch: QC19541

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0997     | 0.0951      | mg/L  | 1    | 0.10               | <0.001        | 100   | 5   | 70 - 130    | 20        |
| Benzene      | 0.0985     | 0.0966      | mg/L  | 1    | 0.10               | <0.001        | 98    | 2   | 70 - 130    | 20        |
| Toluene      | 0.101      | 0.0987      | mg/L  | 1    | 0.10               | <0.001        | 101   | 2   | 70 - 130    | 20        |
| Ethylbenzene | 0.100      | 0.0992      | mg/L  | 1    | 0.10               | <0.001        | 100   | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.308      | 0.308       | mg/L  | 1    | 0.30               | <0.001        | 103   | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0985     | 0.0951      | mg/L  | 1        | 0.10         | 98        | 95         | 70 - 130        |
| 4-BFB     | 0.0923     | 0.0886      | mg/L  | 1        | 0.10         | 92        | 89         | 70 - 130        |

#### Laboratory Control Spikes

QC Batch: QC19553

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.108      | 0.0995      | mg/L  | 1    | 0.10               | <0.001        | 108   | 8   | 70 - 130    | 20        |
| Benzene      | 0.103      | 0.101       | mg/L  | 1    | 0.10               | <0.001        | 103   | 2   | 70 - 130    | 20        |
| Toluene      | 0.104      | 0.101       | mg/L  | 1    | 0.10               | <0.001        | 104   | 3   | 70 - 130    | 20        |
| Ethylbenzene | 0.106      | 0.101       | mg/L  | 1    | 0.10               | <0.001        | 106   | 5   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.316      | 0.300       | mg/L  | 1    | 0.30               | <0.001        | 105   | 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 |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0927     | 0.0942      | mg/L  | 1        | 0.10         | 93        | 94         | 70 - 130        |
| 4-BFB     | 0.0963     | 0.0968      | mg/L  | 1        | 0.10         | 96        | 97         | 70 - 130        |

#### Laboratory Control Spikes

QC Batch: QC19589

| Param   | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|---------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE    | 0.104      | 0.105       | mg/L  | 1    | 0.10               | <0.001        | 104   | 1   | 70 - 130    | 20        |
| Benzene | 0.102      | 0.100       | mg/L  | 1    | 0.10               | <0.001        | 102   | 2   | 70 - 130    | 20        |

Continued ...



... Continued

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Toluene      | 0.102      | 0.101       | mg/L  | 1    | 0.10               | <0.001        | 102   | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.104      | 0.104       | mg/L  | 1    | 0.10               | <0.001        | 104   | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.308      | 0.308       | mg/L  | 1    | 0.30               | <0.001        | 103   | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0997     | 0.098       | mg/L  | 1        | 0.10         | 100       | 98         | 70 - 130        |
| 4-BFB     | 0.0988     | 0.0982      | mg/L  | 1        | 0.10         | 99        | 98         | 70 - 130        |

### Quality Control Report Continuing Calibration Verification Standards

CCV (1)      QCBatch:    QC19541

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0989           | 99                    | 85 - 115                | 4/12/02       |
| Benzene      |      | mg/L  | 0.10            | 0.0955           | 96                    | 85 - 115                | 4/12/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0982           | 98                    | 85 - 115                | 4/12/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0977           | 98                    | 85 - 115                | 4/12/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.301            | 100                   | 85 - 115                | 4/12/02       |

CCV (2)      QCBatch:    QC19541

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0987           | 98                    | 85 - 115                | 4/12/02       |
| Benzene      |      | mg/L  | 0.10            | 0.0961           | 96                    | 85 - 115                | 4/12/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0987           | 98                    | 85 - 115                | 4/12/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0998           | 99                    | 85 - 115                | 4/12/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.303            | 101                   | 85 - 115                | 4/12/02       |

ICV (1)      QCBatch:    QC19541

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0995           | 100                   | 85 - 115                | 4/12/02       |
| Benzene      |      | mg/L  | 0.10            | 0.0987           | 99                    | 85 - 115                | 4/12/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0997           | 100                   | 85 - 115                | 4/12/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.101            | 101                   | 85 - 115                | 4/12/02       |

Continued ...

Continued

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.307                  | 102                         | 85 - 115                      | 4/12/02          |

CCV (1)            QCBatch:    QC19553

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0986                 | 99                          | 85 - 115                      | 4/13/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0931                 | 93                          | 85 - 115                      | 4/13/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.094                  | 94                          | 85 - 115                      | 4/13/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0956                 | 96                          | 85 - 115                      | 4/13/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.285                  | 95                          | 85 - 115                      | 4/13/02          |

CCV (2)            QCBatch:    QC19553

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0974                 | 97                          | 85 - 115                      | 4/13/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0948                 | 94                          | 85 - 115                      | 4/13/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0952                 | 95                          | 85 - 115                      | 4/13/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0961                 | 96                          | 85 - 115                      | 4/13/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.2856                 | 95                          | 85 - 115                      | 4/13/02          |

ICV (1)            QCBatch:    QC19553

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 4/13/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0987                 | 99                          | 85 - 115                      | 4/13/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0994                 | 99                          | 85 - 115                      | 4/13/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 4/13/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.300                  | 100                         | 85 - 115                      | 4/13/02          |

CCV (1)            QCBatch:    QC19589

| Param   | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|---------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE    |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 4/15/02          |
| Benzene |      | mg/L  | 0.10                  | 0.0991                 | 99                          | 85 - 115                      | 4/15/02          |

Continued ...

Continued

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Toluene      |      | mg/L  | 0.10                  | 0.0995                 | 100                         | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.100                  | 100                         | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.298                  | 99                          | 85 - 115                      | 4/15/02          |

CCV (2)            QCBatch:    QC19589

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0923                 | 92                          | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.088                  | 88                          | 85 - 115                      | 4/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0888                 | 88                          | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0904                 | 90                          | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.2695                 | 89                          | 85 - 115                      | 4/15/02          |

ICV (1)            QCBatch:    QC19589

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0998                 | 100                         | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0934                 | 93                          | 85 - 115                      | 4/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0943                 | 94                          | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0969                 | 97                          | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.289                  | 96                          | 85 - 115                      | 4/15/02          |

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

LAB Order ID # A02041508

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

**Trace Analysis, Inc.**

3701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

Company Name: Environ Services Inc Phone #: 915-570-8726  
 Address: (Street, City, Zip) Fax #: 915-684-7587  
306 West Wall, Suite 1312  
Midland, TX 79701  
 Contact Person: Jeffrey Kindley  
Kyle Landman Incident # 97236397  
 (different from above) ENVIVA SERVICES  
 Project Name: Denton  
 Subject #: EQ-101  
 Project Location: Denton, Leon Co. New Mexico  
 Sampler Signature: Jeffrey Kindley

| LAB #<br>AB USE ONLY | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      |     | SAMPLING DATE | TIME |
|----------------------|------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|-----|---------------|------|
|                      |            |              |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE |               |      |
| 74845                | MW-2       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1430 |
| 46                   | MW-6       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1340 |
| 47                   | MW-8       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1410 |
| 48                   | MW-9       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1350 |
| 49                   | MW-10      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1500 |
| 50                   | MW-11      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1100 |
| 51                   | MW-12      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1135 |
| 52                   | MW-13      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1320 |
| 53                   | MW-15      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1200 |
| 54                   | MW-16      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |     | 04/11/02      | 1145 |

inquired by: Jeffrey Kindley Date: 04/12/02 Time: 1200  
 inquired by: Walter Shelton Date: 4/12/02 Time: 1200  
 inquired by: Walter Shelton Date: 4/12/02 Time: 830  
 Received by: Walter Shelton Date: 4/12/02 Time: 9:30  
 Received at Laboratory by: Chris Miller Date: 4/12/02 Time: 9:30  
 Remarks: Normal  
 Intact: Y/N Headspace: Y/N Temp: 4 Log-in Review: MS  
 Carrier # 48140

**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                       | ✓ |
| PCBs 8082/608                                    | ✓ |
| Pesticides 8081A/608                             | ✓ |
| BOD, TSS, pH                                     | ✓ |

Turn Around Time if different from standard

Initial of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 20 samples - 115

Report Date: April 17, 2002 Order Number: A02041508  
EQ-101 Denton Station

Page Number: 1 of 1  
Lea Co. New Mexico

## Summary Report

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

Report Date: April 17, 2002

Order ID Number: A02041508

Project: EQ-101  
TA Job Code: Denton Station  
Casualty Code: EQ-101  
Project Location: Lea Co. New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 194845 | MW-2        | Water  | 4/11/02    | 14:30      | 4/15/02       |
| 194846 | MW-6        | Water  | 4/11/02    | 13:40      | 4/15/02       |
| 194847 | MW-8        | Water  | 4/11/02    | 14:10      | 4/15/02       |
| 194848 | MW-9        | Water  | 4/11/02    | 13:50      | 4/15/02       |
| 194849 | MW-10       | Water  | 4/11/02    | 15:00      | 4/15/02       |
| 194850 | MW-11       | Water  | 4/11/02    | 11:00      | 4/15/02       |
| 194851 | MW-12       | Water  | 4/11/02    | 11:35      | 4/15/02       |
| 194852 | MW-13       | Water  | 4/11/02    | 13:20      | 4/15/02       |
| 194853 | MW-15       | Water  | 4/11/02    | 12:00      | 4/15/02       |
| 194854 | MW-16       | Water  | 4/11/02    | 11:45      | 4/15/02       |

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

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 194845 - MW-2       | 0.828         | <0.010        | <0.010             | <0.010             | 0.828            |
| 194846 - MW-6       | 0.731         | <0.100        | <0.100             | <0.100             | 0.731            |
| 194847 - MW-8       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194848 - MW-9       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194849 - MW-10      | 1.44          | <0.050        | 0.139              | 0.0644             | 1.6434           |
| 194850 - MW-11      | 0.102         | <0.005        | <0.005             | <0.005             | 0.102            |
| 194851 - MW-12      | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194852 - MW-13      | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194853 - MW-15      | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 194854 - MW-16      | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |



# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9  
155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296  
El Paso, Texas 79932 888•588•3443  
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: April 17, 2002

Order ID Number: A02041508

Project: EQ-101  
TA Job Code: Denton Station  
Casualty Code: EQ-101  
Project Location: Lea Co. 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 |
|--------|-------------|--------|------------|------------|---------------|
| 194845 | MW-2        | Water  | 4/11/02    | 14:30      | 4/15/02       |
| 194846 | MW-6        | Water  | 4/11/02    | 13:40      | 4/15/02       |
| 194847 | MW-8        | Water  | 4/11/02    | 14:10      | 4/15/02       |
| 194848 | MW-9        | Water  | 4/11/02    | 13:50      | 4/15/02       |
| 194849 | MW-10       | Water  | 4/11/02    | 15:00      | 4/15/02       |
| 194850 | MW-11       | Water  | 4/11/02    | 11:00      | 4/15/02       |
| 194851 | MW-12       | Water  | 4/11/02    | 11:35      | 4/15/02       |
| 194852 | MW-13       | Water  | 4/11/02    | 13:20      | 4/15/02       |
| 194853 | MW-15       | Water  | 4/11/02    | 12:00      | 4/15/02       |
| 194854 | MW-16       | Water  | 4/11/02    | 11:45      | 4/15/02       |

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

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 194845 - MW-2**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.828  | mg/L  | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/L  | 10       | 0.001 |
| Ethylbenzene |      | <0.010 | mg/L  | 10       | 0.001 |
| M,P,O-Xylene |      | <0.010 | mg/L  | 10       | 0.001 |
| Total BTEX   |      | 0.828  | mg/L  | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0853 | mg/L  | 10       | 0.10         | 85               | 70 - 130        |
| 4-BFB     |      | 0.0836 | mg/L  | 10       | 0.10         | 83               | 70 - 130        |

**Sample: 194846 - MW-6**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19589 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18857 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.731  | mg/L  | 100      | 0.001 |
| Toluene      |      | <0.100 | mg/L  | 100      | 0.001 |
| Ethylbenzene |      | <0.100 | mg/L  | 100      | 0.001 |
| M,P,O-Xylene |      | <0.100 | mg/L  | 100      | 0.001 |
| Total BTEX   |      | 0.731  | mg/L  | 100      | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0862 | mg/L  | 100      | 0.10         | 86               | 70 - 130        |
| 4-BFB     |      | 0.0882 | mg/L  | 100      | 0.10         | 88               | 70 - 130        |

**Sample: 194847 - MW-8**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19589 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18857 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0924 | mg/L  | 1        | 0.10         | 92               | 70 - 130        |
| 4-BFB     |      | 0.0916 | mg/L  | 1        | 0.10         | 92               | 70 - 130        |

**Sample: 194848 - MW-9**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0869 | mg/L  | 1        | 0.10         | 87               | 70 - 130        |
| 4-BFB     |      | 0.0861 | mg/L  | 1        | 0.10         | 86               | 70 - 130        |

**Sample: 194849 - MW-10**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 1.44   | mg/L  | 50       | 0.001 |
| Toluene      |      | <0.050 | mg/L  | 50       | 0.001 |
| Ethylbenzene |      | 0.139  | mg/L  | 50       | 0.001 |
| M,P,O-Xylene |      | 0.0644 | mg/L  | 50       | 0.001 |
| Total BTEX   |      | 1.6434 | mg/L  | 50       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0858 | mg/L  | 50       | 0.10         | 85               | 70 - 130        |
| 4-BFB     |      | 0.0855 | mg/L  | 50       | 0.10         | 85               | 70 - 130        |

**Sample: 194850 - MW-11**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.102  | mg/L  | 5        | 0.001 |
| Toluene      |      | <0.005 | mg/L  | 5        | 0.001 |
| Ethylbenzene |      | <0.005 | mg/L  | 5        | 0.001 |
| M,P,O-Xylene |      | <0.005 | mg/L  | 5        | 0.001 |
| Total BTEX   |      | 0.102  | mg/L  | 5        | 0.001 |



| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0873 | mg/L  | 5        | 0.10         | 87               | 70 - 130        |
| 4-BFB     |      | 0.0845 | mg/L  | 5        | 0.10         | 84               | 70 - 130        |

**Sample: 194851 - MW-12**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0944 | mg/L  | 1        | 0.10         | 94               | 70 - 130        |
| 4-BFB     |      | 0.0907 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |

**Sample: 194852 - MW-13**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0792 | mg/L  | 1        | 0.10         | 79               | 70 - 130        |
| 4-BFB     |      | 0.084  | mg/L  | 1        | 0.10         | 84               | 70 - 130        |

**Sample: 194853 - MW-15**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0984 | mg/L  | 1        | 0.10         | 98               | 70 - 130        |
| 4-BFB     |      | 0.0909 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |

**Sample: 194854 - MW-16**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC19590 Date Analyzed: 4/15/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB18858 Date Prepared: 4/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0964 | mg/L  | 1        | 0.10         | 96               | 70 - 130        |
| 4-BFB     |      | 0.0899 | mg/L  | 1        | 0.10         | 90               | 70 - 130        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC19589

| 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       |      | 0.0934 | mg/L  | 1        | 0.10         | 93               | 70 - 130        |
| 4-BFB     |      | 0.0888 | mg/L  | 1        | 0.10         | 89               | 70 - 130        |

Method Blank      QCBatch:    QC19590

| 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       |      | 0.087  | mg/L  | 1        | 0.10         | 87               | 70 - 130        |
| 4-BFB     |      | 0.085  | mg/L  | 1        | 0.10         | 85               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC19589

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.104      | 0.105       | mg/L  | 1    | 0.10               | <0.001        | 104   | 1   | 70 - 130    | 20        |
| Benzene      | 0.102      | 0.100       | mg/L  | 1    | 0.10               | <0.001        | 102   | 2   | 70 - 130    | 20        |
| Toluene      | 0.102      | 0.101       | mg/L  | 1    | 0.10               | <0.001        | 102   | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.104      | 0.104       | mg/L  | 1    | 0.10               | <0.001        | 104   | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.308      | 0.308       | mg/L  | 1    | 0.30               | <0.001        | 103   | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0997     | 0.098       | mg/L  | 1        | 0.10         | 100       | 98         | 70 - 130        |
| 4-BFB     | 0.0988     | 0.0982      | mg/L  | 1        | 0.10         | 99        | 98         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC19590

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0996     | 0.0936      | mg/L  | 1    | 0.10               | <0.001        | 100   | 6   | 70 - 130    | 20        |
| Benzene      | 0.0954     | 0.0913      | mg/L  | 1    | 0.10               | <0.001        | 95    | 4   | 70 - 130    | 20        |
| Toluene      | 0.0961     | 0.0913      | mg/L  | 1    | 0.10               | <0.001        | 96    | 5   | 70 - 130    | 20        |
| Ethylbenzene | 0.0978     | 0.0926      | mg/L  | 1    | 0.10               | <0.001        | 98    | 5   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.291      | 0.276       | mg/L  | 1    | 0.30               | <0.001        | 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 |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0899     | 0.0886      | mg/L  | 1        | 0.10         | 90        | 89         | 70 - 130        |
| 4-BFB     | 0.0897     | 0.0877      | mg/L  | 1        | 0.10         | 90        | 88         | 70 - 130        |

**Quality Control Report  
Continuing Calibration Verification Standards**

**CCV (1)**

QCBatch: QC19589

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.101            | 101                   | 85 - 115                | 4/15/02       |
| Benzene      |      | mg/L  | 0.10            | 0.0991           | 99                    | 85 - 115                | 4/15/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0995           | 100                   | 85 - 115                | 4/15/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.100            | 100                   | 85 - 115                | 4/15/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.298            | 99                    | 85 - 115                | 4/15/02       |

**CCV (2)**

QCBatch: QC19589

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0923           | 92                    | 85 - 115                | 4/15/02       |
| Benzene      |      | mg/L  | 0.10            | 0.088            | 88                    | 85 - 115                | 4/15/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0888           | 88                    | 85 - 115                | 4/15/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0904           | 90                    | 85 - 115                | 4/15/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.2695           | 89                    | 85 - 115                | 4/15/02       |

ICV (1)            QCBatch:    QC19589

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0998                 | 100                         | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0934                 | 93                          | 85 - 115                      | 4/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0943                 | 94                          | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0969                 | 97                          | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.289                  | 96                          | 85 - 115                      | 4/15/02          |

CCV (1)            QCBatch:    QC19590

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0942                 | 94                          | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0964                 | 96                          | 85 - 115                      | 4/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0972                 | 97                          | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0982                 | 98                          | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.292                  | 97                          | 85 - 115                      | 4/15/02          |

CCV (2)            QCBatch:    QC19590

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0952                 | 95                          | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0938                 | 93                          | 85 - 115                      | 4/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0943                 | 94                          | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0952                 | 95                          | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.2836                 | 94                          | 85 - 115                      | 4/15/02          |

ICV (1)            QCBatch:    QC19590

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.098                  | 98                          | 85 - 115                      | 4/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0963                 | 96                          | 85 - 115                      | 4/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0965                 | 96                          | 85 - 115                      | 4/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0977                 | 98                          | 85 - 115                      | 4/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.290                  | 97                          | 85 - 115                      | 4/15/02          |

Report Date: May 6, 2002 Order Number: A02050218

Page Number: 1 of 1

EQ-112

Barber Ranch 3000109

Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 6, 2002

Order ID Number: A02050218

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196171 | MW-1 (13-15') | Soil   | 4/30/02    | 13:05      | 5/2/02        |
| 196172 | MW-1 (23-25') | Soil   | 4/30/02    | 13:25      | 5/2/02        |
| 196173 | MW-2 (13-15') | Soil   | 4/30/02    | 16:12      | 5/2/02        |
| 196174 | MW-2 (23-25') | Soil   | 4/30/02    | 16:50      | 5/2/02        |
| 196175 | MW-3 (13-15') | Soil   | 4/30/02    | 11:25      | 5/2/02        |
| 196176 | MW-3 (18-20') | Soil   | 4/30/02    | 11:30      | 5/2/02        |
| 196177 | MW-4 (13-15') | Soil   | 4/30/02    | 17:00      | 5/2/02        |
| 196178 | MW-4 (28-30') | Soil   | 4/30/02    | 17:30      | 5/2/02        |

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

| Sample - Field Code    | BTEX          |               |                    |                    |                  | Extended TX1005 |                |              | TPH DRO   | TPH GRO   |
|------------------------|---------------|---------------|--------------------|--------------------|------------------|-----------------|----------------|--------------|-----------|-----------|
|                        | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | C6-C12 (ppm)    | >C12-C35 (ppm) | C6-C35 (ppm) | DRO (ppm) | GRO (ppm) |
| 196171 - MW-1 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0           | <50.0          | <50.0        | <50.0     | <1.00     |
| 196172 - MW-1 (23-25') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0           | <50.0          | <50.0        | <50.0     | <1.00     |
| 196173 - MW-2 (13-15') | <0.500        | <0.500        | 1.27               | 1.95               | 3.22             | 1020            | 2090           | 3110         | 2150      | 532       |
| 196174 - MW-2 (23-25') | <0.100        | <0.100        | 2.15               | 7.14               | 9.29             | 690             | 1880           | 2570         | 1840      | 313       |
| 196175 - MW-3 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0           | <50.0          | <50.0        | <50.0     | <1.00     |
| 196176 - MW-3 (18-20') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0           | <50.0          | <50.0        | <50.0     | <1.00     |
| 196177 - MW-4 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0           | <50.0          | <50.0        | <50.0     | <1.00     |
| 196178 - MW-4 (28-30') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0           | <50.0          | <50.0        | <50.0     | <1.00     |

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



# TRACE ANALYSIS, INC.

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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: May 6, 2002

Order ID Number: A02050218

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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.

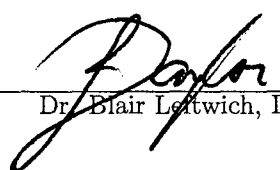
| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196171 | MW-1 (13-15') | Soil   | 4/30/02    | 13:05      | 5/2/02        |
| 196172 | MW-1 (23-25') | Soil   | 4/30/02    | 13:25      | 5/2/02        |
| 196173 | MW-2 (13-15') | Soil   | 4/30/02    | 16:12      | 5/2/02        |
| 196174 | MW-2 (23-25') | Soil   | 4/30/02    | 16:50      | 5/2/02        |
| 196175 | MW-3 (13-15') | Soil   | 4/30/02    | 11:25      | 5/2/02        |
| 196176 | MW-3 (18-20') | Soil   | 4/30/02    | 11:30      | 5/2/02        |
| 196177 | MW-4 (13-15') | Soil   | 4/30/02    | 17:00      | 5/2/02        |
| 196178 | MW-4 (28-30') | Soil   | 4/30/02    | 17:30      | 5/2/02        |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 18 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: 196171 - MW-1 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |              | 0.756  | mg/Kg | 10       | 1            | 76               | 70 - 130        |
| 4-BFB     | <sup>1</sup> | 0.690  | mg/Kg | 10       | 1            | 69               | 70 - 130        |

**Sample: 196171 - MW-1 (13-15')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <50.0  | mg/Kg | 1        | 50  |
| >C12-C35 |      | <50.0  | mg/Kg | 1        | 50  |
| C6-C35   |      | <50.0  | mg/Kg | 1        | 50  |

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

**Sample: 196171 - MW-1 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 122    | mg/Kg | 1        | 150          | 81               | 70 - 130        |

<sup>1</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.



**Sample: 196171 - MW-1 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.961  | mg/Kg | 10       | 0.10         | 96               | 70 - 130        |
| 4-BFB     |      | 0.850  | mg/Kg | 10       | 0.10         | 85               | 70 - 130        |

**Sample: 196172 - MW-1 (23-25')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |              | 0.712  | mg/Kg | 10       | 1            | 71               | 70 - 130        |
| 4-BFB     | <sup>2</sup> | 0.655  | mg/Kg | 10       | 1            | 65               | 70 - 130        |

**Sample: 196172 - MW-1 (23-25')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <50.0  | mg/Kg | 1        | 50  |
| >C12-C35 |      | <50.0  | mg/Kg | 1        | 50  |
| C6-C35   |      | <50.0  | mg/Kg | 1        | 50  |

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

**Sample: 196172 - MW-1 (23-25')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 124    | mg/Kg | 1        | 150          | 83               | 70 - 130        |

**Sample: 196172 - MW-1 (23-25')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.01   | mg/Kg | 10       | 0.10         | 101              | 70 - 130        |
| 4-BFB     |      | 0.818  | mg/Kg | 10       | 0.10         | 82               | 70 - 130        |

**Sample: 196173 - MW-2 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.500 | mg/Kg | 500      | 0.001 |
| Toluene       |      | <0.500 | mg/Kg | 500      | 0.001 |
| Ethylbenzene  |      | 1.27   | mg/Kg | 500      | 0.001 |
| M,P,O-Xylene  |      | 1.95   | mg/Kg | 500      | 0.001 |
| Total BTEX    |      | 3.22   | mg/Kg | 500      | 0.001 |
| Test Comments | 3    | *      | mg/Kg | 1        |       |

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>4</sup> | 0.672  | mg/Kg | 10       | 1            | 67               | 70 - 130        |
| 4-BFB     | <sup>5</sup> | 7.40   | mg/Kg | 10       | 1            | 740              | 70 - 130        |

**Sample: 196173 - MW-2 (13-15')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| 6-C12 |      | 1020   | mg/Kg | 5        | 50  |

Continued ...

<sup>3</sup>Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.1183 which is the MDL.

<sup>4</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.

<sup>5</sup>High surrogate recovery due to matrix interference.

Continued Sample: 196173 Analysis: Extended TX1005

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| >C12-C35 |      | 2090   | mg/Kg | 5        | 50  |
| C6-C35   |      | 3110   | mg/Kg | 5        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 194    | mg/Kg | 1        | 150          | 129              | 70 - 130        |

Sample: 196173 - MW-2 (13-15')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 2150   | mg/Kg | 5        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | 6    | 215    | mg/Kg | 5        | 150          | 143              | 70 - 130        |

Sample: 196173 - MW-2 (13-15')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 532    | mg/Kg | 500      | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.28   | mg/Kg | 500      | 0.10         | 128              | 70 - 130        |
| 4-BFB     | 7    | 24.0   | mg/Kg | 500      | 0.10         | 2400             | 70 - 130        |

Sample: 196174 - MW-2 (23-25')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.100 | mg/Kg | 100      | 0.001 |
| Toluene       |      | <0.100 | mg/Kg | 100      | 0.001 |
| Ethylbenzene  |      | 2.15   | mg/Kg | 100      | 0.001 |
| M,P,O-Xylene  |      | 7.14   | mg/Kg | 100      | 0.001 |
| Total BTEX    |      | 9.29   | mg/Kg | 100      | 0.001 |
| Test Comments | 8    | *      | mg/Kg | 1        |       |

<sup>6</sup>Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.

<sup>7</sup>High surrogate recovery due to peak interference.

<sup>8</sup>Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.02366 which is the MDL.

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>9</sup>  | 0.489  | mg/Kg | 50       | 1            | 48               | 70 - 130        |
| 4-BFB     | <sup>10</sup> | 3.86   | mg/Kg | 500      | 1            | 386              | 70 - 130        |

**Sample: 196174 - MW-2 (23-25')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | 690    | mg/Kg | 5        | 50  |
| >C12-C35 |      | 1880   | mg/Kg | 5        | 50  |
| C6-C35   |      | 2570   | mg/Kg | 5        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 194    | mg/Kg | 1        | 150          | 129              | 70 - 130        |

**Sample: 196174 - MW-2 (23-25')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 1840   | mg/Kg | 5        | 50  |

| Surrogate     | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | <sup>11</sup> | 215    | mg/Kg | 5        | 150          | 143              | 70 - 130        |

**Sample: 196174 - MW-2 (23-25')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 313    | mg/Kg | 100      | 0.10 |

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>12</sup> | 0.0211 | mg/Kg | 100      | 0.10         | 2                | 70 - 130        |
| 4-BFB     | <sup>13</sup> | 11     | mg/Kg | 100      | 0.10         | 1100             | 70 - 130        |

<sup>9</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.

<sup>10</sup>High surrogate recovery due to peak interference.

<sup>11</sup>Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.

<sup>12</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.

<sup>13</sup>High surrogate recovery due to peak interference.

**Sample: 196175 - MW-3 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |               | 0.721  | mg/Kg | 10       | 1            | 72               | 70 - 130        |
| 4-BFB     | <sup>14</sup> | 0.697  | mg/Kg | 10       | 1            | 69               | 70 - 130        |

**Sample: 196175 - MW-3 (13-15')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <50.0  | mg/Kg | 1        | 50  |
| >C12-C35 |      | <50.0  | mg/Kg | 1        | 50  |
| C6-C35   |      | <50.0  | mg/Kg | 1        | 50  |

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

**Sample: 196175 - MW-3 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 122    | mg/Kg | 1        | 150          | 81               | 70 - 130        |

**Sample: 196175 - MW-3 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

<sup>14</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.09   | mg/Kg | 10       | 0.10         | 109              | 70 - 130        |
| 4-BFB     |      | 0.858  | mg/Kg | 10       | 0.10         | 86               | 70 - 130        |

**Sample: 196176 - MW-3 (18-20')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.790  | mg/Kg | 10       | 1            | 79               | 70 - 130        |
| 4-BFB     |      | 0.751  | mg/Kg | 10       | 1            | 75               | 70 - 130        |

**Sample: 196176 - MW-3 (18-20')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <50.0  | mg/Kg | 1        | 50  |
| >C12-C35 |      | <50.0  | mg/Kg | 1        | 50  |
| C6-C35   |      | <50.0  | mg/Kg | 1        | 50  |

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

**Sample: 196176 - MW-3 (18-20')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 125    | mg/Kg | 1        | 150          | 83               | 70 - 130        |

**Sample: 196176 - MW-3 (18-20')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.20   | mg/Kg | 10       | 0.10         | 120              | 70 - 130        |
| 4-BFB     |      | 0.916  | mg/Kg | 10       | 0.10         | 92               | 70 - 130        |

**Sample: 196177 - MW-4 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.7    | mg/Kg | 10       | 1            | 70               | 70 - 130        |
| 4-BFB     | 15   | 0.645  | mg/Kg | 10       | 1            | 64               | 70 - 130        |

**Sample: 196177 - MW-4 (13-15')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <50.0  | mg/Kg | 1        | 50  |
| >C12-C35 |      | <50.0  | mg/Kg | 1        | 50  |
| C6-C35   |      | <50.0  | mg/Kg | 1        | 50  |

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

<sup>15</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.

**Sample: 196177 - MW-4 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
 Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 124    | mg/Kg | 1        | 150          | 83               | 70 - 130        |

**Sample: 196177 - MW-4 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
 Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.13   | mg/Kg | 10       | 0.10         | 113              | 70 - 130        |
| 4-BFB     |      | 0.812  | mg/Kg | 10       | 0.10         | 81               | 70 - 130        |

**Sample: 196178 - MW-4 (28-30')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20047 Date Analyzed: 5/2/02  
 Analyst: CG Preparation Method: S 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.788  | mg/Kg | 10       | 1            | 79               | 70 - 130        |
| 4-BFB     |      | 0.755  | mg/Kg | 10       | 1            | 75               | 70 - 130        |

**Sample: 196178 - MW-4 (28-30')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
 Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param  | Flag | Result | Units | Dilution | RDL |
|--------|------|--------|-------|----------|-----|
| C6-C12 |      | <50.0  | mg/Kg | 1        | 50  |

Continued ...



... Continued Sample: 196178 Analysis: Extended TX1005

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| >C12-C35 |      | <50.0  | mg/Kg | 1        | 50  |
| C6-C35   |      | <50.0  | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 158    | mg/Kg | 1        | 150          | 105              | 70 - 130        |

**Sample: 196178 - MW-4 (28-30')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 135    | mg/Kg | 1        | 150          | 90               | 70 - 130        |

**Sample: 196178 - MW-4 (28-30')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20048 Date Analyzed: 5/2/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19215 Date Prepared: 5/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.16   | mg/Kg | 10       | 0.10         | 116              | 70 - 130        |
| 4-BFB     |      | 0.905  | mg/Kg | 10       | 0.10         | 90               | 70 - 130        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20047

| 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       |               | 0.886  | mg/Kg | 10       | 1            | 89               | 70 - 130        |
| 4-BFB     | <sup>16</sup> | 0.585  | mg/Kg | 10       | 1            | 58               | 70 - 130        |

Method Blank      QCBatch:    QC20048

| 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       | 0.10         | 101              | 70 - 130        |
| 4-BFB     |      | 0.736  | mg/Kg | 10       | 0.10         | 74               | 70 - 130        |

Method Blank      QCBatch:    QC20095

| Param    | Flag | Results | Units | Reporting Limit |
|----------|------|---------|-------|-----------------|
| C6-C12   |      | <50.0   | mg/Kg | 50              |
| >C12-C35 |      | <50.0   | mg/Kg | 50              |
| C6-C35   |      | <50.0   | mg/Kg | 50              |

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

Method Blank      QCBatch:    QC20096

<sup>16</sup>Low surrogate recovery due to prep. ICV, CCV, CCV shows the method to be in control.

| 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 |      | 122    | mg/Kg | 1        | 150          | 81               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

**Laboratory Control Spikes**      QCBatch:    QC20047

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.906      | 0.926       | mg/Kg | 10   | 1                  | <0.010        | 91    | 2   | 70 - 130    | 20        |
| Benzene      | 0.929      | 0.935       | mg/Kg | 10   | 1                  | <0.010        | 93    | 1   | 70 - 130    | 20        |
| Toluene      | 0.926      | 0.935       | mg/Kg | 10   | 1                  | <0.010        | 93    | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.932      | 0.936       | mg/Kg | 10   | 1                  | <0.010        | 93    | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.70       | 2.85        | mg/Kg | 10   | 3                  | <0.010        | 90    | 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 |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.900      | 0.900       | mg/Kg | 10       | 1            | 90        | 90         | 70 - 130        |
| 4-BFB     | 0.770      | 0.841       | mg/Kg | 10       | 1            | 77        | 84         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC20048

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 11.1       | 11.6        | mg/Kg | 10   | 1                  | <1            | 111   | 4   | 80 - 120    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.06       | 1.08        | mg/Kg | 10       | 0.10         | 106       | 108        | 70 - 130        |
| 4-BFB     | 0.947      | 0.958       | mg/Kg | 10       | 0.10         | 95        | 76         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC20095

| Param  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12 | 224        | 224         | mg/Kg | 1    | 250                | <50.0         | 89    | 0   | 70 - 130    | 20        |

Continued ...

Continued

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| >C12-C35 | 225        | 225         | mg/Kg | 1    | 250                | <50.0         | 90    | 0   | 70 - 130    | 20        |
| C6-C35   | 449        | 449         | mg/Kg | 1    | 500                | <50.0         | 89    | 0   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 142        | 141         | mg/Kg | 1        | 150          | 95        | 94         | 70 - 130        |

Laboratory Control Spikes

QCBatch: QC20096

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 251        | 251         | mg/Kg | 1    | 250                | <50.0         | 100   | 0   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 121        | 120         | mg/Kg | 1        | 150          | 81        | 80         | 70 - 130        |

Quality Control Report  
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC20047

| Param        | MS Result           | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|---------------------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | <sup>17</sup> 0.498 | 0.922      | mg/Kg | 10   | 1                  | <0.010        | 49    | 59  | 70 - 130    | 20        |
| Toluene      | <sup>18</sup> 0.474 | 0.881      | mg/Kg | 10   | 1                  | <0.010        | 47    | 60  | 70 - 130    | 20        |
| Ethylbenzene | <sup>19</sup> 0.49  | 0.94       | mg/Kg | 10   | 1                  | <0.010        | 49    | 62  | 70 - 130    | 20        |
| M,P,O-Xylene | <sup>20</sup> 1.5   | 2.86       | mg/Kg | 10   | 3                  | <0.010        | 50    | 62  | 70 - 130    | 20        |

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

| Surrogate | MS Result           | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|---------------------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | <sup>21</sup> 0.469 | 0.851      | mg/Kg | 10       | 1            | 46       | 85        | 70 - 130        |
| 4-BFB     | <sup>22</sup> 0.454 | 0.818      | mg/Kg | 10       | 1            | 45       | 81        | 70 - 130        |

<sup>17</sup>Low MS recovery due to prep. LCS, LCSD, MSD show the method to be in control.

<sup>18</sup>Low MS recovery due to prep. LCS, LCSD, MSD show the method to be in control.

<sup>19</sup>Low MS recovery due to prep. LCS, LCSD, MSD show the method to be in control.

<sup>20</sup>Low MS recovery due to prep. LCS, LCSD, MSD show the method to be in control.

<sup>21</sup>Low MS recovery due to prep. LCS, LCSD, MSD show the method to be in control.

<sup>22</sup>Low MS recovery due to prep. LCS, LCSD, MSD show the method to be in control.

**Matrix Spikes**                      QCBatch:    QC20048

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.69      | 8.26       | mg/Kg | 10   | 1                  | <1.00         | 87    | 15  | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.733     | 0.786      | mg/Kg | 10       | 0.10         | 73       | 79        | 70 - 130        |
| 4-BFB     | 0.744     | 0.938      | mg/Kg | 10       | 0.10         | 74       | 94        | 70 - 130        |

**Matrix Spikes**                      QCBatch:    QC20095

| Param    | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12   | 199       | 195        | mg/Kg | 1    | 250                | <50.0         | 79    | 2   | 70 - 130    | 20        |
| >C12-C35 | 204       | 214        | mg/Kg | 1    | 250                | <50.0         | 81    | 4   | 70 - 130    | 20        |
| C6-C35   | 403       | 409        | mg/Kg | 1    | 500                | <50.0         | 80    | 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 | 135       | 143        | mg/Kg | 1        | 150          | 90       | 95        | 70 - 130        |

**Matrix Spikes**                      QCBatch:    QC20096

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 227       | 224        | mg/Kg | 1    | 250                | <50.0         | 91    | 1   | 70 - 130    | 20        |

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

| Surrogate     | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|---------------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| n-Triacontane | 115       | 122        | mg/Kg | 1        | 150          | 77       | 81        | 70 - 130        |

**Quality Control Report**  
**Continuing Calibration Verification Standards**

CCV (1)

QCBatch:    QC20047

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.100                  | 100                         | 85 - 115                      | 5/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0911                 | 91                          | 85 - 115                      | 5/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0927                 | 93                          | 85 - 115                      | 5/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.093                  | 93                          | 85 - 115                      | 5/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.282                  | 94                          | 85 - 115                      | 5/2/02           |

CCV (2)            QCBatch:    QC20047

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.1028                 | 102                         | 85 - 115                      | 5/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0921                 | 92                          | 85 - 115                      | 5/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0936                 | 93                          | 85 - 115                      | 5/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0939                 | 93                          | 85 - 115                      | 5/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.2841                 | 94                          | 85 - 115                      | 5/2/02           |

ICV (1)            QCBatch:    QC20047

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0875                 | 88                          | 85 - 115                      | 5/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.092                  | 92                          | 85 - 115                      | 5/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0936                 | 94                          | 85 - 115                      | 5/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.087                  | 87                          | 85 - 115                      | 5/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.282                  | 94                          | 85 - 115                      | 5/2/02           |

CCV (1)            QCBatch:    QC20048

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.877                  | 87                          | 85 - 115                      | 5/2/02           |

ICV (1)            QCBatch:    QC20048

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.895                  | 89                          | 85 - 115                      | 5/2/02           |

CCV (1) QCBatch: QC20095

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| C6-C12   |      | mg/Kg | 250                   | 243                    | 97                          | 70 - 130                      | 5/5/02           |
| >C12-C35 |      | mg/Kg | 250                   | 244                    | 97                          | 70 - 130                      | 5/5/02           |
| C6-C35   |      | mg/Kg | 500                   | 487                    | 97                          | 70 - 130                      | 5/5/02           |

CCV (2) QCBatch: QC20095

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| C6-C12   |      | mg/Kg | 250                   | 224                    | 89                          | 70 - 130                      | 5/5/02           |
| >C12-C35 |      | mg/Kg | 250                   | 228                    | 91                          | 70 - 130                      | 5/5/02           |
| C6-C35   |      | mg/Kg | 500                   | 452                    | 90                          | 70 - 130                      | 5/5/02           |

ICV (1) QCBatch: QC20095

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| C6-C12   |      | mg/Kg | 250                   | 224                    | 89                          | 75 - 125                      | 5/5/02           |
| >C12-C35 |      | mg/Kg | 250                   | 225                    | 90                          | 75 - 125                      | 5/5/02           |
| C6-C35   |      | mg/Kg | 500                   | 449                    | 89                          | 75 - 125                      | 5/5/02           |

CCV (1) QCBatch: QC20096

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 271                    | 108                         | 75 - 125                      | 5/5/02           |

CCV (2) QCBatch: QC20096

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 254                    | 101                         | 75 - 125                      | 5/5/02           |

ICV (1) QCBatch: QC20096

Report Date: May 6, 2002  
EQ-112

Order Number: A02050218  
Barber Ranch 3000109

Page Number: 18 of 18  
Barber Lea County, New Mexico

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 251                    | 100                         | 75 - 125                      | 5/5/02           |



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1 (800) 378-1296

# Trace Analysis, 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 # **AD0250218**

Company Name: **EMERSON SERVICES**

Address: **306 Westwood, Suite 1312, Midland, TX 79701**

Contact Person: **Jeffrey Kindley**

Voice to: **Kyle Lamberson**

(different from above)

Project #: **EQ-112**

Project Name: **Barben Ranch**

Sampler Signature: **Jeffrey Kindley**

Project Location: **Barben Lea County, New Mexico**

Phone #: **915-570-8726**

Fax #: **915-684-7587**

Equipment #

Matrix

Water

Soil

Air

Sludge

HCl

HNO<sub>3</sub>

H<sub>2</sub>SO<sub>4</sub>

NaOH

ICE

None

Volume/Amount

# Containers

Field Code

MW-1

MW-1

MW-1

1 Liter

1 Liter

40ml

DATE

TIME

Received by:

Date:

Time:

Received by:

Date:

Time:

Received at Laboratory by:

Date:

Time:

Signature: **Jeffrey Kindley**

Date: **Apr 30, 2002 1800**

Signature: **Jeffrey Kindley**

Date: **5-20-02 10:00**

Signature: **Jeffrey Kindley**

Date: **5-20-02 10:00**

### ANALYSIS REQUEST

(Circle or Specify Method No.)

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

Carbonates (Tot. Alk/310, med)

Bamido/Phosphate/Nitrate (TC-300)

Ferrous Iron (Fall-3500 FED)

Hold

Turn Around Time if different from standard

TX 1005  
8021B  
PAH 8270C

MTBE 8021B/602

BTEX 8021B/602

TPH 464/TX1005

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B/624

GC/MS Semi. Vol. 8270C/625

PCBs 8082/608

Pesticides 8081A/608

BOD, TSS, pH

Carbonates (Tot. Alk/310, med)

Bamido/Phosphate/Nitrate (TC-300)

Ferrous Iron (Fall-3500 FED)

Hold

Turn Around Time if different from standard

### REMARKS:

PAH not run, lab error notified Jeff 5/17, will re-sample next week. MB. PTF 5/17/02

Check If Special Reporting Limits Are Needed

### LAB USE ONLY

Intact  Y  N

Headspace  Y  N

Temp

Log-in-Review

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

Carrier # **Busa 902 879287**

Report Date: May 17, 2002 Order Number: A02050216  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 17, 2002

Order ID Number: A02050216

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 196167 | MW-1        | Water  | 4/30/02    | 16:30      | 5/2/02        |

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

| Sample - Field Code | BTEX          |               |                    |                    |                  | Extended TX1005 |                |              |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|-----------------|----------------|--------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | C6-C12 (ppm)    | >C12-C35 (ppm) | C6-C35 (ppm) |
| 196167 - MW-1       | 0.0128        | <0.001        | <0.001             | <0.001             | 0.0128           | <5.00           | <5.00          | <5.00        |

### Sample: 196167 - MW-1

| Param                  | Flag | Result | Units         |
|------------------------|------|--------|---------------|
| Hydroxide Alkalinity   |      | <1.0   | mg/L as CaCo3 |
| Carbonate Alkalinity   |      | <1.0   | mg/L as CaCo3 |
| Bicarbonate Alkalinity |      | 452    | mg/L as CaCo3 |
| Total Alkalinity       |      | 452    | mg/L as CaCo3 |
| ferrous iron           | 1    | 0.28   | mg/L          |
| Bromide                | 2    | 1.18   | mg/L          |
| Nitrate-N              | 3    | <1.00  | mg/L          |
| PO4-P                  |      | 0.0475 | mg/L          |

<sup>1</sup>Sample was received out of holding time.

<sup>2</sup>Br matrix spikes RPD = 3; %EA = 94.

<sup>3</sup>NO3 matrix spikes RPD = 0; %EA = 91.

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

# TRACE ANALYSIS, INC.

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El Paso, Texas 79922 888•588•3443  
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: May 17, 2002

Order ID Number: A02050216

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|-------------|--------|------------|------------|---------------|
| 196167 | MW-1        | Water  | 4/30/02    | 16:30      | 5/2/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

  
Dr. Blair Lettwich, Director

## Analytical Report

**Sample: 196167 - MW-1**

Analysis: Alkalinity      Analytical Method: E 310.1      QC Batch: QC20078      Date Analyzed: 5/3/02  
Analyst: RS              Preparation Method: N/A      Prep Batch: PB19249      Date Prepared: 5/3/02

| Param                  | Flag | Result | Units         | Dilution | RDL |
|------------------------|------|--------|---------------|----------|-----|
| Hydroxide Alkalinity   |      | <1.0   | mg/L as CaCo3 | 1        | 1   |
| Carbonate Alkalinity   |      | <1.0   | mg/L as CaCo3 | 1        | 1   |
| Bicarbonate Alkalinity |      | 452    | mg/L as CaCo3 | 1        | 1   |
| Total Alkalinity       |      | 452    | mg/L as CaCo3 | 1        | 1   |

**Sample: 196167 - MW-1**

Analysis: BTEX            Analytical Method: S 8021B      QC Batch: QC20035      Date Analyzed: 5/2/02  
Analyst: CG              Preparation Method: S 5030B      Prep Batch: PB19213      Date Prepared: 5/2/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0128 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | 0.0128 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0926 | mg/L  | 1        | 0.10         | 93               | 70 - 130        |
| 4-BFB     |      | 0.099  | mg/L  | 1        | 0.10         | 99               | 70 - 130        |

**Sample: 196167 - MW-1**

Analysis: Extended TX1005      Analytical Method: TX1005      QC Batch: QC20117      Date Analyzed: 5/3/02  
Analyst: MM                      Preparation Method: N/A      Prep Batch: PB19281      Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <5.00  | mg/L  | 0.10     | 50  |
| >C12-C35 |      | <5.00  | mg/L  | 0.10     | 50  |
| C6-C35   |      | <5.00  | mg/L  | 0.10     | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 13.9   | mg/L  | 1        | 15           | 92               | 70 - 130        |

**Sample: 196167 - MW-1**

Analysis: Ferrous Iron      Analytical Method: Hach IR-1      QC Batch: QC20042      Date Analyzed: 5/2/02  
Analyst: JSW                  Preparation Method: N/A      Prep Batch: PB19206      Date Prepared: 5/2/02

| Param        | Flag | Result | Units | Dilution | RDL  |
|--------------|------|--------|-------|----------|------|
| ferrous iron | 1    | 0.28   | mg/L  | 1        | 0.01 |

**Sample: 196167 - MW-1**

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20103 Date Analyzed: 5/2/02  
Analyst: JS Preparation Method: N/A Prep Batch: PB19265 Date Prepared: 5/2/02

| Param     | Flag | Result | Units | Dilution | RDL  |
|-----------|------|--------|-------|----------|------|
| Bromide   | 2    | 1.18   | mg/L  | 5        | 0.20 |
| Nitrate-N | 3    | <1.00  | mg/L  | 5        | 0.20 |

**Sample: 196167 - MW-1**

Analysis: PO4 Analytical Method: E 300.0 QC Batch: QC20045 Date Analyzed: 5/2/02  
Analyst: JSW Preparation Method: N/A Prep Batch: PB19204 Date Prepared: 5/2/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| PO4-P |      | 0.0475 | mg/L  | 1        | 0.01 |

<sup>1</sup>Sample was received out of holding time.

<sup>2</sup>Br matrix spikes RPD = 3; %EA = 94.

<sup>3</sup>NO3 matrix spikes RPD = 0; %EA = 91.

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20035

| 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       |      | 0.0912 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |
| 4-BFB     |      | 0.0899 | mg/L  | 1        | 0.10         | 90               | 70 - 130        |

Method Blank      QCBatch:    QC20042

| Param        | Flag | Results | Units | Reporting Limit |
|--------------|------|---------|-------|-----------------|
| ferrous iron |      | 0.28    | mg/L  | 0.01            |

Method Blank      QCBatch:    QC20045

| Param | Flag | Results | Units | Reporting Limit |
|-------|------|---------|-------|-----------------|
| PO4-P |      | 0.0131  | mg/L  | 0.01            |

Method Blank      QCBatch:    QC20078

| Param                  | Flag | Results | Units         | Reporting Limit |
|------------------------|------|---------|---------------|-----------------|
| Hydroxide Alkalinity   |      | <1.0    | mg/L as CaCo3 | 1               |
| Carbonate Alkalinity   |      | <1.0    | mg/L as CaCo3 | 1               |
| Bicarbonate Alkalinity |      | <4.0    | mg/L as CaCo3 | 1               |
| Total Alkalinity       |      | <4.0    | mg/L as CaCo3 | 1               |

Method Blank      QCBatch:    QC20103

| Param   | Flag | Results | Units | Reporting Limit |
|---------|------|---------|-------|-----------------|
| Bromide |      | <0.2    | mg/L  | 0.20            |

Continued ...

Continued

| Param     | Flag | Results | Units | Reporting Limit |
|-----------|------|---------|-------|-----------------|
| Nitrate-N |      | <0.2    | mg/L  | 0.20            |

Method Blank      QCBatch:    QC20117

| Param    | Flag | Results | Units | Reporting Limit |
|----------|------|---------|-------|-----------------|
| C6-C12   |      | <5.00   | mg/L  | 50              |
| >C12-C35 |      | <5.00   | mg/L  | 50              |
| C6-C35   |      | <5.00   | mg/L  | 50              |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 15.3   | mg/L  | 0.10     | 15           | 102              | 70 - 130        |

### Quality Control Report Duplicate Samples

Duplicate      QCBatch:    QC20078

| Param                  | Flag | Duplicate Result | Sample Result | Units         | Dilution | RPD | RPD Limit |
|------------------------|------|------------------|---------------|---------------|----------|-----|-----------|
| Hydroxide Alkalinity   |      | <1.0             | <1.0          | mg/L as CaCo3 | 1        | 0   | 9.2       |
| Carbonate Alkalinity   |      | <1.0             | <1.0          | mg/L as CaCo3 | 1        | 0   | 9.2       |
| Bicarbonate Alkalinity |      | 46               | 48            | mg/L as CaCo3 | 1        | 4   | 9.2       |
| Total Alkalinity       |      | 46               | 48            | mg/L as CaCo3 | 1        | 4   | 9.2       |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC20035

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.103      | 0.103       | mg/L  | 1    | 0.10               | <0.001        | 103   | 0   | 70 - 130    | 20        |
| Benzene      | 0.101      | 0.0998      | mg/L  | 1    | 0.10               | <0.001        | 101   | 1   | 70 - 130    | 20        |
| Toluene      | 0.0975     | 0.0972      | mg/L  | 1    | 0.10               | <0.001        | 98    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.0984     | 0.100       | mg/L  | 1    | 0.10               | <0.001        | 98    | 2   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.295      | 0.297       | mg/L  | 1    | 0.30               | <0.001        | 98    | 1   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0918     | 0.0916      | mg/L  | 1        | 0.10         | 92        | 92         | 70 - 130        |

Continued ...

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| 4-BFB     | 0.0887     | 0.0908      | mg/L  | 1        | 0.10         | 89        | 91         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC20045

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| PO4-P | 0.0661     | 0.0661      | mg/L  | 1    | 0.06               | 0.0131        | 101   | 0   | 90 - 120    | 20        |

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

**Laboratory Control Spikes**      QCBatch:    QC20103

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Chloride | 11.98      | 2.37        | mg/L  | 1    | 12.50              | <1.0          | 95    | 0   | 90 - 110    | 20        |

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

**Laboratory Control Spikes**      QCBatch:    QC20117

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12   | 24.6       | 23.8        | mg/L  | 0.10 | 250                | <5.00         | 98    | 3   | 70 - 130    | 20        |
| >C12-C35 | 24.9       | 24.4        | mg/L  | 0.10 | 250                | <5.00         | 99    | 2   | 70 - 130    | 20        |
| C6-C35   | 49.5       | < 50        | mg/L  | 0.10 | 500                | <5.00         | 99    | 2   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 16.2       | 15.5        | mg/L  | 0.10     | 15           | 108       | 103        | 70 - 130        |

## Quality Control Report Matrix Spikes and Duplicate Spikes

**Matrix Spikes**      QCBatch:    QC20045

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| PO4-P | 0.111     | 0.110      | mg/L  | 1    | 0.06               | 0.0475        | 97    | 1   | 80 - 135    | 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:    QC20035

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.094                  | 94                          | 85 - 115                      | 5/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0998                 | 100                         | 85 - 115                      | 5/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0964                 | 96                          | 85 - 115                      | 5/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0976                 | 98                          | 85 - 115                      | 5/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.291                  | 97                          | 85 - 115                      | 5/2/02           |

CCV (2)            QCBatch:    QC20035

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0968                 | 96                          | 85 - 115                      | 5/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0979                 | 97                          | 85 - 115                      | 5/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0975                 | 97                          | 85 - 115                      | 5/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0986                 | 98                          | 85 - 115                      | 5/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.294                  | 98                          | 85 - 115                      | 5/2/02           |

ICV (1)            QCBatch:    QC20035

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.098                  | 98                          | 85 - 115                      | 5/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.097                  | 97                          | 85 - 115                      | 5/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0968                 | 97                          | 85 - 115                      | 5/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 5/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.304                  | 101                         | 85 - 115                      | 5/2/02           |

CCV (1)            QCBatch:    QC20045

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| PO4-P |      | mg/L  | 0.06                  | 0.0661                 | 101                         | 85 - 115                      | 5/2/02           |

ICV (1)            QCBatch:    QC20045

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| PO4-P |      | mg/L  | 0.06            | 0.0707           | 108                   | 85 - 115                | 5/2/02        |

CCV (1)            QCBatch:    QC20078

| Param                  | Flag | Units         | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|---------------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Hydroxide Alkalinity   |      | mg/L as CaCo3 | 0               | <1.0             | 0                     | 90 - 110                | 5/3/02        |
| Carbonate Alkalinity   |      | mg/L as CaCo3 | 0               | 232              | 0                     | 90 - 110                | 5/3/02        |
| Bicarbonate Alkalinity |      | mg/L as CaCo3 | 0               | 10               | 0                     | 90 - 110                | 5/3/02        |
| Total Alkalinity       |      | mg/L as CaCo3 | 250             | 242              | 96                    | 90 - 110                | 5/3/02        |

ICV (1)            QCBatch:    QC20078

| Param                  | Flag | Units         | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|---------------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Hydroxide Alkalinity   |      | mg/L as CaCo3 | 0               | <1.0             | 0                     | 90 - 110                | 5/3/02        |
| Carbonate Alkalinity   |      | mg/L as CaCo3 | 0               | 228              | 0                     | 90 - 110                | 5/3/02        |
| Bicarbonate Alkalinity |      | mg/L as CaCo3 | 0               | 16               | 0                     | 90 - 110                | 5/3/02        |
| Total Alkalinity       |      | mg/L as CaCo3 | 250             | 244              | 97                    | 90 - 110                | 5/3/02        |

CCV (1)            QCBatch:    QC20103

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Chloride |      | mg/L  | 12.50           | 12.11            | 96                    | 90 - 110                | 5/2/02        |

ICV (1)            QCBatch:    QC20103

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Chloride |      | mg/L  | 12.50           | 11.62            | 92                    | 90 - 110                | 5/2/02        |

CCV (1)            QCBatch:    QC20117

Continued ...

Continued

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| C6-C12   |      | mg/L  | 250                   | 231                    | 92                          | 75 - 125                      | 5/3/02           |
| >C12-C35 |      | mg/L  | 250                   | 238                    | 95                          | 75 - 125                      | 5/3/02           |
| C6-C35   |      | mg/L  | 500                   | 469                    | 93                          | 75 - 125                      | 5/3/02           |

ICV (1)

QCBatch: QC20117

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| C6-C12   |      | mg/L  | 250                   | 219                    | 87                          | 75 - 125                      | 5/3/02           |
| >C12-C35 |      | mg/L  | 250                   | 228                    | 91                          | 75 - 125                      | 5/3/02           |
| C6-C35   |      | mg/L  | 500                   | 447                    | 89                          | 75 - 125                      | 5/3/02           |

Report Date: May 22, 2002 Order Number: A02050217  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 2  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 22, 2002

Order ID Number: A02050217

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196168 | MW-4 (13-15)  | Soil   | 4/30/02    | :          | 5/2/02        |
| 196169 | MW-4 (18-20') | Soil   | 4/30/02    | :          | 5/2/02        |
| 196170 | MW-1 (13-15') | Soil   | 4/30/02    | :          | 5/2/02        |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

### Sample: 196168 - MW-4 (13-15)

| Param                  | Flag | Result | Units          |
|------------------------|------|--------|----------------|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 |
| Carbonate Alkalinity   |      | <1.0   | mg/kg as CaCo3 |
| Bicarbonate Alkalinity |      | 60     | mg/kg as CaCo3 |
| Total Alkalinity       |      | 60     | mg/kg as CaCo3 |
| Specific Conductance   |      | 156    | $\mu$ MHOS/cm  |
| FOC                    |      | 0.62   | %              |
| ferrous iron           |      | 0.28   | mg/Kg          |
| Bromide                |      | <0.2   | mg/Kg          |
| Nitrate-N              |      | 0.41   | mg/Kg          |
| Phosphate              |      | <0.5   | mg/Kg          |
| pH                     |      | 8.3    | s.u.           |

### Sample: 196169 - MW-4 (18-20')

| Param                  | Flag | Result | Units          |
|------------------------|------|--------|----------------|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 |
| Carbonate Alkalinity   |      | <1.0   | mg/kg as CaCo3 |
| Bicarbonate Alkalinity |      | 116    | mg/kg as CaCo3 |
| Total Alkalinity       |      | 116    | mg/kg as CaCo3 |
| Specific Conductance   |      | 144    | $\mu$ MHOS/cm  |
| FOC                    |      | 0.72   | %              |
| ferrous iron           |      | 0.28   | mg/Kg          |

Continued on next page ...

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

Report Date: May 22, 2002 Order Number: A02050217  
EQ-112 Barber Ranch 3000109Page Number: 2 of 2  
Barber Lea County, New Mexico*Sample 196169 continued ...*

| Param     | Flag | Result | Units |
|-----------|------|--------|-------|
| Bromide   |      | <0.2   | mg/Kg |
| Nitrate-N |      | 0.57   | mg/Kg |
| Phosphate |      | <0.5   | mg/Kg |
| pH        |      | 8.5    | s.u.  |

**Sample: 196170 - MW-1 (13-15')**

| Param                  | Flag | Result | Units          |
|------------------------|------|--------|----------------|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 |
| Carbonate Alkalinity   |      | <1.0   | mg/kg as CaCo3 |
| Bicarbonate Alkalinity |      | 145    | mg/kg as CaCo3 |
| Total Alkalinity       |      | 145    | mg/kg as CaCo3 |
| Specific Conductance   |      | 143    | $\mu$ MHOS/cm  |
| FOC                    |      | 1.06   | %              |
| ferrous iron           |      | 0.28   | mg/Kg          |
| Bromide                |      | <0.2   | mg/Kg          |
| Nitrate-N              |      | 0.48   | mg/Kg          |
| Phosphate              |      | <0.5   | mg/Kg          |
| pH                     |      | 8.4    | s.u.           |

# TRACE ANALYSIS, INC.

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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: May 22, 2002

Order ID Number: A02050217

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|---------------|--------|------------|------------|---------------|
| 196168 | MW-4 (13-15)  | Soil   | 4/30/02    | :          | 5/2/02        |
| 196169 | MW-4 (18-20') | Soil   | 4/30/02    | :          | 5/2/02        |
| 196170 | MW-1 (13-15') | Soil   | 4/30/02    | :          | 5/2/02        |

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

This report consists of a total of 9 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: 196168 - MW-4 (13-15)**

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20521 Date Analyzed: 5/21/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19588 Date Prepared: 5/21/02

| Param                  | Flag | Result | Units          | Dilution | RDL |
|------------------------|------|--------|----------------|----------|-----|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 | 1        | 1   |
| Carbonate Alkalinity   |      | <1.0   | mg/kg as CaCo3 | 1        | 1   |
| Bicarbonate Alkalinity |      | 60     | mg/kg as CaCo3 | 1        | 1   |
| Total Alkalinity       |      | 60     | mg/kg as CaCo3 | 1        | 1   |

**Sample: 196168 - MW-4 (13-15)**

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC20336 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19447 Date Prepared: 5/14/02

| Param                | Flag | Result | Units    | Dilution | RDL |
|----------------------|------|--------|----------|----------|-----|
| Specific Conductance |      | 156    | μMHOS/cm | 1        |     |

**Sample: 196168 - MW-4 (13-15)**

Analysis: FOC Analytical Method: D2974-87 QC Batch: QC20343 Date Analyzed: 5/10/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19443 Date Prepared: 5/8/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| FOC   |      | 0.62   | %     | 1        | 0.10 |

**Sample: 196168 - MW-4 (13-15)**

Analysis: Ferrous Iron Analytical Method: Hach IR-1 QC Batch: QC20396 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19486 Date Prepared: 5/14/02

| Param        | Flag | Result | Units | Dilution | RDL |
|--------------|------|--------|-------|----------|-----|
| ferrous iron |      | 0.28   | mg/Kg | 1        |     |

**Sample: 196168 - MW-4 (13-15)**

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20502 Date Analyzed: 5/14/02  
Analyst: JSW Preparation Method: N/A Prep Batch: PB19566 Date Prepared: 5/14/02

| Param     | Flag | Result | Units | Dilution | RDL  |
|-----------|------|--------|-------|----------|------|
| Bromide   |      | <0.2   | mg/Kg | 1        | 0.50 |
| Nitrate-N |      | 0.41   | mg/Kg | 1        | 0.20 |
| Phosphate |      | <0.5   | mg/Kg | 1        | 1    |

**Sample: 196168 - MW-4 (13-15)**

Analysis: pH Analytical Method: E 150.1 QC Batch: QC20389 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19493 Date Prepared: 5/14/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| pH    |      | 8.3    | s.u.  | 1        | 1   |

**Sample: 196169 - MW-4 (18-20')**

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20521 Date Analyzed: 5/21/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19588 Date Prepared: 5/21/02

| Param                  | Flag | Result | Units          | Dilution | RDL |
|------------------------|------|--------|----------------|----------|-----|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 | 1        | 1   |
| Carbonate Alkalinity   |      | <1.0   | mg/kg as CaCo3 | 1        | 1   |
| Bicarbonate Alkalinity |      | 116    | mg/kg as CaCo3 | 1        | 1   |
| Total Alkalinity       |      | 116    | mg/kg as CaCo3 | 1        | 1   |

**Sample: 196169 - MW-4 (18-20')**

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC20336 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19447 Date Prepared: 5/14/02

| Param                | Flag | Result | Units    | Dilution | RDL |
|----------------------|------|--------|----------|----------|-----|
| Specific Conductance |      | 144    | µMHOS/cm | 1        |     |

**Sample: 196169 - MW-4 (18-20')**

Analysis: FOC Analytical Method: D2974-87 QC Batch: QC20343 Date Analyzed: 5/10/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19443 Date Prepared: 5/8/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| FOC   |      | 0.72   | %     | 1        | 0.10 |

**Sample: 196169 - MW-4 (18-20')**

Analysis: Ferrous Iron Analytical Method: Hach IR-1 QC Batch: QC20396 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19486 Date Prepared: 5/14/02

| Param        | Flag | Result | Units | Dilution | RDL |
|--------------|------|--------|-------|----------|-----|
| ferrous iron |      | 0.28   | mg/Kg | 1        |     |

**Sample: 196169 - MW-4 (18-20')**

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20502 Date Analyzed: 5/14/02  
Analyst: JSW Preparation Method: N/A Prep Batch: PB19566 Date Prepared: 5/14/02

| Param   | Flag | Result | Units | Dilution | RDL  |
|---------|------|--------|-------|----------|------|
| Bromide |      | <0.2   | mg/Kg | 1        | 0.50 |

Continued ...



... Continued Sample: 196169 Analysis: Ion Chromatography (IC)

| Param     | Flag | Result | Units | Dilution | RDL  |
|-----------|------|--------|-------|----------|------|
| Nitrate-N |      | 0.57   | mg/Kg | 1        | 0.20 |
| Phosphate |      | <0.5   | mg/Kg | 1        | 1    |

Sample: 196169 - MW-4 (18-20')

Analysis: pH Analytical Method: E 150.1 QC Batch: QC20389 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19493 Date Prepared: 5/14/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| pH    |      | 8.5    | s.u.  | 1        | 1   |

Sample: 196170 - MW-1 (13-15')

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20521 Date Analyzed: 5/21/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19588 Date Prepared: 5/21/02

| Param                  | Flag | Result | Units          | Dilution | RDL |
|------------------------|------|--------|----------------|----------|-----|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 | 1        | 1   |
| Carbonate Alkalinity   |      | <1.0   | mg/kg as CaCo3 | 1        | 1   |
| Bicarbonate Alkalinity |      | 145    | mg/kg as CaCo3 | 1        | 1   |
| Total Alkalinity       |      | 145    | mg/kg as CaCo3 | 1        | 1   |

Sample: 196170 - MW-1 (13-15')

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC20336 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19447 Date Prepared: 5/14/02

| Param                | Flag | Result | Units    | Dilution | RDL |
|----------------------|------|--------|----------|----------|-----|
| Specific Conductance |      | 143    | µMHOS/cm | 1        |     |

Sample: 196170 - MW-1 (13-15')

Analysis: FOC Analytical Method: D2974-87 QC Batch: QC20343 Date Analyzed: 5/10/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19443 Date Prepared: 5/8/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| FOC   |      | 1.06   | %     | 1        | 0.10 |

Sample: 196170 - MW-1 (13-15')

Analysis: Ferrous Iron Analytical Method: Hach IR-1 QC Batch: QC20396 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19486 Date Prepared: 5/14/02

| Param        | Flag | Result | Units | Dilution | RDL |
|--------------|------|--------|-------|----------|-----|
| ferrous iron |      | 0.28   | mg/Kg | 1        |     |

**Sample: 196170 - MW-1 (13-15')**

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20502 Date Analyzed: 5/14/02  
Analyst: JSW Preparation Method: N/A Prep Batch: PB19566 Date Prepared: 5/14/02

| Param     | Flag | Result | Units | Dilution | RDL  |
|-----------|------|--------|-------|----------|------|
| Bromide   |      | <0.2   | mg/Kg | 1        | 0.50 |
| Nitrate-N |      | 0.48   | mg/Kg | 1        | 0.20 |
| Phosphate |      | <0.5   | mg/Kg | 1        | 1    |

**Sample: 196170 - MW-1 (13-15')**

Analysis: pH Analytical Method: E 150.1 QC Batch: QC20389 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19493 Date Prepared: 5/14/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| pH    |      | 8.4    | s.u.  | 1        | 1   |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20336

| Param                | Flag | Results | Units    | Reporting Limit |
|----------------------|------|---------|----------|-----------------|
| Specific Conductance |      | 3.66    | µMHOS/cm |                 |

Method Blank            QCBatch:    QC20396

| Param        | Flag | Results | Units | Reporting Limit |
|--------------|------|---------|-------|-----------------|
| ferrous iron |      | 0.28    | mg/Kg |                 |

Method Blank            QCBatch:    QC20502

| Param     | Flag | Results | Units | Reporting Limit |
|-----------|------|---------|-------|-----------------|
| Bromide   |      | <0.2    | mg/Kg | 0.50            |
| Nitrate-N |      | <0.2    | mg/Kg | 0.20            |
| Phosphate |      | <0.5    | mg/Kg | 1               |

Method Blank            QCBatch:    QC20521

| Param                  | Flag | Results | Units          | Reporting Limit |
|------------------------|------|---------|----------------|-----------------|
| Hydroxide Alkalinity   |      | <1.0    | mg/Kg as CaCo3 | 1               |
| Carbonate Alkalinity   |      | <1.0    | mg/Kg as CaCo3 | 1               |
| Bicarbonate Alkalinity |      | <4.0    | mg/Kg as CaCo3 | 1               |
| Total Alkalinity       |      | <4.0    | mg/Kg as CaCo3 | 1               |

### Quality Control Report Duplicate Samples

Duplicate            QCBatch:    QC20336

| Param                | Flag | Duplicate Result | Sample Result | Units    | Dilution | RPD | RPD Limit |
|----------------------|------|------------------|---------------|----------|----------|-----|-----------|
| Specific Conductance |      | 34165            | 34700         | µMHOS/cm | 1        | 1   | 4.3       |

Duplicate            QCBatch:    QC20343

| Param | Flag | Duplicate Result | Sample Result | Units | Dilution | RPD | RPD Limit |
|-------|------|------------------|---------------|-------|----------|-----|-----------|
| FOC   |      | 0.78             | 0.72          | %     | 1        | 8   | 72        |

Duplicate QCBatch: QC20389

| Param | Flag | Duplicate Result | Sample Result | Units | Dilution | RPD | RPD Limit |
|-------|------|------------------|---------------|-------|----------|-----|-----------|
| pH    |      | 8.4              | 8.4           | s.u.  | 1        | 0   | 1         |

Duplicate QCBatch: QC20521

| Param                  | Flag | Duplicate Result | Sample Result | Units          | Dilution | RPD | RPD Limit |
|------------------------|------|------------------|---------------|----------------|----------|-----|-----------|
| Hydroxide Alkalinity   |      | <1.0             | <1.0          | mg/Kg as CaCo3 | 1        | 0   | 20        |
| Carbonate Alkalinity   |      | <1.0             | <1.0          | mg/Kg as CaCo3 | 1        | 0   | 20        |
| Bicarbonate Alkalinity |      | 58               | 60            | mg/Kg as CaCo3 | 1        | 3   | 20        |
| Total Alkalinity       |      | 58               | 60            | mg/Kg as CaCo3 | 1        | 3   | 20        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC20502

| Param     | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Bromide   | 2.51       | 2.43        | mg/Kg | 1    | 2.50               | <0.2          | 100   | 3   | 90 - 110    | 20        |
| Nitrate-N | 2.53       | 2.53        | mg/Kg | 1    | 2.50               | <0.2          | 101   | 0   | 90 - 110    | 20        |
| Phosphate | 12.50      | 12.74       | mg/Kg | 1    | 12.50              | <0.5          | 100   | 1   | 90 - 110    | 20        |

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

### Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes QCBatch: QC20502

| Param     | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-----------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Bromide   | 5.00      | 5.07       | mg/Kg | 1    | 5                  | <0.2          | 100   | 1   | 88 - 116    | 20        |
| Nitrate-N | 5.49      | 5.37       | mg/Kg | 1    | 5                  | 0.73          | 95    | 2   | 53 - 130    | 20        |
| Phosphate | 24.99     | 24.77      | mg/Kg | 1    | 25                 | <0.5          | 99    | 0   | 83 - 118    | 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:    QC20336

| Param                | Flag | Units    | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|----------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Specific Conductance |      | μMHOS/cm | 1412                  | 1393                   | 98                          | 90 - 110                      | 5/14/02          |

ICV (1)            QCBatch:    QC20336

| Param                | Flag | Units    | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|----------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Specific Conductance |      | μMHOS/cm | 1409                  | 1403                   | 99                          | 90 - 110                      | 5/14/02          |

CCV (1)            QCBatch:    QC20389

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| pH    |      | s.u.  | 7                     | 7.0                    | 100                         | -0.1 s.u. - +0.1 s.u.         | 5/14/02          |

ICV (1)            QCBatch:    QC20389

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| pH    |      | s.u.  | 7                     | 7.0                    | 100                         | -0.1 s.u. - +0.1 s.u.         | 5/14/02          |

CCV (1)            QCBatch:    QC20502

| Param     | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Bromide   |      | mg/Kg | 2.50                  | 2.52                   | 100                         | 90 - 110                      | 5/14/02          |
| Nitrate-N |      | mg/Kg | 2.50                  | 2.36                   | 94                          | 90 - 110                      | 5/14/02          |
| Phosphate |      | mg/Kg | 12.50                 | 12.25                  | 98                          | 90 - 110                      | 5/14/02          |

ICV (1)            QCBatch:    QC20502

| Param     | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Bromide   |      | mg/Kg | 2.50            | 2.41             | 96                    | 90 - 110                | 5/14/02       |
| Nitrate-N |      | mg/Kg | 2.50            | 2.36             | 94                    | 90 - 110                | 5/14/02       |
| Phosphate |      | mg/Kg | 12.50           | 12.14            | 97                    | 90 - 110                | 5/14/02       |

CCV (1)            QCBatch:    QC20521

| Param                  | Flag | Units          | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|----------------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Hydroxide Alkalinity   |      | mg/kg as CaCo3 | 0               | <1.0             | 0                     | 90 - 110                | 5/21/02       |
| Carbonate Alkalinity   |      | mg/Kg as CaCo3 | 0               | 224              | 0                     | 90 - 110                | 5/21/02       |
| Bicarbonate Alkalinity |      | mg/Kg as CaCo3 | 0               | 22               | 0                     | 90 - 110                | 5/21/02       |
| Total Alkalinity       |      | mg/Kg as CaCo3 | 250             | 246              | 98                    | 90 - 110                | 5/21/02       |

ICV (1)            QCBatch:    QC20521

| Param                  | Flag | Units          | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|----------------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Hydroxide Alkalinity   |      | mg/Kg as CaCo3 | 0               | <1.0             | 0                     | 90 - 110                | 5/21/02       |
| Carbonate Alkalinity   |      | mg/Kg as CaCo3 | 0               | 224              | 0                     | 90 - 110                | 5/21/02       |
| Bicarbonate Alkalinity |      | mg/Kg as CaCo3 | 0               | 22               | 0                     | 90 - 110                | 5/21/02       |
| Total Alkalinity       |      | mg/Kg as CaCo3 | 250             | 246              | 98                    | 90 - 110                | 5/21/02       |

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

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

**Trace Analysis, Inc.**

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

LAB Order ID # **A020218**

Company Name: **Environ Services Inc**  
Address: (Street, City, Zip)  
**306 West Wall, Suite 1312, Midland Tx 79701**

Phone #: **915-570-8726**  
Fax #: **915-684-7587**

Contact Person: **Jeffrey Kindley**  
Voice to: **Jeffrey Kindley**  
if different from above) **Kyle Landonan**  
Project #: **EQ-112**  
Project Name: **Barben Lease / Ranch**  
Sampler Signature: **Jeffrey Kindley**

Project Location: **Barben Lease, Lea County, New Mexico**  
Matrix: **EQUIVA**  
# CONTAINERS: **1**

| LAB #<br>LAB USE ONLY | FIELD CODE    | Volume/Amount | MATRIX |      |     | PRESERVATIVE METHOD |     |                  |                                | SAMPLING DATE | TIME |
|-----------------------|---------------|---------------|--------|------|-----|---------------------|-----|------------------|--------------------------------|---------------|------|
|                       |               |               | WATER  | SOIL | AIR | SLUDGE              | HCl | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> |               |      |
| 71                    | MW-1 (13-15') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1305 |
| 72                    | MW-1 (23-25') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1325 |
| 73                    | MW-2 (13-15') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1612 |
| 74                    | MW-2 (23-25') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1450 |
| 75                    | MW-3 (13-15') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1125 |
| 76                    | MW-3 (18-20') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1130 |
| 77                    | MW-4 (13-15') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1700 |
| 78                    | MW-4 (28-30') | 4oz           | ✓      | ✓    | ✓   | ✓                   | ✓   | ✓                | ✓                              | 4/18/02       | 1730 |

Relinquished by: **Jeffrey Kindley** Date: **April 30, 2002** Time: **1800**  
 Received by: **Mike Dun** Date: **5:02** Time: **10:00**

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received at Laboratory by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

ANALYSIS REQUEST (Circle or Specify Method No.)

| TPH 418.1/TX1005 | TPH 8021B/602 | MTBE 8021B/602 | 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 (TX 1005) extend to 638K* on report |   |
|------------------|---------------|----------------|-----------|--|-------------------------------------|----------------|---------------------|-----------------|-----|----------------------|----------------------------|----------------|----------------------|--------------|---|---|
| ✓                | ✓             | ✓              | ✓         | ✓  | ✓                                   | ✓              | ✓                   | ✓               | ✓   | ✓                    | ✓                          | ✓              | ✓                    | ✓            | ✓                                       | TPH (TX 1005) extend to 638K* on report |

LAB USE ONLY

Intact:  Y /  N  
 Headspace:  Y /  N  
 Temp: **2**  
 Log-in Review:  Y

REMARKS:  
 \* Need 3 day turnaround on TPH (080/620) 5/17/02  
 Phone results to: 915-631-6591 → Jeff Kindley  
 Check if Special Reporting Limits Are Needed   
 and 972-484-3854 → Bennett  
 Carrier # \*\* Please call after TPH (080/620) Howell

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 9028779287

916 260-61

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

# Trace Analysis, Inc.

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

Company Name: ENVIRON Services Inc.  
Address: (Street, City, Zip)  
306 West Wall, Suite 1312, Midland, Tx 79701  
Phone #: 915-570-8726  
Fax #: 915-684-7587  
Contact Person: Jeffrey Kindley  
Voice to: Equiva Services  
different from above) Kyle Henderson  
Project #: EQ-112  
Project Name: Barber Ranch  
Sampler Signature: Jeffrey Kindley  
Project Location: Lea County, New Mexico

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0050309

### ANALYSIS REQUEST

(Circle or Specify Method No.)

|  |   |
|--|---|
| GC/MS Vol. 8260B/624                             |   |
| GC/MS Semi. Vol. 8270C/625                       |   |
| PCB's 8082/608                                   |   |
| Pesticides 8081A/608                             |   |
| BOD, TSS, PH                                     |   |
| TCLP Volatiles                                   |   |
| TCLP Semi Volatiles                              |   |
| TCLP Pesticides                                  |   |
| RCI  |   |
| 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                                  |   |
| PAH 8270C  |   |
| MTBE 8021B/602                                   | ✓ |
| BTEX 8021B/602                                   | ✓ |
| TRH 418 TX1005                                   | ✓ |

Extend to C38 on report  
Cadmium (at A14 310.1 med)  
Benzene/Phenol/Nitro (TC-300 Gen)  
Hexous Iron (cell-3500 FED)

Turn Around Time if different from standard

| LAB #<br>LAB USE ONLY | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX |      |     |        |     |                  | PRESERVATIVE METHOD            |      |     |      | SAMPLING TIME |      |
|-----------------------|------------|--------------|---------------|--------|------|-----|--------|-----|------------------|--------------------------------|------|-----|------|---------------|------|
|                       |            |              |               | WATER  | SOIL | AIR | SLUDGE | HCl | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE | NONE |               | DATE |
| 916210                | MW-3       | 3            | 40ml          | ✓      |      |     |        | ✓   |                  |                                |      |     |      | 05/10/02      | 1300 |
|                       | MW-3       | 1            | 1Ltr          | ✓      |      |     |        |     | ✓                |                                |      |     |      | 05/10/02      | 1300 |
| 216                   | MW-4       | 6            | 40ml          | ✓      |      |     |        | ✓   |                  |                                |      |     |      | 05/10/02      | 1500 |
|                       | MW-4       | 1            | 1Ltr          | ✓      |      |     |        |     | ✓                |                                |      |     |      | 05/10/02      | 1500 |
|                       | MW-4       | 1            | 1Ltr          | ✓      |      |     |        |     | ✓                |                                |      |     |      | 05/10/02      | 1500 |

Relinquished by: Jeffrey Kindley Date: May 1, 2002 Time: 1800  
Received by: Jeffrey Kindley Date: 5-3-02 Time: 10:00  
Relinquished by: Jeffrey Kindley Date: 5-3-02 Time: 10:00  
Received by: Jeffrey Kindley Date: 5-3-02 Time: 10:00

LAB USE ONLY  
Intact Q / N  
Headspace Y / N  
Temp 2  
Log-in Review M

REMARKS: 5/14/02  
PJF

Carrier # TMM40 912-877-938-4

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



Report Date: May 13, 2002 Order Number: A02050309  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 2  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 13, 2002

Order ID Number: A02050309

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 196260 | MW-3        | Water  | 5/1/02     | 13:00      | 5/3/02        |
| 196261 | MW-4        | Water  | 5/1/02     | 15:00      | 5/3/02        |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

| Sample - Field Code | BTEX          |               |                    |                    |                  | Extended TX1005 |                |              |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|-----------------|----------------|--------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | C6-C12 (ppm)    | >C12-C35 (ppm) | C6-C35 (ppm) |
| 196260 - MW-3       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           | -               | -              | -            |
| 196261 - MW-4       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           | <5.00           | <5.00          | <5.00        |

### Sample: 196260 - MW-3

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

Continued on next page ...

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

Report Date: May 13, 2002 Order Number: A02050309  
EQ-112 Barber Ranch 3000109

Page Number: 2 of 2  
Barber Lea County, New Mexico

Sample 196260 continued ...

| Param         | Flag | Result  | Units |
|---------------|------|---------|-------|
| Test Comments |      | <0.0002 | mg/L  |

**Sample: 196261 - MW-4**

| Param                  | Flag | Result  | Units         |
|------------------------|------|---------|---------------|
| Hydroxide Alkalinity   |      | <1.0    | mg/L as CaCo3 |
| Carbonate Alkalinity   |      | <1.0    | mg/L as CaCo3 |
| Bicarbonate Alkalinity |      | 402     | mg/L as CaCo3 |
| Total Alkalinity       |      | 402     | mg/L as CaCo3 |
| ferrous iron           | 1    | 0.28    | mg/L          |
| Bromide                |      | 1.25    | mg/L          |
| Nitrate-N              | 2    | 1.87    | mg/L          |
| Naphthalene            |      | <0.0002 | mg/L          |
| Acenaphthylene         |      | <0.0002 | mg/L          |
| Acenaphthene           |      | <0.0002 | mg/L          |
| Fluorene               |      | <0.0002 | mg/L          |
| Phenanthrene           |      | <0.0002 | mg/L          |
| Anthracene             |      | <0.0002 | mg/L          |
| Fluoranthene           |      | <0.0002 | mg/L          |
| Pyrene                 |      | <0.0002 | mg/L          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L          |
| Chrysene               |      | <0.0002 | mg/L          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L          |
| Test Comments          |      | <0.0002 | mg/L          |
| PO4-P                  |      | < 0.04  | mg/L          |

<sup>1</sup>Sample was received out of holding time.

<sup>2</sup>Matrix spikes RPD = 0. %EA = 95.

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

# TRACE ANALYSIS, 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: May 13, 2002

Order ID Number: A02050309

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|-------------|--------|------------|------------|---------------|
| 196260 | MW-3        | Water  | 5/1/02     | 13:00      | 5/3/02        |
| 196261 | MW-4        | Water  | 5/1/02     | 15:00      | 5/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 11 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: 196260 - MW-3**

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC20068      Date Analyzed: 5/3/02  
Analyst: CG      Preparation Method: N/A      Prep Batch: PB19235      Date Prepared: 5/3/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0881 | mg/L  | 1        | 0.10         | 88               | 70 - 130        |
| 4-BFB     |      | 0.090  | mg/L  | 1        | 0.10         | 90               | 70 - 130        |

**Sample: 196260 - MW-3**

Analysis: PAH      Analytical Method: S 8270C      QC Batch: QC20211      Date Analyzed: 5/7/02  
Analyst: RC      Preparation Method: E 3510C      Prep Batch: PB19287      Date Prepared: 5/7/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Test Comments          |      | <0.0002 | mg/L  | 1        |        |

| Surrogate       | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5 |      | 31.21  | mg/L  | 1        | 80           | 39               | 35 - 114        |
| Fluorobiphenyl  |      | 32.51  | mg/L  | 1        | 80           | 40               | 43 - 116        |
| Terphenyl-d14   |      | 34.44  | mg/L  | 1        | 80           | 43               | 33 - 141        |

**Sample: 196261 - MW-4**

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20078 Date Analyzed: 5/3/02  
 Analyst: RS Preparation Method: N/A Prep Batch: PB19249 Date Prepared: 5/3/02

| Param                  | Flag | Result | Units         | Dilution | RDL |
|------------------------|------|--------|---------------|----------|-----|
| Hydroxide Alkalinity   |      | <1.0   | mg/L as CaCo3 | 1        | 1   |
| Carbonate Alkalinity   |      | <1.0   | mg/L as CaCo3 | 1        | 1   |
| Bicarbonate Alkalinity |      | 402    | mg/L as CaCo3 | 1        | 1   |
| Total Alkalinity       |      | 402    | mg/L as CaCo3 | 1        | 1   |

**Sample: 196261 - MW-4**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20068 Date Analyzed: 5/3/02  
 Analyst: CG Preparation Method: S 5030B Prep Batch: PB19235 Date Prepared: 5/3/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0801 | mg/L  | 1        | 0.10         | 80               | 70 - 130        |
| 4-BFB     |      | 0.0838 | mg/L  | 1        | 0.10         | 84               | 70 - 130        |

**Sample: 196261 - MW-4**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20117 Date Analyzed: 5/3/02  
 Analyst: MM Preparation Method: N/A Prep Batch: PB19281 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <5.00  | mg/L  | 0.10     | 50  |
| >C12-C35 |      | <5.00  | mg/L  | 0.10     | 50  |
| C6-C35   |      | <5.00  | mg/L  | 0.10     | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 14.9   | mg/L  | 1        | 15           | 99               | 70 - 130        |

**Sample: 196261 - MW-4**

Analysis: Ferrous Iron Analytical Method: Hach IR-1 QC Batch: QC20065 Date Analyzed: 5/3/02  
 Analyst: JSW Preparation Method: N/A Prep Batch: PB19231 Date Prepared: 5/3/02

| Param        | Flag | Result | Units | Dilution | RDL  |
|--------------|------|--------|-------|----------|------|
| ferrous iron | 1    | 0.28   | mg/L  | 1        | 0.01 |

<sup>1</sup>Sample was received out of holding time.

**Sample: 196261 - MW-4**

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20140 Date Analyzed: 5/3/02  
Analyst: JSW Preparation Method: N/A Prep Batch: PB19295 Date Prepared: 5/3/02

| Param     | Flag | Result | Units | Dilution | RDL  |
|-----------|------|--------|-------|----------|------|
| Bromide   |      | 1.25   | mg/L  | 5        | 0.20 |
| Nitrate-N | 2    | 1.87   | mg/L  | 5        | 0.20 |

**Sample: 196261 - MW-4**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20211 Date Analyzed: 5/7/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19287 Date Prepared: 5/7/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Test Comments          |      | <0.0002 | mg/L  | 1        |        |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 32.01  | mg/L  | 1        | 80           | 40               | 35 - 114        |
| 2-Fluorobiphenyl |      | 33.92  | mg/L  | 1        | 80           | 42               | 43 - 116        |
| Terphenyl-d14    |      | 29.48  | mg/L  | 1        | 80           | 36               | 33 - 141        |

**Sample: 196261 - MW-4**

Analysis: PO4 Analytical Method: E 300.0 QC Batch: QC20139 Date Analyzed: 5/3/02  
Analyst: JSW Preparation Method: N/A Prep Batch: PB19294 Date Prepared: 5/3/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| PO4-P |      | < 0.04 | mg/L  | 1        | 0.04 |

<sup>2</sup>Matrix spikes RPD = 0. %EA = 95.

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20065

| Param        | Flag | Results | Units | Reporting Limit |
|--------------|------|---------|-------|-----------------|
| ferrous iron |      | 0.28    | mg/L  | 0.01            |

Method Blank            QCBatch:    QC20068

| 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       |      | 0.104  | mg/L  | 1        | 0.10         | 104              | 70 - 130        |
| 4-BFB     |      | 0.102  | mg/L  | 1        | 0.10         | 102              | 70 - 130        |

Method Blank            QCBatch:    QC20078

| Param                  | Flag | Results | Units         | Reporting Limit |
|------------------------|------|---------|---------------|-----------------|
| Hydroxide Alkalinity   |      | <1.0    | mg/L as CaCo3 | 1               |
| Carbonate Alkalinity   |      | <1.0    | mg/L as CaCo3 | 1               |
| Bicarbonate Alkalinity |      | <4.0    | mg/L as CaCo3 | 1               |
| Total Alkalinity       |      | <4.0    | mg/L as CaCo3 | 1               |

Method Blank            QCBatch:    QC20117

| Param    | Flag | Results | Units | Reporting Limit |
|----------|------|---------|-------|-----------------|
| C6-C12   |      | <5.00   | mg/L  | 50              |
| >C12-C35 |      | <5.00   | mg/L  | 50              |
| C6-C35   |      | <5.00   | mg/L  | 50              |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 15.3   | mg/L  | 0.10     | 15           | 102              | 70 - 130        |

Method Blank                    QCBatch:    QC20139

| Param | Flag | Results | Units | Reporting Limit |
|-------|------|---------|-------|-----------------|
| PO4-P |      | <0.0131 | mg/L  | 0.04            |

Method Blank                    QCBatch:    QC20140

| Param     | Flag | Results | Units | Reporting Limit |
|-----------|------|---------|-------|-----------------|
| Bromide   |      | <0.2    | mg/L  | 0.20            |
| Nitrate-N |      | <0.2    | mg/L  | 0.20            |

Method Blank                    QCBatch:    QC20211

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |
| Test Comments          |      | <0.0002 | mg/L  |                 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 89.97  | mg/L  | 1        | 80           | 112              | 35 - 114        |
| 2-Fluorobiphenyl |      | 96.41  | mg/L  | 1        | 80           | 120              | 43 - 116        |
| Terphenyl-d14    |      | 86     | mg/L  | 1        | 80           | 107              | 33 - 141        |

### Quality Control Report Duplicate Samples

Duplicate                    QCBatch:    QC20078



| Param                  | Flag | Duplicate Result | Sample Result | Units         | Dilution | RPD | RPD Limit |
|------------------------|------|------------------|---------------|---------------|----------|-----|-----------|
| Hydroxide Alkalinity   |      | <1.0             | <1.0          | mg/L as CaCo3 | 1        | 0   | 6.6       |
| Carbonate Alkalinity   |      | <1.0             | <1.0          | mg/L as CaCo3 | 1        | 0   | 6.6       |
| Bicarbonate Alkalinity |      | 46               | 48            | mg/L as CaCo3 | 1        | 4   | 6.6       |
| Total Alkalinity       |      | 46               | 48            | mg/L as CaCo3 | 1        | 4   | 6.6       |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

#### Laboratory Control Spikes

QCBatch: QC20068

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0984     | 0.102       | mg/L  | 1    | 0.10               | <0.001        | 98    | 4   | 70 - 130    | 20        |
| Benzene      | 0.101      | 0.100       | mg/L  | 1    | 0.10               | <0.001        | 101   | 1   | 70 - 130    | 20        |
| Toluene      | 0.099      | 0.0993      | mg/L  | 1    | 0.10               | <0.001        | 99    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.0995     | 0.103       | mg/L  | 1    | 0.10               | <0.001        | 100   | 3   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.298      | 0.307       | mg/L  | 1    | 0.30               | <0.001        | 99    | 3   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.104      | 0.0982      | mg/L  | 1        | 0.10         | 104       | 98         | 70 - 130        |
| 4-BFB     | 0.101      | 0.0977      | mg/L  | 1        | 0.10         | 101       | 98         | 70 - 130        |

#### Laboratory Control Spikes

QCBatch: QC20117

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12   | 24.6       | 23.8        | mg/L  | 0.10 | 250                | <5.00         | 98    | 3   | 70 - 130    | 20        |
| >C12-C35 | 24.9       | 24.4        | mg/L  | 0.10 | 250                | <5.00         | 99    | 2   | 70 - 130    | 20        |
| C6-C35   | 49.5       | < 50        | mg/L  | 0.10 | 500                | <5.00         | 99    | 2   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 16.2       | 15.5        | mg/L  | 0.10     | 15           | 108       | 103        | 70 - 130        |

#### Laboratory Control Spikes

QCBatch: QC20139

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| PO4-P | 0.0591     | 0.0580      | mg/L  | 1    | 0.06               | <0.0131       | 90    | 1   | 90 - 120    | 20        |

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

**Laboratory Control Spikes**

QCBatch: QC20140

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Chloride | 11.93      | 11.95       | mg/L  | 1    | 12.50              | <2.0          | 95    | 0   | 90 - 110    | 20        |
| Sulfate  | 12.27      | 12.32       | mg/L  | 1    | 12.50              | <2.0          | 98    | 0   | 90 - 110    | 20        |

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

**Laboratory Control Spikes**

QCBatch: QC20211

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 16.53      | 39.82       | mg/L  | 1    | 80                 | <0.0002       | 20    | 82  | 16 - 96     | 20        |
| Acenaphthylene         | 18.7       | 47.23       | mg/L  | 1    | 80                 | <0.0002       | 23    | 86  | 20 - 110    | 20        |
| Acenaphthene           | 17.36      | 45.28       | mg/L  | 1    | 80                 | <0.0002       | 21    | 89  | 18 - 108    | 20        |
| Fluorene               | 17.6       | 47.76       | mg/L  | 1    | 80                 | <0.0002       | 22    | 92  | 22 - 102    | 20        |
| Phenanthrene           | 16.33      | 48.56       | mg/L  | 1    | 80                 | <0.0002       | 20    | 99  | 25 - 103    | 20        |
| Anthracene             | 16.68      | 50.28       | mg/L  | 1    | 80                 | <0.0002       | 20    | 100 | 22 - 110    | 20        |
| Fluoranthene           | 21.35      | 65.13       | mg/L  | 1    | 80                 | <0.0002       | 26    | 101 | 21 - 110    | 20        |
| Pyrene                 | 31.23      | 55.82       | mg/L  | 1    | 80                 | <0.0002       | 39    | 56  | 22 - 100    | 20        |
| Benzo(a)anthracene     | 29.98      | 54.52       | mg/L  | 1    | 80                 | <0.0002       | 37    | 58  | 30 - 99     | 20        |
| Chrysene               | 26.95      | 49.62       | mg/L  | 1    | 80                 | <0.0002       | 33    | 59  | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 44.89      | 60.98       | mg/L  | 1    | 80                 | <0.0002       | 56    | 30  | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 51.42      | 62.36       | mg/L  | 1    | 80                 | <0.0002       | 64    | 19  | 35 - 103    | 20        |
| Benzo(a)pyrene         | 48.44      | 61.65       | mg/L  | 1    | 80                 | <0.0002       | 60    | 23  | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 35.08      | 50.52       | mg/L  | 1    | 80                 | <0.0002       | 43    | 36  | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 31.71      | 40.79       | mg/L  | 1    | 80                 | <0.0002       | 39    | 25  | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 41.14      | 53.31       | mg/L  | 1    | 80                 | <0.0002       | 51    | 25  | 19 - 119    | 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  | 29.1       | 69.05       | mg/L  | 1        | 80           | 36        | 86         | 35 - 114        |
| 2-Fluorobiphenyl | 29.93      | 74.73       | mg/L  | 1        | 80           | 37        | 93         | 43 - 116        |
| Terphenyl-d14    | 51.05      | 90.12       | mg/L  | 1        | 80           | 63        | 112        | 33 - 141        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**

QCBatch: QC20139

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| PO4-P | 0.0974    | 0.0916     | mg/L  | 1    | 0.06               | 0.0359        | 94    | 9   | 80 - 135    | 20        |

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

**Matrix Spikes**

QCBatch: QC20140

| Param   | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|---------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Bromide | 3.29      | 3.30       | mg/L  | 1    | 1.25               | 1.92          | 104   | 0   | 84 - 110    | 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:    QC20068

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0932           | 93                    | 85 - 115                | 5/3/02        |
| Benzene      |      | mg/L  | 0.10            | 0.0977           | 98                    | 85 - 115                | 5/3/02        |
| Toluene      |      | mg/L  | 0.10            | 0.0961           | 96                    | 85 - 115                | 5/3/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0967           | 97                    | 85 - 115                | 5/3/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.290            | 97                    | 85 - 115                | 5/3/02        |

CCV (2)      QCBatch:    QC20068

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.096            | 96                    | 85 - 115                | 5/3/02        |
| Benzene      |      | mg/L  | 0.10            | 0.102            | 102                   | 85 - 115                | 5/3/02        |
| Toluene      |      | mg/L  | 0.10            | 0.1              | 100                   | 85 - 115                | 5/3/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.103            | 103                   | 85 - 115                | 5/3/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.302            | 100                   | 85 - 115                | 5/3/02        |

ICV (1)      QCBatch:    QC20068

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.1134           | 113                   | 85 - 115                | 5/3/02        |
| Benzene      |      | mg/L  | 0.10            | 0.113            | 113                   | 85 - 115                | 5/3/02        |
| Toluene      |      | mg/L  | 0.10            | 0.108            | 108                   | 85 - 115                | 5/3/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.108            | 108                   | 85 - 115                | 5/3/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.322            | 107                   | 85 - 115                | 5/3/02        |

CCV (1)      QCBatch:    QC20078

| Param                  | Flag | Units         | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|---------------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Hydroxide Alkalinity   |      | mg/L as CaCo3 | 0               | <1.0             | 0                     | 90 - 110                | 5/3/02        |
| Carbonate Alkalinity   |      | mg/L as CaCo3 | 0               | 232              | 0                     | 90 - 110                | 5/3/02        |
| Bicarbonate Alkalinity |      | mg/L as CaCo3 | 0               | 10               | 0                     | 90 - 110                | 5/3/02        |
| Total Alkalinity       |      | mg/L as CaCo3 | 250             | 242              | 96                    | 90 - 110                | 5/3/02        |

ICV (1)      QCBatch:    QC20078

| Param                  | Flag | Units         | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|---------------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Hydroxide Alkalinity   |      | mg/L as CaCo3 | 0               | <1.0             | 0                     | 90 - 110                | 5/3/02        |
| Carbonate Alkalinity   |      | mg/L as CaCo3 | 0               | 228              | 0                     | 90 - 110                | 5/3/02        |
| Bicarbonate Alkalinity |      | mg/L as CaCo3 | 0               | 16               | 0                     | 90 - 110                | 5/3/02        |
| Total Alkalinity       |      | mg/L as CaCo3 | 250             | 244              | 97                    | 90 - 110                | 5/3/02        |

CCV (1)      QCBatch:    QC20117

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/L  | 250             | 231              | 92                    | 75 - 125                | 5/3/02        |
| >C12-C35 |      | mg/L  | 250             | 238              | 95                    | 75 - 125                | 5/3/02        |
| C6-C35   |      | mg/L  | 500             | 469              | 93                    | 75 - 125                | 5/3/02        |

ICV (1)      QCBatch:    QC20117

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/L  | 250             | 219              | 87                    | 75 - 125                | 5/3/02        |
| >C12-C35 |      | mg/L  | 250             | 228              | 91                    | 75 - 125                | 5/3/02        |
| C6-C35   |      | mg/L  | 500             | 447              | 89                    | 75 - 125                | 5/3/02        |

CCV (1)      QCBatch:    QC20139

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| PO4-P |      | mg/L  | 0.06            | 0.0638           | 97                    | 85 - 115                | 5/3/02        |

ICV (1)      QCBatch:    QC20139

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| PO4-P |      | mg/L  | 0.06            | 0.0626           | 95                    | 85 - 115                | 5/3/02        |

CCV (1)            QCBatch:    QC20140

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Chloride |      | mg/L  | 12.50           | 11.98            | 95                    | 90 - 110                | 5/3/02        |
| Sulfate  |      | mg/L  | 12.50           | 12.48            | 99                    | 90 - 110                | 5/3/02        |

ICV (1)            QCBatch:    QC20140

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Chloride |      | mg/L  | 12.50           | 12.04            | 96                    | 90 - 110                | 5/3/02        |
| Sulfate  |      | mg/L  | 12.50           | 12.50            | 100                   | 90 - 110                | 5/3/02        |

CCV (1)            QCBatch:    QC20211

| Param                  | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Naphthalene            |      | mg/L  | 60              | 60.51            | 100                   | 80 - 120                | 5/7/02        |
| Acenaphthylene         |      | mg/L  | 60              | 63.27            | 105                   | 80 - 120                | 5/7/02        |
| Acenaphthene           |      | mg/L  | 60              | 61.09            | 101                   | 80 - 120                | 5/7/02        |
| Fluorene               |      | mg/L  | 60              | 60.09            | 100                   | 80 - 120                | 5/7/02        |
| Phenanthrene           |      | mg/L  | 60              | 53.08            | 88                    | 80 - 120                | 5/7/02        |
| Anthracene             |      | mg/L  | 60              | 54.12            | 90                    | 80 - 120                | 5/7/02        |
| Fluoranthene           |      | mg/L  | 60              | 65.02            | 108                   | 80 - 120                | 5/7/02        |
| Pyrene                 |      | mg/L  | 60              | 60.27            | 100                   | 80 - 120                | 5/7/02        |
| Benzo(a)anthracene     |      | mg/L  | 60              | 60.83            | 101                   | 80 - 120                | 5/7/02        |
| Chrysene               |      | mg/L  | 60              | 58.92            | 98                    | 80 - 120                | 5/7/02        |
| Benzo(b)fluoranthene   |      | mg/L  | 60              | 64.67            | 107                   | 80 - 120                | 5/7/02        |
| Benzo(k)fluoranthene   |      | mg/L  | 60              | 60.34            | 100                   | 80 - 120                | 5/7/02        |
| Benzo(a)pyrene         |      | mg/L  | 60              | 62.7             | 104                   | 80 - 120                | 5/7/02        |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60              | 53.8             | 89                    | 80 - 120                | 5/7/02        |
| Dibenzo(a,h)anthracene |      | mg/L  | 60              | 53.89            | 89                    | 80 - 120                | 5/7/02        |
| Benzo(g,h,i)perylene   |      | mg/L  | 60              | 53.55            | 89                    | 80 - 120                | 5/7/02        |
| Nitrobenzene-d5        |      | mg/L  | 60              | 62.25            | 103                   | 80 - 120                | 5/7/02        |
| Fluorobiphenyl         |      | mg/L  | 60              | 63.85            | 106                   | 80 - 120                | 5/7/02        |
| terphenyl-d14          |      | mg/L  | 60              | 59.23            | 98                    | 80 - 120                | 5/7/02        |

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1 (800) 378-1296

# Trace Analysis, Inc.

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

Company Name: Environ Services Inc Phone #: 915-570-8726  
 Address: 306 West Wesley, Suite 1312, Midland, TX 79701 Fax #: 915-684-7587  
 Contact Person: Jeffrey Kindley  
 Invoice to: Kyle Landrenew  
 (different from above) Equiva Services  
 Project #: EQ-112 Incident #: 300109  
 Project Name: Barber Ranch  
 Sampler Signature: Jeffrey Kindley

| LAB #<br>LAB USE ONLY | FIELD CODE    | # CONTAINERS | Volume/Amount | MATRIX |      |     |        |     |                  | PRESERVATIVE METHOD | SAMPLING                       |          |      |
|-----------------------|---------------|--------------|---------------|--------|------|-----|--------|-----|------------------|---------------------|--------------------------------|----------|------|
|                       |               |              |               | WATER  | SOIL | AIR | SLUDGE | HCl | HNO <sub>3</sub> |                     | H <sub>2</sub> SO <sub>4</sub> | NaOH     | ICE  |
| 263                   | MW-5 (8-10')  | 1            | 4oz           | ✓      |      |     |        |     |                  |                     |                                | 05/10/02 | 1418 |
|                       | MW-5 (28-30') | 1            | 4oz           | ✓      |      |     |        |     |                  |                     |                                | 05/10/02 | 1518 |

Acquired by: Jeffrey Kindley Date: May 2002 Time: 1800  
 Acquired by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received at Laboratory by: Jeffrey Kindley Date: 5-30-02 Time: 10:20 AM

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD0503 (P)

### ANALYSIS REQUEST

(Circle or Specify Method No.)

|                                     |  |   |
|-------------------------------------|--|---|
| <input type="checkbox"/>            | MTBE 8021B/602                                   | ✓ |
| <input type="checkbox"/>            | BTEX 8021B/602                                   | ✓ |
| <input type="checkbox"/>            | TPH 418.1/TX1005                                 |   |
| <input type="checkbox"/>            | PAH 8270C  |   |
| <input type="checkbox"/>            | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 |   |
| <input type="checkbox"/>            | TCLP Metals Ag As Ba Cd Cr Pb Se Hg              |   |
| <input type="checkbox"/>            | TCLP Semi Volatiles                              |   |
| <input type="checkbox"/>            | TCLP Volatiles                                   |   |
| <input type="checkbox"/>            | GC/MS Vol. 8260B/624                             |   |
| <input type="checkbox"/>            | GC/MS Semi. Vol. 8270C/625                       |   |
| <input type="checkbox"/>            | PCBs 8082/608                                    |   |
| <input type="checkbox"/>            | Pesticides 8081A/608                             |   |
| <input type="checkbox"/>            | BOD, TSS, pH                                     |   |
| <input checked="" type="checkbox"/> | TPH (Delect) 8015 Modified *                     | ✓ |
| <input checked="" type="checkbox"/> | TPH (TX 1005) carried out to C-38                | ✓ |

LAB USE ONLY  
 Intact: Y/N  
 Headspace: Y/N  
 Temp: 2  
 Log-in Review: M

REMARKS:  
 \* Need 3 day Turnaround on TPH (Delect) (600) Phone results to: 915-631-6591  
 Jeff Kindley  
 And 972-484-3854 → Bennett Howell  
 Check if Special Reporting Limits Are Needed   
 PAF 5/7/02

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

ORIGINAL COPY

Report Date: May 6, 2002 Order Number: A02050310  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Monument, Lea County, New Mexico

## Summary Report

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

Report Date: May 6, 2002

Order ID Number: A02050310

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196262 | MW-5 (8-10')  | Soil   | 5/2/02     | 14:18      | 5/3/02        |
| 196263 | MW-5 (28-30') | Soil   | 5/2/02     | 15:18      | 5/3/02        |

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

| Sample - Field Code    | Extended TX1005 |                   |                 |
|------------------------|-----------------|-------------------|-----------------|
|                        | C6-C12<br>(ppm) | >C12-C35<br>(ppm) | C6-C35<br>(ppm) |
| 196262 - MW-5 (8-10')  | 251             | 320               | 571             |
| 196263 - MW-5 (28-30') | <50.0           | <50.0             | <50.0           |

Report Date: May 6, 2002 Order Number: A02050310

Page Number: 1 of 1

EQ-112

Barber Ranch 3000109

Monument, Lea County, New Mexico

## Summary Report

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

Report Date: May 6, 2002

Order ID Number: A02050310

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196262 | MW-5 (8-10')  | Soil   | 5/2/02     | 14:18      | 5/3/02        |
| 196263 | MW-5 (28-30') | Soil   | 5/2/02     | 15:18      | 5/3/02        |

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

| Sample - Field Code    | BTEX          |               |                    |                    |                  | Test Comments  | TPH DRO   | TPH GRO         |
|------------------------|---------------|---------------|--------------------|--------------------|------------------|----------------|-----------|-----------------|
|                        | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |                | DRO (ppm) | GRO (ppm)       |
| 196262 - MW-5 (8-10')  | <0.500        | <0.500        | 0.946              | 1.6                | 2.55             | * <sup>1</sup> | 374       | 497             |
| 196263 - MW-5 (28-30') | <0.020        | <0.020        | <0.020             | 0.04               | 0.040            | * <sup>2</sup> | <50.0     | <2 <sup>3</sup> |

<sup>1</sup> Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.1183 which is the MDL.

<sup>2</sup> Sample diluted due to lack of sample extract. Sample has a Benzene concentration of less than 0.0473 which is the MDL.

<sup>3</sup> Sample diluted due to lack of sample extract.

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



# TRACE ANALYSIS, INC.

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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: May 6, 2002

Order ID Number: A02050310

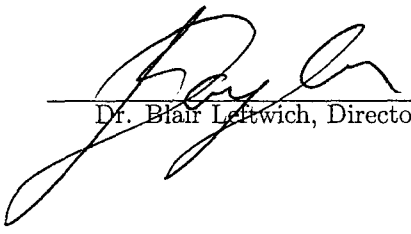
Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, Lea County, New Mexico  
Enercon Services Inc. / Midland / Jeff Kindley

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 |
|--------|---------------|--------|------------|------------|---------------|
| 196262 | MW-5 (8-10')  | Soil   | 5/2/02     | 14:18      | 5/3/02        |
| 196263 | MW-5 (28-30') | Soil   | 5/2/02     | 15:18      | 5/3/02        |

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

This report consists of a total of 4 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of Trace Analysis, Inc.

  
Dr. Blair Lettwich, Director

### Analytical Report

**Sample: 196262 - MW-5 (8-10')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | 251    | mg/Kg | 1        | 50  |
| >C12-C35 |      | 320    | mg/Kg | 1        | 50  |
| C6-C35   |      | 571    | mg/Kg | 1        | 50  |

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

**Sample: 196263 - MW-5 (28-30')**

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20095 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19255 Date Prepared: 5/2/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | <50.0  | mg/Kg | 1        | 50  |
| >C12-C35 |      | <50.0  | mg/Kg | 1        | 50  |
| C6-C35   |      | <50.0  | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 139    | mg/Kg | 1        | 150          | 93               | 70 - 130        |

### Quality Control Report Method Blank

Method Blank                      QCBatch:    QC20095

| Param    | Flag | Results | Units | Reporting Limit |
|----------|------|---------|-------|-----------------|
| C6-C12   |      | <50.0   | mg/Kg | 50              |
| >C12-C35 |      | <50.0   | mg/Kg | 50              |
| C6-C35   |      | <50.0   | mg/Kg | 50              |

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

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes                      QCBatch:    QC20095

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12   | 224        | 224         | mg/Kg | 1    | 250                | <50.0         | 89    | 0   | 70 - 130    | 20        |
| >C12-C35 | 225        | 225         | mg/Kg | 1    | 250                | <50.0         | 90    | 0   | 70 - 130    | 20        |
| C6-C35   | 449        | 449         | mg/Kg | 1    | 500                | <50.0         | 89    | 0   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 142        | 141         | mg/Kg | 1        | 150          | 95        | 94         | 70 - 130        |

### Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes                      QCBatch:    QC20095

| Param    | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12   | 199       | 195        | mg/Kg | 1    | 250                | <50.0         | 79    | 2   | 70 - 130    | 20        |
| >C12-C35 | 204       | 214        | mg/Kg | 1    | 250                | <50.0         | 81    | 4   | 70 - 130    | 20        |
| C6-C35   | 403       | 409        | mg/Kg | 1    | 500                | <50.0         | 80    | 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 | 135       | 143        | mg/Kg | 1        | 150          | 90       | 95        | 70 - 130        |

### Quality Control Report Continuing Calibration Verification Standards

CCV (1)            QCBatch:    QC20095

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/Kg | 250             | 243              | 97                    | 70 - 130                | 5/5/02        |
| >C12-C35 |      | mg/Kg | 250             | 244              | 97                    | 70 - 130                | 5/5/02        |
| C6-C35   |      | mg/Kg | 500             | 487              | 97                    | 70 - 130                | 5/5/02        |

CCV (2)            QCBatch:    QC20095

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/Kg | 250             | 224              | 89                    | 70 - 130                | 5/5/02        |
| >C12-C35 |      | mg/Kg | 250             | 228              | 91                    | 70 - 130                | 5/5/02        |
| C6-C35   |      | mg/Kg | 500             | 452              | 90                    | 70 - 130                | 5/5/02        |

ICV (1)            QCBatch:    QC20095

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/Kg | 250             | 224              | 89                    | 75 - 125                | 5/5/02        |
| >C12-C35 |      | mg/Kg | 250             | 225              | 90                    | 75 - 125                | 5/5/02        |
| C6-C35   |      | mg/Kg | 500             | 449              | 89                    | 75 - 125                | 5/5/02        |



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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: May 6, 2002

Order ID Number: A02050310

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, 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 |
|--------|---------------|--------|------------|------------|---------------|
| 196262 | MW-5 (8-10')  | Soil   | 5/2/02     | 14:18      | 5/3/02        |
| 196263 | MW-5 (28-30') | Soil   | 5/2/02     | 15:18      | 5/3/02        |

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

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 196262 - MW-5 (8-10')**

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC20071      Date Analyzed: 5/3/02  
Analyst: CG      Preparation Method: S 5035      Prep Batch: PB19238      Date Prepared: 5/3/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.500 | mg/Kg | 500      | 0.001 |
| Toluene       |      | <0.500 | mg/Kg | 500      | 0.001 |
| Ethylbenzene  |      | 0.946  | mg/Kg | 500      | 0.001 |
| M,P,O-Xylene  |      | 1.6    | mg/Kg | 500      | 0.001 |
| Total BTEX    |      | 2.55   | mg/Kg | 500      | 0.001 |
| Test Comments | 1    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 2    | 0.684  | mg/Kg | 500      | 1            | 68               | 70 - 130        |
| 4-BFB     | 3    | 7.39   | mg/Kg | 500      | 1            | 739              | 70 - 130        |

**Sample: 196262 - MW-5 (8-10')**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC20096      Date Analyzed: 5/5/02  
Analyst: MM      Preparation Method: 3550 B      Prep Batch: PB19256      Date Prepared: 5/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 374    | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 122    | mg/Kg | 1        | 150          | 81               | 70 - 130        |

**Sample: 196262 - MW-5 (8-10')**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC20072      Date Analyzed: 5/3/02  
Analyst: CG      Preparation Method: 5035      Prep Batch: PB19238      Date Prepared: 5/3/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 497    | mg/Kg | 500      | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 4    | 0.419  | mg/Kg | 500      | 0.10         | 42               | 70 - 130        |
| 4-BFB     | 5    | 27.5   | mg/Kg | 500      | 0.10         | 2750             | 70 - 130        |

<sup>1</sup>Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.1183 which is the MDL.

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV shows the method to be in control.

<sup>3</sup>High surrogate recovery due to peak interference.

<sup>4</sup>Low surrogate recovery due to matrix interference. ICV, CCV shows the method to be in control.

<sup>5</sup>High surrogate recovery due to peak interference.

**Sample: 196263 - MW-5 (28-30')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20071 Date Analyzed: 5/3/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19238 Date Prepared: 5/3/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Ethylbenzene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | 0.04   | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | 0.040  | mg/Kg | 20       | 0.001 |
| Test Comments | 6    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 7    | 0.602  | mg/Kg | 20       | 1            | 60               | 70 - 130        |
| 4-BFB     | 8    | 0.554  | mg/Kg | 20       | 1            | 55               | 70 - 130        |

**Sample: 196263 - MW-5 (28-30')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20096 Date Analyzed: 5/5/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19256 Date Prepared: 5/2/02

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

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

**Sample: 196263 - MW-5 (28-30')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20072 Date Analyzed: 5/3/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19238 Date Prepared: 5/3/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   | 9    | <2     | mg/Kg | 20       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.04   | mg/Kg | 20       | 0.10         | 104              | 70 - 130        |
| 4-BFB     |      | 0.857  | mg/Kg | 20       | 0.10         | 86               | 70 - 130        |

<sup>6</sup>Sample diluted due to lack of sample extract. Sample has a Benzene concentration of less than 0.0473 which is the MDL.

<sup>7</sup>Low surrogate recovery due to matrix interference. ICV, CCV shows the method to be in control.

<sup>8</sup>Low surrogate recovery due to matrix interference. ICV, CCV shows the method to be in control.

<sup>9</sup>Sample diluted due to lack of sample extract.

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20071

| 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       |               | 0.846  | mg/Kg | 10       | 1            | 84               | 70 - 130        |
| 4-BFB     | <sup>10</sup> | 0.55   | mg/Kg | 10       | 1            | 55               | 70 - 130        |

Method Blank      QCBatch:    QC20072

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.952  | mg/Kg | 10       | 0.10         | 95               | 70 - 130        |
| 4-BFB     |      | 0.703  | mg/Kg | 10       | 0.10         | 70               | 70 - 130        |

Method Blank      QCBatch:    QC20096

| 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 |      | 122    | mg/Kg | 1        | 150          | 81               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

<sup>10</sup>Low surrogate recovery due to prep. ICV, CCV shows the method to be in control.



**Laboratory Control Spikes**

QCBatch: QC20071

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.917      | 0.914       | mg/Kg | 10   | 1                  | <0.010        | 91    | 0   | 70 - 130    | 20        |
| Benzene      | 0.09       | 0.897       | mg/Kg | 10   | 1                  | <0.010        | 90    | 163 | 70 - 130    | 20        |
| Toluene      | 0.925      | 0.908       | mg/Kg | 10   | 1                  | <0.010        | 92    | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.897      | 0.9         | mg/Kg | 10   | 1                  | <0.010        | 90    | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.77       | 2.68        | mg/Kg | 10   | 3                  | <0.010        | 92    | 3   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.874      | 0.862       | mg/Kg | 10       | 1            | 87        | 86         | 70 - 130        |
| 4-BFB     | 0.826      | 0.806       | mg/Kg | 10       | 1            | 82        | 80         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20072

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.37       | 10.1        | mg/Kg | 10   | 1                  | <1            | 94    | 7   | 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       | 0.998      | 1.06        | mg/Kg | 10       | 0.10         | 100       | 106        | 70 - 130        |
| 4-BFB     | 0.958      | 0.984       | mg/Kg | 10       | 0.10         | 96        | 98         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20096

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 251        | 251         | mg/Kg | 1    | 250                | <50.0         | 100   | 0   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 121        | 120         | mg/Kg | 1        | 150          | 81        | 80         | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

Matrix Spikes

QCBatch: QC20071

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.85      | 0.857      | mg/Kg | 10   | 1                  | <0.010        | 85    | 0   | 70 - 130    | 20        |
| Toluene      | 0.872     | 0.875      | mg/Kg | 10   | 1                  | <0.010        | 87    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.871     | 0.878      | mg/Kg | 10   | 1                  | <0.010        | 87    | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.65      | 2.58       | mg/Kg | 10   | 3                  | <0.010        | 88    | 2   | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.807     | 0.858      | mg/Kg | 10       | 1            | 80       | 85        | 70 - 130        |
| 4-BFB     | 0.81      | 0.829      | mg/Kg | 10       | 1            | 81       | 82        | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC20072

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 7.99      | 8.67       | mg/Kg | 10   | 1                  | <1            | 80    | 8   | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.788     | 0.86       | mg/Kg | 10       | 0.10         | 79       | 86        | 70 - 130        |
| 4-BFB     | 0.945     | 1.01       | mg/Kg | 10       | 0.10         | 94       | 101       | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC20096

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 227       | 224        | mg/Kg | 1    | 250                | <50.0         | 91    | 1   | 70 - 130    | 20        |

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

| Surrogate     | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|---------------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| n-Triacontane | 115       | 122        | mg/Kg | 1        | 150          | 77       | 81        | 70 - 130        |

## Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch:    QC20071

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0926           | 92                    | 85 - 115                | 5/3/02        |
| Benzene      |      | mg/L  | 0.10            | 0.0891           | 89                    | 85 - 115                | 5/3/02        |
| Toluene      |      | mg/L  | 0.10            | 0.0906           | 90                    | 85 - 115                | 5/3/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0893           | 89                    | 85 - 115                | 5/3/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.274            | 91                    | 85 - 115                | 5/3/02        |

ICV (1)      QCBatch:    QC20071

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0901           | 90                    | 85 - 115                | 5/3/02        |
| Benzene      |      | mg/L  | 0.10            | 0.0902           | 90                    | 85 - 115                | 5/3/02        |
| Toluene      |      | mg/L  | 0.10            | 0.0909           | 90                    | 85 - 115                | 5/3/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0894           | 89                    | 85 - 115                | 5/3/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.2618           | 87                    | 85 - 115                | 5/3/02        |

CCV (1)      QCBatch:    QC20072

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/Kg | 1               | 0.912            | 91                    | 85 - 115                | 5/3/02        |

ICV (1)      QCBatch:    QC20072

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/Kg | 1               | 1.03             | 103                   | 85 - 115                | 5/3/02        |

CCV (1)      QCBatch:    QC20096

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 271              | 108                   | 75 - 125                | 5/5/02        |

CCV (2)      QCBatch:    QC20096

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 254                    | 101                         | 75 - 125                      | 5/5/02           |

ICV (1)

QCBatch: QC20096

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 251                    | 100                         | 75 - 125                      | 5/5/02           |

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Lubbock, Texas 79424  
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1 (800) 378-1296

# Trace Analysis, 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 #

Company Name: Enamun Services Inc.  
Phone #: 915-570-8726

(Street, City, Zip)  
Fax #: 915-684-7587

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

Contact Person: Jeffrey Kinley

Invoice to: EQUVIA SERVICES Incident # 300109

(different from above) Kyle Londerness

Project Name: Barker Ranch

Project Location: EQ-112

Sampler Signature: Jeffrey Kinley

Matrix: Water

Volume/Amount: 1 4oz

# Containers: 1

Field Code: 196317 MW-6 (13-15)

Matrix: Water

Matrix: SOIL

Matrix: AIR

Matrix: SLUDGE

Matrix: HCl

Matrix: HNO<sub>3</sub>

Matrix: H<sub>2</sub>SO<sub>4</sub>

Matrix: NaOH

Matrix: ICE

Matrix: NONE

Matrix: WATER

Matrix: SOIL

Matrix: AIR

Matrix: SLUDGE

Matrix: HCl

Matrix: HNO<sub>3</sub>

### 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                                  |                                     |
| PEI <u>Phosphate/Water (TC-300)</u>              | <input checked="" type="checkbox"/> |
| GC/MS Vol. 8260B/62                              |                                     |
| GC/MS Semi. Vol. 8270C/625                       |                                     |
| PEB 8082600 <u>Ferrous Iron (Fall - 3500 FT)</u> | <input checked="" type="checkbox"/> |
| Pesticides 8081A/608                             |                                     |
| BOD, TSS, pH                                     |                                     |
| Free Organic Carbon (TOC 9000 Series)            | <input checked="" type="checkbox"/> |
| pH (5w 9045)                                     | <input checked="" type="checkbox"/> |
| Conductivity (120.1 mod)                         | <input checked="" type="checkbox"/> |
| Redox Potential                                  | <input checked="" type="checkbox"/> |
| Carbonate (LTed Alkalinity)                      | <input checked="" type="checkbox"/> |
| Turn Around Time if different from standard      |                                     |
| Hold   |                                     |

REMARKS:

**LAB USE ONLY**

Intact: Y / N  
Headspace: Y / N  
Temp: Z  
Log-in Review: MT

5123F

Check If Special Reporting Limits Are Needed

Carrier # Carry in

|  |                          |                   |  |                     |                      |
|--|--------------------------|-------------------|--|---------------------|----------------------|
| Relinquished by: <u>Jeffrey Kinley</u> | Date: <u>May 3, 2002</u> | Time: <u>1300</u> | Received by: <u>[Signature]</u>              | Date: <u>5/3/02</u> | Time: <u>1300</u>    |
| Relinquished by: <u>[Signature]</u>    | Date: <u>5/3/02</u>      | Time: <u>400</u>  | Received by: <u>[Signature]</u>              | Date: <u>5-3-02</u> | Time: <u>4:20 pm</u> |
| Relinquished by: <u>[Signature]</u>    | Date: <u>5/3/02</u>      | Time: <u>400</u>  | Received at Laboratory by: <u>Dell Green</u> | Date: <u>5-3-02</u> | Time: <u>4:20 pm</u> |

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

Report Date: May 22, 2002 Order Number: A02050403  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 22, 2002

Order ID Number: A02050403

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196317 | MW-6 (13-15') | Soil   | 5/2/02     | 9:10       | 5/3/02        |

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: 196317 - MW-6 (13-15')

| Param                  | Flag | Result | Units          |
|------------------------|------|--------|----------------|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 |
| Carbonate Alkalinity   |      | <1.0   | mg/Kg as CaCo3 |
| Bicarbonate Alkalinity |      | 180    | mg/Kg as CaCo3 |
| Total Alkalinity       |      | 180    | mg/Kg as CaCo3 |
| Specific Conductance   |      | 189    | $\mu$ MHOS/cm  |
| FOC                    |      | 1.04   | %              |
| ferrous iron           |      | 0.28   | mg/Kg          |
| Bromide                |      | <0.2   | mg/Kg          |
| Nitrate-N              |      | 0.73   | mg/Kg          |
| Phosphate              |      | <0.5   | mg/Kg          |
| pH                     |      | 8.4    | s.u.           |

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

# TRACE ANALYSIS, INC.

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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: May 22, 2002

Order ID Number: A02050403

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|---------------|--------|------------|------------|---------------|
| 196317 | MW-6 (13-15') | Soil   | 5/2/02     | 9:10       | 5/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 7 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: 196317 - MW-6 (13-15')**

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20521 Date Analyzed: 5/21/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19588 Date Prepared: 5/21/02

| Param                  | Flag | Result | Units          | Dilution | RDL |
|------------------------|------|--------|----------------|----------|-----|
| Hydroxide Alkalinity   |      | <1.0   | mg/kg as CaCo3 | 1        | 1   |
| Carbonate Alkalinity   |      | <1.0   | mg/Kg as CaCo3 | 1        | 1   |
| Bicarbonate Alkalinity |      | 180    | mg/Kg as CaCo3 | 1        | 1   |
| Total Alkalinity       |      | 180    | mg/Kg as CaCo3 | 1        | 1   |

**Sample: 196317 - MW-6 (13-15')**

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC20336 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19447 Date Prepared: 5/14/02

| Param                | Flag | Result | Units    | Dilution | RDL |
|----------------------|------|--------|----------|----------|-----|
| Specific Conductance |      | 189    | µMHOS/cm | 1        |     |

**Sample: 196317 - MW-6 (13-15')**

Analysis: FOC Analytical Method: D2974-87 QC Batch: QC20343 Date Analyzed: 5/10/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19443 Date Prepared: 5/8/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| FOC   |      | 1.04   | %     | 1        | 0.10 |

**Sample: 196317 - MW-6 (13-15')**

Analysis: Ferrous Iron Analytical Method: Hach IR-1 QC Batch: QC20396 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19486 Date Prepared: 5/14/02

| Param        | Flag | Result | Units | Dilution | RDL |
|--------------|------|--------|-------|----------|-----|
| ferrous iron |      | 0.28   | mg/Kg | 1        |     |

**Sample: 196317 - MW-6 (13-15')**

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20502 Date Analyzed: 5/14/02  
Analyst: JSW Preparation Method: N/A Prep Batch: PB19566 Date Prepared: 5/14/02

| Param     | Flag | Result | Units | Dilution | RDL  |
|-----------|------|--------|-------|----------|------|
| Bromide   |      | <0.2   | mg/Kg | 1        | 0.50 |
| Nitrate-N |      | 0.73   | mg/Kg | 1        | 0.20 |
| Phosphate |      | <0.5   | mg/Kg | 1        | 1    |



Report Date: May 22, 2002  
EQ-112

Order Number: A02050403  
Barber Ranch 3000109

Page Number: 3 of 7  
Barber Lea County, New Mexico

**Sample: 196317 - MW-6 (13-15')**

Analysis: pH Analytical Method: E 150.1 QC Batch: QC20389 Date Analyzed: 5/14/02  
Analyst: RS Preparation Method: N/A Prep Batch: PB19493 Date Prepared: 5/14/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| pH    |      | 8.4    | s.u.  | 1        | 1   |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20336

| Param                | Flag | Results | Units    | Reporting Limit |
|----------------------|------|---------|----------|-----------------|
| Specific Conductance |      | 3.66    | μMHOS/cm |                 |

Method Blank      QCBatch:    QC20396

| Param        | Flag | Results | Units | Reporting Limit |
|--------------|------|---------|-------|-----------------|
| ferrous iron |      | 0.28    | mg/Kg |                 |

Method Blank      QCBatch:    QC20502

| Param     | Flag | Results | Units | Reporting Limit |
|-----------|------|---------|-------|-----------------|
| Bromide   |      | <0.2    | mg/Kg | 0.50            |
| Nitrate-N |      | <0.2    | mg/Kg | 0.20            |
| Phosphate |      | <0.5    | mg/Kg | 1               |

Method Blank      QCBatch:    QC20521

| Param                  | Flag | Results | Units          | Reporting Limit |
|------------------------|------|---------|----------------|-----------------|
| Hydroxide Alkalinity   |      | <1.0    | mg/Kg as CaCo3 | 1               |
| Carbonate Alkalinity   |      | <1.0    | mg/Kg as CaCo3 | 1               |
| Bicarbonate Alkalinity |      | <4.0    | mg/Kg as CaCo3 | 1               |
| Total Alkalinity       |      | <4.0    | mg/Kg as CaCo3 | 1               |

### Quality Control Report Duplicate Samples

Duplicate      QCBatch:    QC20336

| Param                | Flag | Duplicate Result | Sample Result | Units    | Dilution | RPD | RPD Limit |
|----------------------|------|------------------|---------------|----------|----------|-----|-----------|
| Specific Conductance |      | 34165            | 34700         | μMHOS/cm | 1        | 1   | 4.3       |

Duplicate      QCBatch:    QC20343

| Param | Flag | Duplicate Result | Sample Result | Units | Dilution | RPD | RPD Limit |
|-------|------|------------------|---------------|-------|----------|-----|-----------|
| FOC   |      | 0.78             | 0.72          | %     | 1        | 8   | 72        |

Duplicate QCBatch: QC20389

| Param | Flag | Duplicate Result | Sample Result | Units | Dilution | RPD | RPD Limit |
|-------|------|------------------|---------------|-------|----------|-----|-----------|
| pH    |      | 8.4              | 8.4           | s.u.  | 1        | 0   | 1         |

Duplicate QCBatch: QC20521

| Param                  | Flag | Duplicate Result | Sample Result | Units          | Dilution | RPD | RPD Limit |
|------------------------|------|------------------|---------------|----------------|----------|-----|-----------|
| Hydroxide Alkalinity   |      | <1.0             | <1.0          | mg/Kg as CaCo3 | 1        | 0   | 20        |
| Carbonate Alkalinity   |      | <1.0             | <1.0          | mg/Kg as CaCo3 | 1        | 0   | 20        |
| Bicarbonate Alkalinity |      | 58               | 60            | mg/Kg as CaCo3 | 1        | 3   | 20        |
| Total Alkalinity       |      | 58               | 60            | mg/Kg as CaCo3 | 1        | 3   | 20        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC20502

| Param     | LCS Result | LCS D Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-----------|------------|--------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Bromide   | 2.51       | 2.43         | mg/Kg | 1    | 2.50               | <0.2          | 100   | 3   | 90 - 110    | 20        |
| Nitrate-N | 2.53       | 2.53         | mg/Kg | 1    | 2.50               | <0.2          | 101   | 0   | 90 - 110    | 20        |
| Phosphate | 12.50      | 12.74        | mg/Kg | 1    | 12.50              | <0.5          | 100   | 1   | 90 - 110    | 20        |

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

### Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes QCBatch: QC20502

| Param     | MS Result | MS D Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-----------|-----------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Bromide   | 5.00      | 5.07        | mg/Kg | 1    | 5                  | <0.2          | 100   | 1   | 88 - 116    | 20        |
| Nitrate-N | 5.49      | 5.37        | mg/Kg | 1    | 5                  | 0.73          | 95    | 2   | 53 - 130    | 20        |
| Phosphate | 24.99     | 24.77       | mg/Kg | 1    | 25                 | <0.5          | 99    | 0   | 83 - 118    | 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:    QC20336

| Param                | Flag | Units    | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|----------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Specific Conductance |      | μMHOS/cm | 1412                  | 1393                   | 98                          | 90 - 110                      | 5/14/02          |

ICV (1)      QCBatch:    QC20336

| Param                | Flag | Units    | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|----------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Specific Conductance |      | μMHOS/cm | 1409                  | 1403                   | 99                          | 90 - 110                      | 5/14/02          |

CCV (1)      QCBatch:    QC20389

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| pH    |      | s.u.  | 7                     | 7.0                    | 100                         | -0.1 s.u. - +0.1 s.u.         | 5/14/02          |

ICV (1)      QCBatch:    QC20389

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| pH    |      | s.u.  | 7                     | 7.0                    | 100                         | -0.1 s.u. - +0.1 s.u.         | 5/14/02          |

CCV (1)      QCBatch:    QC20502

| Param     | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Bromide   |      | mg/L  | 2.50                  | 2.52                   | 100                         | 90 - 110                      | 5/14/02          |
| Nitrate-N |      | mg/L  | 2.50                  | 2.36                   | 94                          | 90 - 110                      | 5/14/02          |
| Phosphate |      | mg/L  | 12.50                 | 12.25                  | 98                          | 90 - 110                      | 5/14/02          |

ICV (1)      QCBatch:    QC20502

| Param     | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Bromide   |      | mg/L  | 2.50                  | 2.41                   | 96                          | 90 - 110                      | 5/14/02          |
| Nitrate-N |      | mg/L  | 2.50                  | 2.36                   | 94                          | 90 - 110                      | 5/14/02          |
| Phosphate |      | mg/L  | 12.50                 | 12.14                  | 97                          | 90 - 110                      | 5/14/02          |

CCV (1)            QCBatch:    QC20521

| Param                  | Flag | Units          | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|----------------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Hydroxide Alkalinity   |      | mg/kg as CaCo3 | 0                     | <1.0                   | 0                           | 90 - 110                      | 5/21/02          |
| Carbonate Alkalinity   |      | mg/Kg as CaCo3 | 0                     | 224                    | 0                           | 90 - 110                      | 5/21/02          |
| Bicarbonate Alkalinity |      | mg/Kg as CaCo3 | 0                     | 22                     | 0                           | 90 - 110                      | 5/21/02          |
| Total Alkalinity       |      | mg/Kg as CaCo3 | 250                   | 246                    | 98                          | 90 - 110                      | 5/21/02          |

ICV (1)            QCBatch:    QC20521

| Param                  | Flag | Units          | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|----------------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Hydroxide Alkalinity   |      | mg/Kg as CaCo3 | 0                     | <1.0                   | 0                           | 90 - 110                      | 5/21/02          |
| Carbonate Alkalinity   |      | mg/Kg as CaCo3 | 0                     | 224                    | 0                           | 90 - 110                      | 5/21/02          |
| Bicarbonate Alkalinity |      | mg/Kg as CaCo3 | 0                     | 22                     | 0                           | 90 - 110                      | 5/21/02          |
| Total Alkalinity       |      | mg/Kg as CaCo3 | 250                   | 246                    | 98                          | 90 - 110                      | 5/21/02          |

Report Date: May 20, 2002 Order Number: A02050404  
 EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
 Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 20, 2002

Order ID Number: A02050404

Project: EQ-112  
 TA Job Code: Barber Ranch 3000109  
 Casualty Code: EQ-112  
 Project Location: Barber Lea County, New Mexico  
 Project Address:  
 Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description  | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------|--------|------------|------------|---------------|
| 196320 | MW-7 (8-10') | Soil   | 5/2/02     | 16:00      | 5/3/02        |

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: 196320 - MW-7 (8-10')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | 1.31   | mg/L  |

Report Date: May 14, 2002  
EQ-112

Order Number: A02050404  
Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 14, 2002

Order ID Number: A02050404

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description  | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------|--------|------------|------------|---------------|
| 196320 | MW-7 (8-10') | Soil   | 5/2/02     | 16:00      | 5/3/02        |

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

| Sample - Field Code   | Extended TX1005 |                   |                 |
|-----------------------|-----------------|-------------------|-----------------|
|                       | C6-C12<br>(ppm) | >C12-C35<br>(ppm) | C6-C35<br>(ppm) |
| 196320 - MW-7 (8-10') | 840             | 1610              | 2450            |

Report Date: May 8, 2002 Order Number: A02050404  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 8, 2002

Order ID Number: A02050404

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196318 | MW-6 (13-15') | Soil   | 5/2/02     | 9:10       | 5/3/02        |
| 196319 | MW-6 (25-27') | Soil   | 5/2/02     | 10:15      | 5/3/02        |
| 196320 | MW-7 (8-10')  | Soil   | 5/2/02     | 16:00      | 5/3/02        |
| 196321 | MW-7 (25-27') | Soil   | 5/2/02     | 17:10      | 5/3/02        |
| 196322 | MW-8 (8-10')  | Soil   | 5/2/02     | 10:12      | 5/3/02        |
| 196323 | MW-8 (23-25') | Soil   | 5/2/02     | 11:15      | 5/3/02        |

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

| Sample - Field Code    | BTEX          |               |                    |                    |                  | TPH DRO   | TPH GRO   |
|------------------------|---------------|---------------|--------------------|--------------------|------------------|-----------|-----------|
|                        | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | DRO (ppm) | GRO (ppm) |
| 196318 - MW-6 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0     | <1.00     |
| 196319 - MW-6 (25-27') | <0.010        | <0.010        | <0.010             | 0.0115             | 0.0115           | <50.0     | <1.00     |
| 196320 - MW-7 (8-10')  | 1.05          | <0.500        | 6.42               | 2.17               | 9.64             | 2700      | 877       |
| 196321 - MW-7 (25-27') | <0.010        | <0.010        | 0.0203             | <0.010             | 0.0203           | <50.0     | <1.00     |
| 196322 - MW-8 (8-10')  | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0     | <1.00     |
| 196323 - MW-8 (23-25') | <0.020        | <0.020        | <0.020             | <0.020             | <0.020           | <50.0     | <2.00     |

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





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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: May 20, 2002

Order ID Number: A02050404

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|--------------|--------|------------|------------|---------------|
| 196320 | MW-7 (8-10') | Soil   | 5/2/02     | 16:00      | 5/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample:** 196320 - MW-7 (8-10')

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC20373 Date Analyzed: 5/16/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB19468 Date Prepared: 5/16/02

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

**Sample:** 196320 - MW-7 (8-10')

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC20465 Date Analyzed: 5/16/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB19543 Date Prepared: 5/16/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | 1.31   | mg/L  | 5        | 0.10 |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20373

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

Method Blank            QCBatch:    QC20465

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

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes            QCBatch:    QC20373

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP DRO | < 50       | < 50        | mg/L  | 1    | 25                 | <5.00         | 95    | 4   | 70 - 130    | 20        |

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

Laboratory Control Spikes            QCBatch:    QC20465

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP GRO | 0.854      | 0.855       | mg/L  | 1    | 1                  | <0.1          | 85    | 0   | 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:    QC20373

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP DRO |      | mg/L  | 250             | 253              | 101                   | 75 - 125                | 5/16/02       |

ICV (1)            QCBatch:    QC20373

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 252                    | 100                         | 75 - 125                      | 5/16/02          |

CCV (1)            QCBatch:    QC20465

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 0.915                  | 91                          | 85 - 115                      | 5/16/02          |

ICV (1)            QCBatch:    QC20465

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 1.04                   | 104                         | 85 - 115                      | 5/16/02          |

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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: May 14, 2002

Order ID Number: A02050404

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|--------------|--------|------------|------------|---------------|
| 196320 | MW-7 (8-10') | Soil   | 5/2/02     | 16:00      | 5/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

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Dr. Blair Leftwich, Director

## Analytical Report

Sample: 196320 - MW-7 (8-10')

Analysis: Extended TX1005 Analytical Method: TX1005 QC Batch: QC20286 Date Analyzed: 5/13/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19403 Date Prepared: 5/10/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| C6-C12   |      | 840    | mg/Kg | 10       | 50  |
| >C12-C35 |      | 1610   | mg/Kg | 10       | 50  |
| C6-C35   |      | 2450   | mg/Kg | 10       | 50  |

| Surrogate     | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | <sup>1</sup> | 235    | mg/Kg | 1        | 150          | 156              | 70 - 130        |

<sup>1</sup>Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.

### Quality Control Report Method Blank

Method Blank                      QCBatch:    QC20286

| Param    | Flag | Results | Units | Reporting Limit |
|----------|------|---------|-------|-----------------|
| C6-C12   |      | <50.0   | mg/Kg | 50              |
| >C12-C35 |      | <50.0   | mg/Kg | 50              |
| C6-C35   |      | <50.0   | mg/Kg | 50              |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 184    | mg/Kg | 1        | 150          | 122              | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes                      QCBatch:    QC20286

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12   | 262        | 249         | mg/Kg | 1    | 250                | <50.0         | 104   | 5   | 70 - 130    | 20        |
| >C12-C35 | 273        | 262         | mg/Kg | 1    | 250                | <50.0         | 109   | 4   | 70 - 130    | 20        |
| C6-C35   | 535        | 511         | mg/Kg | 1    | 500                | <50.0         | 107   | 4   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 167        | 178         | mg/Kg | 1        | 150          | 111       | 119        | 70 - 130        |

### Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes                      QCBatch:    QC20286

| Param    | MS Result        | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| C6-C12   | <sup>2</sup> 200 | 207        | mg/Kg | 1    | 250                | <50.0         | 80    | 3   | 70 - 130    | 20        |
| >C12-C35 | 256              | 266        | mg/Kg | 1    | 250                | 121           | 54    | 7   | 70 - 130    | 20        |
| C6-C35   | 456              | 473        | mg/Kg | 1    | 500                | 121           | 67    | 4   | 70 - 130    | 20        |

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

<sup>2</sup>MS and MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.

| Surrogate     | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|---------------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| n-Triacontane | 155       | 155        | mg/Kg | 1        | 150          | 103      | 103       | 70 - 130        |

### Quality Control Report Continuing Calibration Verification Standards

CCV (1)            QCBatch:    QC20286

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/Kg | 250             | 226              | 90                    | 70 - 130                | 5/13/02       |
| >C12-C35 |      | mg/Kg | 250             | 241              | 96                    | 70 - 130                | 5/13/02       |
| C6-C35   |      | mg/Kg | 500             | 467              | 93                    | 70 - 130                | 5/13/02       |

CCV (2)            QCBatch:    QC20286

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/Kg | 250             | 218              | 87                    | 70 - 130                | 5/13/02       |
| >C12-C35 |      | mg/Kg | 250             | 235              | 94                    | 70 - 130                | 5/13/02       |
| C6-C35   |      | mg/Kg | 500             | 453              | 90                    | 70 - 130                | 5/13/02       |

ICV (1)            QCBatch:    QC20286

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| C6-C12   |      | mg/Kg | 250             | 233              | 93                    | 75 - 125                | 5/13/02       |
| >C12-C35 |      | mg/Kg | 250             | 247              | 98                    | 75 - 125                | 5/13/02       |
| C6-C35   |      | mg/Kg | 500             | 480              | 96                    | 75 - 125                | 5/13/02       |



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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: May 8, 2002

Order ID Number: A02050404

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|---------------|--------|------------|------------|---------------|
| 196318 | MW-6 (13-15') | Soil   | 5/2/02     | 9:10       | 5/3/02        |
| 196319 | MW-6 (25-27') | Soil   | 5/2/02     | 10:15      | 5/3/02        |
| 196320 | MW-7 (8-10')  | Soil   | 5/2/02     | 16:00      | 5/3/02        |
| 196321 | MW-7 (25-27') | Soil   | 5/2/02     | 17:10      | 5/3/02        |
| 196322 | MW-8 (8-10')  | Soil   | 5/2/02     | 10:12      | 5/3/02        |
| 196323 | MW-8 (23-25') | Soil   | 5/2/02     | 11:15      | 5/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 13 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of Trace Analysis, Inc.



Dr. Blair Leftwich, Director

### Analytical Report

**Sample: 196318 - MW-6 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20107 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.858  | mg/Kg | 10       | 1            | 86               | 70 - 130        |
| 4-BFB     |      | 0.727  | mg/Kg | 10       | 1            | 73               | 70 - 130        |

**Sample: 196318 - MW-6 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20145 Date Analyzed: 5/7/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19299 Date Prepared: 5/7/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 127    | mg/Kg | 1        | 150          | 85               | 70 - 130        |

**Sample: 196318 - MW-6 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20108 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.844  | mg/Kg | 10       | 0.10         | 84               | 70 - 130        |
| 4-BFB     |      | 0.887  | mg/Kg | 10       | 0.10         | 89               | 70 - 130        |

**Sample: 196319 - MW-6 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20107 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | <0.010 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0115 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.0115 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.870  | mg/Kg | 10       | 1            | 87               | 70 - 130        |
| 4-BFB     |      | 0.747  | mg/Kg | 10       | 1            | 75               | 70 - 130        |

**Sample: 196319 - MW-6 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20145 Date Analyzed: 5/7/02  
 Analyst: MM Preparation Method: 3550 B Prep Batch: PB19299 Date Prepared: 5/7/02

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

| Surrogate   | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Triacontane |      | 129    | mg/Kg | 1        | 150          | 86               | 70 - 130        |

**Sample: 196319 - MW-6 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20108 Date Analyzed: 5/6/02  
 Analyst: CG Preparation Method: 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.26   | mg/Kg | 10       | 0.10         | 126              | 70 - 130        |
| 4-BFB     |      | 0.899  | mg/Kg | 10       | 0.10         | 90               | 70 - 130        |

**Sample: 196320 - MW-7 (8-10')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20107 Date Analyzed: 5/6/02  
 Analyst: CG Preparation Method: S 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 1.05   | mg/Kg | 500      | 0.001 |
| Toluene      |      | <0.500 | mg/Kg | 500      | 0.001 |
| Ethylbenzene |      | 6.42   | mg/Kg | 500      | 0.001 |
| M,P,O-Xylene |      | 2.17   | mg/Kg | 500      | 0.001 |
| Total BTEX   |      | 9.64   | mg/Kg | 500      | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.859  | mg/Kg | 500      | 1            | 86               | 70 - 130        |
| 4-BFB     | 1    | 13.3   | mg/Kg | 500      | 1            | 1330             | 70 - 130        |

**Sample: 196320 - MW-7 (8-10')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20162 Date Analyzed: 5/8/02  
 Analyst: MM Preparation Method: 3550 B Prep Batch: PB19315 Date Prepared: 5/7/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 2700   | mg/Kg | 5        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | 2    | 263    | mg/Kg | 5        | 150          | 175              | 70 - 130        |

**Sample: 196320 - MW-7 (8-10')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20108 Date Analyzed: 5/6/02  
 Analyst: CG Preparation Method: 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 877    | mg/Kg | 500      | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 3    | 1.88   | mg/Kg | 500      | 0.10         | 188              | 70 - 130        |
| 4-BFB     | 4    | 49.7   | mg/Kg | 500      | 0.10         | 4970             | 70 - 130        |

**Sample: 196321 - MW-7 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20107 Date Analyzed: 5/6/02  
 Analyst: CG Preparation Method: S 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0203 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | <0.010 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.0203 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.903  | mg/Kg | 10       | 1            | 90               | 70 - 130        |

Continued ...

<sup>1</sup>High surrogate recovery due to peak interference.

<sup>2</sup>Surrogate out of recovery limits due to high hydrocarbons. LCS, ICV, and CCV show the process is in control.

<sup>3</sup>High surrogate recovery due to peak interference.

<sup>4</sup>High surrogate recovery due to peak interference.

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| 4-BFB     |      | 0.776  | mg/Kg | 10       | 1            | 78               | 70 - 130        |

**Sample: 196321 - MW-7 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20145 Date Analyzed: 5/7/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19299 Date Prepared: 5/7/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 132    | mg/Kg | 1        | 150          | 88               | 70 - 130        |

**Sample: 196321 - MW-7 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20108 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| RO    |      | <1.00  | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.825  | mg/Kg | 10       | 0.10         | 82               | 70 - 130        |
| 4-BFB     |      | 0.897  | mg/Kg | 10       | 0.10         | 90               | 70 - 130        |

**Sample: 196322 - MW-8 (8-10')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20107 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.850  | mg/Kg | 10       | 1            | 85               | 70 - 130        |
| BFB       |      | 0.726  | mg/Kg | 10       | 1            | 73               | 70 - 130        |

**Sample: 196322 - MW-8 (8-10')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20145 Date Analyzed: 5/7/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19299 Date Prepared: 5/7/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 127    | mg/Kg | 1        | 150          | 85               | 70 - 130        |

**Sample: 196322 - MW-8 (8-10')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20108 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.847  | mg/Kg | 10       | 0.10         | 85               | 70 - 130        |
| BFB       |      | 0.878  | mg/Kg | 10       | 0.10         | 88               | 70 - 130        |

**Sample: 196323 - MW-8 (23-25')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20107 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Ethylbenzene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | <0.020 | mg/Kg | 20       | 0.001 |
| Test Comments | 5    |        | *     | mg/Kg    | 1     |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.853  | mg/Kg | 20       | 1            | 85               | 70 - 130        |
| 4-BFB     | 6    | 0.664  | mg/Kg | 20       | 1            | 66               | 70 - 130        |

**Sample: 196323 - MW-8 (23-25')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20145 Date Analyzed: 5/7/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19299 Date Prepared: 5/7/02

<sup>5</sup>Sample diluted due to lack of sample extract. Sample has a Benzene concentration of less than 0.0047.

<sup>6</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV shows the method to be in control.

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 126    | mg/Kg | 1        | 150          | 84               | 70 - 130        |

**Sample: 196323 - MW-8 (23-25')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20108 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19273 Date Prepared: 5/6/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.847  | mg/Kg | 20       | 0.10         | 85               | 70 - 130        |
| 4-BFB     |      | 0.929  | mg/Kg | 20       | 0.10         | 93               | 70 - 130        |

## Quality Control Report Method Blank

Method Blank            QCBatch:    QC20107

| 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       |      | 0.920  | mg/Kg | 10       | 1            | 92               | 70 - 130        |
| 4-BFB     | 7    | 0.523  | mg/Kg | 10       | 1            | 52               | 70 - 130        |

Method Blank            QCBatch:    QC20108

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.952  | mg/Kg | 10       | 0.10         | 95               | 70 - 130        |
| 4-BFB     | 8    | 0.625  | mg/Kg | 10       | 0.10         | 62               | 70 - 130        |

Method Blank            QCBatch:    QC20145

| 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 |      | 119    | mg/Kg | 1        | 150          | 79               | 70 - 130        |

Method Blank            QCBatch:    QC20162

<sup>7</sup>Low surrogate recovery due to prep. ICV, CCV, CCV show the method to be in control.

<sup>8</sup>Low surrogate recovery due to prep. ICV, CCV, CCV show the method to be in control.



| 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 |      | 125    | mg/Kg | 1        | 150          | 83               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

**Laboratory Control Spikes**      QCBatch: QC20107

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 1.01       | 0.999       | mg/Kg | 10   | 1                  | <0.010        | 101   | 1   | 70 - 130    | 20        |
| Benzene      | 0.985      | 0.968       | mg/Kg | 10   | 1                  | <0.010        | 98    | 2   | 70 - 130    | 20        |
| Toluene      | 0.980      | 0.976       | mg/Kg | 10   | 1                  | <0.010        | 98    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.982      | 0.963       | mg/Kg | 10   | 1                  | <0.010        | 98    | 2   | 70 - 130    | 20        |
| M,P,O-Xylene | 3.01       | 2.94        | mg/Kg | 10   | 3                  | <0.010        | 100   | 2   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.997      | 0.997       | mg/Kg | 10       | 1            | 100       | 100        | 70 - 130        |
| 4-BFB     | 0.913      | 0.911       | mg/Kg | 10       | 1            | 91        | 91         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch: QC20108

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 8.32       | 8.48        | mg/Kg | 10   | 1                  | <1            | 83    | 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       | 0.882      | 0.896       | mg/Kg | 10       | 0.10         | 88        | 90         | 70 - 130        |
| 4-BFB     | 0.898      | 0.91        | mg/Kg | 10       | 0.10         | 90        | 91         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch: QC20145

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 228        | 233         | mg/Kg | 1    | 250                | <50.0         | 91    | 2   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 123        | 120         | mg/Kg | 1        | 150          | 82        | 80         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20162

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 261        | 262         | mg/Kg | 1    | 250                | <50.0         | 104   | 0   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 133        | 132         | mg/Kg | 1        | 150          | 89        | 88         | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**

QCBatch: QC20107

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.845     | 0.854      | mg/Kg | 10   | 1                  | <0.010        | 84    | 1   | 70 - 130    | 20        |
| Toluene      | 0.876     | 0.878      | mg/Kg | 10   | 1                  | <0.010        | 87    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.877     | 0.891      | mg/Kg | 10   | 1                  | <0.010        | 87    | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.63      | 2.73       | mg/Kg | 10   | 3                  | <0.010        | 87    | 3   | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.842     | 0.814      | mg/Kg | 10       | 1            | 84       | 81        | 70 - 130        |
| 4-BFB     | 0.811     | 0.783      | mg/Kg | 10       | 1            | 81       | 78        | 70 - 130        |

**Matrix Spikes**

QCBatch: QC20108

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 9.45      | 11.4       | mg/Kg | 10   | 1                  | <1.00         | 94    | 18  | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.907     | 1.07       | mg/Kg | 10       | 0.10         | 91       | 107       | 70 - 130        |
| 4-BFB     | 0.885     | 0.914      | mg/Kg | 10       | 0.10         | 88       | 91        | 70 - 130        |

**Matrix Spikes**            QCBatch:    QC20145

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 224       | 263        | mg/Kg | 1    | 250                | <50.0         | 89    | 16  | 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 | 112       | 128        | mg/Kg | 1        | 150          | 75       | 85        | 70 - 130        |

**Matrix Spikes**            QCBatch:    QC20162

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 455       | 456        | mg/Kg | 1    | 250                | 195           | 104   | 0   | 70 - 130    | 20        |

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

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

## Quality Control Report Continuing Calibration Verification Standards

**CCV (1)**            QCBatch:    QC20107

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.101            | 101                   | 85 - 115                | 5/6/02        |
| Benzene      |      | mg/L  | 0.10            | 0.0969           | 97                    | 85 - 115                | 5/6/02        |
| Toluene      |      | mg/L  | 0.10            | 0.0965           | 96                    | 85 - 115                | 5/6/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0959           | 96                    | 85 - 115                | 5/6/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.293            | 98                    | 85 - 115                | 5/6/02        |

**CCV (2)**            QCBatch:    QC20107

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.109                  | 109                         | 85 - 115                      | 5/6/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0954                 | 95                          | 85 - 115                      | 5/6/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0971                 | 97                          | 85 - 115                      | 5/6/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/6/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.292                  | 97                          | 85 - 115                      | 5/6/02           |

ICV (1)      QCBatch:    QC20107

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/6/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0974                 | 97                          | 85 - 115                      | 5/6/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0989                 | 99                          | 85 - 115                      | 5/6/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0971                 | 97                          | 85 - 115                      | 5/6/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.299                  | 100                         | 85 - 115                      | 5/6/02           |

CCV (1)      QCBatch:    QC20108

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.904                  | 90                          | 85 - 115                      | 5/6/02           |

CCV (2)      QCBatch:    QC20108

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 1.09                   | 109                         | 85 - 115                      | 5/6/02           |

ICV (1)      QCBatch:    QC20108

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.872                  | 87                          | 85 - 115                      | 5/6/02           |

CCV (1)      QCBatch:    QC20145

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 246                    | 98                          | 75 - 125                      | 5/7/02           |

CCV (2)            QCBatch:    QC20145

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 269                    | 107                         | 75 - 125                      | 5/7/02           |

ICV (1)            QCBatch:    QC20145

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 233                    | 93                          | 75 - 125                      | 5/7/02           |

CCV (1)            QCBatch:    QC20162

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 246                    | 98                          | 75 - 125                      | 5/8/02           |

CCV (2)            QCBatch:    QC20162

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 262                    | 104                         | 75 - 125                      | 5/8/02           |

ICV (1)            QCBatch:    QC20162

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 263                    | 105                         | 75 - 125                      | 5/8/02           |

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1 (800) 378-1296

# Trace Analysis, 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 # **A0050405**

Company Name: **FINAGUA SAVINA** Phone #: **915-570-8726**  
 Address: **306 West Wall, Suite 1312, Midland, TX 79701** Fax #: **915-684-7587**  
 Contact Person: **Jeffrey Kindley** Incident #: **300109**  
 Voice to: **Equiva Service** Project Name: **Borden Ranch**  
 (different from above) **style construction** Sampler Signature: **Jeffrey Kindley**  
 Project #: **EQ-112** Project Location: **Lea County, New Mexico**

| LAB #<br>LAB USE ONLY | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING |          |      |
|-----------------------|------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|----------|----------|------|
|                       |            |              |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE      | NONE     | DATE |
| 98814                 | MW-5       | 1            | 1 liter       | ✓      |      |     |        | ✓                   |                  |                                |      | ✓        | 05/26/02 | 1030 |
|                       | MW-5       | 3            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |          | 05/26/02 | 1030 |
| 85                    | MW-6       | 1            | 1 liter       | ✓      |      |     |        |                     |                  |                                |      | ✓        | 05/26/02 | 930  |
|                       | MW-6       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |          | 05/26/02 | 930  |
| 86                    | MW-7       | 1            | 1 liter       | ✓      |      |     |        |                     |                  |                                |      | ✓        | 05/26/02 | 945  |
|                       | MW-7       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |          | 05/26/02 | 945  |

Relinquished by: **Jeffrey Kindley** Date: **May 3, 2002** Time: **1300**  
 Received by: **[Signature]** Date: **5/2/02** Time: **1300**  
 Relinquished by: **[Signature]** Date: **5/3/02** Time: **420**  
 Received by: **[Signature]** Date: **5-3-02** Time: **4:20 pm**  
 Received at Laboratory by: **Mell Green** Date: **5-3-02** Time: **4:20 pm**

### 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                                  |   |
| FCI  |   |
| GC/MS Vol. 8260B/624                             |   |
| GC/MS Semi. Vol. 8270C/625                       |   |
| PCBs 8082/608                                    |   |
| Pesticides 8081A/608                             |   |
| BOD, TSS, pH                                     |   |

Turn Around Time if different from standard: \_\_\_\_\_

### LAB USE ONLY

Intact:  Y  N  
 Headspace:  Y  N  
 Temp: **2**  
 Log-in Review: **MA**

REMARKS: **513 FIP**  
 Check If Special Reporting Limits Are Needed

Carrier #: **Carry in**

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

Report Date: May 13, 2002 Order Number: A02050405  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 2  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 13, 2002

Order ID Number: A02050405

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 196324 | MW-5        | Water  | 5/2/02     | 10:30      | 5/3/02        |
| 196325 | MW-6        | Water  | 5/3/02     | 9:30       | 5/3/02        |
| 196326 | MW-7        | Water  | 5/3/02     | 9:45       | 5/3/02        |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 196324 - MW-5       | 0.0351        | <0.010        | 0.0317             | 0.122              | 0.189            |
| 196325 - MW-6       | 0.0262        | <0.005        | <0.005             | <0.005             | 0.0262           |
| 196326 - MW-7       | 0.0116        | <0.001        | 0.0021             | 0.0012             | 0.0149           |

### Sample: 196324 - MW-5

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | 0.0068  | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | 0.0003  | mg/L  |
| Phenanthrene           |      | 0.0002  | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |

Continued on next page ...

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

Report Date: May 13, 2002 Order Number: A02050405  
EQ-112 Barber Ranch 3000109

Page Number: 2 of 2  
Barber Lea County, New Mexico

Sample 196324 continued ...

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

**Sample: 196325 - MW-6**

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | 0.0004  | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

**Sample: 196326 - MW-7**

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | 0.0008  | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | 0.0003  | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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



# TRACE ANALYSIS, INC.

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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: May 13, 2002

Order ID Number: A02050405

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|-------------|--------|------------|------------|---------------|
| 196324 | MW-5        | Water  | 5/2/02     | 10:30      | 5/3/02        |
| 196325 | MW-6        | Water  | 5/3/02     | 9:30       | 5/3/02        |
| 196326 | MW-7        | Water  | 5/3/02     | 9:45       | 5/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 8 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: 196324 - MW-5**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20104 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19267 Date Prepared: 5/6/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0351 | mg/L  | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/L  | 10       | 0.001 |
| Ethylbenzene |      | 0.0317 | mg/L  | 10       | 0.001 |
| M,P,O-Xylene |      | 0.122  | mg/L  | 10       | 0.001 |
| Total BTEX   |      | 0.189  | mg/L  | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0897 | mg/L  | 10       | 0.10         | 89               | 70 - 130        |
| 4-BFB     |      | 0.0932 | mg/L  | 10       | 0.10         | 93               | 70 - 130        |

**Sample: 196324 - MW-5**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20211 Date Analyzed: 5/7/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19287 Date Prepared: 5/7/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | 0.0068  | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | 0.0003  | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | 0.0002  | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 29.74  | mg/L  | 1        | 80           | 37               | 35 - 114        |
| 2-Fluorobiphenyl |      | 30.88  | mg/L  | 1        | 80           | 38               | 43 - 116        |
| Terphenyl-d14    |      | 43.27  | mg/L  | 1        | 80           | 54               | 33 - 141        |

**Sample: 196325 - MW-6**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20104 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19267 Date Prepared: 5/6/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0262 | mg/L  | 5        | 0.001 |
| Toluene      |      | <0.005 | mg/L  | 5        | 0.001 |
| Ethylbenzene |      | <0.005 | mg/L  | 5        | 0.001 |
| M,P,O-Xylene |      | <0.005 | mg/L  | 5        | 0.001 |
| Total BTEX   |      | 0.0262 | mg/L  | 5        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0946 | mg/L  | 5        | 0.10         | 94               | 70 - 130        |
| 4-BFB     |      | 0.0934 | mg/L  | 5        | 0.10         | 93               | 70 - 130        |

**Sample: 196325 - MW-6**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20211 Date Analyzed: 5/7/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19287 Date Prepared: 5/7/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | 0.0004  | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 32.62  | mg/L  | 1        | 80           | 40               | 35 - 114        |
| 2-Fluorobiphenyl |      | 34.19  | mg/L  | 1        | 80           | 42               | 43 - 116        |
| Terphenyl-d14    |      | 33.37  | mg/L  | 1        | 80           | 41               | 33 - 141        |

**Sample: 196326 - MW-7**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20104 Date Analyzed: 5/6/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19267 Date Prepared: 5/6/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0116 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | 0.0021 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | 0.0012 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | 0.0149 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0945 | mg/L  | 1        | 0.10         | 94               | 70 - 130        |
| 4-BFB     |      | 0.0919 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |

**Sample: 196326 - MW-7**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20211 Date Analyzed: 5/7/02  
 Analyst: RC Preparation Method: E 3510C Prep Batch: PB19287 Date Prepared: 5/7/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | 0.0008  | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | 0.0003  | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 27.68  | mg/L  | 1        | 80           | 34               | 35 - 114        |
| 2-Fluorobiphenyl |      | 28.35  | mg/L  | 1        | 80           | 35               | 43 - 116        |
| Terphenyl-d14    |      | 35.03  | mg/L  | 1        | 80           | 43               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20104

| 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       |      | 0.104  | mg/L  | 1        | 0.10         | 104              | 70 - 130        |
| 4-BFB     |      | 0.0979 | mg/L  | 1        | 0.10         | 98               | 70 - 130        |

Method Blank            QCBatch:    QC20211

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 89.97  | mg/L  | 1        | 80           | 112              | 35 - 114        |
| 2-Fluorobiphenyl |      | 96.41  | mg/L  | 1        | 80           | 120              | 43 - 116        |
| Terphenyl-d14    |      | 86     | mg/L  | 1        | 80           | 107              | 33 - 141        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC20104

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.102      | 0.102       | mg/L  | 1    | 0.10               | <0.001        | 102   | 0   | 70 - 130    | 20        |
| Benzene      | 0.111      | 0.103       | mg/L  | 1    | 0.10               | <0.001        | 111   | 7   | 70 - 130    | 20        |
| Toluene      | 0.108      | 0.103       | mg/L  | 1    | 0.10               | <0.001        | 108   | 5   | 70 - 130    | 20        |
| Ethylbenzene | 0.108      | 0.104       | mg/L  | 1    | 0.10               | <0.001        | 108   | 4   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.315      | 0.309       | mg/L  | 1    | 0.30               | <0.001        | 105   | 2   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.107      | 0.101       | mg/L  | 1        | 0.10         | 107       | 101        | 70 - 130        |
| 4-BFB     | 0.101      | 0.101       | mg/L  | 1        | 0.10         | 101       | 101        | 70 - 130        |

Laboratory Control Spikes

QCBatch: QC20211

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 16.53      | 39.82       | mg/L  | 1    | 80                 | <0.0002       | 20    | 82  | 16 - 96     | 20        |
| Acenaphthylene         | 18.7       | 47.23       | mg/L  | 1    | 80                 | <0.0002       | 23    | 86  | 20 - 110    | 20        |
| Acenaphthene           | 17.36      | 45.28       | mg/L  | 1    | 80                 | <0.0002       | 21    | 89  | 18 - 108    | 20        |
| Fluorene               | 17.6       | 47.76       | mg/L  | 1    | 80                 | <0.0002       | 22    | 92  | 22 - 102    | 20        |
| Phenanthrene           | 16.33      | 48.56       | mg/L  | 1    | 80                 | <0.0002       | 20    | 99  | 25 - 103    | 20        |
| Anthracene             | 16.68      | 50.28       | mg/L  | 1    | 80                 | <0.0002       | 20    | 100 | 22 - 110    | 20        |
| Fluoranthene           | 21.35      | 65.13       | mg/L  | 1    | 80                 | <0.0002       | 26    | 101 | 21 - 110    | 20        |
| Pyrene                 | 31.23      | 55.82       | mg/L  | 1    | 80                 | <0.0002       | 39    | 56  | 22 - 100    | 20        |
| Benzo(a)anthracene     | 29.98      | 54.52       | mg/L  | 1    | 80                 | <0.0002       | 37    | 58  | 30 - 99     | 20        |
| Chrysene               | 26.95      | 49.62       | mg/L  | 1    | 80                 | <0.0002       | 33    | 59  | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 44.89      | 60.98       | mg/L  | 1    | 80                 | <0.0002       | 56    | 30  | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 51.42      | 62.36       | mg/L  | 1    | 80                 | <0.0002       | 64    | 19  | 35 - 103    | 20        |
| Benzo(a)pyrene         | 48.44      | 61.65       | mg/L  | 1    | 80                 | <0.0002       | 60    | 23  | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 35.08      | 50.52       | mg/L  | 1    | 80                 | <0.0002       | 43    | 36  | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 31.71      | 40.79       | mg/L  | 1    | 80                 | <0.0002       | 39    | 25  | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 41.14      | 53.31       | mg/L  | 1    | 80                 | <0.0002       | 51    | 25  | 19 - 119    | 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  | 29.1       | 69.05       | mg/L  | 1        | 80           | 36        | 86         | 35 - 114        |
| 2-Fluorobiphenyl | 29.93      | 74.73       | mg/L  | 1        | 80           | 37        | 93         | 43 - 116        |
| Terphenyl-d14    | 51.05      | 90.12       | mg/L  | 1        | 80           | 63        | 112        | 33 - 141        |

Quality Control Report  
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC20104

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0997                 | 100                         | 85 - 115                      | 5/6/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.106                  | 106                         | 85 - 115                      | 5/6/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.107                  | 107                         | 85 - 115                      | 5/6/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.106                  | 106                         | 85 - 115                      | 5/6/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.316                  | 105                         | 85 - 115                      | 5/6/02           |

CCV (2)            QCBatch:    QC20104

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0989                 | 98                          | 85 - 115                      | 5/6/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 5/6/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 5/6/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/6/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.3                    | 100                         | 85 - 115                      | 5/6/02           |

ICV (1)            QCBatch:    QC20104

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.105                  | 105                         | 85 - 115                      | 5/6/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.114                  | 114                         | 85 - 115                      | 5/6/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.112                  | 112                         | 85 - 115                      | 5/6/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.112                  | 112                         | 85 - 115                      | 5/6/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.333                  | 111                         | 85 - 115                      | 5/6/02           |

CCV (1)            QCBatch:    QC20211

| Param                | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene          |      | mg/L  | 60                    | 60.51                  | 100                         | 80 - 120                      | 5/7/02           |
| Acenaphthylene       |      | mg/L  | 60                    | 63.27                  | 105                         | 80 - 120                      | 5/7/02           |
| Acenaphthene         |      | mg/L  | 60                    | 61.09                  | 101                         | 80 - 120                      | 5/7/02           |
| Fluorene             |      | mg/L  | 60                    | 60.09                  | 100                         | 80 - 120                      | 5/7/02           |
| Phenanthrene         |      | mg/L  | 60                    | 53.08                  | 88                          | 80 - 120                      | 5/7/02           |
| Anthracene           |      | mg/L  | 60                    | 54.12                  | 90                          | 80 - 120                      | 5/7/02           |
| Fluoranthene         |      | mg/L  | 60                    | 65.02                  | 108                         | 80 - 120                      | 5/7/02           |
| Pyrene               |      | mg/L  | 60                    | 60.27                  | 100                         | 80 - 120                      | 5/7/02           |
| Benzo(a)anthracene   |      | mg/L  | 60                    | 60.83                  | 101                         | 80 - 120                      | 5/7/02           |
| Chrysene             |      | mg/L  | 60                    | 58.92                  | 98                          | 80 - 120                      | 5/7/02           |
| Benzo(b)fluoranthene |      | mg/L  | 60                    | 64.67                  | 107                         | 80 - 120                      | 5/7/02           |
| Benzo(k)fluoranthene |      | mg/L  | 60                    | 60.34                  | 100                         | 80 - 120                      | 5/7/02           |

Continued ...

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| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzo(a)pyrene         |      | mg/L  | 60                    | 62.7                   | 104                         | 80 - 120                      | 5/7/02           |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 53.8                   | 89                          | 80 - 120                      | 5/7/02           |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 53.89                  | 89                          | 80 - 120                      | 5/7/02           |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 53.55                  | 89                          | 80 - 120                      | 5/7/02           |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 62.25                  | 103                         | 80 - 120                      | 5/7/02           |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 63.85                  | 106                         | 80 - 120                      | 5/7/02           |
| Terphenyl-d14          |      | mg/L  | 60                    | 59.23                  | 98                          | 80 - 120                      | 5/7/02           |



# TraceAnalysis, Inc.

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

Company Name: Environ Services Inc Phone #: 915-570-8726  
 Address: 306 West Wall, Suite 1312, Midland, TX 79701 915-684-7587 Fax #: 915-570-8726  
 Contact Person: Jeffrey Kindley  
 Invoice to: Environ Services  
 (if different from above) Attn: Kyle Landman Incident # 300109  
 Project #: EQ-112 Project Name: Barber Ranch  
 Project Location: Lea County, New Mexico Sampler Signature: Jeffrey Kindley

| LAB #<br>(LAB USE ONLY) | FIELD CODE    | # CONTAINERS | Volume/Amount | PRESERVATIVE METHOD |      |     |        |        | SAMPLING TIME |     |      |     |          |      |
|-------------------------|---------------|--------------|---------------|---------------------|------|-----|--------|--------|---------------|-----|------|-----|----------|------|
|                         |               |              |               | WATER               | SOIL | AIR | SLUDGE | MATHIX |               | HCL | HNO3 | ICE | NONE     |      |
| 196491                  | MW-9 (13-15') | 1            | 402           | ✓                   |      |     |        |        |               |     |      | ✓   | 05/06/02 | 1018 |
| 92                      | MW-9 (25-27') | 1            | 402           | ✓                   |      |     |        |        |               |     |      | ✓   | 05/06/02 | 1100 |
| 93                      | S-4 (13-15')  | 1            | 402           | ✓                   |      |     |        |        |               |     |      | ✓   | 05/06/02 | 1430 |
| 94                      | S-4 (28-29')  | 1            | 402           | ✓                   |      |     |        |        |               |     |      | ✓   | 05/06/02 | 1530 |
| 95                      | MW-8          | 3            | 120ml<br>40ml | ✓                   |      |     |        |        | ✓             |     |      |     | 05/06/02 | 1230 |
| 96                      | MW-9          | 3            | 120ml<br>40ml | ✓                   |      |     |        |        | ✓             |     |      |     | 05/06/02 | 1545 |

Relinquished by: Jeffrey Kindley Date: May 6, 2002 Time: 1800  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received at Laboratory by: Neil Green Date: 5-8-02 Time: 9:30am

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # A02050807

| ANALYSIS REQUEST<br>(Circle or Specify Method No.) | PAH 8270 | TPH | MTBE 8020/602 | BTEX 8020/602 | Total Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8240/8260/624 | GC/MS Semi. Vol. 8270/625 | PCB's 8080/608 | Pest. 8080/608 | BOD, TSS, PH | TPH (Dro/Gr) 8015/M * | TPH (TX 1005) extend to C38 K * | Turn Around Time if different from standard | Hold |
|--|----------|-----|---------------|---------------|--------------------------------------|-------------------------------------|----------------|---------------------|-----|--------------------------|---------------------------|----------------|----------------|--------------|-----------------------|---------------------------------|---|------|
|  | ✓        | ✓   | ✓             | ✓             | ✓                                    | ✓                                   | ✓              | ✓                   | ✓   | ✓                        | ✓                         | ✓              | ✓              | ✓            | ✓                     | ✓                               |   |      |

REMARKS:  
 \* Need 3 day turnaround on TPH (Dro/Gr) call Jeff Kindley at 915-631-6591 and Bennett Haywood at 972-484-3854 with results  
 \*\* After running TPH (Dro/Gr) call for initial samples to be further analyzed at TX 1005  
 RFF # 5/10  
 5/10/02

Report Date: May 10, 2002 Order Number: A02050807  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 10, 2002

Order ID Number: A02050807

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 196491 | MW-9 (13-15') | Soil   | 5/6/02     | 10:18      | 5/8/02        |
| 196492 | MW-9 (25-27') | Soil   | 5/6/02     | 11:00      | 5/8/02        |
| 196493 | S-4 (13-15')  | Soil   | 5/6/02     | 14:30      | 5/8/02        |
| 196494 | S-4 (28-29')  | Soil   | 5/6/02     | 15:30      | 5/8/02        |

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

| Sample - Field Code    | BTEX             |                  |                       |                       |                     | TPH DRO<br>DRO<br>(ppm) | TPH GRO<br>GRO<br>(ppm) |
|------------------------|------------------|------------------|-----------------------|-----------------------|---------------------|-------------------------|-------------------------|
|                        | Benzene<br>(ppm) | Toluene<br>(ppm) | Ethylbenzene<br>(ppm) | M,P,O-Xylene<br>(ppm) | Total BTEX<br>(ppm) |                         |                         |
| 196491 - MW-9 (13-15') | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50.0                   | <1                      |
| 196492 - MW-9 (25-27') | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50.0                   | <1                      |
| 196493 - S-4 (13-15')  | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50.0                   | <1                      |
| 196494 - S-4 (28-29')  | <0.020           | <0.020           | <0.020                | <0.020                | <0.020              | <50.0                   | <2 <sup>1</sup>         |

<sup>1</sup>Sample diluted due to lack of sample extract.

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

Report Date: May 13, 2002 Order Number: A02050807  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 2  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 13, 2002

Order ID Number: A02050807

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 196495 | MW-8        | Water  | 5/6/02     | 12:30      | 5/8/02        |
| 196496 | MW-9        | Water  | 5/6/02     | 15:45      | 5/8/02        |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 196495 - MW-8       | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 196496 - MW-9       | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |

### Sample: 196495 - MW-8

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

Report Date: May 13, 2002 Order Number: A02050807  
EQ-112 Barber Ranch 3000109Page Number: 2 of 2  
Barber Lea County, New Mexico**Sample: 196496 - MW-9**

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | 0.00089 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

# TRACE ANALYSIS, INC.

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155 McCutcheon, Suite H

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El Paso, Texas 79932 888•588•3443  
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: May 13, 2002

Order ID Number: A02050807

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|-------------|--------|------------|------------|---------------|
| 196495 | MW-8        | Water  | 5/6/02     | 12:30      | 5/8/02        |
| 196496 | MW-9        | Water  | 5/6/02     | 15:45      | 5/8/02        |

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

This report consists of a total of 7 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: 196495 - MW-8**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20176 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19323 Date Prepared: 5/8/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.099  | mg/L  | 5        | 0.10         | 99               | 70 - 130        |
| 4-BFB     |      | 0.0986 | mg/L  | 5        | 0.10         | 99               | 70 - 130        |

**Sample: 196495 - MW-8**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20214 Date Analyzed: 5/8/02  
Analyst: RC Preparation Method: N/A Prep Batch: PB19319 Date Prepared: 5/8/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 28.96  | mg/L  | 1        | 80           | 36               | 35 - 114        |
| 2-Fluorobiphenyl |      | 33.96  | mg/L  | 1        | 80           | 42               | 43 - 116        |
| Terphenyl-d14    |      | 26.78  | mg/L  | 1        | 80           | 33               | 33 - 141        |

**Sample: 196496 - MW-9**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20176 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19323 Date Prepared: 5/8/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0999 | mg/L  | 5        | 0.10         | 100              | 70 - 130        |
| 4-BFB     |      | 0.097  | mg/L  | 5        | 0.10         | 97               | 70 - 130        |

**Sample: 196496 - MW-9**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20214 Date Analyzed: 5/8/02  
Analyst: RC Preparation Method: N/A Prep Batch: PB19319 Date Prepared: 5/8/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | 0.00089 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 60.6   | mg/L  | 1        | 80           | 75               | 35 - 114        |
| 2-Fluorobiphenyl |      | 65.67  | mg/L  | 1        | 80           | 82               | 43 - 116        |
| Terphenyl-d14    |      | 39.91  | mg/L  | 1        | 80           | 49               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20176

| 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       |      | 0.108  | mg/L  | 1        | 0.10         | 108              | 70 - 130        |
| 4-BFB     |      | 0.103  | mg/L  | 1        | 0.10         | 103              | 70 - 130        |

Method Blank            QCBatch:    QC20214

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 68.71  | mg/L  | 1        | 80           | 85               | 35 - 114        |
| 2-Fluorobiphenyl |      | 75.42  | mg/L  | 1        | 80           | 94               | 43 - 116        |
| Terphenyl-d14    |      | 41.21  | mg/L  | 1        | 80           | 51               | 33 - 141        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes



**Laboratory Control Spikes**

QCBatch: QC20176

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.103      | 0.102       | mg/L  | 1    | 0.10               | <0.001        | 103   | 1   | 70 - 130    | 20        |
| Benzene      | 0.108      | 0.111       | mg/L  | 1    | 0.10               | <0.001        | 108   | 3   | 70 - 130    | 20        |
| Toluene      | 0.107      | 0.108       | mg/L  | 1    | 0.10               | <0.001        | 107   | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.107      | 0.107       | mg/L  | 1    | 0.10               | <0.001        | 107   | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.320      | 0.318       | mg/L  | 1    | 0.30               | <0.001        | 107   | 1   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.106      | 0.109       | mg/L  | 1        | 0.10         | 106       | 109        | 70 - 130        |
| 4-BFB     | 0.103      | 0.102       | mg/L  | 1        | 0.10         | 103       | 102        | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20214

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 56.16      | 59.94       | mg/L  | 1    | 80                 | <0.0002       | 70    | 6   | 16 - 96     | 20        |
| Acenaphthylene         | 63.57      | 69.07       | mg/L  | 1    | 80                 | <0.0002       | 79    | 8   | 20 - 110    | 20        |
| Acenaphthene           | 60.61      | 65.94       | mg/L  | 1    | 80                 | <0.0002       | 75    | 8   | 18 - 108    | 20        |
| Fluorene               | 56.98      | 63.87       | mg/L  | 1    | 80                 | <0.0002       | 71    | 11  | 22 - 102    | 20        |
| Phenanthrene           | 58.06      | 61.81       | mg/L  | 1    | 80                 | <0.0002       | 72    | 6   | 25 - 103    | 20        |
| Anthracene             | 59.98      | 63.59       | mg/L  | 1    | 80                 | <0.0002       | 74    | 5   | 22 - 110    | 20        |
| Fluoranthene           | 84.26      | 83.42       | mg/L  | 1    | 80                 | <0.0002       | 105   | 1   | 21 - 110    | 20        |
| Pyrene                 | 63.91      | 63.47       | mg/L  | 1    | 80                 | <0.0002       | 79    | 0   | 22 - 100    | 20        |
| Benzo(a)anthracene     | 63.27      | 66.91       | mg/L  | 1    | 80                 | <0.0002       | 79    | 5   | 30 - 99     | 20        |
| Chrysene               | 56.61      | 61.45       | mg/L  | 1    | 80                 | <0.0002       | 70    | 8   | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 70.58      | 69.71       | mg/L  | 1    | 80                 | <0.0002       | 88    | 1   | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 72.81      | 77.54       | mg/L  | 1    | 80                 | <0.0002       | 91    | 6   | 35 - 103    | 20        |
| Benzo(a)pyrene         | 67.97      | 70.8        | mg/L  | 1    | 80                 | <0.0002       | 84    | 4   | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 50.58      | 50.43       | mg/L  | 1    | 80                 | <0.0002       | 63    | 0   | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 42.84      | 43.81       | mg/L  | 1    | 80                 | <0.0002       | 53    | 2   | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 53.45      | 61.02       | mg/L  | 1    | 80                 | <0.0002       | 66    | 13  | 19 - 119    | 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  | 68.28      | 70.92       | mg/L  | 1        | 80           | 85        | 88         | 35 - 114        |
| 2-Fluorobiphenyl | 79.07      | 79.78       | mg/L  | 1        | 80           | 98        | 99         | 43 - 116        |
| Terphenyl-d14    | 42.35      | 42.05       | mg/L  | 1        | 80           | 52        | 52         | 33 - 141        |

**Quality Control Report  
Continuing Calibration Verification Standards**

CCV (1)

QCBatch: QC20176

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0998                 | 100                         | 85 - 115                      | 5/8/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 5/8/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 5/8/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.104                  | 104                         | 85 - 115                      | 5/8/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.311                  | 104                         | 85 - 115                      | 5/8/02           |

CCV (2)            QCBatch:    QC20176

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/8/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 5/8/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0991                 | 99                          | 85 - 115                      | 5/8/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0987                 | 98                          | 85 - 115                      | 5/8/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.293                  | 97                          | 85 - 115                      | 5/8/02           |

ICV (1)            QCBatch:    QC20176

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0977                 | 98                          | 85 - 115                      | 5/8/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0933                 | 93                          | 85 - 115                      | 5/8/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0953                 | 95                          | 85 - 115                      | 5/8/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.099                  | 99                          | 85 - 115                      | 5/8/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.299                  | 100                         | 85 - 115                      | 5/8/02           |

CCV (1)            QCBatch:    QC20214

| Param                | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene          |      | mg/L  | 60                    | 59.81                  | 99                          | 80 - 120                      | 5/8/02           |
| Acenaphthylene       |      | mg/L  | 60                    | 63.69                  | 106                         | 80 - 120                      | 5/8/02           |
| Acenaphthene         |      | mg/L  | 60                    | 61.82                  | 103                         | 80 - 120                      | 5/8/02           |
| Fluorene             |      | mg/L  | 60                    | 58.4                   | 97                          | 80 - 120                      | 5/8/02           |
| Phenanthrene         |      | mg/L  | 60                    | 52.6                   | 87                          | 80 - 120                      | 5/8/02           |
| Anthracene           |      | mg/L  | 60                    | 53.88                  | 89                          | 80 - 120                      | 5/8/02           |
| Fluoranthene         |      | mg/L  | 60                    | 71.2                   | 118                         | 80 - 120                      | 5/8/02           |
| Pyrene               |      | mg/L  | 60                    | 59.57                  | 99                          | 80 - 120                      | 5/8/02           |
| Benzo(a)anthracene   |      | mg/L  | 60                    | 60.85                  | 101                         | 80 - 120                      | 5/8/02           |
| Chrysene             |      | mg/L  | 60                    | 59.44                  | 99                          | 80 - 120                      | 5/8/02           |
| Benzo(b)fluoranthene |      | mg/L  | 60                    | 67.83                  | 113                         | 80 - 120                      | 5/8/02           |
| Benzo(k)fluoranthene |      | mg/L  | 60                    | 61.15                  | 101                         | 80 - 120                      | 5/8/02           |

Continued ...

... Continued

| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzo(a)pyrene         |      | mg/L  | 60                    | 57.46                  | 95                          | 80 - 120                      | 5/8/02           |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 50.38                  | 83                          | 80 - 120                      | 5/8/02           |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 53.21                  | 88                          | 80 - 120                      | 5/8/02           |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 53.41                  | 89                          | 80 - 120                      | 5/8/02           |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 60.79                  | 101                         | 80 - 120                      | 5/8/02           |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 65.57                  | 109                         | 80 - 120                      | 5/8/02           |
| Terphenyl-d14          |      | mg/L  | 60                    | 59.00                  | 98                          | 80 - 120                      | 5/8/02           |



# TRACE ANALYSIS, 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: May 10, 2002

Order ID Number: A02050807

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|---------------|--------|------------|------------|---------------|
| 196491 | MW-9 (13-15') | Soil   | 5/6/02     | 10:18      | 5/8/02        |
| 196492 | MW-9 (25-27') | Soil   | 5/6/02     | 11:00      | 5/8/02        |
| 196493 | S-4 (13-15')  | Soil   | 5/6/02     | 14:30      | 5/8/02        |
| 196494 | S-4 (28-29')  | Soil   | 5/6/02     | 15:30      | 5/8/02        |

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

This report consists of a total of 10 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: 196491 - MW-9 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20177 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.790  | mg/Kg | 10       | 1            | 79               | 70 - 130        |
| 4-BFB     |      | 0.724  | mg/Kg | 10       | 1            | 72               | 70 - 130        |

**Sample: 196491 - MW-9 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20207 Date Analyzed: 5/9/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19347 Date Prepared: 5/9/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 126    | mg/Kg | 1        | 150          | 84               | 70 - 130        |

**Sample: 196491 - MW-9 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20178 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.2    | mg/Kg | 10       | 0.10         | 120              | 70 - 130        |
| 4-BFB     |      | 0.906  | mg/Kg | 10       | 0.10         | 91               | 70 - 130        |

**Sample: 196492 - MW-9 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20177 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.739  | mg/Kg | 10       | 1            | 74               | 70 - 130        |
| 4-BFB     | 1    | 0.667  | mg/Kg | 10       | 1            | 66               | 70 - 130        |

**Sample: 196492 - MW-9 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20207 Date Analyzed: 5/9/02  
 Analyst: MM Preparation Method: N/A Prep Batch: PB19347 Date Prepared: 5/9/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 124    | mg/Kg | 1        | 150          | 83               | 70 - 130        |

**Sample: 196492 - MW-9 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20178 Date Analyzed: 5/8/02  
 Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.16   | mg/Kg | 10       | 0.10         | 116              | 70 - 130        |
| 4-BFB     |      | 0.834  | mg/Kg | 10       | 0.10         | 83               | 70 - 130        |

**Sample: 196493 - S-4 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20177 Date Analyzed: 5/8/02  
 Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

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

Continued ...

<sup>1</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

... Continued Sample: 196493 Analysis: BTEX

| Param      | Flag | Result | Units | Dilution | RDL   |
|------------|------|--------|-------|----------|-------|
| Total BTEX |      | <0.010 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.831  | mg/Kg | 10       | 1            | 83               | 70 - 130        |
| 4-BFB     |      | 0.818  | mg/Kg | 10       | 1            | 82               | 70 - 130        |

**Sample: 196493 - S-4 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20207 Date Analyzed: 5/9/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19347 Date Prepared: 5/9/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 123    | mg/Kg | 1        | 150          | 82               | 70 - 130        |

**Sample: 196493 - S-4 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20178 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.792  | mg/Kg | 10       | 0.10         | 79               | 70 - 130        |
| 4-BFB     |      | 0.94   | mg/Kg | 10       | 0.10         | 94               | 70 - 130        |

**Sample: 196494 - S-4 (28-29')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20177 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Ethylbenzene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | <0.020 | mg/Kg | 20       | 0.001 |
| Test Comments | 2    | *      | mg/Kg | 1        |       |

<sup>2</sup>Sample diluted due to lack of sample extract. Sample has a Benzene concentration of less than 0.0047 which is the MDL.

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |              | 0.754  | mg/Kg | 20       | 1            | 75               | 70 - 130        |
| 4-BFB     | <sup>3</sup> | 0.695  | mg/Kg | 20       | 1            | 69               | 70 - 130        |

**Sample: 196494 - S-4 (28-29')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20207 Date Analyzed: 5/9/02  
Analyst: MM Preparation Method: N/A Prep Batch: PB19347 Date Prepared: 5/9/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 124    | mg/Kg | 1        | 150          | 83               | 70 - 130        |

**Sample: 196494 - S-4 (28-29')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20178 Date Analyzed: 5/8/02  
Analyst: CG Preparation Method: N/A Prep Batch: PB19324 Date Prepared: 5/8/02

| Param | Flag         | Result | Units | Dilution | RDL  |
|-------|--------------|--------|-------|----------|------|
| GRO   | <sup>4</sup> | <2     | mg/Kg | 20       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1      | mg/Kg | 20       | 0.10         | 100              | 70 - 130        |
| 4-BFB     |      | 0.94   | mg/Kg | 20       | 0.10         | 94               | 70 - 130        |

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>4</sup>Sample diluted due to lack of sample extract.



### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20177

| 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       |      | 0.948  | mg/Kg | 10       | 1            | 95               | 70 - 130        |
| 4-BFB     |      | 0.914  | mg/Kg | 10       | 1            | 91               | 70 - 130        |

Method Blank            QCBatch:    QC20178

| 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       | 0.10         | 101              | 70 - 130        |
| 4-BFB     |      | 1.06   | mg/Kg | 10       | 0.10         | 106              | 70 - 130        |

Method Blank            QCBatch:    QC20207

| 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 |      | 125    | mg/Kg | 1        | 150          | 83               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch:    QC20177

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.941      | 0.996       | mg/Kg | 10   | 1                  | <0.010        | 94    | 6   | 70 - 130    | 20        |
| Benzene      | 0.941      | 0.950       | mg/Kg | 10   | 1                  | <0.010        | 94    | 1   | 70 - 130    | 20        |
| Toluene      | 0.970      | 0.972       | mg/Kg | 10   | 1                  | <0.010        | 97    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.955      | 0.957       | mg/Kg | 10   | 1                  | <0.010        | 95    | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.88       | 2.91        | mg/Kg | 10   | 3                  | <0.010        | 96    | 1   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.962      | 0.948       | mg/Kg | 10       | 1            | 96        | 95         | 70 - 130        |
| 4-BFB     | 0.976      | 0.967       | mg/Kg | 10       | 1            | 98        | 10         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20178

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.29       | 9.63        | mg/Kg | 10   | 1                  | <1            | 93    | 3   | 80 - 120    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.929      | 0.968       | mg/Kg | 10       | 0.10         | 93        | 97         | 70 - 130        |
| 4-BFB     | 1.13       | 1.09        | mg/Kg | 10       | 0.10         | 113       | 109        | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20207

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 238        | 241         | mg/Kg | 1    | 250                | <50.0         | 95    | 1   | 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 | 121        | 125         | mg/Kg | 1        | 150          | 81        | 83         | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**

QCBatch: QC20177

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.772     | 0.752      | mg/Kg | 10   | 1                  | <0.010        | 77    | 3   | 70 - 130    | 20        |
| Toluene      | 0.787     | 0.777      | mg/Kg | 10   | 1                  | <0.010        | 79    | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.786     | 0.765      | mg/Kg | 10   | 1                  | <0.010        | 79    | 3   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.44      | 2.37       | mg/Kg | 10   | 3                  | <0.010        | 81    | 3   | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.800     | 0.766      | mg/Kg | 10       | 1            | 80       | 77        | 70 - 130        |
| 4-BFB     | 0.814     | 0.776      | mg/Kg | 10       | 1            | 81       | 78        | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC20178

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 7.56      | 8.78       | mg/Kg | 10   | 1                  | <1            | 76    | 14  | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.761     | 0.901      | mg/Kg | 10       | 0.10         | 76       | 90        | 70 - 130        |
| 4-BFB     | 0.964     | 0.926      | mg/Kg | 10       | 0.10         | 96       | 93        | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC20207

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 247       | 230        | mg/Kg | 1    | 250                | <50.0         | 98    | 7   | 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 | 122       | 118        | mg/Kg | 1        | 150          | 81       | 79        | 70 - 130        |

## Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch:    QC20177

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0983                 | 98                          | 85 - 115                      | 5/8/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.092                  | 92                          | 85 - 115                      | 5/8/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0942                 | 94                          | 85 - 115                      | 5/8/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0927                 | 93                          | 85 - 115                      | 5/8/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.280                  | 93                          | 85 - 115                      | 5/8/02           |

CCV (2)            QCBatch:    QC20177

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0952                 | 95                          | 85 - 115                      | 5/8/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0867                 | 86                          | 85 - 115                      | 5/8/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0876                 | 87                          | 85 - 115                      | 5/8/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0867                 | 86                          | 85 - 115                      | 5/8/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.273                  | 91                          | 85 - 115                      | 5/8/02           |

ICV (1)            QCBatch:    QC20177

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0985                 | 98                          | 85 - 115                      | 5/8/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0949                 | 95                          | 85 - 115                      | 5/8/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0969                 | 97                          | 85 - 115                      | 5/8/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0965                 | 96                          | 85 - 115                      | 5/8/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.298                  | 99                          | 85 - 115                      | 5/8/02           |

CCV (1)            QCBatch:    QC20178

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.903                  | 90                          | 85 - 115                      | 5/8/02           |

ICV (1)            QCBatch:    QC20178

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.99                   | 99                          | 85 - 115                      | 5/8/02           |

CCV (1)            QCBatch:    QC20207

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 259                    | 104                         | 75 - 125                      | 5/9/02           |

ICV (1)            QCBatch:    QC20207

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 237                    | 94                          | 75 - 125                      | 5/9/02           |

# TraceAnalysis, Inc.

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

Company Name:

Emmon Services Inc

Phone #:

915-570-8726

Address:

306 West Wall, Suite 1312, Midland, TX 79701 915-684-7587

Contact Person:

Jeffrey Kinley Kyle Canderson

Invoice to:

Equinn Services Inc.

Project #:

EQ-112

Incident # 300 109

Project Name:

Barbara Ranch

Project Location:

Isa County New Mexico

Sampler Signature:

Jeffrey Kinley

| LAB #<br>(LAB USE ONLY) | FIELD CODE     | # CONTAINERS | Volume/Amount | MATRIX PRESERVATIVE METHOD |      |     |        |     |      | SAMPLING |      | Turn Around Time if different from standard |      |      |  |  |  |  |  |  |  |  |  |  |
|-------------------------|----------------|--------------|---------------|----------------------------|------|-----|--------|-----|------|----------|------|---|------|------|--|--|--|--|--|--|--|--|--|--|
|                         |                |              |               | WATER                      | SOIL | AIR | SLUDGE | HCL | HNO3 | ICE      | NONE |   | DATE | TIME |  |  |  |  |  |  |  |  |  |  |
| 790                     | MW-10 (8-10')  | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/07/02                                    | 0850 |      |  |  |  |  |  |  |  |  |  |  |
| 791                     | MW-10 (25-27') | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/07/02                                    | 0945 |      |  |  |  |  |  |  |  |  |  |  |
| 792                     | S-1 (13-15')   | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/07/02                                    | 1520 |      |  |  |  |  |  |  |  |  |  |  |
| 793                     | S-1 (27-28')   | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/07/02                                    | 1600 |      |  |  |  |  |  |  |  |  |  |  |
| 794                     | MW-11 (13-15') | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/08/02                                    | 1036 |      |  |  |  |  |  |  |  |  |  |  |
| 795                     | MW-11 (26-28') | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/08/02                                    | 1102 |      |  |  |  |  |  |  |  |  |  |  |
| 796                     | MW-12 (13-15') | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/08/02                                    | 1352 |      |  |  |  |  |  |  |  |  |  |  |
| 797                     | MW-12 (27-28') | 1            | 4oz           | ✓                          |      |     |        |     |      |          | ✓    | 05/08/02                                    | 1440 |      |  |  |  |  |  |  |  |  |  |  |

## ANALYSIS REQUEST

(Circle or Specify Method No.)

|                                      |   |
|--------------------------------------|---|
| MTBE 8020/602                        | ✓ |
| BTEX 8020/602                        | ✓ |
| TPH                                  |   |
| PAH 8270                             |   |
| Total Metals Ag As Ba Cd Cr Pb Hg Se |   |
| TCLP Metals Ag As Ba Cd Cr Pb Hg Se  |   |
| TCLP Volatiles                       |   |
| TCLP Semi Volatiles                  |   |
| RCI                                  |   |
| GC/MS Vol. 8240/8260/624             |   |
| GC/MS Semi. Vol. 8270/625            |   |
| PCB's 8080/608                       |   |
| Pest. 8080/608                       |   |
| BOD, TSS, PH                         |   |
| TPH (Dealk.) 8015 M *                | ✓ |
| TPH (TV 1005) and to C35 *           | ✓ |
| Hold                                 |   |

**LAB USE ONLY**

Intact  Y  N

Headspace  Y  N

Temp  4

Log-in Review  CB

REMARKS:  
 \* Need 3-day turnaround on TPH (DNO/GRO) Call Jeff Kinley at 915-631-6591 and Bennett Howard at 972-484-3854 with results \*\* After running TPH (DNO/GRO) call Jeff on Bennett for possible further analysis of TPH 1005

Relinquished by: Jeffrey Kinley Date: May 9, 2002 Time: 1200

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received at Laboratory by: Jeffrey Kinley Date: 5-10-02 Time: 10:00

Report Date: May 17, 2002 Order Number: A02051010  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 17, 2002

Order ID Number: A02051010

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description    | Matrix | Date Taken | Time Taken | Date Received |
|--------|----------------|--------|------------|------------|---------------|
| 196728 | MW-10 (8-10')  | Soil   | 5/7/02     | 8:50       | 5/10/02       |
| 196729 | MW-10 (25-27') | Soil   | 5/7/02     | 9:45       | 5/10/02       |
| 196730 | S-1 (13-15')   | Soil   | 5/7/02     | 15:20      | 5/10/02       |
| 196731 | S-1 (27-28')   | Soil   | 5/7/02     | 16:00      | 5/10/02       |
| 196732 | MW-11 (13-15') | Soil   | 5/8/02     | 10:36      | 5/10/02       |
| 196733 | MW-11 (26-28') | Soil   | 5/8/02     | 11:02      | 5/10/02       |
| 196734 | MW-12 (13-15') | Soil   | 5/8/02     | 13:52      | 5/10/02       |
| 196735 | MW-12 (27-28') | Soil   | 5/8/02     | 14:40      | 5/10/02       |

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

| Sample - Field Code     | BTEX          |               |                    |                    |                  |                     | TPH DRO   | TPH GRO   |
|-------------------------|---------------|---------------|--------------------|--------------------|------------------|---------------------|-----------|-----------|
|                         | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | Test Comments (ppm) | DRO (ppm) | GRO (ppm) |
| 196728 - MW-10 (8-10')  | <0.200        | 0.511         | 0.298              | 0.663              | 1.47             | * 1                 | 767       | 202       |
| 196729 - MW-10 (25-27') | <0.050        | <0.050        | <0.050             | <0.050             | <0.050           | * 2                 | <50.0     | 17.2      |
| 196730 - S-1 (13-15')   | <0.020        | <0.020        | <0.020             | <0.020             | <0.020           | * 3                 | <50.0     | <2 4      |
| 196731 - S-1 (27-28')   | <0.010        | 0.0922        | 0.0146             | <0.010             | 0.107            | -                   | <50.0     | <1.00     |
| 196732 - MW-11 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | -                   | <50.0     | <1        |
| 196733 - MW-11 (26-28') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | -                   | <50.0     | <1        |
| 196734 - MW-12 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | -                   | <50.0     | <1        |
| 196735 - MW-12 (27-28') | <0.050        | <0.050        | 0.397              | 1.24               | 1.64             | * 5                 | <50.0     | 79.7      |

<sup>1</sup> Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.0473 which is the MDL.

<sup>2</sup> Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.01183 which is the MDL.

<sup>3</sup> Sample diluted due to turbidity. Sample has a Benzene concentration of less than 0.00473 which is the MDL.

<sup>4</sup> Sample diluted due to turbidity.

<sup>5</sup> Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.01183 which is the MDL.

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

# TRACE ANALYSIS, INC.

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Lubbock, Texas 79424 800•378•1296  
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E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: May 17, 2002

Order ID Number: A02051010

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|----------------|--------|------------|------------|---------------|
| 196728 | MW-10 (8-10')  | Soil   | 5/7/02     | 8:50       | 5/10/02       |
| 196729 | MW-10 (25-27') | Soil   | 5/7/02     | 9:45       | 5/10/02       |
| 196730 | S-1 (13-15')   | Soil   | 5/7/02     | 15:20      | 5/10/02       |
| 196731 | S-1 (27-28')   | Soil   | 5/7/02     | 16:00      | 5/10/02       |
| 196732 | MW-11 (13-15') | Soil   | 5/8/02     | 10:36      | 5/10/02       |
| 196733 | MW-11 (26-28') | Soil   | 5/8/02     | 11:02      | 5/10/02       |
| 196734 | MW-12 (13-15') | Soil   | 5/8/02     | 13:52      | 5/10/02       |
| 196735 | MW-12 (27-28') | Soil   | 5/8/02     | 14:40      | 5/10/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 18 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: 196728 - MW-10 (8-10')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20232 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.200 | mg/Kg | 200      | 0.001 |
| Toluene       |      | 0.511  | mg/Kg | 200      | 0.001 |
| Ethylbenzene  |      | 0.298  | mg/Kg | 200      | 0.001 |
| M,P,O-Xylene  |      | 0.663  | mg/Kg | 200      | 0.001 |
| Total BTEX    |      | 1.47   | mg/Kg | 200      | 0.001 |
| Test Comments | 1    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.87   | mg/Kg | 200      | 1            | 87               | 70 - 130        |
| 4-BFB     | 2    | 4.05   | mg/Kg | 200      | 1            | 405              | 70 - 130        |

**Sample: 196728 - MW-10 (8-10')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20349 Date Analyzed: 5/15/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19453 Date Prepared: 5/15/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 767    | mg/Kg | 1        | 50  |

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

**Sample: 196728 - MW-10 (8-10')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20233 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 202    | mg/Kg | 200      | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 3    | 0.482  | mg/Kg | 200      | 0.10         | 48               | 70 - 130        |
| 4-BFB     | 4    | 12.6   | mg/Kg | 200      | 0.10         | 126              | 70 - 130        |

<sup>1</sup>Sampled diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.0473 which is the MDL.

<sup>2</sup>High surrogate recovery due to peak interference.

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>4</sup>High surrogate recovery due to peak interference.

**Sample: 196729 - MW-10 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20232 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.050 | mg/Kg | 50       | 0.001 |
| Toluene       |      | <0.050 | mg/Kg | 50       | 0.001 |
| Ethylbenzene  |      | <0.050 | mg/Kg | 50       | 0.001 |
| M,P,O-Xylene  |      | <0.050 | mg/Kg | 50       | 0.001 |
| Total BTEX    |      | <0.050 | mg/Kg | 50       | 0.001 |
| Test Comments | 5    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.816  | mg/Kg | 50       | 1            | 81               | 70 - 130        |
| 4-BFB     |      | 0.89   | mg/Kg | 50       | 1            | 89               | 70 - 130        |

**Sample: 196729 - MW-10 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20301 Date Analyzed: 5/14/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19416 Date Prepared: 5/13/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 173    | mg/Kg | 1        | 150          | 115              | 70 - 130        |

**Sample: 196729 - MW-10 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20233 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 17.2   | mg/Kg | 50       | 0.10 |

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>6</sup> | 0.68   | mg/Kg | 50       | 0.10         | 68               | 70 - 130        |
| 4-BFB     | <sup>7</sup> | 2.14   | mg/Kg | 50       | 0.10         | 214              | 70 - 130        |

**Sample: 196730 - S-1 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20232 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

<sup>5</sup>Sampled diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.01183 which is the MDL.

<sup>6</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>7</sup>High surrogate recovery due to peak interference.

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Ethylbenzene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | <0.020 | mg/Kg | 20       | 0.001 |
| Test Comments | 8    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.775  | mg/Kg | 20       | 1            | 77               | 70 - 130        |
| 4-BFB     |      | 0.743  | mg/Kg | 20       | 1            | 74               | 70 - 130        |

**Sample: 196730 - S-1 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20301 Date Analyzed: 5/14/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19416 Date Prepared: 5/13/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 166    | mg/Kg | 1        | 150          | 111              | 70 - 130        |

**Sample: 196730 - S-1 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20233 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   | 9    | <2     | mg/Kg | 20       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.794  | mg/Kg | 20       | 0.10         | 79               | 70 - 130        |
| 4-BFB     |      | 0.962  | mg/Kg | 20       | 0.10         | 96               | 70 - 130        |

**Sample: 196731 - S-1 (27-28')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20274 Date Analyzed: 5/13/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19399 Date Prepared: 5/13/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene |      | 0.0922 | mg/Kg | 10       | 0.001 |

Continued ...

<sup>8</sup>Sample diluted due to turbidity. Sample has a Benzene concentration of less than 0.00473 which is the MDL.

<sup>9</sup>Sample diluted due to turbidity.

... Continued Sample: 196731 Analysis: BTEX

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Ethylbenzene |      | 0.0146 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | <0.010 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.107  | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.703  | mg/Kg | 10       | 1            | 70               | 70 - 130        |
| 4-BFB     |      | 0.738  | mg/Kg | 10       | 1            | 74               | 70 - 130        |

Sample: 196731 - S-1 (27-28')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20301 Date Analyzed: 5/14/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19416 Date Prepared: 5/13/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 173    | mg/Kg | 1        | 150          | 115              | 70 - 130        |

Sample: 196731 - S-1 (27-28')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20275 Date Analyzed: 5/13/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19399 Date Prepared: 5/13/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.22   | mg/Kg | 10       | 0.10         | 122              | 70 - 130        |
| 4-BFB     |      | 0.905  | mg/Kg | 10       | 0.10         | 90               | 70 - 130        |

Sample: 196732 - MW-11 (13-15')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20232 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

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

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>10</sup> | 0.648  | mg/Kg | 10       | 1            | 64               | 70 - 130        |
| 4-BFB     | <sup>11</sup> | 0.581  | mg/Kg | 10       | 1            | 58               | 70 - 130        |

**Sample: 196732 - MW-11 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20301 Date Analyzed: 5/14/02  
 Analyst: MM Preparation Method: 3550 B Prep Batch: PB19416 Date Prepared: 5/13/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 168    | mg/Kg | 1        | 150          | 112              | 70 - 130        |

**Sample: 196732 - MW-11 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20233 Date Analyzed: 5/10/02  
 Analyst: CG Preparation Method: 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.785  | mg/Kg | 10       | 0.10         | 79               | 70 - 130        |
| 4-BFB     |      | 0.743  | mg/Kg | 10       | 0.10         | 74               | 70 - 130        |

**Sample: 196733 - MW-11 (26-28')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20232 Date Analyzed: 5/10/02  
 Analyst: CG Preparation Method: S 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

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

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>12</sup> | 0.66   | mg/Kg | 10       | 1            | 66               | 70 - 130        |

Continued ...

<sup>10</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>11</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>12</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| 4-BFB     | <sup>13</sup> | 0.63   | mg/Kg | 10       | 1            | 63               | 70 - 130        |

**Sample: 196733 - MW-11 (26-28')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20349 Date Analyzed: 5/15/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19453 Date Prepared: 5/15/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 128    | mg/Kg | 1        | 150          | 85               | 70 - 130        |

**Sample: 196733 - MW-11 (26-28')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20233 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.09   | mg/Kg | 10       | 0.10         | 109              | 70 - 130        |
| 4-BFB     |      | 0.757  | mg/Kg | 10       | 0.10         | 76               | 70 - 130        |

**Sample: 196734 - MW-12 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20232 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.778  | mg/Kg | 10       | 1            | 77               | 70 - 130        |
| 4-BFB     |      | 0.747  | mg/Kg | 10       | 1            | 74               | 70 - 130        |

<sup>13</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

**Sample: 196734 - MW-12 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20301 Date Analyzed: 5/14/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19416 Date Prepared: 5/13/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 161    | mg/Kg | 1        | 150          | 107              | 70 - 130        |

**Sample: 196734 - MW-12 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20233 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.16   | mg/Kg | 10       | 0.10         | 116              | 70 - 130        |
| 4-BFB     |      | 0.888  | mg/Kg | 10       | 0.10         | 89               | 70 - 130        |

**Sample: 196735 - MW-12 (27-28')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20232 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19360 Date Prepared: 5/10/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.050 | mg/Kg | 50       | 0.001 |
| Toluene       |      | <0.050 | mg/Kg | 50       | 0.001 |
| Ethylbenzene  |      | 0.397  | mg/Kg | 50       | 0.001 |
| M,P,O-Xylene  |      | 1.24   | mg/Kg | 50       | 0.001 |
| Total BTEX    |      | 1.64   | mg/Kg | 50       | 0.001 |
| Test Comments | 14   | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.836  | mg/Kg | 50       | 1            | 83               | 70 - 130        |
| 4-BFB     | 15   | 1.35   | mg/Kg | 50       | 1            | 135              | 70 - 130        |

**Sample: 196735 - MW-12 (27-28')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20301 Date Analyzed: 5/14/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19416 Date Prepared: 5/13/02

<sup>14</sup>Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.01183 which is the MDL.

<sup>15</sup>High surrogate recovery due to peak interference.

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 167    | mg/Kg | 1        | 150          | 111              | 70 - 130        |

**Sample: 196735 - MW-12 (27-28')**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC20233      Date Analyzed: 5/10/02  
Analyst: CG              Preparation Method: 5035      Prep Batch: PB19360      Date Prepared: 5/10/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 79.7   | mg/Kg | 50       | 0.10 |

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>16</sup> | 0.468  | mg/Kg | 50       | 0.10         | 47               | 70 - 130        |
| 4-BFB     | <sup>17</sup> | 2.68   | mg/Kg | 50       | 0.10         | 268              | 70 - 130        |

<sup>16</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>17</sup>High surrogate recovery due to peak interference.



### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20232

| 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       |      | 0.905  | mg/Kg | 10       | 1            | 90               | 70 - 130        |
| 4-BFB     |      | 0.931  | mg/Kg | 10       | 1            | 93               | 70 - 130        |

Method Blank            QCBatch:    QC20233

| 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      | mg/Kg | 10       | 0.10         | 100              | 70 - 130        |
| 4-BFB     |      | 1.07   | mg/Kg | 10       | 0.10         | 107              | 70 - 130        |

Method Blank            QCBatch:    QC20274

| 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       |      | 0.846  | mg/Kg | 10       | 1            | 85               | 70 - 130        |
| 4-BFB     |      | 0.810  | mg/Kg | 10       | 1            | 81               | 70 - 130        |

**Method Blank**                      QCBatch:    QC20275

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.00   | mg/Kg | 10       | 0.10         | 100              | 70 - 130        |
| 4-BFB     |      | 1.04   | mg/Kg | 10       | 0.10         | 104              | 70 - 130        |

**Method Blank**                      QCBatch:    QC20301

| 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 |      | 176    | mg/Kg | 1        | 150          | 117              | 70 - 130        |

**Method Blank**                      QCBatch:    QC20349

| 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 |      | 130    | mg/Kg | 1        | 150          | 86               | 70 - 130        |

## Quality Control Report Lab Control Spikes and Duplicate Spikes

**Laboratory Control Spikes**                      QCBatch:    QC20232

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.92       | 0.957       | mg/Kg | 10   | 1                  | <0.010        | 92    | 3   | 70 - 130    | 20        |
| Benzene      | 0.925      | 0.929       | mg/Kg | 10   | 1                  | <0.010        | 92    | 0   | 70 - 130    | 20        |
| Toluene      | 0.961      | 0.951       | mg/Kg | 10   | 1                  | <0.010        | 96    | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.954      | 0.941       | mg/Kg | 10   | 1                  | <0.010        | 95    | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.93       | 2.91        | mg/Kg | 10   | 3                  | <0.010        | 97    | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.961      | 0.953       | mg/Kg | 10       | 1            | 96        | 95         | 70 - 130        |
| 4-BFB     | 0.978      | 0.924       | mg/Kg | 10       | 1            | 97        | 92         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC20233

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.72       | 9.43        | mg/Kg | 10   | 1                  | <1            | 97    | 3   | 80 - 120    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.895      | 0.883       | mg/Kg | 10       | 0.10         | 89        | 88         | 70 - 130        |
| 4-BFB     | 1.1        | 1.09        | mg/Kg | 10       | 0.10         | 110       | 109        | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC20274

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.865      | 0.890       | mg/Kg | 10   | 1                  | <0.010        | 86    | 2   | 70 - 130    | 20        |
| Benzene      | 0.895      | 0.905       | mg/Kg | 10   | 1                  | <0.010        | 89    | 1   | 70 - 130    | 20        |
| Toluene      | 0.916      | 0.911       | mg/Kg | 10   | 1                  | <0.010        | 91    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.846      | 0.909       | mg/Kg | 10   | 1                  | <0.010        | 84    | 7   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.73       | 2.69        | mg/Kg | 10   | 3                  | <0.010        | 91    | 1   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.826      | 0.836       | mg/Kg | 10       | 1            | 82        | 83         | 70 - 130        |
| 4-BFB     | 0.837      | 0.916       | mg/Kg | 10       | 1            | 83        | 91         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC20275

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 10.5       | 10.7        | mg/Kg | 10   | 1                  | <1            | 105   | 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       | 1.01       | 1.01        | mg/Kg | 10       | 0.10         | 101       | 101        | 70 - 130        |
| 4-BFB     | 1.09       | 1.1         | mg/Kg | 10       | 0.10         | 109       | 110        | 70 - 130        |

**Laboratory Control Spikes**

QC Batch: QC20301

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 269        | 268         | mg/Kg | 1    | 250                | <50.0         | 108   | 0   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 178        | 174         | mg/Kg | 1        | 150          | 119       | 116        | 70 - 130        |

**Laboratory Control Spikes**

QC Batch: QC20349

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 247        | 263         | mg/Kg | 1    | 250                | <50.0         | 99    | 6   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 132        | 144         | mg/Kg | 1        | 150          | 88        | 96         | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**

QC Batch: QC20232

| Param        | MS Result | MSD Result          | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|---------------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.74      | <sup>18</sup> 0.644 | mg/Kg | 10   | 1                  | <0.010        | 74    | 13  | 70 - 130    | 20        |
| Toluene      | 0.758     | <sup>19</sup> 0.642 | mg/Kg | 10   | 1                  | <0.010        | 75    | 16  | 70 - 130    | 20        |
| Ethylbenzene | 0.756     | <sup>20</sup> 0.641 | mg/Kg | 10   | 1                  | <0.010        | 75    | 16  | 70 - 130    | 20        |
| M,P,O-Xylene | 2.34      | <sup>21</sup> 1.95  | mg/Kg | 10   | 3                  | <0.010        | 78    | 18  | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result          | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|---------------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.754     | <sup>22</sup> 0.668 | mg/Kg | 10       | 1            | 75       | 66        | 70 - 130        |
| 4-BFB     | 0.76      | <sup>23</sup> 0.633 | mg/Kg | 10       | 1            | 76       | 63        | 70 - 130        |

<sup>18</sup>Low MSD recovery due to prep. LCS, LCSD, MS show the method to be in control.  
<sup>19</sup>Low MSD recovery due to prep. LCS, LCSD, MS show the method to be in control.  
<sup>20</sup>Low MSD recovery due to prep. LCS, LCSD, MS show the method to be in control.  
<sup>21</sup>Low MSD recovery due to prep. LCS, LCSD, MS show the method to be in control.  
<sup>22</sup>Low MSD recovery due to prep. LCS, LCSD, MS show the method to be in control.  
<sup>23</sup>Low MSD recovery due to prep. LCS, LCSD, MS show the method to be in control.

**Matrix Spikes** QCBatch: QC20274

| Param        | MS Result           | MSD Result         | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|---------------------|--------------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | <sup>24</sup> 0.676 | <sup>25</sup> 0.65 | mg/Kg | 10   | 1                  | <0.010        | 67    | 3   | 70 - 130    | 20        |
| Toluene      | <sup>26</sup> 0.711 | <sup>27</sup> 0.71 | mg/Kg | 10   | 1                  | 0.0922        | 61    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.704               | 0.714              | mg/Kg | 10   | 1                  | 0.0146        | 68    | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.29                | 2.13               | mg/Kg | 10   | 3                  | <0.010        | 76    | 7   | 70 - 130    | 20        |

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

| Surrogate | MS Result           | MSD Result          | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|---------------------|---------------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | <sup>28</sup> 0.678 | <sup>29</sup> 0.636 | mg/Kg | 10       | 1            | 67       | 63        | 70 - 130        |
| 4-BFB     | <sup>30</sup> 0.626 | <sup>31</sup> 0.596 | mg/Kg | 10       | 1            | 62       | 59        | 70 - 130        |

**Matrix Spikes** QCBatch: QC20275

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 9.72      | 9.45       | mg/Kg | 10   | 1                  | <1.00         | 97    | 2   | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.914     | 0.939      | mg/Kg | 10       | 0.10         | 91       | 94        | 70 - 130        |
| 4-BFB     | 0.909     | 0.86       | mg/Kg | 10       | 0.10         | 91       | 86        | 70 - 130        |

**Matrix Spikes** QCBatch: QC20301

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 241       | 236        | mg/Kg | 1    | 250                | <50.0         | 96    | 2   | 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 | 164       | 164        | mg/Kg | 1        | 150          | 109      | 109       | 70 - 130        |

<sup>24</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

<sup>25</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

<sup>26</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

<sup>27</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

<sup>28</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

<sup>29</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

<sup>30</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

<sup>31</sup>Low MS/MSD recovery due to prep. LCS, LCSD show the method to be in control.

**Matrix Spikes**                      QCBatch:    QC20349

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 226       | 222        | mg/Kg | 1    | 250                | <50.0         | 90    | 2   | 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 | 119       | 116        | mg/Kg | 1        | 150          | 79       | 77        | 70 - 130        |

### Quality Control Report Continuing Calibration Verification Standards

**CCV (1)**                      QCBatch:    QC20232

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0942           | 94                    | 85 - 115                | 5/10/02       |
| Benzene      |      | mg/L  | 0.10            | 0.0914           | 91                    | 85 - 115                | 5/10/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0915           | 91                    | 85 - 115                | 5/10/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0922           | 92                    | 85 - 115                | 5/10/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.284            | 94                    | 85 - 115                | 5/10/02       |

**ICV (1)**                      QCBatch:    QC20232

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.1              | 100                   | 85 - 115                | 5/10/02       |
| Benzene      |      | mg/L  | 0.10            | 0.093            | 93                    | 85 - 115                | 5/10/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0943           | 94                    | 85 - 115                | 5/10/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0948           | 94                    | 85 - 115                | 5/10/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.289            | 96                    | 85 - 115                | 5/10/02       |

**CCV (1)**                      QCBatch:    QC20233

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/Kg | 1               | 0.953            | 95                    | 85 - 115                | 5/10/02       |

ICV (1)            QCBatch:    QC20233

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 1.02                   | 102                         | 85 - 115                      | 5/10/02          |

CCV (1)            QCBatch:    QC20274

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.105                  | 105                         | 85 - 115                      | 5/13/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.086                  | 86                          | 85 - 115                      | 5/13/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0913                 | 91                          | 85 - 115                      | 5/13/02          |
| Ethylbenzene | 32   | mg/L  | 0.10                  | 0.0837                 | 84                          | 85 - 115                      | 5/13/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.265                  | 88                          | 85 - 115                      | 5/13/02          |

CCV (2)            QCBatch:    QC20274

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0935                 | 93                          | 85 - 115                      | 5/13/02          |
| Benzene      | 33   | mg/L  | 0.10                  | 0.0833                 | 83                          | 85 - 115                      | 5/13/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.085                  | 85                          | 85 - 115                      | 5/13/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0889                 | 88                          | 85 - 115                      | 5/13/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.267                  | 89                          | 85 - 115                      | 5/13/02          |

ICV (1)            QCBatch:    QC20274

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0941                 | 94                          | 85 - 115                      | 5/13/02          |
| Benzene      | 34   | mg/L  | 0.10                  | 0.0841                 | 84                          | 85 - 115                      | 5/13/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0853                 | 85                          | 85 - 115                      | 5/13/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.085                  | 85                          | 85 - 115                      | 5/13/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.262                  | 87                          | 85 - 115                      | 5/13/02          |

CCV (1)            QCBatch:    QC20275

<sup>32</sup>Ethylbenzene outside normal limits. Average (91) of CCV components within acceptable range.

<sup>33</sup>Benzene outside normal limits. Average (88) of CCV components within acceptable range.

<sup>34</sup>Benzene outside normal limits. Average (87) of ICV components within acceptable range.

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/Kg | 1               | 1.04             | 104                   | 85 - 115                | 5/13/02       |

CCV (2)            QCBatch:    QC20275

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/Kg | 1               | 0.973            | 97                    | 85 - 115                | 5/13/02       |

ICV (1)            QCBatch:    QC20275

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/Kg | 1               | 1.07             | 107                   | 85 - 115                | 5/13/02       |

CCV (1)            QCBatch:    QC20301

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 272              | 109                   | 75 - 125                | 5/14/02       |

CCV (2)            QCBatch:    QC20301

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 272              | 108                   | 75 - 125                | 5/14/02       |

CCV (3)            QCBatch:    QC20301

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 274              | 109                   | 75 - 125                | 5/14/02       |

ICV (1)            QCBatch:    QC20301



| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 266                    | 106                         | 75 - 125                      | 5/14/02          |

CCV (1)            QCBatch:    QC20349

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 248                    | 99                          | 75 - 125                      | 5/15/02          |

CCV (2)            QCBatch:    QC20349

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 252                    | 100                         | 75 - 125                      | 5/15/02          |

CCV (3)            QCBatch:    QC20349

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 263                    | 105                         | 75 - 125                      | 5/15/02          |

ICV (1)            QCBatch:    QC20349

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 234                    | 94                          | 75 - 125                      | 5/15/02          |

196 736-

# TraceAnalysis, Inc.

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

Company Name: Emeron Services Phone #: 915-570-8726  
 Address: 306 West Wall Suite 1312, Midland, Tx 79701 915-684-7587 Fax #: 915-570-8726  
 Contact Person: Jeffery Kindley / Kyle Landrean  
 Invoice to: Equivia Services  
 Project #: EQ-112 Incident #: 300109  
 Project Location: Loa County New Mexico Project Name: Barker Ranch  
 Sampler Signature: Jeffery Kindley

| LAB #<br>(LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD | SAMPLING |      |     |          |      |
|-------------------------|------------|--------------|---------------|--------|------|-----|--------|---------------------|----------|------|-----|----------|------|
|                         |            |              |               | WATER  | SOIL | AIR | SLUDGE |                     | HCL      | HNO3 | ICE | NONE     | DATE |
| 736                     | MW-11      | 1            | 1.4L          | ✓      |      |     |        |                     | ✓        |      |     | 05/08/02 | 1350 |
|                         | MW-11      | 2            | 40ml          | ✓      |      |     |        | ✓                   |          |      |     | 05/08/02 | 1350 |
| 737                     | MW-12      | 1            | 1.4L          | ✓      |      |     |        |                     | ✓        |      |     | 05/08/02 | 1615 |
|                         | MW-12      | 2            | 40ml          | ✓      |      |     |        | ✓                   |          |      |     | 05/08/02 | 1615 |

Relinquished by: Jeffery Kindley Date: May 9 2002 Time: 1200  
 Relinquished by: Jich Olvera Date: 5-10-02 Time: 00:00  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # A02051011

### ANALYSIS REQUEST

(Circle or Specify Method No.)

|   |   |
|---|---|
| MTBE 8020/602                               | ✓ |
| BTEX 8020/602                               | ✓ |
| TPH   | ✓ |
| PAH 8270                                    | ✓ |
| Total Metals Ag As Ba Cd Cr Pb Hg Se        |   |
| TCLP Metals Ag As Ba Cd Cr Pb Hg Se         |   |
| TCLP Volatiles                              |   |
| TCLP Semi Volatiles                         |   |
| RCI   |   |
| GC/MS Vol. 8240/8260/624                    |   |
| GC/MS Semi. Vol. 8270/625                   |   |
| PCB's 8080/608                              |   |
| Pest. 8080/608                              |   |
| BOD, TSS, PH                                |   |
| Turn Around Time if different from standard |   |
| Hold  |   |

REMARKS:  
**LAB USE ONLY**  
 Intact: Y N  
 Headspace: Y N  
 Temp: 4  
 Log-in Review: CA

FYP  
5/17/02

Carrier # BLS 902 877979 3

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

Report Date: May 20, 2002 Order Number: A02051011  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 2  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: May 20, 2002

Order ID Number: A02051011

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 196736 | MW-11       | Water  | 5/8/02     | 13:50      | 5/10/02       |
| 196737 | MW-12       | Water  | 5/8/02     | 16:15      | 5/10/02       |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 196736 - MW-11      | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 196737 - MW-12      | 0.002         | <0.001        | <0.001             | 0.0026             | 0.0046           |

### Sample: 196736 - MW-11

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | 0.0008  | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

Report Date: May 20, 2002 Order Number: A02051011  
EQ-112 Barber Ranch 3000109Page Number: 2 of 2  
Barber Lea County, New Mexico**Sample: 196737 - MW-12**

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | 0.0008  | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | 0.0002  | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | 0.0006  | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | 0.0007  | mg/L  |
| Chrysene               |      | 0.0008  | mg/L  |
| Benzo(b)fluoranthene   |      | 0.0013  | mg/L  |
| Benzo(k)fluoranthene   |      | 0.0015  | mg/L  |
| Benzo(a)pyrene         |      | 0.0014  | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
4725 Ripley Avenue, Suite A El Paso, Texas 79922 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: May 20, 2002

Order ID Number: A02051011

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|-------------|--------|------------|------------|---------------|
| 196736 | MW-11       | Water  | 5/8/02     | 13:50      | 5/10/02       |
| 196737 | MW-12       | Water  | 5/8/02     | 16:15      | 5/10/02       |

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

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 196736 - MW-11**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20230 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19358 Date Prepared: 5/10/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0923 | mg/L  | 5        | 0.10         | 92               | 70 - 130        |
| 4-BFB     |      | 0.0959 | mg/L  | 5        | 0.10         | 95               | 70 - 130        |

**Sample: 196736 - MW-11**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20367 Date Analyzed: 5/14/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19413 Date Prepared: 5/14/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | 0.0008  | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 50.76  | mg/L  | 1        | 80           | 63               | 35 - 114        |
| 2-Fluorobiphenyl |      | 52.13  | mg/L  | 1        | 80           | 65               | 43 - 116        |
| Terphenyl-d14    |      | 23.66  | mg/L  | 1        | 80           | 29               | 33 - 141        |

**Sample: 196737 - MW-12**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20230 Date Analyzed: 5/10/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19358 Date Prepared: 5/10/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.002  | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | 0.0026 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | 0.0046 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.100  | mg/L  | 1        | 0.10         | 100              | 70 - 130        |
| 4-BFB     |      | 0.101  | mg/L  | 1        | 0.10         | 101              | 70 - 130        |

**Sample: 196737 - MW-12**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20367 Date Analyzed: 5/14/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19413 Date Prepared: 5/14/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | 0.0008  | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | 0.0002  | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | 0.0006  | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | 0.0007  | mg/L  | 1        | 0.0002 |
| Chrysene               |      | 0.0008  | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | 0.0013  | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | 0.0015  | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | 0.0014  | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 56.12  | mg/L  | 1        | 80           | 70               | 35 - 114        |
| 2-Fluorobiphenyl |      | 59.15  | mg/L  | 1        | 80           | 73               | 43 - 116        |
| Terphenyl-d14    |      | 23.93  | mg/L  | 1        | 80           | 29               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20230

| 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       |      | 0.105  | mg/L  | 1        | 0.10         | 105              | 70 - 130        |
| 4-BFB     |      | 0.104  | mg/L  | 1        | 0.10         | 104              | 70 - 130        |

Method Blank      QCBatch:    QC20367

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 37.43  | mg/L  | 1        | 80           | 46               | 35 - 114        |
| 2-Fluorobiphenyl |      | 38.08  | mg/L  | 1        | 80           | 47               | 43 - 116        |
| Terphenyl-d14    |      | 62.17  | mg/L  | 1        | 80           | 77               | 33 - 141        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes



**Laboratory Control Spikes**

QCBatch: QC20230

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0984     | 0.102       | mg/L  | 1    | 0.10               | <0.001        | 98    | 4   | 70 - 130    | 20        |
| Benzene      | 0.105      | 0.107       | mg/L  | 1    | 0.10               | <0.001        | 105   | 2   | 70 - 130    | 20        |
| Toluene      | 0.103      | 0.106       | mg/L  | 1    | 0.10               | <0.001        | 103   | 3   | 70 - 130    | 20        |
| Ethylbenzene | 0.103      | 0.108       | mg/L  | 1    | 0.10               | <0.001        | 103   | 5   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.306      | 0.316       | mg/L  | 1    | 0.30               | <0.001        | 102   | 3   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.105      | 0.105       | mg/L  | 1        | 0.10         | 105       | 105        | 70 - 130        |
| 4-BFB     | 0.101      | 0.103       | mg/L  | 1        | 0.10         | 101       | 103        | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20367

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 40.46      | 33.65       | mg/L  | 1    | 80                 | <0.0002       | 50    | 18  | 16 - 96     | 20        |
| Acenaphthylene         | 41.22      | 40.09       | mg/L  | 1    | 80                 | <0.0002       | 51    | 2   | 20 - 110    | 20        |
| Acenaphthene           | 45.58      | 44.59       | mg/L  | 1    | 80                 | <0.0002       | 56    | 2   | 18 - 108    | 20        |
| Fluorene               | 50.06      | 49.39       | mg/L  | 1    | 80                 | <0.0002       | 62    | 1   | 22 - 102    | 20        |
| Phenanthrene           | 57.04      | 58.94       | mg/L  | 1    | 80                 | <0.0002       | 71    | 3   | 25 - 103    | 20        |
| Anthracene             | 58.63      | 59.3        | mg/L  | 1    | 80                 | <0.0002       | 73    | 1   | 22 - 110    | 20        |
| Fluoranthene           | 60.24      | 60.67       | mg/L  | 1    | 80                 | <0.0002       | 75    | 0   | 21 - 110    | 20        |
| Pyrene                 | 53.99      | 53.16       | mg/L  | 1    | 80                 | <0.0002       | 67    | 1   | 22 - 100    | 20        |
| Benzo(a)anthracene     | 58.57      | 58.86       | mg/L  | 1    | 80                 | <0.0002       | 73    | 0   | 30 - 99     | 20        |
| Chrysene               | 53.66      | 54.28       | mg/L  | 1    | 80                 | <0.0002       | 67    | 1   | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 51.69      | 48.99       | mg/L  | 1    | 80                 | <0.0002       | 64    | 5   | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 53.9       | 56.25       | mg/L  | 1    | 80                 | <0.0002       | 67    | 4   | 35 - 103    | 20        |
| Benzo(a)pyrene         | 50.46      | 50.75       | mg/L  | 1    | 80                 | <0.0002       | 63    | 0   | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 55.6       | 53.82       | mg/L  | 1    | 80                 | <0.0002       | 69    | 3   | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 55.25      | 55.54       | mg/L  | 1    | 80                 | <0.0002       | 69    | 0   | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 49.34      | 49.24       | mg/L  | 1    | 80                 | <0.0002       | 61    | 0   | 19 - 119    | 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  | 46.66      | 37.15       | mg/L  | 1        | 80           | 58        | 46         | 35 - 114        |
| 2-Fluorobiphenyl | 47.74      | 42.74       | mg/L  | 1        | 80           | 59        | 53         | 43 - 116        |
| Terphenyl-d14    | 62.51      | 60.66       | mg/L  | 1        | 80           | 78        | 75         | 33 - 141        |

**Quality Control Report  
Continuing Calibration Verification Standards**

CCV (1)

QCBatch: QC20230

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0988                 | 99                          | 85 - 115                      | 5/10/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/10/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.100                  | 100                         | 85 - 115                      | 5/10/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/10/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.302                  | 101                         | 85 - 115                      | 5/10/02          |

CCV (2)            QCBatch:    QC20230

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0946                 | 94                          | 85 - 115                      | 5/10/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/10/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0983                 | 98                          | 85 - 115                      | 5/10/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0985                 | 98                          | 85 - 115                      | 5/10/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.292                  | 97                          | 85 - 115                      | 5/10/02          |

ICV (1)            QCBatch:    QC20230

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 5/10/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.104                  | 104                         | 85 - 115                      | 5/10/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 5/10/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.106                  | 106                         | 85 - 115                      | 5/10/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.316                  | 105                         | 85 - 115                      | 5/10/02          |

CCV (1)            QCBatch:    QC20367

| Param                | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene          |      | mg/L  | 60                    | 59.37                  | 98                          | 80 - 120                      | 5/14/02          |
| Acenaphthylene       |      | mg/L  | 60                    | 59.8                   | 99                          | 80 - 120                      | 5/14/02          |
| Acenaphthene         |      | mg/L  | 60                    | 60.24                  | 100                         | 80 - 120                      | 5/14/02          |
| Fluorene             |      | mg/L  | 60                    | 60.35                  | 100                         | 80 - 120                      | 5/14/02          |
| Phenanthrene         |      | mg/L  | 60                    | 59.26                  | 98                          | 80 - 120                      | 5/14/02          |
| Anthracene           |      | mg/L  | 60                    | 59.62                  | 99                          | 80 - 120                      | 5/14/02          |
| Fluoranthene         |      | mg/L  | 60                    | 60.68                  | 101                         | 80 - 120                      | 5/14/02          |
| Pyrene               |      | mg/L  | 60                    | 55.96                  | 93                          | 80 - 120                      | 5/14/02          |
| Benzo(a)anthracene   |      | mg/L  | 60                    | 60.23                  | 100                         | 80 - 120                      | 5/14/02          |
| Chrysene             |      | mg/L  | 60                    | 57.45                  | 95                          | 80 - 120                      | 5/14/02          |
| Benzo(b)fluoranthene |      | mg/L  | 60                    | 62.08                  | 103                         | 80 - 120                      | 5/14/02          |
| Benzo(k)fluoranthene |      | mg/L  | 60                    | 55.29                  | 92                          | 80 - 120                      | 5/14/02          |

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| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzo(a)pyrene         |      | mg/L  | 60                    | 55.75                  | 92                          | 80 - 120                      | 5/14/02          |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 55.55                  | 92                          | 80 - 120                      | 5/14/02          |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 53.26                  | 88                          | 80 - 120                      | 5/14/02          |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 52.52                  | 87                          | 80 - 120                      | 5/14/02          |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 61.21                  | 102                         | 80 - 120                      | 5/14/02          |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 59.62                  | 99                          | 80 - 120                      | 5/14/02          |
| Terphenyl-d14          |      | mg/L  | 60                    | 57.39                  | 95                          | 80 - 120                      | 5/14/02          |

# TraceAnalysis, Inc.

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

Company Name: Ennum Services Inc Phone #: 915-570-8726  
 Address: 306 West Wall, Suite 1312 Midland, TX 79701 915-684-7587 Fax #: 915-570-8726  
 Contact Person: Jeffrey Kinley  
 Invoice to: Ennum Services  
 (if different from above) Kyle Handreese  
 Project #: EQ-110 Incident # 300110  
 Project Location: Monterey Lea County, New Mexico Project Name: John Handreese  
 Sampler Signature: Jeffrey Kinley

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # A02051504

| ANALYSIS REQUEST<br>(Circle or Specify Method No.) | MTBE 8020/602                       | BTEX 8020/602                       | TPH | PAH 8270                            | Total Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. B240/8260/624 | GC/MS Semi. Vol. 8270/625 | PCB's 8080/608 | Pest. 8080/608 | BOD, TSS, PH | Hold |
|--|-------------------------------------|-------------------------------------|-----|-------------------------------------|--------------------------------------|-------------------------------------|----------------|---------------------|-----|--------------------------|---------------------------|----------------|----------------|--------------|------|
|  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                      |                                     |                |                     |     |                          |                           |                |                |              |      |
|  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                      |                                     |                |                     |     |                          |                           |                |                |              |      |
|  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                      |                                     |                |                     |     |                          |                           |                |                |              |      |
|  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                      |                                     |                |                     |     |                          |                           |                |                |              |      |
|  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                      |                                     |                |                     |     |                          |                           |                |                |              |      |

|                              |          |
|------------------------------|----------|
| REMARKS:                     |          |
| LAB USE ONLY                 | 5/21 FIP |
| Intact: <u>Y</u> <u>N</u>    |          |
| Headspace: <u>Y</u> <u>N</u> |          |
| Temp: <u>4</u>               |          |
| Log-in Review: <u>10</u>     |          |

| LAB #<br>(LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX                              |      |     |        | PRESERVATIVE METHOD |      |     | SAMPLING                            |          |      |
|-------------------------|------------|--------------|---------------|-------------------------------------|------|-----|--------|---------------------|------|-----|-------------------------------------|----------|------|
|                         |            |              |               | WATER                               | SOIL | AIR | SLUDGE | HCL                 | HNO3 | ICE | NONE                                | DATE     | TIME |
| 197042                  | MW-1       | 1            | 1 Liter       | <input checked="" type="checkbox"/> |      |     |        |                     |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1250 |
|                         | MW-1       | 2            | 40ml          | <input checked="" type="checkbox"/> |      |     |        | V                   |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1250 |
| 43                      | MW-2       | 1            | 1 Liter       | <input checked="" type="checkbox"/> |      |     |        |                     |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1544 |
|                         | MW-2       | 2            | 40ml          | <input checked="" type="checkbox"/> |      |     |        |                     |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1544 |
| 44                      | MW-3       | 1            | 1 Liter       | <input checked="" type="checkbox"/> |      |     |        |                     |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1535 |
|                         | MW-3       | 2            | 40ml          | <input checked="" type="checkbox"/> |      |     |        | V                   |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1535 |
| 45                      | MW-5       | 1            | 1 Liter       | <input checked="" type="checkbox"/> |      |     |        |                     |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1605 |
|                         | MW-5       | 2            | 40ml          | <input checked="" type="checkbox"/> |      |     |        | V                   |      | X   | <input checked="" type="checkbox"/> | 05/13/02 | 1605 |

|   |  |
|---|--|
| Relinquished by: <u>Jeffrey Kinley</u> Date: <u>May 14 2002</u> Time: <u>0700</u> | Received by: <u>Helen Shelton</u> Date: <u>5/14/02</u> Time: <u>0700</u> |
| Relinquished by: <u>Helen Shelton</u> Date: <u>5/14/02</u> Time: <u>1830</u>      | Received by: <u>J. Kinley</u> Date: <u>5/15/02</u> Time: <u>1000</u>     |
| Relinquished by: _____ Date: _____ Time: _____                                    | Received at Laboratory by: _____ Date: _____ Time: _____                 |

Carrier # Dushband 113-544-7493  
 12 samples

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

# TRACE ANALYSIS, 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: May 21, 2002

Order ID Number: A02051504

Project: EQ-110  
TA Job Code: 300110  
Casualty Code: EQ-110  
Project Location: Monument, 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 |
|--------|-------------|--------|------------|------------|---------------|
| 197042 | MW-1        | Water  | 5/13/02    | 12:50      | 5/15/02       |
| 197043 | MW-2        | Water  | 5/13/02    | 15:44      | 5/15/02       |
| 197044 | MW-3        | Water  | 5/13/02    | 15:35      | 5/15/02       |
| 197045 | MW-5        | Water  | 5/13/02    | 16:05      | 5/15/02       |

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

This report consists of a total of 8 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: 197042 - MW-1**

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC20321      Date Analyzed: 5/15/02  
Analyst: CG      Preparation Method: S 5030B      Prep Batch: PB19433      Date Prepared: 5/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0872 | mg/L  | 1        | 0.10         | 87               | 70 - 130        |
| 4-BFB     |      | 0.0879 | mg/L  | 1        | 0.10         | 88               | 70 - 130        |

**Sample: 197042 - MW-1**

Analysis: PAH      Analytical Method: S 8270C      QC Batch: QC20489      Date Analyzed: 5/19/02  
Analyst: RC      Preparation Method: E 3510C      Prep Batch: PB19488      Date Prepared: 5/19/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 62.98  | mg/L  | 1        | 80           | 78               | 35 - 114        |
| 2-Fluorobiphenyl |      | 61.05  | mg/L  | 1        | 80           | 76               | 43 - 116        |
| Terphenyl-d14    |      | 28.22  | mg/L  | 1        | 80           | 35               | 33 - 141        |

**Sample: 197043 - MW-2**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20321 Date Analyzed: 5/15/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19433 Date Prepared: 5/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.089  | mg/L  | 1        | 0.10         | 89               | 70 - 130        |
| 4-BFB     |      | 0.0948 | mg/L  | 1        | 0.10         | 95               | 70 - 130        |

**Sample: 197043 - MW-2**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20489 Date Analyzed: 5/19/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19488 Date Prepared: 5/19/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | 0.00026 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | 0.00044 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 40.15  | mg/L  | 1        | 80           | 50               | 35 - 114        |
| 2-Fluorobiphenyl |      | 42.87  | mg/L  | 1        | 80           | 53               | 43 - 116        |
| Terphenyl-d14    |      | 19.77  | mg/L  | 1        | 80           | 24               | 33 - 141        |

**Sample: 197044 - MW-3**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20321 Date Analyzed: 5/15/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19433 Date Prepared: 5/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.090  | mg/L  | 1        | 0.10         | 90               | 70 - 130        |
| 4-BFB     |      | 0.0956 | mg/L  | 1        | 0.10         | 96               | 70 - 130        |

**Sample: 197044 - MW-3**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20489 Date Analyzed: 5/19/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19488 Date Prepared: 5/19/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 61.63  | mg/L  | 1        | 80           | 77               | 35 - 114        |
| 2-Fluorobiphenyl |      | 66.87  | mg/L  | 1        | 80           | 83               | 43 - 116        |
| Terphenyl-d14    |      | 31.9   | mg/L  | 1        | 80           | 39               | 33 - 141        |

**Sample: 197045 - MW-5**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20321 Date Analyzed: 5/15/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19433 Date Prepared: 5/15/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |

Continued ...



... Continued Sample: 197045 Analysis: BTEX

| Param      | Flag | Result | Units | Dilution | RDL   |
|------------|------|--------|-------|----------|-------|
| Total BTEX |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0911 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |
| 4-BFB     |      | 0.0966 | mg/L  | 1        | 0.10         | 97               | 70 - 130        |

**Sample: 197045 - MW-5**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20489 Date Analyzed: 5/19/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19488 Date Prepared: 5/19/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 58.78  | mg/L  | 1        | 80           | 73               | 35 - 114        |
| 2-Fluorobiphenyl |      | 60.64  | mg/L  | 1        | 80           | 75               | 43 - 116        |
| Terphenyl-d14    |      | 28.22  | mg/L  | 1        | 80           | 35               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20321

| 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       |      | 0.0914 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |
| 4-BFB     |      | 0.0923 | mg/L  | 1        | 0.10         | 92               | 70 - 130        |

Method Blank      QCBatch:    QC20489

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 56.26  | mg/L  | 1        | 80           | 70               | 35 - 114        |
| 2-Fluorobiphenyl |      | 54.88  | mg/L  | 1        | 80           | 68               | 43 - 116        |
| Terphenyl-d14    |      | 43.06  | mg/L  | 1        | 80           | 53               | 33 - 141        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

**Laboratory Control Spikes**

QCBatch: QC20321

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0909     | 0.0912      | mg/L  | 1    | 0.10               | <0.001        | 91    | 0   | 70 - 130    | 20        |
| Benzene      | 0.0921     | 0.0953      | mg/L  | 1    | 0.10               | <0.001        | 92    | 3   | 70 - 130    | 20        |
| Toluene      | 0.093      | 0.0952      | mg/L  | 1    | 0.10               | <0.001        | 93    | 2   | 70 - 130    | 20        |
| Ethylbenzene | 0.0946     | 0.0953      | mg/L  | 1    | 0.10               | <0.001        | 95    | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.281      | 0.284       | mg/L  | 1    | 0.30               | <0.001        | 94    | 1   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0915     | 0.0948      | mg/L  | 1        | 0.10         | 92        | 95         | 70 - 130        |
| 4-BFB     | 0.0926     | 0.0944      | mg/L  | 1        | 0.10         | 93        | 94         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20489

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 51.12      | 51.64       | mg/L  | 1    | 80                 | <0.0002       | 63    | 1   | 16 - 96     | 20        |
| Acenaphthylene         | 57.5       | 58.58       | mg/L  | 1    | 80                 | <0.0002       | 71    | 1   | 20 - 110    | 20        |
| Acenaphthene           | 55.65      | 57.07       | mg/L  | 1    | 80                 | <0.0002       | 69    | 2   | 18 - 108    | 20        |
| Fluorene               | 58.7       | 59.56       | mg/L  | 1    | 80                 | <0.0002       | 73    | 1   | 22 - 102    | 20        |
| Phenanthrene           | 63.65      | 61.33       | mg/L  | 1    | 80                 | <0.0002       | 79    | 3   | 25 - 103    | 20        |
| Anthracene             | 64.81      | 62.23       | mg/L  | 1    | 80                 | <0.0002       | 81    | 4   | 22 - 110    | 20        |
| Fluoranthene           | 71.73      | 61.2        | mg/L  | 1    | 80                 | <0.0002       | 89    | 15  | 21 - 110    | 20        |
| Pyrene                 | 51.22      | 53.69       | mg/L  | 1    | 80                 | <0.0002       | 64    | 4   | 22 - 100    | 20        |
| Benzo(a)anthracene     | 59.56      | 59.66       | mg/L  | 1    | 80                 | <0.0002       | 74    | 0   | 30 - 99     | 20        |
| Chrysene               | 43.72      | 43.86       | mg/L  | 1    | 80                 | <0.0002       | 54    | 0   | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 50.95      | 48.95       | mg/L  | 1    | 80                 | <0.0002       | 63    | 4   | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 57.13      | 56.97       | mg/L  | 1    | 80                 | <0.0002       | 71    | 0   | 35 - 103    | 20        |
| Benzo(a)pyrene         | 52.11      | 49.83       | mg/L  | 1    | 80                 | <0.0002       | 65    | 4   | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 50.61      | 49.83       | mg/L  | 1    | 80                 | <0.0002       | 63    | 1   | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 35.94      | 34.04       | mg/L  | 1    | 80                 | <0.0002       | 44    | 5   | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 45.39      | 47.77       | mg/L  | 1    | 80                 | <0.0002       | 56    | 5   | 19 - 119    | 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  | 59.84      | 60.33       | mg/L  | 1        | 80           | 74        | 75         | 35 - 114        |
| 2-Fluorobiphenyl | 61.23      | 60.89       | mg/L  | 1        | 80           | 76        | 76         | 43 - 116        |
| Terphenyl-d14    | 37.98      | 41.59       | mg/L  | 1        | 80           | 47        | 51         | 33 - 141        |

**Quality Control Report  
Continuing Calibration Verification Standards**

CCV (1)

QCBatch: QC20321

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0967                 | 96                          | 85 - 115                      | 5/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.1                    | 100                         | 85 - 115                      | 5/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0989                 | 98                          | 85 - 115                      | 5/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0976                 | 97                          | 85 - 115                      | 5/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.288                  | 96                          | 85 - 115                      | 5/15/02          |

ICV (1)

QCBatch: QC20321

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0931                 | 93                          | 85 - 115                      | 5/15/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0964                 | 96                          | 85 - 115                      | 5/15/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0965                 | 96                          | 85 - 115                      | 5/15/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0981                 | 98                          | 85 - 115                      | 5/15/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.292                  | 97                          | 85 - 115                      | 5/15/02          |

CCV (1)

QCBatch: QC20489

| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene            |      | mg/L  | 60                    | 63.88                  | 106                         | 80 - 120                      | 5/19/02          |
| Acenaphthylene         |      | mg/L  | 60                    | 64.09                  | 106                         | 80 - 120                      | 5/19/02          |
| Acenaphthene           |      | mg/L  | 60                    | 63.94                  | 106                         | 80 - 120                      | 5/19/02          |
| Fluorene               |      | mg/L  | 60                    | 58.28                  | 97                          | 80 - 120                      | 5/19/02          |
| Phenanthrene           |      | mg/L  | 60                    | 62.9                   | 104                         | 80 - 120                      | 5/19/02          |
| Anthracene             |      | mg/L  | 60                    | 63.00                  | 105                         | 80 - 120                      | 5/19/02          |
| Fluoranthene           |      | mg/L  | 60                    | 58.82                  | 98                          | 80 - 120                      | 5/19/02          |
| Pyrene                 |      | mg/L  | 60                    | 54.92                  | 91                          | 80 - 120                      | 5/19/02          |
| Benzo(a)anthracene     |      | mg/L  | 60                    | 61.19                  | 101                         | 80 - 120                      | 5/19/02          |
| Chrysene               |      | mg/L  | 60                    | 64.67                  | 107                         | 80 - 120                      | 5/19/02          |
| Benzo(b)fluoranthene   |      | mg/L  | 60                    | 49.99                  | 83                          | 80 - 120                      | 5/19/02          |
| Benzo(k)fluoranthene   |      | mg/L  | 60                    | 60.56                  | 100                         | 80 - 120                      | 5/19/02          |
| Benzo(a)pyrene         |      | mg/L  | 60                    | 53.67                  | 89                          | 80 - 120                      | 5/19/02          |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 53.08                  | 88                          | 80 - 120                      | 5/19/02          |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 51.59                  | 85                          | 80 - 120                      | 5/19/02          |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 49.94                  | 83                          | 80 - 120                      | 5/19/02          |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 67.14                  | 111                         | 80 - 120                      | 5/19/02          |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 70.94                  | 118                         | 80 - 120                      | 5/19/02          |
| Terphenyl-d14          |      | mg/L  | 60                    | 55.47                  | 92                          | 80 - 120                      | 5/19/02          |



Report Date: May 21, 2002 Order Number: A02051619  
EQ-110 300110

Page Number: 1 of 1  
Monument, New Mexico

## Summary Report

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

Report Date: May 21, 2002

Order ID Number: A02051619

Project: EQ-110  
TA Job Code: 300110  
Casualty Code: EQ-110  
Project Location: Monument, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 197161 | MW-3        | Water  | 5/14/02    | 12:45      | 5/16/02       |

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

| Sample - Field Code | BTEX             |                  |                       |                       | Total BTEX<br>(ppm) |
|---------------------|------------------|------------------|-----------------------|-----------------------|---------------------|
|                     | Benzene<br>(ppm) | Toluene<br>(ppm) | Ethylbenzene<br>(ppm) | M,P,O-Xylene<br>(ppm) |                     |
| 197161 - MW-3       | 0.0042           | <0.001           | <0.001                | <0.001                | 0.0042              |

### Sample: 197161 - MW-3

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

Report Date: May 17, 2002 Order Number: A02051619  
EQ-110 300110

Page Number: 1 of 1  
Monument, New Mexico

## Summary Report

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

Report Date: May 17, 2002

Order ID Number: A02051619

Project: EQ-110  
TA Job Code: 300110  
Casualty Code: EQ-110  
Project Location: Monument, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 197159 | SB-1 (15-17') | Soil   | 5/14/02    | 10:24      | 5/16/02       |
| 197160 | SB-1 (30-32') | Soil   | 5/14/02    | 11:15      | 5/16/02       |

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

| Sample - Field Code    | BTEX             |                  |                       |                       |                     | TPH DRO      | TPH GRO      |
|------------------------|------------------|------------------|-----------------------|-----------------------|---------------------|--------------|--------------|
|                        | Benzene<br>(ppm) | Toluene<br>(ppm) | Ethylbenzene<br>(ppm) | M,P,O-Xylene<br>(ppm) | Total BTEX<br>(ppm) | DRO<br>(ppm) | GRO<br>(ppm) |
| 197159 - SB-1 (15-17') | <0.010           | <0.010           | <0.010                | 0.0146                | 0.0146              | <50.0        | <1           |
| 197160 - SB-1 (30-32') | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50          | <1           |

# TRACE ANALYSIS, INC.

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155 McCutcheon, Suite H

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El Paso, Texas 79932 888•588•3443  
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: May 21, 2002

Order ID Number: A02051619

Project: EQ-110  
TA Job Code: 300110  
Casualty Code: EQ-110  
Project Location: Monument, 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 |
|--------|-------------|--------|------------|------------|---------------|
| 197161 | MW-3        | Water  | 5/14/02    | 12:45      | 5/16/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 6 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: 197161 - MW-3**

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC20364      Date Analyzed: 5/16/02  
Analyst: CG      Preparation Method: S 5030B      Prep Batch: PB19462      Date Prepared: 5/16/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0042 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | 0.0042 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0799 | mg/L  | 1        | 0.10         | 80               | 70 - 130        |
| 4-BFB     |      | 0.0779 | mg/L  | 1        | 0.10         | 78               | 70 - 130        |

**Sample: 197161 - MW-3**

Analysis: PAH      Analytical Method: S 8270C      QC Batch: QC20489      Date Analyzed: 5/19/02  
Analyst: RC      Preparation Method: E 3510C      Prep Batch: PB19488      Date Prepared: 5/19/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 62.71  | mg/L  | 1        | 80           | 78               | 35 - 114        |
| 2-Fluorobiphenyl |      | 62.98  | mg/L  | 1        | 80           | 78               | 43 - 116        |
| Terphenyl-d14    |      | 23.83  | mg/L  | 1        | 80           | 29               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20364

| 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       |      | 0.0833 | mg/L  | 1        | 0.10         | 83               | 70 - 130        |
| 4-BFB     |      | 0.0824 | mg/L  | 1        | 0.10         | 82               | 70 - 130        |

Method Blank      QCBatch:    QC20489

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 56.26  | mg/L  | 1        | 80           | 70               | 35 - 114        |
| 2-Fluorobiphenyl |      | 54.88  | mg/L  | 1        | 80           | 68               | 43 - 116        |
| Terphenyl-d14    |      | 43.06  | mg/L  | 1        | 80           | 53               | 33 - 141        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

**Laboratory Control Spikes**

QCBatch: QC20364

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0851     | 0.0906      | mg/L  | 1    | 0.10               | <0.001        | 85    | 6   | 70 - 130    | 20        |
| Benzene      | 0.0827     | 0.0891      | mg/L  | 1    | 0.10               | <0.001        | 83    | 7   | 70 - 130    | 20        |
| Toluene      | 0.0776     | 0.0854      | mg/L  | 1    | 0.10               | <0.001        | 78    | 10  | 70 - 130    | 20        |
| Ethylbenzene | 0.0773     | 0.0851      | mg/L  | 1    | 0.10               | <0.001        | 77    | 10  | 70 - 130    | 20        |
| M,P,O-Xylene | 0.242      | 0.260       | mg/L  | 1    | 0.30               | <0.001        | 81    | 7   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0806     | 0.0885      | mg/L  | 1        | 0.10         | 81        | 88         | 70 - 130        |
| 4-BFB     | 0.0833     | 0.0896      | mg/L  | 1        | 0.10         | 83        | 90         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC20489

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 51.12      | 51.64       | mg/L  | 1    | 80                 | <0.0002       | 63    | 1   | 16 - 96     | 20        |
| Acenaphthylene         | 57.5       | 58.58       | mg/L  | 1    | 80                 | <0.0002       | 71    | 1   | 20 - 110    | 20        |
| Acenaphthene           | 55.65      | 57.07       | mg/L  | 1    | 80                 | <0.0002       | 69    | 2   | 18 - 108    | 20        |
| Fluorene               | 58.7       | 59.56       | mg/L  | 1    | 80                 | <0.0002       | 73    | 1   | 22 - 102    | 20        |
| Phenanthrene           | 63.65      | 61.33       | mg/L  | 1    | 80                 | <0.0002       | 79    | 3   | 25 - 103    | 20        |
| Anthracene             | 64.81      | 62.23       | mg/L  | 1    | 80                 | <0.0002       | 81    | 4   | 22 - 110    | 20        |
| Fluoranthene           | 71.73      | 61.2        | mg/L  | 1    | 80                 | <0.0002       | 89    | 15  | 21 - 110    | 20        |
| Pyrene                 | 51.22      | 53.69       | mg/L  | 1    | 80                 | <0.0002       | 64    | 4   | 22 - 100    | 20        |
| Benzo(a)anthracene     | 59.56      | 59.66       | mg/L  | 1    | 80                 | <0.0002       | 74    | 0   | 30 - 99     | 20        |
| Chrysene               | 43.72      | 43.86       | mg/L  | 1    | 80                 | <0.0002       | 54    | 0   | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 50.95      | 48.95       | mg/L  | 1    | 80                 | <0.0002       | 63    | 4   | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 57.13      | 56.97       | mg/L  | 1    | 80                 | <0.0002       | 71    | 0   | 35 - 103    | 20        |
| Benzo(a)pyrene         | 52.11      | 49.83       | mg/L  | 1    | 80                 | <0.0002       | 65    | 4   | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 50.61      | 49.83       | mg/L  | 1    | 80                 | <0.0002       | 63    | 1   | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 35.94      | 34.04       | mg/L  | 1    | 80                 | <0.0002       | 44    | 5   | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 45.39      | 47.77       | mg/L  | 1    | 80                 | <0.0002       | 56    | 5   | 19 - 119    | 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  | 59.84      | 60.33       | mg/L  | 1        | 80           | 74        | 75         | 35 - 114        |
| 2-Fluorobiphenyl | 61.23      | 60.89       | mg/L  | 1        | 80           | 76        | 76         | 43 - 116        |
| Terphenyl-d14    | 37.98      | 41.59       | mg/L  | 1        | 80           | 47        | 51         | 33 - 141        |

**Quality Control Report  
Continuing Calibration Verification Standards**

CCV (1)

QCBatch: QC20364

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0895                 | 89                          | 85 - 115                      | 5/16/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0895                 | 89                          | 85 - 115                      | 5/16/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.085                  | 85                          | 85 - 115                      | 5/16/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.086                  | 86                          | 85 - 115                      | 5/16/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.2657                 | 88                          | 85 - 115                      | 5/16/02          |

CCV (2)            QCBatch:    QC20364

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0917                 | 91                          | 85 - 115                      | 5/16/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0917                 | 91                          | 85 - 115                      | 5/16/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0878                 | 87                          | 85 - 115                      | 5/16/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0866                 | 86                          | 85 - 115                      | 5/16/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.266                  | 88                          | 85 - 115                      | 5/16/02          |

ICV (1)            QCBatch:    QC20364

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 5/16/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0965                 | 96                          | 85 - 115                      | 5/16/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.095                  | 95                          | 85 - 115                      | 5/16/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0934                 | 93                          | 85 - 115                      | 5/16/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.279                  | 93                          | 85 - 115                      | 5/16/02          |

CCV (1)            QCBatch:    QC20489

| Param                | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene          |      | mg/L  | 60                    | 63.88                  | 106                         | 80 - 120                      | 5/19/02          |
| Acenaphthylene       |      | mg/L  | 60                    | 64.09                  | 106                         | 80 - 120                      | 5/19/02          |
| Acenaphthene         |      | mg/L  | 60                    | 63.94                  | 106                         | 80 - 120                      | 5/19/02          |
| Fluorene             |      | mg/L  | 60                    | 58.28                  | 97                          | 80 - 120                      | 5/19/02          |
| Phenanthrene         |      | mg/L  | 60                    | 62.9                   | 104                         | 80 - 120                      | 5/19/02          |
| Anthracene           |      | mg/L  | 60                    | 63.00                  | 105                         | 80 - 120                      | 5/19/02          |
| Fluoranthene         |      | mg/L  | 60                    | 58.82                  | 98                          | 80 - 120                      | 5/19/02          |
| Pyrene               |      | mg/L  | 60                    | 54.92                  | 91                          | 80 - 120                      | 5/19/02          |
| Benzo(a)anthracene   |      | mg/L  | 60                    | 61.19                  | 101                         | 80 - 120                      | 5/19/02          |
| Chrysene             |      | mg/L  | 60                    | 64.67                  | 107                         | 80 - 120                      | 5/19/02          |
| Benzo(b)fluoranthene |      | mg/L  | 60                    | 49.99                  | 83                          | 80 - 120                      | 5/19/02          |
| Benzo(k)fluoranthene |      | mg/L  | 60                    | 60.56                  | 100                         | 80 - 120                      | 5/19/02          |

Continued ...

... Continued

| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzo(a)pyrene         |      | mg/L  | 60                    | 53.67                  | 89                          | 80 - 120                      | 5/19/02          |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 53.08                  | 88                          | 80 - 120                      | 5/19/02          |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 51.59                  | 85                          | 80 - 120                      | 5/19/02          |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 49.94                  | 83                          | 80 - 120                      | 5/19/02          |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 67.14                  | 111                         | 80 - 120                      | 5/19/02          |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 70.94                  | 118                         | 80 - 120                      | 5/19/02          |
| Terphenyl-d14          |      | mg/L  | 60                    | 55.47                  | 92                          | 80 - 120                      | 5/19/02          |

# TRACE ANALYSIS, 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: May 17, 2002

Order ID Number: A02051619

Project: EQ-110  
TA Job Code: 300110  
Casualty Code: EQ-110  
Project Location: Monument, 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 |
|--------|---------------|--------|------------|------------|---------------|
| 197159 | SB-1 (15-17') | Soil   | 5/14/02    | 10:24      | 5/16/02       |
| 197160 | SB-1 (30-32') | Soil   | 5/14/02    | 11:15      | 5/16/02       |

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

This report consists of a total of 8 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

  
Dr. Blair Leffewich, Director

## Analytical Report

**Sample: 197159 - SB-1 (15-17')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20381 Date Analyzed: 5/16/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19475 Date Prepared: 5/16/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | <0.010 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0146 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.0146 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.857  | mg/Kg | 10       | 1            | 85               | 70 - 130        |
| 4-BFB     |      | 0.719  | mg/Kg | 10       | 1            | 71               | 70 - 130        |

**Sample: 197159 - SB-1 (15-17')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20372 Date Analyzed: 5/16/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB19467 Date Prepared: 5/16/02

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

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

**Sample: 197159 - SB-1 (15-17')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20382 Date Analyzed: 5/16/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB19475 Date Prepared: 5/16/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.25   | mg/Kg | 10       | 0.10         | 125              | 70 - 130        |
| 4-BFB     |      | 0.921  | mg/Kg | 10       | 0.10         | 92               | 70 - 130        |

**Sample: 197160 - SB-1 (30-32')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20381 Date Analyzed: 5/16/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19475 Date Prepared: 5/16/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.806  | mg/Kg | 10       | 1            | 80               | 70 - 130        |
| 4-BFB     |      | 0.731  | mg/Kg | 10       | 1            | 73               | 70 - 130        |

**Sample: 197160 - SB-1 (30-32')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC20372 Date Analyzed: 5/16/02  
 Analyst: MM Preparation Method: 3550 B Prep Batch: PB19467 Date Prepared: 5/16/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 132    | mg/Kg | 1        | 150          | 88               | 70 - 130        |

**Sample: 197160 - SB-1 (30-32')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC20382 Date Analyzed: 5/16/02  
 Analyst: CG Preparation Method: 5035 Prep Batch: PB19475 Date Prepared: 5/16/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.22   | mg/Kg | 10       | 0.10         | 122              | 70 - 130        |
| 4-BFB     |      | 0.853  | mg/Kg | 10       | 0.10         | 85               | 70 - 130        |



### Quality Control Report Method Blank

Method Blank      QCBatch:    QC20372

| 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 |      | 132    | mg/Kg | 1        | 150          | 88               | 70 - 130        |

Method Blank      QCBatch:    QC20381

| 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       |      | 0.964  | mg/Kg | 10       | 1            | 96               | 70 - 130        |
| 4-BFB     |      | 0.842  | mg/Kg | 10       | 1            | 84               | 70 - 130        |

Method Blank      QCBatch:    QC20382

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.997  | mg/Kg | 10       | 0.10         | 100              | 70 - 130        |
| 4-BFB     |      | 0.993  | mg/Kg | 10       | 0.10         | 99               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC20372

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 238        | 254         | mg/Kg | 1    | 250                | <50.0         | 95    | 6   | 70 - 130    | 20        |

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

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

**Laboratory Control Spikes**      QCBatch:    QC20381

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.949      | 0.984       | mg/Kg | 10   | 1                  | <0.010        | 94    | 3   | 70 - 130    | 20        |
| Benzene      | 0.976      | 0.988       | mg/Kg | 10   | 1                  | <0.010        | 97    | 1   | 70 - 130    | 20        |
| Toluene      | 0.957      | 0.969       | mg/Kg | 10   | 1                  | <0.010        | 95    | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.951      | 0.892       | mg/Kg | 10   | 1                  | <0.010        | 95    | 6   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.97       | 3.07        | mg/Kg | 10   | 3                  | <0.010        | 99    | 3   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.887      | 0.939       | mg/Kg | 10       | 1            | 88        | 93         | 70 - 130        |
| 4-BFB     | 0.912      | 0.856       | mg/Kg | 10       | 1            | 91        | 85         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC20382

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.36       | 8.58        | mg/Kg | 10   | 1                  | <1            | 94    | 8   | 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       | 0.891      | 0.892       | mg/Kg | 10       | 0.10         | 89        | 89         | 70 - 130        |
| 4-BFB     | 1.06       | 1.06        | mg/Kg | 10       | 0.10         | 106       | 106        | 70 - 130        |

## Quality Control Report Matrix Spikes and Duplicate Spikes

**Matrix Spikes**      QCBatch:    QC20372

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 248       | 250        | mg/Kg | 1    | 250                | <50.0         | 99    | 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 | 127       | 129        | mg/Kg | 1        | 150          | 85       | 86        | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC20381

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.83      | 0.817      | mg/Kg | 10   | 1                  | <0.010        | 83    | 1   | 70 - 130    | 20        |
| Toluene      | 0.826     | 0.767      | mg/Kg | 10   | 1                  | <0.010        | 82    | 7   | 70 - 130    | 20        |
| Ethylbenzene | 0.782     | 0.819      | mg/Kg | 10   | 1                  | <0.010        | 78    | 4   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.54      | 2.5        | mg/Kg | 10   | 3                  | 0.0146        | 84    | 1   | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.845     | 0.834      | mg/Kg | 10       | 1            | 84       | 83        | 70 - 130        |
| 4-BFB     | 0.734     | 0.728      | mg/Kg | 10       | 1            | 73       | 72        | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC20382

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.05      | 8.79       | mg/Kg | 10   | 1                  | <1            | 90    | 2   | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.905     | 0.89       | mg/Kg | 10       | 0.10         | 90       | 89        | 70 - 130        |
| 4-BFB     | 0.901     | 0.896      | mg/Kg | 10       | 0.10         | 90       | 90        | 70 - 130        |

## Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch:    QC20372

| 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                | 5/16/02       |

ICV (1)            QCBatch:    QC20372

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 242              | 96                    | 75 - 125                | 5/16/02       |

CCV (1)            QCBatch:    QC20381

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0988           | 98                    | 85 - 115                | 5/16/02       |
| Benzene      |      | mg/L  | 0.10            | 0.0984           | 98                    | 85 - 115                | 5/16/02       |
| Toluene      |      | mg/L  | 0.10            | 0.0914           | 91                    | 85 - 115                | 5/16/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0898           | 89                    | 85 - 115                | 5/16/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.292            | 97                    | 85 - 115                | 5/16/02       |

ICV (1)            QCBatch:    QC20381

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0987           | 98                    | 85 - 115                | 5/16/02       |
| Benzene      |      | mg/L  | 0.10            | 0.0961           | 96                    | 85 - 115                | 5/16/02       |
| Toluene      |      | mg/L  | 0.10            | 0.09320          | 93                    | 85 - 115                | 5/16/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0966           | 96                    | 85 - 115                | 5/16/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.287            | 95                    | 85 - 115                | 5/16/02       |

CCV (1)            QCBatch:    QC20382

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/Kg | 1               | 1.04             | 104                   | 85 - 115                | 5/16/02       |

ICV (1)            QCBatch:    QC20382

Report Date: May 17, 2002  
EQ-110

Order Number: A02051619  
300110

Page Number: 8 of 8  
Monument, New Mexico

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| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.893                  | 89                          | 85 - 115                      | 5/16/02          |

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Report Date: May 30, 2002 Order Number: A02052214  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Monument, Lea County, New Mexico

## Summary Report

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

Report Date: May 30, 2002

Order ID Number: A02052214

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 197615 | MW-1        | Water  | 5/20/02    | 8:30       | 5/22/02       |

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

### Sample: 197615 - MW-1

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

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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: May 30, 2002

Order ID Number: A02052214

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, 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 |
|--------|-------------|--------|------------|------------|---------------|
| 197615 | MW-1        | Water  | 5/20/02    | 8:30       | 5/22/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 4 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: 197615 - MW-1**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC20435 Date Analyzed: 5/28/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB19526 Date Prepared: 5/23/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 33.69  | mg/L  | 1        | 80           | 42               | 35 - 114        |
| 2-Fluorobiphenyl |      | 38.26  | mg/L  | 1        | 80           | 47               | 43 - 116        |
| Terphenyl-d14    |      | 70.87  | mg/L  | 1        | 80           | 88               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC20435

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 32.79  | mg/L  | 1        | 80           | 40               | 35 - 114        |
| 2-Fluorobiphenyl |      | 35.72  | mg/L  | 1        | 80           | 44               | 43 - 116        |
| Terphenyl-d14    |      | 47.49  | mg/L  | 1        | 80           | 59               | 33 - 141        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes            QCBatch:    QC20435

| Param              | LCS Result | LCSD Result        | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------------|------------|--------------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene        | 22.72      | 25.94              | mg/L  | 1    | 80                 | <0.0002       | 28    | 13  | 16 - 96     | 20        |
| Acenaphthylene     | 24.06      | 28.76              | mg/L  | 1    | 80                 | <0.0002       | 30    | 17  | 20 - 110    | 20        |
| Acenaphthene       | 23.73      | 28.94              | mg/L  | 1    | 80                 | <0.0002       | 29    | 19  | 18 - 108    | 20        |
| Fluorene           | 26.31      | 31.13              | mg/L  | 1    | 80                 | <0.0002       | 32    | 16  | 22 - 102    | 20        |
| Phenanthrene       | 28.61      | 33.91              | mg/L  | 1    | 80                 | <0.0002       | 35    | 16  | 25 - 103    | 20        |
| Anthracene         | 29.48      | 35.19              | mg/L  | 1    | 80                 | <0.0002       | 36    | 17  | 22 - 110    | 20        |
| Fluoranthene       | 23.56      | <sup>1</sup> 43.1  | mg/L  | 1    | 80                 | <0.0002       | 29    | 58  | 21 - 110    | 20        |
| Pyrene             | 56.64      | <sup>2</sup> 84.21 | mg/L  | 1    | 80                 | <0.0002       | 70    | 39  | 22 - 100    | 20        |
| Benzo(a)anthracene | 35.16      | 42.53              | mg/L  | 1    | 80                 | <0.0002       | 43    | 18  | 30 - 99     | 20        |
| Chrysene           | 26.77      | 32.1               | mg/L  | 1    | 80                 | <0.0002       | 33    | 18  | 27 - 108    | 20        |

Continued ...

<sup>1</sup>RPD values out of limits due to poor prep.

<sup>2</sup>RPD values out of limits due to poor prep.

... Continued

| Param                  | LCS Result | LCS <sup>3</sup> D Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|---------------------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzo(b)fluoranthene   | 33.1       | 40.98                     | mg/L  | 1    | 80                 | <0.0002       | 41    | 21  | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 39.58      | 46.85                     | mg/L  | 1    | 80                 | <0.0002       | 49    | 16  | 35 - 103    | 20        |
| Benzo(a)pyrene         | 33.04      | 40.91                     | mg/L  | 1    | 80                 | <0.0002       | 41    | 21  | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 31.38      | 38.53                     | mg/L  | 1    | 80                 | <0.0002       | 39    | 20  | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 22.48      | 27.07                     | mg/L  | 1    | 80                 | <0.0002       | 28    | 18  | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 31.13      | 37.06                     | mg/L  | 1    | 80                 | <0.0002       | 38    | 17  | 19 - 119    | 20        |

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

| Surrogate        | LCS Result | LCS <sup>3</sup> D Result | Units | Dilution | Spike Amount | LCS % Rec | LCS <sup>3</sup> D % Rec | Recovery Limits |
|------------------|------------|---------------------------|-------|----------|--------------|-----------|--------------------------|-----------------|
| Nitrobenzene-d5  | 24.6       | 26.3                      | mg/L  | 1        | 80           | 30        | 32                       | 35 - 114        |
| 2-Fluorobiphenyl | 25.71      | 28.97                     | mg/L  | 1        | 80           | 32        | 36                       | 43 - 116        |
| Terphenyl-d14    | 39.04      | 71.94                     | mg/L  | 1        | 80           | 48        | 89                       | 33 - 141        |

## Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QC Batch: QC20435

| Param                  | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|------------------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Naphthalene            |      | mg/L  | 60              | 60.1             | 100                   | 80 - 120                | 5/28/02       |
| Acenaphthylene         |      | mg/L  | 60              | 59.67            | 99                    | 80 - 120                | 5/28/02       |
| Acenaphthene           |      | mg/L  | 60              | 60.17            | 100                   | 80 - 120                | 5/28/02       |
| Fluorene               |      | mg/L  | 60              | 62.32            | 103                   | 80 - 120                | 5/28/02       |
| Phenanthrene           |      | mg/L  | 60              | 57.9             | 96                    | 80 - 120                | 5/28/02       |
| Anthracene             |      | mg/L  | 60              | 53.04            | 88                    | 80 - 120                | 5/28/02       |
| Fluoranthene           |      | mg/L  | 60              | 48.37            | 80                    | 80 - 120                | 5/28/02       |
| Pyrene                 |      | mg/L  | 60              | 66.75            | 111                   | 80 - 120                | 5/28/02       |
| Benzo(a)anthracene     |      | mg/L  | 60              | 58.42            | 97                    | 80 - 120                | 5/28/02       |
| Chrysene               |      | mg/L  | 60              | 58.79            | 97                    | 80 - 120                | 5/28/02       |
| Benzo(b)fluoranthene   |      | mg/L  | 60              | 52.04            | 86                    | 80 - 120                | 5/28/02       |
| Benzo(k)fluoranthene   |      | mg/L  | 60              | 64.77            | 107                   | 80 - 120                | 5/28/02       |
| Benzo(a)pyrene         |      | mg/L  | 60              | 53.95            | 89                    | 80 - 120                | 5/28/02       |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60              | 48.11            | 80                    | 80 - 120                | 5/28/02       |
| Dibenzo(a,h)anthracene |      | mg/L  | 60              | 49.28            | 82                    | 80 - 120                | 5/28/02       |
| Benzo(g,h,i)perylene   |      | mg/L  | 60              | 51.98            | 86                    | 80 - 120                | 5/28/02       |
| Nitrobenzene-d5        |      | mg/L  | 60              | 55.5             | 92                    | 80 - 120                | 5/28/02       |
| 2-Fluorobiphenyl       |      | mg/L  | 60              | 59.3             | 98                    | 80 - 120                | 5/28/02       |
| Terphenyl-d14          |      | mg/L  | 60              | 62.58            | 104                   | 80 - 120                | 5/28/02       |

<sup>3</sup>RPD values out of limits due to poor prep.

<sup>4</sup>RPD values out of limits due to poor prep.

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# Trace Analysis, Inc.

155 McCutcheon, Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 586-3443

Company Name: Jeffrey Kindley  
Address: 306 West Wall, Suite 1312, Midland, Tx 79701  
Phone #: 915-570-8726  
Fax #: 915-684-7587

Contact Person: Jeffrey Kindley  
Kyle Landman  
Equiva Services

Project #: EQ-110  
Project Name: Monument, New Mexico  
Sampler Signature: John Humbria  
Jeffrey Kindley

| LAB #<br>AB USE ONLY | FIELD CODE | # CONTAINERS | Volume/Amount    | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING |         |      |
|----------------------|------------|--------------|------------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|----------|---------|------|
|                      |            |              |                  | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE      | NONE    | DATE |
| 198992               | MW-4       | 3            | 2.40ml<br>1.40ml |        |      |     |        | ✓                   |                  |                                |      |          | 6/10/02 | 1300 |

Inquired by: Jeffrey Kindley Date: June 10, 2002 Time: 1800  
Received by: John Humbria Date: 6/10/02 Time: 1800  
Inquired by: John Humbria Date: 6/10/02 Time: 1830  
Received by: John Humbria Date: 6-11-02 Time: 10:20

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AL0001107

### ANALYSIS REQUEST

(Circle or Specify Method No.)

|                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | MTBE 8021B/602                                   |
| <input checked="" type="checkbox"/> | BTEX 8021B/602                                   |
| <input checked="" type="checkbox"/> | TPH 418.1/TX1005                                 |
| <input type="checkbox"/>            | PAH 8270C  |
| <input type="checkbox"/>            | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 |
| <input type="checkbox"/>            | TCP Volatiles                                    |
| <input type="checkbox"/>            | TCP Semi Volatiles                               |
| <input type="checkbox"/>            | TCLP Pesticides                                  |
| <input type="checkbox"/>            | RCI  |
| <input type="checkbox"/>            | GC/MS Vol. 8260B/624                             |
| <input type="checkbox"/>            | GC/MS Semi. Vol. 8270C/625                       |
| <input type="checkbox"/>            | PCB's 8082/608                                   |
| <input type="checkbox"/>            | Pesticides 8081A/608                             |
| <input type="checkbox"/>            | BOD, TSS, pH                                     |
| <input type="checkbox"/>            | Turn Around Time if different from standard      |

LAB USE ONLY  
Intact Y/N  
Headspace Y/N  
Temp 40  
Log-in Review NY  
Carrier # Greyhound 105 303 1402

REMARKS:  
24 to 48 hr Turnaround  
6/17/02  
FTP  
4/19/02  
 Check if Special Reporting Limits Are Needed

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 3 samples HS

Report Date: June 18, 2002 Order Number: A02061107  
EQ-110 300110

Page Number: 1 of 1  
Monument, New Mexico

## Summary Report

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

Report Date: June 18, 2002

Order ID Number: A02061107

Project: EQ-110  
TA Job Code: 300110  
Casualty Code: EQ-110  
Project Location: Monument, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 198992 | MW-4        | Water  | 6/10/02    | 13:00      | 6/11/02       |

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

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 198992 - MW-4       | 0.005         | 0.013         | <0.005             | <0.005             | 0.018            |

### Sample: 198992 - MW-4

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

# TRACE ANALYSIS, INC.

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El Paso, Texas 79932 888•588•3443  
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915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: June 18, 2002

Order ID Number: A02061107

Project: EQ-110  
TA Job Code: 300110  
Casualty Code: EQ-110  
Project Location: Monument, 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 |
|--------|-------------|--------|------------|------------|---------------|
| 198992 | MW-4        | Water  | 6/10/02    | 13:00      | 6/11/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 6 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: 198992 - MW-4**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20961 Date Analyzed: 6/11/02  
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19958 Date Prepared: 6/11/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.005  | mg/L  | 5        | 0.001 |
| Toluene      |      | 0.013  | mg/L  | 5        | 0.001 |
| Ethylbenzene |      | <0.005 | mg/L  | 5        | 0.001 |
| M,P,O-Xylene |      | <0.005 | mg/L  | 5        | 0.001 |
| Total BTEX   |      | 0.018  | mg/L  | 5        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.092  | mg/L  | 5        | 0.10         | 92               | 70 - 130        |
| 4-BFB     |      | 0.089  | mg/L  | 5        | 0.10         | 89               | 70 - 130        |

**Sample: 198992 - MW-4**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC21047 Date Analyzed: 6/13/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB20042 Date Prepared: 6/12/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 66.23  | mg/L  | 1        | 80           | 82               | 35 - 114        |
| 2-Fluorobiphenyl |      | 64.67  | mg/L  | 1        | 80           | 80               | 43 - 116        |
| Terphenyl-d14    |      | 45.37  | mg/L  | 1        | 80           | 56               | 33 - 141        |

## Quality Control Report Method Blank

Method Blank            QCBatch:    QC20961

| 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       |      | 0.0921 | mg/L  | 1        | 0.10         | 92               | 70 - 130        |
| 4-BFB     |      | 0.0913 | mg/L  | 1        | 0.10         | 91               | 70 - 130        |

Method Blank            QCBatch:    QC21047

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 65.26  | mg/L  | 1        | 80           | 81               | 35 - 114        |
| 2-Fluorobiphenyl |      | 62.86  | mg/L  | 1        | 80           | 78               | 43 - 116        |
| Terphenyl-d14    |      | 62.34  | mg/L  | 1        | 80           | 77               | 33 - 141        |

## Quality Control Report Lab Control Spikes and Duplicate Spikes



**Laboratory Control Spikes**

QCBatch: QC20961

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0938     | 0.0937      | mg/L  | 1    | 0.10               | <0.001        | 94    | 0   | 70 - 130    | 20        |
| Benzene      | 0.0944     | 0.0941      | mg/L  | 1    | 0.10               | <0.001        | 94    | 0   | 70 - 130    | 20        |
| Toluene      | 0.0911     | 0.0924      | mg/L  | 1    | 0.10               | <0.001        | 91    | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.0909     | 0.0904      | mg/L  | 1    | 0.10               | <0.001        | 91    | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.270      | 0.269       | mg/L  | 1    | 0.30               | <0.001        | 90    | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.0924     | 0.0895      | mg/L  | 1        | 0.10         | 92        | 90         | 70 - 130        |
| 4-BFB     | 0.0946     | 0.0924      | mg/L  | 1        | 0.10         | 95        | 92         | 70 - 130        |

**Laboratory Control Spikes**

QCBatch: QC21047

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 53.57      | 63.86       | mg/L  | 1    | 80                 | <0.0002       | 66    | 17  | 16 - 96     | 20        |
| Acenaphthylene         | 58.61      | 69.45       | mg/L  | 1    | 80                 | <0.0002       | 73    | 16  | 20 - 110    | 20        |
| Acenaphthene           | 56.84      | 66.8        | mg/L  | 1    | 80                 | <0.0002       | 71    | 16  | 18 - 108    | 20        |
| Fluorene               | 55.95      | 66.5        | mg/L  | 1    | 80                 | <0.0002       | 69    | 17  | 22 - 102    | 20        |
| Phenanthrene           | 57.71      | 68.73       | mg/L  | 1    | 80                 | <0.0002       | 72    | 17  | 25 - 103    | 20        |
| Anthracene             | 60.4       | 71.06       | mg/L  | 1    | 80                 | <0.0002       | 75    | 16  | 22 - 110    | 20        |
| Fluoranthene           | 69.64      | 80.67       | mg/L  | 1    | 80                 | <0.0002       | 87    | 14  | 21 - 110    | 20        |
| Pyrene                 | 51.84      | 62.82       | mg/L  | 1    | 80                 | <0.0002       | 64    | 19  | 22 - 100    | 20        |
| Benzo(a)anthracene     | 55.5       | 67.76       | mg/L  | 1    | 80                 | <0.0002       | 69    | 19  | 30 - 99     | 20        |
| Chrysene               | 43.73      | 51.45       | mg/L  | 1    | 80                 | <0.0002       | 54    | 16  | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 49.9       | 60.76       | mg/L  | 1    | 80                 | <0.0002       | 62    | 19  | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 54.88      | 65.84       | mg/L  | 1    | 80                 | <0.0002       | 68    | 18  | 35 - 103    | 20        |
| Benzo(a)pyrene         | 47.48      | 58.02       | mg/L  | 1    | 80                 | <0.0002       | 59    | 19  | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 34.41      | 42.59       | mg/L  | 1    | 80                 | <0.0002       | 43    | 21  | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 23.86      | 28.89       | mg/L  | 1    | 80                 | <0.0002       | 29    | 19  | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 35.67      | 43.21       | mg/L  | 1    | 80                 | <0.0002       | 44    | 19  | 19 - 119    | 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  | 64.5       | 66.8        | mg/L  | 1        | 80           | 80        | 83         | 35 - 114        |
| 2-Fluorobiphenyl | 64.84      | 65.19       | mg/L  | 1        | 80           | 81        | 81         | 43 - 116        |
| Terphenyl-d14    | 54.64      | 57.75       | mg/L  | 1        | 80           | 68        | 72         | 33 - 141        |

**Quality Control Report  
Continuing Calibration Verification Standards**

CCV (1)

QCBatch: QC20961

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.112                  | 112                         | 85 - 115                      | 6/11/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0962                 | 96                          | 85 - 115                      | 6/11/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0973                 | 97                          | 85 - 115                      | 6/11/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0924                 | 92                          | 85 - 115                      | 6/11/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.275                  | 91                          | 85 - 115                      | 6/11/02          |

CCV (2)            QCBatch:    QC20961

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.106                  | 106                         | 85 - 115                      | 6/11/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.091                  | 91                          | 85 - 115                      | 6/11/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.091                  | 91                          | 85 - 115                      | 6/11/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.089                  | 89                          | 85 - 115                      | 6/11/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.265                  | 88                          | 85 - 115                      | 6/11/02          |

ICV (1)            QCBatch:    QC20961

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0924                 | 92                          | 85 - 115                      | 6/11/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0949                 | 94                          | 85 - 115                      | 6/11/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0932                 | 93                          | 85 - 115                      | 6/11/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0931                 | 93                          | 85 - 115                      | 6/11/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.277                  | 92                          | 85 - 115                      | 6/11/02          |

CCV (1)            QCBatch:    QC21047

| Param                | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene          |      | mg/L  | 60                    | 62.12                  | 103                         | 80 - 120                      | 6/13/02          |
| Acenaphthylene       |      | mg/L  | 60                    | 62.22                  | 103                         | 80 - 120                      | 6/13/02          |
| Acenaphthene         |      | mg/L  | 60                    | 62.49                  | 104                         | 80 - 120                      | 6/13/02          |
| Fluorene             |      | mg/L  | 60                    | 59.16                  | 98                          | 80 - 120                      | 6/13/02          |
| Phenanthrene         |      | mg/L  | 60                    | 60.21                  | 100                         | 80 - 120                      | 6/13/02          |
| Anthracene           |      | mg/L  | 60                    | 62.1                   | 103                         | 80 - 120                      | 6/13/02          |
| Fluoranthene         |      | mg/L  | 60                    | 66.85                  | 111                         | 80 - 120                      | 6/13/02          |
| Pyrene               |      | mg/L  | 60                    | 69.58                  | 115                         | 80 - 120                      | 6/13/02          |
| Benzo(a)anthracene   |      | mg/L  | 60                    | 61.66                  | 102                         | 80 - 120                      | 6/13/02          |
| Chrysene             |      | mg/L  | 60                    | 59.47                  | 99                          | 80 - 120                      | 6/13/02          |
| Benzo(b)fluoranthene |      | mg/L  | 60                    | 58.8                   | 98                          | 80 - 120                      | 6/13/02          |
| Benzo(k)fluoranthene |      | mg/L  | 60                    | 62.51                  | 104                         | 80 - 120                      | 6/13/02          |

Continued ...

... Continued

| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzo(a)pyrene         |      | mg/L  | 60                    | 59.8                   | 99                          | 80 - 120                      | 6/13/02          |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 58.8                   | 98                          | 80 - 120                      | 6/13/02          |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 54.1                   | 90                          | 80 - 120                      | 6/13/02          |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 54.4                   | 90                          | 80 - 120                      | 6/13/02          |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 64.88                  | 108                         | 80 - 120                      | 6/13/02          |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 64.24                  | 107                         | 80 - 120                      | 6/13/02          |
| Terphenyl-d14          |      | mg/L  | 60                    | 61.75                  | 102                         | 80 - 120                      | 6/13/02          |

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Fax (915) 585-4944  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # **AD2062412**

Company Name: **Francisco Services Inc** Phone #: **915-570-8726**  
 Address: **306 West Wall Street 1312, Midland, Tx 79701 915-684-7881**  
 Contact Person: **Jeffery Kindley**  
 Name: **Kyle Landonneau** Incident # **300109**  
 Project Name: **Barben Ranch**  
 Project Location: **Loa County, New Mexico**  
 Sampler Signature: **Jeffery Kindley**

| ANALYSIS REQUEST               |   |
|--------------------------------|---|
| (Circle or Specify Method No.) |   |
| <input type="checkbox"/>       | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007 |
| <input type="checkbox"/>       | TCLP Metals Ag As Ba Cd Cr Pb Se Hg             |
| <input type="checkbox"/>       | TCLP Volatiles                                  |
| <input type="checkbox"/>       | TCLP Semi Volatiles                             |
| <input type="checkbox"/>       | TCLP Pesticides                                 |
| <input type="checkbox"/>       | RCI   |
| <input type="checkbox"/>       | GC/MS Vol. 8260B/624                            |
| <input type="checkbox"/>       | GC/MS Semi. Vol. 8270C/625                      |
| <input type="checkbox"/>       | PCB's 8082/608                                  |
| <input type="checkbox"/>       | Pesticides 8081A/608                            |
| <input type="checkbox"/>       | BOD, TSS, pH                                    |
| <input type="checkbox"/>       | Turn Around Time if different from standard     |

| LAB #<br>LAB USE ONLY | FIELD CODE     | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING DATE | TIME |
|-----------------------|----------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|---------------|------|
|                       |                |              |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH |               |      |
| 99919                 | MW-13 (13-15') | 1            | 4oz           | ✓      |      |     |        |                     |                  |                                |      | 6/21/02       | 1030 |
| 20                    | MW-13 (25-27') | 1            | 4oz           | ✓      |      |     |        |                     |                  |                                |      | 6/21/02       | 1100 |
| 21                    | MW-14 (13-15') | 1            | 4oz           | ✓      |      |     |        |                     |                  |                                |      | 6/21/02       | 1505 |
| 22                    | MW-14 (25-27') | 1            | 4oz           | ✓      |      |     |        |                     |                  |                                |      | 6/21/02       | 1540 |

| inquired by:    | Date:         | Time: | Received by:  | Date:   | Time: |
|-----------------|---------------|-------|---------------|---------|-------|
| Jeffery Kindley | June 21, 2002 | 0900  | Helen Shelton | 6/21/02 | 0900  |
| Helen Shelton   | 6/21/02       | 1830  | Amie Curran   | 6/21/02 | 1830  |

Received at Laboratory by: **Amie Curran** Date: **6/21/02** Time: **1830**

Carrier # **1635667671** on total **CITEX 3 50ppm**

REMARKS:  
 \* Need 3 day turnaround on TPH (P&G/G&G) Call Jeff Kindley or Bennett Howell - (915) 631-6591 or 972-484-3854  
 \* Any if Special Reporting Limits Are Needed on with Benzene > 5ppm 6/27P

| LAB USE ONLY  |    |
|---------------|----|
| Inact. Y/N    | N  |
| Headspace Y/N | N  |
| Temp          | 5  |
| Log-in Review | NL |

Initial of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 4 samples - HS

Report Date: June 26, 2002 Order Number: A02062412  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: June 26, 2002

Order ID Number: A02062412

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description    | Matrix | Date Taken | Time Taken | Date Received |
|--------|----------------|--------|------------|------------|---------------|
| 199919 | MW-13 (13-15') | Soil   | 6/19/02    | 10:20      | 6/22/02       |
| 199920 | MW-13 (25-27') | Soil   | 6/19/02    | 11:00      | 6/22/02       |
| 199921 | MW-14 (13-15') | Soil   | 6/20/02    | 15:05      | 6/22/02       |
| 199922 | MW-14 (25-27') | Soil   | 6/20/02    | 15:40      | 6/22/02       |

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

| Sample - Field Code     | BTEX          |               |                    |                    |                  | Test Comments  | TPH DRO   | TPH GRO   |
|-------------------------|---------------|---------------|--------------------|--------------------|------------------|----------------|-----------|-----------|
|                         | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |                | DRO (ppm) | GRO (ppm) |
| 199919 - MW-13 (13-15') | <0.020        | <0.020        | <0.020             | <0.020             | <0.020           | * <sup>1</sup> | <50.0     | <2.00     |
| 199920 - MW-13 (25-27') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | -              | <50.0     | <1.00     |
| 199921 - MW-14 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | -              | <50.0     | <1.00     |
| 199922 - MW-14 (25-27') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | -              | <50.0     | <1.00     |

<sup>1</sup>Sample diluted due to turbidity. Sample has a Benzene concentration of less than 0.00473 which is the MDL.

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

# TRACE ANALYSIS, 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: June 26, 2002

Order ID Number: A02062412


Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|----------------|--------|------------|------------|---------------|
| 199919 | MW-13 (13-15') | Soil   | 6/19/02    | 10:20      | 6/22/02       |
| 199920 | MW-13 (25-27') | Soil   | 6/19/02    | 11:00      | 6/22/02       |
| 199921 | MW-14 (13-15') | Soil   | 6/20/02    | 15:05      | 6/22/02       |
| 199922 | MW-14 (25-27') | Soil   | 6/20/02    | 15:40      | 6/22/02       |

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

This report consists of a total of 10 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

  
Dr. Blair Loftwich, Director

## Analytical Report

**Sample: 199919 - MW-13 (13-15')**

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

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.817  | mg/Kg | 20       | 1            | 82               | 70 - 130        |
| 4-BFB     |      | 0.778  | mg/Kg | 20       | 1            | 78               | 70 - 130        |

**Sample: 199919 - MW-13 (13-15')**

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

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 150    | mg/Kg | 1        | 150          | 100              | 70 - 130        |

**Sample: 199919 - MW-13 (13-15')**

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

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 2    | 0.613  | mg/Kg | 20       | 0.10         | 61               | 70 - 130        |
| 4-BFB     | 3    | 0.625  | mg/Kg | 20       | 0.10         | 62               | 70 - 130        |

<sup>1</sup>Sample diluted due to turbidity. Sample has a Benzene concentration of less than 0.00473 which is the MDL.

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

**Sample: 199920 - MW-13 (25-27')**

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

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.09   | mg/Kg | 10       | 1            | 109              | 70 - 130        |
| 4-BFB     |      | 0.814  | mg/Kg | 10       | 1            | 81               | 70 - 130        |

**Sample: 199920 - MW-13 (25-27')**

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

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

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

**Sample: 199920 - MW-13 (25-27')**

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

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.23   | mg/Kg | 10       | 0.10         | 123              | 70 - 130        |
| 4-BFB     |      | 0.749  | mg/Kg | 10       | 0.10         | 75               | 70 - 130        |

**Sample: 199921 - MW-14 (13-15')**

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

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | <0.010 | mg/Kg | 10       | 0.001 |

Continued ...



Continued Sample: 199921 Analysis: BTEX

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.00   | mg/Kg | 10       | 1            | 100              | 70 - 130        |
| 4-BFB     |      | 0.955  | mg/Kg | 10       | 1            | 95               | 70 - 130        |

Sample: 199921 - MW-14 (13-15')

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

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

| Surrogate   | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Triacontane |      | 159    | mg/Kg | 1        | 150          | 106              | 70 - 130        |

Sample: 199921 - MW-14 (13-15')

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

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.857  | mg/Kg | 10       | 0.10         | 86               | 70 - 130        |
| 4-BFB     |      | 0.862  | mg/Kg | 10       | 0.10         | 86               | 70 - 130        |

Sample: 199922 - MW-14 (25-27')

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

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.964  | mg/Kg | 10       | 1            | 96               | 70 - 130        |
| 4-BFB     |      | 0.987  | mg/Kg | 10       | 1            | 99               | 70 - 130        |

**Sample: 199922 - MW-14 (25-27')**

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

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 139    | mg/Kg | 1        | 150          | 93               | 70 - 130        |

**Sample: 199922 - MW-14 (25-27')**

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

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.832  | mg/Kg | 10       | 0.10         | 83               | 70 - 130        |
| 4-BFB     |      | 0.892  | mg/Kg | 10       | 0.10         | 89               | 70 - 130        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21329

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

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

Method Blank      QCBatch:    QC21330

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

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

Method Blank      QCBatch:    QC21368

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

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

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC21329

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

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

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

**Laboratory Control Spikes**

QCBatch: QC21330

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

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

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

**Laboratory Control Spikes**

QCBatch: QC21368

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

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

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

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**

QCBatch: QC21330

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

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

| Surrogate | MS Result          | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|--------------------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | <sup>4</sup> 0.323 | 1.03       | mg/Kg | 10       | 0.10         | 32       | 103       | 70 - 130        |
| 4-BFB     | <sup>5</sup> 0.368 | 0.754      | mg/Kg | 10       | 0.10         | 37       | 75        | 70 - 130        |

**Matrix Spikes**                      QCBatch:    QC21368

| Param | MS Result         | MSD Result        | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD  | % Rec Limit | RPD Limit |
|-------|-------------------|-------------------|-------|------|--------------------|---------------|-------|------|-------------|-----------|
| DRO   | <sup>6</sup> <500 | <sup>7</sup> <500 | mg/Kg | 10   | 250                | 160           | -64   | -200 | 70 - 130    | 20        |

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

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

## Quality Control Report Continuing Calibration Verification Standards

**CCV (1)**                      QCBatch:    QC21329

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

**CCV (2)**                      QCBatch:    QC21329

<sup>4</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

<sup>5</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

<sup>6</sup>MS and MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.

<sup>7</sup>MS and MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.

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

ICV (1)            QCBatch:    QC21329

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

CCV (1)            QCBatch:    QC21330

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

CCV (2)            QCBatch:    QC21330

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

ICV (1)            QCBatch:    QC21330

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

CCV (1)            QCBatch:    QC21368

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

CCV (2)            QCBatch:    QC21368

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

CCV (3)            QCBatch:    QC21368

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

ICV (1)            QCBatch:    QC21368

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

# Equiva Services, LLC

## TraceAnalysis, Inc.

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD0000512

Consulting Company Name: Equiva Services Inc  
 Phone #: 915-570-8726  
 Consulting Company Address: 306 Westwall, Suite 1312 Midland, Tx 79701 915-684-7587  
 Consulting Contact: Jill Kindley  
 Equiva Contact: Kyle Landrenow  
 Incident #: # 300109  
 Location/SAF: Barben Ranch  
 Location Address: Monument, New Mexico  
 Consultant Job#: EQ-112

## 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 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                                     |  |   |  |   |  |   |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Turn Around Time if different from standard      |  |   |  |   |  |   |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

LAB USE ONLY  
 Initial: JKN  
 Headspace: Y/N  
 Temp: 3  
 Log-in Review: MS  
 Carrier # 401497 For that analyte: 163-566-892

REMARKS:  
 Need 3 Day Turnaround on TPH  
 Check if special reporting limits needed.  
 \* IF TPH Over 600 exceeds total of 100ppm  
 then run SLP TPH No SLP  
 \*\* If Benzene exceeds 10ppm + NO SLP  
 BTEX exceeds 50ppm run SLP  
 V-6-20

| LAB #         | FIELD CODE            | # CONTAINERS | Volume/Amount | WATER    | SOIL     | AIR | SLUDGE | PRESERVATIVE METHOD |                  |                    |                                |     | SAMPLING       |             |
|---------------|-----------------------|--------------|---------------|----------|----------|-----|--------|---------------------|------------------|--------------------|--------------------------------|-----|----------------|-------------|
|               |                       |              |               |          |          |     |        | HCL                 | HNO <sub>3</sub> | NaHSO <sub>4</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE | NONE           | DATE        |
| <u>300016</u> | <u>MW-15 (3-5')</u>   | <u>1</u>     | <u>402</u>    | <u>✓</u> | <u>✓</u> |     |        |                     |                  |                    |                                |     | <u>6/10/02</u> | <u>830</u>  |
| <u>17</u>     | <u>MW-15 (25-27')</u> | <u>1</u>     | <u>402</u>    | <u>✓</u> | <u>✓</u> |     |        |                     |                  |                    |                                |     | <u>6/10/02</u> | <u>925</u>  |
| <u>18</u>     | <u>MW-16 (13-15')</u> | <u>1</u>     | <u>402</u>    | <u>✓</u> | <u>✓</u> |     |        |                     |                  |                    |                                |     | <u>6/10/02</u> | <u>1350</u> |
| <u>19</u>     | <u>MW-16 (25-27')</u> | <u>1</u>     | <u>402</u>    | <u>✓</u> | <u>✓</u> |     |        |                     |                  |                    |                                |     | <u>6/10/02</u> | <u>1420</u> |

Relinquished by: Jill Kindley Date: 6/24/02 Time: 0900  
 Received by: John Shelton Date: 6/24/02 Time: 0900  
 Relinquished by: John Shelton Date: 6/24/02 Time: 1830  
 Received by: John Shelton Date: 6/25/02 Time: 1002  
 Received at Laboratory by: John Shelton Date: 6/25/02 Time: 1002  
 of samples -HS

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



Report Date: July 3, 2002 Order Number: A02062512

Page Number: 1 of 1

EQ-112

Barber Ranch 3000109

Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 3, 2002

Order ID Number: A02062512

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description    | Matrix | Date Taken | Time Taken | Date Received |
|--------|----------------|--------|------------|------------|---------------|
| 200016 | MW-15 (3-5')   | Soil   | 6/21/02    | 8:30       | 6/25/02       |
| 200017 | MW-15 (25-27') | Soil   | 6/21/02    | 9:25       | 6/25/02       |
| 200018 | MW-16 (13-15') | Soil   | 6/21/02    | 13:50      | 6/25/02       |
| 200019 | MW-16 (25-27') | Soil   | 6/21/02    | 14:20      | 6/25/02       |

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

| Sample - Field Code     | BTEX             |                  |                       |                       |                     | TPH DRO<br>DRO<br>(ppm) | TPH GRO<br>GRO<br>(ppm) |
|-------------------------|------------------|------------------|-----------------------|-----------------------|---------------------|-------------------------|-------------------------|
|                         | Benzene<br>(ppm) | Toluene<br>(ppm) | Ethylbenzene<br>(ppm) | M,P,O-Xylene<br>(ppm) | Total BTEX<br>(ppm) |                         |                         |
| 200016 - MW-15 (3-5')   | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50.0                   | 4.64                    |
| 200017 - MW-15 (25-27') | <0.010           | <0.010           | 0.0361                | 0.0254                | 0.0615              | <50.0                   | <1                      |
| 200018 - MW-16 (13-15') | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50.0                   | <1                      |
| 200019 - MW-16 (25-27') | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50.0                   | <1                      |

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



# TRACE ANALYSIS, 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: July 3, 2002

Order ID Number: A02062512

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|----------------|--------|------------|------------|---------------|
| 200016 | MW-15 (3-5')   | Soil   | 6/21/02    | 8:30       | 6/25/02       |
| 200017 | MW-15 (25-27') | Soil   | 6/21/02    | 9:25       | 6/25/02       |
| 200018 | MW-16 (13-15') | Soil   | 6/21/02    | 13:50      | 6/25/02       |
| 200019 | MW-16 (25-27') | Soil   | 6/21/02    | 14:20      | 6/25/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 11 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: 200016 - MW-15 (3-5')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21359 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.00   | mg/Kg | 10       | 1            | 100              | 70 - 130        |
| 4-BFB     |      | 0.746  | mg/Kg | 10       | 1            | 75               | 70 - 130        |

**Sample: 200016 - MW-15 (3-5')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21403 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20329 Date Prepared: 6/26/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 121    | mg/Kg | 1        | 150          | 81               | 70 - 130        |

**Sample: 200016 - MW-15 (3-5')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21360 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 4.64   | mg/Kg | 10       | 0.10 |

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>1</sup> | 0.696  | mg/Kg | 10       | 0.10         | 70               | 70 - 130        |
| 4-BFB     | <sup>2</sup> | 0.676  | mg/Kg | 10       | 0.10         | 68               | 70 - 130        |

<sup>1</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

**Sample: 200017 - MW-15 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21359 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0361 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0254 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.0615 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.819  | mg/Kg | 10       | 1            | 81               | 70 - 130        |
| 4-BFB     |      | 0.757  | mg/Kg | 10       | 1            | 75               | 70 - 130        |

**Sample: 200017 - MW-15 (25-27')**

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

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 119    | mg/Kg | 1        | 150          | 79               | 70 - 130        |

**Sample: 200017 - MW-15 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21360 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.723  | mg/Kg | 10       | 0.10         | 72               | 70 - 130        |
| 4-BFB     |      | 0.706  | mg/Kg | 10       | 0.10         | 71               | 70 - 130        |

**Sample: 200018 - MW-16 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21359 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | <0.010 | mg/Kg | 10       | 0.001 |

Continued ...

Continued Sample: 200018 Analysis: BTEX

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.798  | mg/Kg | 10       | 1            | 80               | 70 - 130        |
| 4-BFB     |      | 0.754  | mg/Kg | 10       | 1            | 75               | 70 - 130        |

Sample: 200018 - MW-16 (13-15')

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

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

| Surrogate   | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Triacontane |      | 118    | mg/Kg | 1        | 150          | 79               | 70 - 130        |

Sample: 200018 - MW-16 (13-15')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21360 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

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

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>3</sup> | 0.679  | mg/Kg | 10       | 0.10         | 68               | 70 - 130        |
| 4-BFB     | <sup>4</sup> | 0.661  | mg/Kg | 10       | 0.10         | 66               | 70 - 130        |

Sample: 200019 - MW-16 (25-27')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21359 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | <0.010 | mg/Kg | 10       | 0.001 |

Continued ...

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>4</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Continued Sample: 200019 Analysis: BTEX

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.870  | mg/Kg | 10       | 1            | 87               | 70 - 130        |
| 4-BFB     |      | 0.815  | mg/Kg | 10       | 1            | 81               | 70 - 130        |

Sample: 200019 - MW-16 (25-27')

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

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 116    | mg/Kg | 1        | 150          | 77               | 70 - 130        |

Sample: 200019 - MW-16 (25-27')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21360 Date Analyzed: 6/25/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20297 Date Prepared: 6/25/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.724  | mg/Kg | 10       | 0.10         | 72               | 70 - 130        |
| 4-BFB     |      | 0.719  | mg/Kg | 10       | 0.10         | 72               | 70 - 130        |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC21359

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.11   | mg/Kg | 10       | 1            | 111              | 70 - 130        |
| 4-BFB     |      | 0.994  | mg/Kg | 10       | 1            | 99               | 70 - 130        |

Method Blank            QCBatch:    QC21360

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.07   | mg/Kg | 10       | 0.10         | 107              | 70 - 130        |
| 4-BFB     |      | 0.933  | mg/Kg | 10       | 0.10         | 93               | 70 - 130        |

Method Blank            QCBatch:    QC21368

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

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

Method Blank            QCBatch:    QC21403

| Param | Flag | Results | Units | Reporting Limit |
|-------|------|---------|-------|-----------------|
| DRO   |      | 104     | mg/Kg | 50              |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 23.5   | mg/Kg | 1        | 150          | 16               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

**Laboratory Control Spikes**                      QCBatch:    QC21359

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 1.04       | 1.04        | mg/Kg | 10   | 1                  | <0.010        | 104   | 0   | 70 - 130    | 20        |
| Benzene      | 1.05       | 1.04        | mg/Kg | 10   | 1                  | <0.010        | 105   | 0   | 70 - 130    | 20        |
| Toluene      | 1.03       | 1.02        | mg/Kg | 10   | 1                  | <0.010        | 103   | 0   | 70 - 130    | 20        |
| Ethylbenzene | 1          | 1           | mg/Kg | 10   | 1                  | <0.010        | 100   | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.94       | 2.92        | mg/Kg | 10   | 3                  | <0.010        | 98    | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.08       | 1.1         | mg/Kg | 10       | 1            | 108       | 110        | 70 - 130        |
| 1-BFB     | 1.01       | 1.04        | mg/Kg | 10       | 1            | 101       | 104        | 70 - 130        |

**Laboratory Control Spikes**                      QCBatch:    QC21360

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 8.71       | 10.5        | mg/Kg | 10   | 1                  | <1            | 87    | 18  | 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       | 0.883      | 1.08        | mg/Kg | 10       | 0.10         | 88        | 108        | 70 - 130        |
| 4-BFB     | 0.93       | 0.96        | mg/Kg | 10       | 0.10         | 93        | 96         | 70 - 130        |

**Laboratory Control Spikes**                      QCBatch:    QC21368

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

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

*Continued ...*



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

**Laboratory Control Spikes**

QCBatch: QC21403

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 232        | 228         | mg/Kg | 1    | 250                | <50           | 93    | 2   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 112        | 16.0        | mg/Kg | 1        | 150          | 75        | 11         | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**

QCBatch: QC21359

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.901     | 0.702      | mg/Kg | 10   | 1                  | <0.010        | 90    | 24  | 70 - 130    | 20        |
| Toluene      | 0.938     | 0.71       | mg/Kg | 10   | 1                  | <0.010        | 93    | 27  | 70 - 130    | 20        |
| Ethylbenzene | 0.880     | 0.696      | mg/Kg | 10   | 1                  | 0.0104        | 86    | 23  | 70 - 130    | 20        |
| M,P,O-Xylene | 2.57      | 2.01       | mg/Kg | 10   | 3                  | <0.010        | 85    | 24  | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.947     | 0.898      | mg/Kg | 10       | 1            | 94       | 89        | 70 - 130        |
| 4-BFB     | 0.89      | 0.83       | mg/Kg | 10       | 1            | 89       | 83        | 70 - 130        |

**Matrix Spikes**

QCBatch: QC21360

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 8.85      | 11.1       | mg/Kg | 10   | 1                  | <1            | 88    | 22  | 80 - 120    | 20        |

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

| Surrogate | MS Result          | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|--------------------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.922              | 1.09       | mg/Kg | 10       | 0.10         | 92       | 109       | 70 - 130        |
| 4-BFB     | <sup>5</sup> 0.695 | 0.874      | mg/Kg | 10       | 0.10         | 69       | 87        | 70 - 130        |

Matrix Spikes            QCBatch:    QC21368

| Param | MS Result         | MSD Result        | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD  | % Rec Limit | RPD Limit |
|-------|-------------------|-------------------|-------|------|--------------------|---------------|-------|------|-------------|-----------|
| DRO   | <sup>6</sup> <500 | <sup>7</sup> <500 | mg/Kg | 10   | 250                | 160           | -64   | -200 | 70 - 130    | 20        |

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

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

Matrix Spikes            QCBatch:    QC21403

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 226       | 240        | mg/Kg | 1    | 250                | <50.0         | 90    | 6   | 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 | 111       | 111        | mg/Kg | 1        | 150          | 74       | 74        | 70 - 130        |

## Quality Control Report Continuing Calibration Verification Standards

CCV (1)            QCBatch:    QC21359

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.108            | 108                   | 85 - 115                | 6/25/02       |
| Benzene      |      | mg/L  | 0.10            | 0.102            | 102                   | 85 - 115                | 6/25/02       |
| Toluene      |      | mg/L  | 0.10            | 0.102            | 102                   | 85 - 115                | 6/25/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0964           | 96                    | 85 - 115                | 6/25/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.282            | 94                    | 85 - 115                | 6/25/02       |

<sup>5</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

<sup>6</sup>MS and MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.

<sup>7</sup>MS and MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.

CCV (2)            QCBatch:    QC21359

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.110                  | 110                         | 85 - 115                      | 6/25/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 6/25/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0988                 | 98                          | 85 - 115                      | 6/25/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0954                 | 95                          | 85 - 115                      | 6/25/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.277                  | 92                          | 85 - 115                      | 6/25/02          |

ICV (1)            QCBatch:    QC21359

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.107                  | 107                         | 85 - 115                      | 6/25/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.105                  | 105                         | 85 - 115                      | 6/25/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 6/25/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.100                  | 100                         | 85 - 115                      | 6/25/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.293                  | 98                          | 85 - 115                      | 6/25/02          |

CCV (1)            QCBatch:    QC21360

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 1.03                   | 103                         | 85 - 115                      | 6/25/02          |

ICV (1)            QCBatch:    QC21360

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 1.1                    | 110                         | 85 - 115                      | 6/25/02          |

CCV (1)            QCBatch:    QC21368

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

CCV (2)            QCBatch:    QC21368

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

CCV (3)            QCBatch:    QC21368

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

ICV (1)            QCBatch:    QC21368

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

CCV (1)            QCBatch:    QC21403

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 224                    | 90                          | 75 - 125                      | 6/27/02          |

ICV (1)            QCBatch:    QC21403

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 222                    | 89                          | 75 - 125                      | 6/27/02          |

# Equiva Services, LLC

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

## TraceAnalysis, Inc.

Consulting Company Name: Equiva Services, Inc.

Phone #: 915-570-8726  
Fax #: 915-570-8726

Consulting Company Address: 306 West Wall, Suite 1312 Midland, Tx 79701

Equiva Contact: Kyle Landrean  
Incident #: 300109  
Project Task: Monument, New Mexico

Consulting Contact: Jeff Kindley

Location/SAP: Barber Ranch

Location Address: Monument, New Mexico

Consultant Job#: EQ-112

Sampler Signature: Jeff Kindley

| LAB #<br>(LAB USE ONLY) | FIELD CODE     | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                    |                                | SAMPLING |         |       |
|-------------------------|----------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------|--------------------------------|----------|---------|-------|
|                         |                |              |               | WATER  | SOIL | AIR | SLUDGE | HCL                 | HNO <sub>3</sub> | NaHSO <sub>4</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE      | NONE    | DATE  |
| 2006147                 | MW-17 (13-15') | 1            | 4oz           | ✓      |      |     |        | ✓                   |                  |                    |                                |          | 6/25/02 | 9:15  |
| 48                      | MW-17 (25-27') | 1            | 4oz           | ✓      |      |     |        | ✓                   |                  |                    |                                |          | 6/25/02 | 10:10 |
| 49                      | MW-18 (13-15') | 1            | 4oz           | ✓      |      |     |        | ✓                   |                  |                    |                                |          | 6/25/02 | 11:15 |
| 50                      | MW-18 (25-27') | 1            | 4oz           | ✓      |      |     |        | ✓                   |                  |                    |                                |          | 6/25/02 | 15:15 |

Relinquished by: Jeff Kindley Date: June 25, 2002 Time: 9:00  
Relinquished by: Jeff Kindley Date: 6/25/02 Time: 18:30

Received by: Helen Shelton Date: 6/25/02 Time: 9:00  
Received by: Helen Shelton Date: 6/26/02 Time: 10:10

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

4 samples - HS

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #: AD2006147

#### ANALYSIS REQUEST

(Circle or Specify Method No.)

| Method No.                 | Method Name                                      | Result | Notes            |
|----------------------------|--|--------|------------------|
| TPH 8270C                  | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 |        |                  |
| TPH 418.1/7X1005           | TPH 8270C  |        |                  |
| BTEX 8021B/602             | BTEX 8021B/602                                   | ✓      |                  |
| MTRB 8021B/602             | MTRB 8021B/602                                   | ✓      |                  |
| GC-MS Vol. 8260B/624       | GC-MS Vol. 8260B/624                             | ✓      |                  |
| GC/MS Semi. Vol. 8270C/625 | GC/MS Semi. Vol. 8270C/625                       | ✓      |                  |
| PCBs 8082/608              | PCBs 8082/608                                    | ✓      |                  |
| Pesticides 8081A/608       | Pesticides 8081A/608                             | ✓      |                  |
| BOD, TSS, pH               | BOD, TSS, pH                                     | ✓      |                  |
| TPH-8015 M (Pool/ce)       | TPH-8015 M (Pool/ce)                             | ✓      | SLIP TPH 600.000 |
| Turn Around Time           | Turn Around Time if different from standard      |        |                  |

LAB USE ONLY  
Intact: Y/N  
Headspace: Y/N  
Temp: < 4 °C  
Log-in/Review: M

REMARKS: 7/11 PIP  
Check if special reporting limits needed.  
N/A Day Turnaround  
\* IF TPH exceeds total of 100ppm  
Then run SLIP TPH on that sample  
\* IF benzene exceeds 10ppm and/or  
Total BTEX exceeds 50ppm then run  
SLIP For that analyte

Report Date: July 10, 2002 Order Number: A02062614  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Monument, Lea County, New Mexico

## Summary Report

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

Report Date: July 10, 2002

Order ID Number: A02062614

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description    | Matrix | Date Taken | Time Taken | Date Received |
|--------|----------------|--------|------------|------------|---------------|
| 200148 | MW-17 (25-27') | Soil   | 6/24/02    | 10:10      | 6/26/02       |
| 200150 | MW-18 (25-27') | Soil   | 6/24/02    | 15:15      | 6/26/02       |

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: 200148 - MW-17 (25-27')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.1   | mg/L  |

### Sample: 200150 - MW-18 (25-27')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.1   | mg/L  |

Report Date: July 8, 2002 Order Number: A02062614  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Monument, Lea County, New Mexico

## Summary Report

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

Report Date: July 8, 2002

Order ID Number: A02062614

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description    | Matrix | Date Taken | Time Taken | Date Received |
|--------|----------------|--------|------------|------------|---------------|
| 200147 | MW-17 (13-15') | Soil   | 6/24/02    | 9:15       | 6/26/02       |
| 200148 | MW-17 (25-27') | Soil   | 6/24/02    | 10:10      | 6/26/02       |
| 200149 | MW-18 (13-15') | Soil   | 6/24/02    | 14:45      | 6/26/02       |
| 200150 | MW-18 (25-27') | Soil   | 6/24/02    | 15:15      | 6/26/02       |

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

| Sample - Field Code     | BTEX          |               |                    |                    |                  | TPH DRO   | TPH GRO   |
|-------------------------|---------------|---------------|--------------------|--------------------|------------------|-----------|-----------|
|                         | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | DRO (ppm) | GRO (ppm) |
| 200147 - MW-17 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0     | <1.00     |
| 200148 - MW-17 (25-27') | <0.020        | <0.020        | <0.020             | 0.0247             | 0.0247           | 201       | 13.0      |
| 200149 - MW-18 (13-15') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0     | <1.00     |
| 200150 - MW-18 (25-27') | <0.020        | <0.020        | 0.264              | 1.17               | 1.43             | 311       | 220       |

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



# TRACE ANALYSIS, 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: July 10, 2002

Order ID Number: A02062614

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, 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 |
|--------|----------------|--------|------------|------------|---------------|
| 200148 | MW-17 (25-27') | Soil   | 6/24/02    | 10:10      | 6/26/02       |
| 200150 | MW-18 (25-27') | Soil   | 6/24/02    | 15:15      | 6/26/02       |

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

This report consists of a total of 4 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: 200148 - MW-17 (25-27')**

Analysis: SPLP DRO    Analytical Method: Mod. 8015B    QC Batch: QC21664    Date Analyzed: 7/7/02  
Analyst: MM    Preparation Method: 1312    Prep Batch: PB20538    Date Prepared: 7/7/02

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

**Sample: 200148 - MW-17 (25-27')**

Analysis: SPLP GRO    Analytical Method: 8015    QC Batch: QC21683    Date Analyzed: 7/7/02  
Analyst: CG    Preparation Method: 1312    Prep Batch: PB20557    Date Prepared: 7/7/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.1   | mg/L  | 1        | 0.10 |

**Sample: 200150 - MW-18 (25-27')**

Analysis: SPLP DRO    Analytical Method: Mod. 8015B    QC Batch: QC21664    Date Analyzed: 7/7/02  
Analyst: MM    Preparation Method: 1312    Prep Batch: PB20538    Date Prepared: 7/7/02

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

**Sample: 200150 - MW-18 (25-27')**

Analysis: SPLP GRO    Analytical Method: 8015    QC Batch: QC21683    Date Analyzed: 7/7/02  
Analyst: CG    Preparation Method: 1312    Prep Batch: PB20557    Date Prepared: 7/7/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.1   | mg/L  | 1        | 0.10 |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC21664

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

Method Blank            QCBatch:    QC21683

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

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes            QCBatch:    QC21664

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP DRO | < 50       | < 50        | mg/L  | 1    | 250                | <5.00         | 95    | 7   | 70 - 130    | 20        |

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

Laboratory Control Spikes            QCBatch:    QC21683

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP GRO | 0.982      | 0.915       | mg/L  | 1    | 1                  | <0.1          | 98    | 7   | 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:    QC21664

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP DRO |      | mg/L  | 250             | 237              | 94                    | 75 - 125                | 7/7/02        |

ICV (1)            QCBatch:    QC21664

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 232                    | 92                          | 75 - 125                      | 7/7/02           |

CCV (1)            QCBatch:    QC21683

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 0.979                  | 97                          | 85 - 115                      | 7/7/02           |

ICV (1)            QCBatch:    QC21683

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 0.914                  | 91                          | 85 - 115                      | 7/7/02           |

# TRACE ANALYSIS, 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: July 8, 2002

Order ID Number: A02062614

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, 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 |
|--------|----------------|--------|------------|------------|---------------|
| 200147 | MW-17 (13-15') | Soil   | 6/24/02    | 9:15       | 6/26/02       |
| 200148 | MW-17 (25-27') | Soil   | 6/24/02    | 10:10      | 6/26/02       |
| 200149 | MW-18 (13-15') | Soil   | 6/24/02    | 14:45      | 6/26/02       |
| 200150 | MW-18 (25-27') | Soil   | 6/24/02    | 15:15      | 6/26/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 200147 - MW-17 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21385 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.909  | mg/Kg | 10       | 1            | 91               | 70 - 130        |
| 4-BFB     |      | 0.852  | mg/Kg | 10       | 1            | 85               | 70 - 130        |

**Sample: 200147 - MW-17 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21403 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20329 Date Prepared: 6/26/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 19.4   | mg/Kg | 1        | 15           | 126              | 70 - 130        |

**Sample: 200147 - MW-17 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21386 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.14   | mg/Kg | 10       | 0.10         | 114              | 70 - 130        |
| 4-BFB     |      | 0.774  | mg/Kg | 10       | 0.10         | 77               | 70 - 130        |

**Sample: 200148 - MW-17 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21385 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Ethylbenzene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | 0.0247 | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | 0.0247 | mg/Kg | 20       | 0.001 |
| Test Comments | 1    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.907  | mg/Kg | 20       | 1            | 91               | 70 - 130        |
| 4-BFB     |      | 0.831  | mg/Kg | 20       | 1            | 83               | 70 - 130        |

**Sample: 200148 - MW-17 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21403 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20329 Date Prepared: 6/26/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 201    | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 119    | mg/Kg | 1        | 150          | 79               | 70 - 130        |

**Sample: 200148 - MW-17 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21386 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 13.0   | mg/Kg | 20       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 2    | 0.962  | mg/Kg | 20       | 0.10         | 48               | 70 - 130        |
| 4-BFB     | 3    | 1.22   | mg/Kg | 20       | 0.10         | 61               | 70 - 130        |

**Sample: 200149 - MW-18 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21385 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | <0.010 | mg/Kg | 10       | 0.001 |

Continued ...

<sup>1</sup>Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.00473 which is the MDL.

<sup>2</sup>Low surrogate due to matrix interference.

<sup>3</sup>Low surrogate due to matrix interference.

Continued Sample: 200149 Analysis: BTEX

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.996  | mg/Kg | 10       | 1            | 100              | 70 - 130        |
| 4-BFB     |      | 0.888  | mg/Kg | 10       | 1            | 89               | 70 - 130        |

Sample: 200149 - MW-18 (13-15')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21403 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20329 Date Prepared: 6/26/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 17.2   | mg/Kg | 1        | 15           | 113              | 70 - 130        |

Sample: 200149 - MW-18 (13-15')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21386 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

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

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>4</sup> | 1.43   | mg/Kg | 10       | 0.10         | 143              | 70 - 130        |
| 4-BFB     |              | 0.841  | mg/Kg | 10       | 0.10         | 84               | 70 - 130        |

Sample: 200150 - MW-18 (25-27')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21385 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene      |      | <0.020 | mg/Kg | 20       | 0.001 |
| Ethylbenzene |      | 0.264  | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene |      | 1.17   | mg/Kg | 20       | 0.001 |

Continued ...

<sup>4</sup>High surrogate due to peak interference.

Continued Sample: 200150 Analysis: BTEX

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Total BTEX    |      | 1.43   | mg/Kg | 20       | 0.001 |
| Test Comments | 5    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.972  | mg/Kg | 20       | 1            | 97               | 70 - 130        |
| 4-BFB     | 6    | 4.84   | mg/Kg | 20       | 1            | 484              | 70 - 130        |

Sample: 200150 - MW-18 (25-27')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21403 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20329 Date Prepared: 6/26/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 311    | mg/Kg | 1        | 50  |

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

Sample: 200150 - MW-18 (25-27')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21386 Date Analyzed: 6/26/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20317 Date Prepared: 6/25/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 220    | mg/Kg | 20       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 7    | 0.807  | mg/Kg | 20       | 0.10         | 40               | 70 - 130        |
| 4-BFB     | 8    | 11.4   | mg/Kg | 20       | 0.10         | 570              | 70 - 130        |

<sup>5</sup>Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.00473 which is the MDL.

<sup>6</sup>High surrogate recovery due to peak interference.

<sup>7</sup>Low surrogate due to matrix interference.

<sup>8</sup>High surrogate due to peak interference.



### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21385

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.08   | mg/Kg | 10       | 1            | 108              | 70 - 130        |
| 4-BFB     |      | 0.978  | mg/Kg | 10       | 1            | 97               | 70 - 130        |

Method Blank      QCBatch:    QC21386

| Param | Flag | Results | Units | Reporting Limit |
|-------|------|---------|-------|-----------------|
| GRO   |      | 1.42    | mg/Kg | 0.10            |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.04   | mg/Kg | 10       | 0.10         | 104              | 70 - 130        |
| 4-BFB     |      | 0.904  | mg/Kg | 10       | 0.10         | 90               | 70 - 130        |

Method Blank      QCBatch:    QC21403

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 235    | mg/Kg | 1        | 15           | 153              | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC21385

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 1.09       | 1.08        | mg/Kg | 10   | 1                  | <0.010        | 109   | 0   | 70 - 130    | 20        |
| Benzene      | 1.05       | 1.03        | mg/Kg | 10   | 1                  | <0.010        | 105   | 1   | 70 - 130    | 20        |
| Toluene      | 1.02       | 1.01        | mg/Kg | 10   | 1                  | <0.010        | 102   | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.988      | 0.983       | mg/Kg | 10   | 1                  | <0.010        | 98    | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.88       | 2.86        | mg/Kg | 10   | 3                  | <0.010        | 96    | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.05       | 1.07        | mg/Kg | 10       | 1            | 105       | 107        | 70 - 130        |
| 4-BFB     | 1          | 1.02        | mg/Kg | 10       | 1            | 100       | 102        | 70 - 130        |

**Laboratory Control Spikes**

QC Batch: QC21403

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 232        | 228         | mg/Kg | 1    | 250                | <50           | 93    | 2   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 112        | 160         | mg/Kg | 1        | 150          | 75        | 106        | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**

QC Batch: QC21385

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.876     | 0.696      | mg/Kg | 10   | 1                  | <0.010        | 87    | 22  | 70 - 130    | 20        |
| Toluene      | 0.866     | 0.69       | mg/Kg | 10   | 1                  | <0.010        | 86    | 22  | 70 - 130    | 20        |
| Ethylbenzene | 0.851     | 0.679      | mg/Kg | 10   | 1                  | <0.010        | 85    | 22  | 70 - 130    | 20        |
| M,P,O-Xylene | 2.46      | 1.95       | mg/Kg | 10   | 3                  | <0.010        | 82    | 23  | 70 - 130    | 20        |

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

| Surrogate | MS Result           | MSD Result          | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|---------------------|---------------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | <sup>9</sup> 0.68   | <sup>10</sup> 0.692 | mg/Kg | 10       | 1            | 68       | 69        | 70 - 130        |
| 4-BFB     | <sup>11</sup> 0.646 | <sup>12</sup> 0.63  | mg/Kg | 10       | 1            | 64       | 63        | 70 - 130        |

<sup>9</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

<sup>10</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

<sup>11</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

<sup>12</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

**Matrix Spikes**            QCBatch:    QC21386

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 15.0      | 13.5       | mg/Kg | 10   | 1                  | <1.00         | 150   | 10  | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 1.12      | 1.36       | mg/Kg | 10       | 0.10         | 112      | 136       | 70 - 130        |
| 4-BFB     | 0.577     | 0.640      | mg/Kg | 10       | 0.10         | 58       | 64        | 70 - 130        |

**Matrix Spikes**            QCBatch:    QC21403

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 226       | 240        | mg/Kg | 1    | 250                | <50.0         | 90    | 6   | 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 | 111       | 111        | mg/Kg | 1        | 150          | 74       | 74        | 70 - 130        |

## Quality Control Report Continuing Calibration Verification Standards

**CCV (1)**            QCBatch:    QC21385

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0997           | 99                    | 85 - 115                | 6/26/02       |
| Benzene      |      | mg/L  | 0.10            | 0.103            | 103                   | 85 - 115                | 6/26/02       |
| Toluene      |      | mg/L  | 0.10            | 0.1              | 100                   | 85 - 115                | 6/26/02       |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0988           | 98                    | 85 - 115                | 6/26/02       |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.288            | 96                    | 85 - 115                | 6/26/02       |

**CCV (2)**            QCBatch:    QC21385

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 6/26/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 6/26/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0991                 | 99                          | 85 - 115                      | 6/26/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0982                 | 98                          | 85 - 115                      | 6/26/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.284                  | 94                          | 85 - 115                      | 6/26/02          |

ICV (1)            QCBatch:    QC21385

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.11                   | 110                         | 85 - 115                      | 6/26/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 6/26/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0988                 | 98                          | 85 - 115                      | 6/26/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0954                 | 95                          | 85 - 115                      | 6/26/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.277                  | 92                          | 85 - 115                      | 6/26/02          |

CCV (1)            QCBatch:    QC21403

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 224                    | 90                          | 75 - 125                      | 6/27/02          |

ICV (1)            QCBatch:    QC21403

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 222                    | 89                          | 75 - 125                      | 6/27/02          |

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

# Trace Analysis, Inc.

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD0002724

Company Name: ERANDON SERVICES INC Phone #: 915-570-8726  
 Address: (Street, City, Zip) Fax #: 915-570-8726  
206 West Wall, Suite 1312, Midland, TX 79701 915-684-7587  
 Contact Person: JEFFREY KINLEY  
 Name to: Kyle Anderson Incident #: 300109  
 different from above: ERANDON SERVICES  
 Project #: EQ-112  
 Project Location: Lea County, New Mexico  
 Project Name: Barber Ranch  
 Sampler Signature: Jeffrey Kinley

| LAB #<br>LAB USE ONLY | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING |         |      |
|-----------------------|------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|----------|---------|------|
|                       |            |              |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE      | NONE    | DATE |
| 300236                | MW-14      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |          | 6/25/02 | 1340 |
| 37                    | MW-14      | 1            | 1 liter       | ✓      |      |     |        | ✓                   |                  |                                |      |          | 6/25/02 | 1340 |
| 38                    | MW-15      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |          | 6/25/02 | 1400 |
| 38                    | MW-17      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |          | 6/25/02 | 1530 |
| 39                    | MW-18      | 1            | 1 liter       | ✓      |      |     |        | ✓                   |                  |                                |      |          | 6/25/02 | 1530 |
| 39                    | MW-18      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      |          | 6/25/02 | 1545 |
| 39                    | MW-18      | 1            | 1 liter       | ✓      |      |     |        | ✓                   |                  |                                |      |          | 6/25/02 | 1545 |

| ANALYSIS REQUEST<br>(Circle or Specify Method No.) | LAB USE ONLY                        | REMARKS:                              |
|--|-------------------------------------|---------------------------------------|
| MTBE 8021B/602                                     | <input checked="" type="checkbox"/> | Normal Turnaround<br>7/11 FIP<br>1/97 |
| BTEX 8021B/602                                     | <input checked="" type="checkbox"/> |                                       |
| TPH 418.1/TX1005                                   | <input checked="" type="checkbox"/> |                                       |
| PAH 8270C  | <input checked="" type="checkbox"/> |                                       |
| Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7   | <input checked="" type="checkbox"/> |                                       |
| TCLP Volatiles                                     | <input checked="" type="checkbox"/> |                                       |
| TCLP Semi Volatiles                                | <input checked="" type="checkbox"/> |                                       |
| TCLP Pesticides                                    | <input checked="" type="checkbox"/> |                                       |
| RCI  | <input checked="" type="checkbox"/> |                                       |
| GC/MS Vol. 8260B/624                               | <input checked="" type="checkbox"/> |                                       |
| GC/MS Semi. Vol. 8270C/625                         | <input checked="" type="checkbox"/> |                                       |
| PCBs 8082/608                                      | <input checked="" type="checkbox"/> |                                       |
| Pesticides 8081A/608                               | <input checked="" type="checkbox"/> |                                       |
| BOD, TSS, pH                                       | <input checked="" type="checkbox"/> |                                       |
| Turn Around Time if different from standard        |                                     |                                       |

Inquired by: Jeffrey Kinley Date: June 26, 2002 Time: 0900  
 Prepared by: Jeffrey Kinley Date: 6/26/02 Time: 0900  
 Analyzed by: Jeffrey Kinley Date: 6/26/02 Time: 1830  
 Inquired by: Jeffrey Kinley Date: 6/26/02 Time: 1830

Received by: Jeffrey Kinley Date: 6/26/02 Time: 0900  
 Received by: Jeffrey Kinley Date: 6/26/02 Time: 0900  
 Received at Laboratory by: Jeffrey Kinley Date: 6/26/02 Time: 1830

Carrier # Jeffrey Kinley 163-546-8870

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 11 samples HS

# TRACE ANALYSIS, 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: July 5, 2002

Order ID Number: A02062724

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|-------------|--------|------------|------------|---------------|
| 200236 | MW-14       | Water  | 6/25/02    | 13:40      | 6/27/02       |
| 200237 | MW-15       | Water  | 6/25/02    | 14:00      | 6/27/02       |
| 200238 | MW-17       | Water  | 6/25/02    | 15:30      | 6/27/02       |
| 200239 | MW-18       | Water  | 6/25/02    | 15:45      | 6/27/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 9 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: 200236 - MW-14**

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC21592      Date Analyzed: 6/27/02  
Analyst: DN      Preparation Method: S 5030B      Prep Batch: PB20483      Date Prepared: 6/27/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0032 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | 0.0032 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.095  | mg/L  | 1        | 0.10         | 95               | 70 - 130        |
| 4-BFB     |      | 0.091  | mg/L  | 1        | 0.10         | 90               | 70 - 130        |

**Sample: 200236 - MW-14**

Analysis: PAH      Analytical Method: S 8270C      QC Batch: QC21441      Date Analyzed: 6/28/02  
Analyst: RC      Preparation Method: E 3510C      Prep Batch: PB20358      Date Prepared: 6/27/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 61.18  | mg/L  | 1        | 80           | 76               | 35 - 114        |
| 2-Fluorobiphenyl |      | 57.72  | mg/L  | 1        | 80           | 72               | 43 - 116        |
| Terphenyl-d14    |      | 41.88  | mg/L  | 1        | 80           | 52               | 33 - 141        |

**Sample: 200237 - MW-15**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21592 Date Analyzed: 6/27/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20483 Date Prepared: 6/27/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0948 | mg/L  | 1        | 0.10         | 94               | 70 - 130        |
| 4-BFB     |      | 0.0884 | mg/L  | 1        | 0.10         | 88               | 70 - 130        |

**Sample: 200238 - MW-17**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21592 Date Analyzed: 6/27/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20483 Date Prepared: 6/27/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0877 | mg/L  | 5        | 0.10         | 87               | 70 - 130        |
| 4-BFB     |      | 0.0825 | mg/L  | 5        | 0.10         | 82               | 70 - 130        |

**Sample: 200238 - MW-17**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC21441 Date Analyzed: 6/28/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB20358 Date Prepared: 6/27/02

| Param                | Flag | Result  | Units | Dilution | RDL    |
|----------------------|------|---------|-------|----------|--------|
| Naphthalene          |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene       |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene |      | <0.0002 | mg/L  | 1        | 0.0002 |

Continued ...



... Continued Sample: 200238 Analysis: PAH

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 66.76  | mg/L  | 1        | 80           | 83               | 35 - 114        |
| 2-Fluorobiphenyl |      | 62.41  | mg/L  | 1        | 80           | 78               | 43 - 116        |
| Terphenyl-d14    |      | 39.54  | mg/L  | 1        | 80           | 49               | 33 - 141        |

Sample: 200239 - MW-18

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21592 Date Analyzed: 6/27/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20483 Date Prepared: 6/27/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0014 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | 0.0014 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.0934 | mg/L  | 1        | 0.10         | 93               | 70 - 130        |
| 4-BFB     |      | 0.0873 | mg/L  | 1        | 0.10         | 87               | 70 - 130        |

Sample: 200239 - MW-18

Analysis: PAH Analytical Method: S 8270C QC Batch: QC21441 Date Analyzed: 6/28/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB20358 Date Prepared: 6/27/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |

Continued ...

... Continued Sample: 200239 Analysis: PAH

| Param                | Flag | Result  | Units | Dilution | RDL    |
|----------------------|------|---------|-------|----------|--------|
| Benzo(g,h,i)perylene |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 64.99  | mg/L  | 1        | 80           | 81               | 35 - 114        |
| 2-Fluorobiphenyl |      | 59.09  | mg/L  | 1        | 80           | 73               | 43 - 116        |
| Terphenyl-d14    |      | 44.49  | mg/L  | 1        | 80           | 55               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21441

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 69.24  | mg/L  | 1        | 80           | 86               | 35 - 114        |
| 2-Fluorobiphenyl |      | 61.89  | mg/L  | 1        | 80           | 77               | 43 - 116        |
| Terphenyl-d14    |      | 58.99  | mg/L  | 1        | 80           | 73               | 33 - 141        |

Method Blank      QCBatch:    QC21592

| 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       |      | 0.0926 | mg/L  | 1        | 0.10         | 92               | 70 - 130        |
| 4-BFB     |      | 0.0869 | mg/L  | 1        | 0.10         | 86               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC21441

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 60.15      | 64.15       | mg/L  | 1    | 80                 | <0.0002       | 75    | 6   | 16 - 96     | 20        |
| Acenaphthylene         | 65.7       | 68.7        | mg/L  | 1    | 80                 | <0.0002       | 82    | 4   | 20 - 110    | 20        |
| Acenaphthene           | 62.68      | 65.47       | mg/L  | 1    | 80                 | <0.0002       | 78    | 4   | 18 - 108    | 20        |
| Fluorene               | 64.96      | 68.58       | mg/L  | 1    | 80                 | <0.0002       | 81    | 5   | 22 - 102    | 20        |
| Phenanthrene           | 64.63      | 67.45       | mg/L  | 1    | 80                 | <0.0002       | 80    | 4   | 25 - 103    | 20        |
| Anthracene             | 65.32      | 68.62       | mg/L  | 1    | 80                 | <0.0002       | 81    | 4   | 22 - 110    | 20        |
| Fluoranthene           | 81.3       | 87.2        | mg/L  | 1    | 80                 | <0.0002       | 101   | 7   | 21 - 110    | 20        |
| Pyrene                 | 90.55      | 83.21       | mg/L  | 1    | 80                 | <0.0002       | 113   | 8   | 22 - 100    | 20        |
| Benzo(a)anthracene     | 61.12      | 66.22       | mg/L  | 1    | 80                 | <0.0002       | 76    | 8   | 30 - 99     | 20        |
| Chrysene               | 58.26      | 59.6        | mg/L  | 1    | 80                 | <0.0002       | 72    | 2   | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 50.73      | 52.08       | mg/L  | 1    | 80                 | <0.0002       | 63    | 2   | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 63.07      | 65.25       | mg/L  | 1    | 80                 | <0.0002       | 78    | 3   | 35 - 103    | 20        |
| Benzo(a)pyrene         | 51.18      | 54.19       | mg/L  | 1    | 80                 | <0.0002       | 63    | 5   | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 50.09      | 52.65       | mg/L  | 1    | 80                 | <0.0002       | 62    | 4   | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 33.84      | 35.31       | mg/L  | 1    | 80                 | <0.0002       | 42    | 4   | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 44.55      | 45.88       | mg/L  | 1    | 80                 | <0.0002       | 55    | 2   | 19 - 119    | 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  | 62.06      | 68.2        | mg/L  | 1        | 80           | 77        | 85         | 35 - 114        |
| 2-Fluorobiphenyl | 58.28      | 61.3        | mg/L  | 1        | 80           | 72        | 76         | 43 - 116        |
| Terphenyl-d14    | 72.8       | 69.13       | mg/L  | 1        | 80           | 91        | 86         | 33 - 141        |

Laboratory Control Spikes

QCBatch: QC21592

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0938     | 0.0954      | mg/L  | 1    | 0.10               | <0.001        | 93    | 1   | 70 - 130    | 20        |
| Benzene      | 0.0934     | 0.0958      | mg/L  | 1    | 0.10               | <0.001        | 93    | 2   | 70 - 130    | 20        |
| Toluene      | 0.0905     | 0.0933      | mg/L  | 1    | 0.10               | <0.001        | 90    | 3   | 70 - 130    | 20        |
| Ethylbenzene | 0.0906     | 0.0939      | mg/L  | 1    | 0.10               | <0.001        | 90    | 3   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.271      | 0.283       | mg/L  | 1    | 0.30               | <0.001        | 90    | 4   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.091      | 0.093       | mg/L  | 1        | 0.10         | 91        | 93         | 70 - 130        |
| 4-BFB     | 0.0906     | 0.0938      | mg/L  | 1        | 0.10         | 90        | 93         | 70 - 130        |

Quality Control Report  
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC21441

| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene            |      | mg/L  | 60                    | 68.09                  | 113                         | 80 - 120                      | 6/28/02          |
| Acenaphthylene         |      | mg/L  | 60                    | 69.4                   | 115                         | 80 - 120                      | 6/28/02          |
| Acenaphthene           |      | mg/L  | 60                    | 69.22                  | 115                         | 80 - 120                      | 6/28/02          |
| Fluorene               |      | mg/L  | 60                    | 70.05                  | 116                         | 80 - 120                      | 6/28/02          |
| Phenanthrene           |      | mg/L  | 60                    | 67.11                  | 111                         | 80 - 120                      | 6/28/02          |
| Anthracene             |      | mg/L  | 60                    | 66.0                   | 110                         | 80 - 120                      | 6/28/02          |
| Fluoranthene           |      | mg/L  | 60                    | 67.63                  | 112                         | 80 - 120                      | 6/28/02          |
| Pyrene                 |      | mg/L  | 60                    | 70.99                  | 118                         | 80 - 120                      | 6/28/02          |
| Benzo(a)anthracene     |      | mg/L  | 60                    | 62.07                  | 103                         | 80 - 120                      | 6/28/02          |
| Chrysene               |      | mg/L  | 60                    | 61.82                  | 103                         | 80 - 120                      | 6/28/02          |
| Benzo(b)fluoranthene   |      | mg/L  | 60                    | 59.3                   | 98                          | 80 - 120                      | 6/28/02          |
| Benzo(k)fluoranthene   |      | mg/L  | 60                    | 66.15                  | 110                         | 80 - 120                      | 6/28/02          |
| Benzo(a)pyrene         |      | mg/L  | 60                    | 58.63                  | 97                          | 80 - 120                      | 6/28/02          |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 57.98                  | 96                          | 80 - 120                      | 6/28/02          |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 53.82                  | 89                          | 80 - 120                      | 6/28/02          |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 52.01                  | 86                          | 80 - 120                      | 6/28/02          |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 69.1                   | 115                         | 80 - 120                      | 6/28/02          |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 68.34                  | 113                         | 80 - 120                      | 6/28/02          |
| Terphenyl-d14          |      | mg/L  | 60                    | 69.35                  | 115                         | 80 - 120                      | 6/28/02          |

CCV (1)

QCBatch: QC21592

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0887                 | 88                          | 85 - 115                      | 6/27/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0901                 | 90                          | 85 - 115                      | 6/27/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0878                 | 87                          | 85 - 115                      | 6/27/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0891                 | 89                          | 85 - 115                      | 6/27/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.266                  | 88                          | 85 - 115                      | 6/27/02          |

CCV (2)

QCBatch: QC21592

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0915                 | 91                          | 85 - 115                      | 6/27/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0902                 | 90                          | 85 - 115                      | 6/27/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0875                 | 87                          | 85 - 115                      | 6/27/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0882                 | 88                          | 85 - 115                      | 6/27/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.261                  | 87                          | 85 - 115                      | 6/27/02          |

ICV (1)

QCBatch: QC21592

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0934                 | 93                          | 85 - 115                      | 6/27/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0941                 | 94                          | 85 - 115                      | 6/27/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0931                 | 93                          | 85 - 115                      | 6/27/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0931                 | 93                          | 85 - 115                      | 6/27/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.28                   | 93                          | 85 - 115                      | 6/27/02          |

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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

Company Name: Environ Services Inc. Phone #: 915-570-8726  
 Address: (Street, City, Zip) Fax #: 915-570-8726  
306 Westwood, Suite 1312 Midland, TX 79701 915-684-7587  
 Contact Person: Jeffrey Kindley  
 Invoice to: Kyle Landrenou  
 (if different from above) EQUIVA SERVICES Incident # 300109  
 Project #: EQ-112 Project Name: Burber Ranch  
 Project Location: Loa County, New Mexico Sampler Signature: Jeffrey Kindley

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AP0206724

| ANALYSIS REQUEST                                 | (Circle or Specify Method No.) |
|--|--------------------------------|
| PAH 8270C  | <input type="checkbox"/>       |
| Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 | <input type="checkbox"/>       |
| TCP Metals Ag As Ba Cd Cr Pb Se Hg               | <input type="checkbox"/>       |
| TCP Volatiles                                    | <input type="checkbox"/>       |
| TCP Semi Volatiles                               | <input type="checkbox"/>       |
| TCLP Pesticides                                  | <input type="checkbox"/>       |
| FCL  | <input type="checkbox"/>       |
| GC-MS Vol. 8260B/624                             | <input type="checkbox"/>       |
| GC/MS Semi. Vol. 8270C/625                       | <input type="checkbox"/>       |
| PCBs 8082/608                                    | <input type="checkbox"/>       |
| Pesticides 8081A/608                             | <input type="checkbox"/>       |
| BOD, TSS, pH                                     | <input type="checkbox"/>       |
| Turn Around Time if different from standard      |                                |

Handwritten notes: TPH (total lead) 8015 m \*  
TPH SLP \* see note above  
TPH SLP \* see note above

| LAB #<br>(LAB USE ONLY) | FIELD CODE          | # CONTAINERS | Volume/Amount | PRESERVATIVE METHOD                 |                                     |                                     |                                     |                                     |                                     | DATE                                | TIME           |             |
|-------------------------|---------------------|--------------|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------|-------------|
|                         |                     |              |               | WATER                               | SOIL                                | AIR                                 | SLUDGE                              | HCL                                 | HNO3                                |                                     |                | ICE         |
| <u>300240</u>           | <u>S-5 (8-10')</u>  | <u>1</u>     | <u>4oz</u>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>6/25/02</u> | <u>1508</u> |
| <u>41</u>               | <u>S-5 (30-32')</u> | <u>1</u>     | <u>4oz</u>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>6/25/02</u> | <u>1540</u> |
| <u>42</u>               | <u>S-6 (8-10')</u>  | <u>1</u>     | <u>4oz</u>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>6/25/02</u> | <u>1615</u> |
| <u>43</u>               | <u>S-6 (25-27')</u> | <u>1</u>     | <u>4oz</u>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>6/25/02</u> | <u>1650</u> |

Relinquished by: Jeffrey Kindley Date: June 24, 2002 Time: 0900  
 Relinquished by: Helena Shelton Date: 6/26/02 Time: 1830  
 Relinquished by: Helena Shelton Date: 6/26/02 Time: 0900  
 Received by: Helena Shelton Date: 6/26/02 Time: 0900  
 Received by: Helena Shelton Date: 6/27/02 Time: 1100

LAB USE ONLY  
 Intact  N  
 Headspace  Y /  N  
 Temp  Y /  N  
 Log-in Review  N  
 Carrier # 21018 Total BTEX 210 ppm or 250 ppm  
 REMARKS: Need 3-day Turnaround on TPH  
Also after running TPH if any sample PbO/600 combined is 100 ppm run TPH SLP on that sample. For BTEX any sample with benzene 210 ppm or Total BTEX 250 ppm run

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 4 samples - HS

Report Date: July 10, 2002 Order Number: A02062724  
 EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
 Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 10, 2002

Order ID Number: A02062724

Project: EQ-112  
 TA Job Code: Barber Ranch 3000109  
 Casualty Code: EQ-112  
 Project Location: Barber Lea County, New Mexico  
 Project Address:  
 Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 200240 | S-5 (8-10') | Soil   | 6/25/02    | 15:08      | 6/27/02       |
| 200242 | S-6 (8-10') | Soil   | 6/25/02    | 16:15      | 6/27/02       |

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: 200240 - S-5 (8-10')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | 2.32   | mg/L  |

### Sample: 200242 - S-6 (8-10')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | 1.1    | mg/L  |



Report Date: July 8, 2002 Order Number: A02062724  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 8, 2002

Order ID Number: A02062724

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description  | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------|--------|------------|------------|---------------|
| 200240 | S-5 (8-10')  | Soil   | 6/25/02    | 15:08      | 6/27/02       |
| 200241 | S-5 (30-32') | Soil   | 6/25/02    | 15:40      | 6/27/02       |
| 200242 | S-6 (8-10')  | Soil   | 6/25/02    | 16:15      | 6/27/02       |
| 200243 | S-6 (25-27') | Soil   | 6/25/02    | 16:50      | 6/27/02       |

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

| Sample - Field Code   | BTEX          |               |                    |                    |                  | Test Comments | TPH DRO   | TPH GRO   |
|-----------------------|---------------|---------------|--------------------|--------------------|------------------|---------------|-----------|-----------|
|                       | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |               | DRO (ppm) | GRO (ppm) |
| 200240 - S-5 (8-10')  | 5.74          | 34.9          | 16.5               | 9.23               | 66.4             | *             | 6900      | 2766      |
| 200241 - S-5 (30-32') | 0.0124        | 0.0991        | 0.0118             | 0.0237             | 0.147            | -             | <50       | <1        |
| 200242 - S-6 (8-10')  | 0.0823        | 0.424         | 1.12               | 2.40               | 4.03             | -             | 544       | 126       |
| 200243 - S-6 (25-27') | 0.0696        | 0.141         | 0.0184             | 0.0612             | 0.290            | -             | 59.1      | 9.47      |

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

## Summary Report

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

Report Date: July 5, 2002

Order ID Number: A02062724

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 200236 | MW-14       | Water  | 6/25/02    | 13:40      | 6/27/02       |
| 200237 | MW-15       | Water  | 6/25/02    | 14:00      | 6/27/02       |
| 200238 | MW-17       | Water  | 6/25/02    | 15:30      | 6/27/02       |
| 200239 | MW-18       | Water  | 6/25/02    | 15:45      | 6/27/02       |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 200236 - MW-14      | 0.0032        | <0.001        | <0.001             | <0.001             | 0.0032           |
| 200237 - MW-15      | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 200238 - MW-17      | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 200239 - MW-18      | 0.0014        | <0.001        | <0.001             | <0.001             | 0.0014           |

### Sample: 200236 - MW-14

| Param                | Flag | Result  | Units |
|----------------------|------|---------|-------|
| Naphthalene          |      | <0.0002 | mg/L  |
| Acenaphthylene       |      | <0.0002 | mg/L  |
| Acenaphthene         |      | <0.0002 | mg/L  |
| Fluorene             |      | <0.0002 | mg/L  |
| Phenanthrene         |      | <0.0002 | mg/L  |
| Anthracene           |      | <0.0002 | mg/L  |
| Fluoranthene         |      | <0.0002 | mg/L  |
| Pyrene               |      | <0.0002 | mg/L  |
| Benzo(a)anthracene   |      | <0.0002 | mg/L  |
| Chrysene             |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene |      | <0.0002 | mg/L  |

Continued on next page ...

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

Report Date: July 5, 2002 Order Number: A02062724

Page Number: 2 of 2

EQ-112

Barber Ranch 3000109

Barber Lea County, New Mexico

*Sample 200236 continued ...*

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

**Sample: 200238 - MW-17**

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

**Sample: 200239 - MW-18**

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

# TRACE ANALYSIS, 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: July 10, 2002

Order ID Number: A02062724

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|-------------|--------|------------|------------|---------------|
| 200240 | S-5 (8-10') | Soil   | 6/25/02    | 15:08      | 6/27/02       |
| 200242 | S-6 (8-10') | Soil   | 6/25/02    | 16:15      | 6/27/02       |

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

This report consists of a total of 4 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: 200240 - S-5 (8-10')**

Analysis: SPLP DRO    Analytical Method: Mod. 8015B    QC Batch: QC21664    Date Analyzed: 7/7/02  
Analyst: MM    Preparation Method: 1312    Prep Batch: PB20538    Date Prepared: 7/7/02

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

**Sample: 200240 - S-5 (8-10')**

Analysis: SPLP GRO    Analytical Method: 8015    QC Batch: QC21683    Date Analyzed: 7/7/02  
Analyst: CG    Preparation Method: 1312    Prep Batch: PB20557    Date Prepared: 7/7/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | 2.32   | mg/L  | 5        | 0.10 |

**Sample: 200242 - S-6 (8-10')**

Analysis: SPLP DRO    Analytical Method: Mod. 8015B    QC Batch: QC21664    Date Analyzed: 7/7/02  
Analyst: MM    Preparation Method: 1312    Prep Batch: PB20538    Date Prepared: 7/7/02

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

**Sample: 200242 - S-6 (8-10')**

Analysis: SPLP GRO    Analytical Method: 8015    QC Batch: QC21683    Date Analyzed: 7/7/02  
Analyst: CG    Preparation Method: 1312    Prep Batch: PB20557    Date Prepared: 7/7/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | 1.1    | mg/L  | 5        | 0.10 |

### Quality Control Report Method Blank

Method Blank            QCBatch:    QC21664

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

Method Blank            QCBatch:    QC21683

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

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes            QCBatch:    QC21664

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP DRO | < 50       | < 50        | mg/L  | 1    | 250                | <5.00         | 95    | 7   | 70 - 130    | 20        |

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

Laboratory Control Spikes            QCBatch:    QC21683

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP GRO | 0.982      | 0.915       | mg/L  | 1    | 1                  | <0.1          | 98    | 7   | 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:    QC21664

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP DRO |      | mg/L  | 250             | 237              | 94                    | 75 - 125                | 7/7/02        |

ICV (1)            QCBatch:    QC21664

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 232                    | 92                          | 75 - 125                      | 7/7/02           |

CCV (1)            QCBatch:    QC21683

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 0.979                  | 97                          | 85 - 115                      | 7/7/02           |

ICV (1)            QCBatch:    QC21683

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 0.914                  | 91                          | 85 - 115                      | 7/7/02           |

# TRACE ANALYSIS, INC.

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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: July 8, 2002

Order ID Number: A02062724

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|--------------|--------|------------|------------|---------------|
| 200240 | S-5 (8-10')  | Soil   | 6/25/02    | 15:08      | 6/27/02       |
| 200241 | S-5 (30-32') | Soil   | 6/25/02    | 15:40      | 6/27/02       |
| 200242 | S-6 (8-10')  | Soil   | 6/25/02    | 16:15      | 6/27/02       |
| 200243 | S-6 (25-27') | Soil   | 6/25/02    | 16:50      | 6/27/02       |

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

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Dr. Blair Leftwich, Director



## Analytical Report

**Sample: 200240 - S-5 (8-10')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21408 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | 5.74   | mg/Kg | 500      | 0.001 |
| Toluene       |      | 34.9   | mg/Kg | 500      | 0.001 |
| Ethylbenzene  |      | 16.5   | mg/Kg | 500      | 0.001 |
| M,P,O-Xylene  |      | 9.23   | mg/Kg | 500      | 0.001 |
| Total BTEX    |      | 66.4   | mg/Kg | 500      | 0.001 |
| Test Comments |      | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 1    | 2.62   | mg/Kg | 500      | 1            | 262              | 70 - 130        |
| 4-BFB     | 2    | 38.4   | mg/Kg | 500      | 1            | 3840             | 70 - 130        |

**Sample: 200240 - S-5 (8-10')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21430 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20349 Date Prepared: 6/27/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 6900   | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | 3    | 840    | mg/Kg | 1        | 150          | 560              | 70 - 130        |

**Sample: 200240 - S-5 (8-10')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21409 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 2766   | mg/Kg | 1        | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 4    | 0      | mg/Kg | 500      | 0.10         | 0                | 70 - 130        |
| 4-BFB     | 5    | 78.7   | mg/Kg | 500      | 0.10         | 78700            | 70 - 130        |

<sup>1</sup>High surrogate recovery due to peak interference.

<sup>2</sup>High surrogate recovery due to peak interference.

<sup>3</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.

<sup>4</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>5</sup>High surrogate recovery due to peak interference.

**Sample: 200241 - S-5 (30-32')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21408 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0124 | mg/Kg | 10       | 0.001 |
| Toluene      |      | 0.0991 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0118 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0237 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.147  | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.03   | mg/Kg | 10       | 1            | 103              | 70 - 130        |
| 4-BFB     |      | 0.862  | mg/Kg | 10       | 1            | 86               | 70 - 130        |

**Sample: 200241 - S-5 (30-32')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21430 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20349 Date Prepared: 6/27/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 111    | mg/Kg | 1        | 150          | 74               | 70 - 130        |

**Sample: 200241 - S-5 (30-32')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21409 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.04   | mg/Kg | 10       | 0.10         | 104              | 70 - 130        |
| 4-BFB     |      | 0.875  | mg/Kg | 10       | 0.10         | 87               | 70 - 130        |

**Sample: 200242 - S-6 (8-10')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21408 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | 0.0823 | mg/Kg | 20       | 0.001 |

Continued ...

Continued Sample: 200242 Analysis: BTEX

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Toluene      |      | 0.424  | mg/Kg | 20       | 0.001 |
| Ethylbenzene |      | 1.12   | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene |      | 2.40   | mg/Kg | 20       | 0.001 |
| Total BTEX   |      | 4.03   | mg/Kg | 20       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.905  | mg/Kg | 20       | 1            | 90               | 70 - 130        |
| 4-BFB     | 6    | 2.52   | mg/Kg | 20       | 1            | 252              | 70 - 130        |

Sample: 200242 - S-6 (8-10')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21430 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20349 Date Prepared: 6/27/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 544    | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 190    | mg/Kg | 1        | 150          | 126              | 70 - 130        |

Sample: 200242 - S-6 (8-10')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21409 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 126    | mg/Kg | 1        | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 7    | 0.694  | mg/Kg | 20       | 0.10         | 69               | 70 - 130        |
| 4-BFB     | 8    | 4.85   | mg/Kg | 20       | 0.10         | 485              | 70 - 130        |

Sample: 200243 - S-6 (25-27')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21408 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | 0.0696 | mg/Kg | 10       | 0.001 |
| Toluene |      | 0.141  | mg/Kg | 10       | 0.001 |

Continued ...

<sup>6</sup>High surrogate recovery due to peak interference.

<sup>7</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>8</sup>High surrogate recovery due to peak interference.

*Continued* Sample: 200243 Analysis: BTEX

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Ethylbenzene |      | 0.0184 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0612 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.290  | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.14   | mg/Kg | 1        | 1            | 114              | 70 - 130        |
| 4-BFB     |      | 0.859  | mg/Kg | 1        | 1            | 85               | 70 - 130        |

**Sample: 200243 - S-6 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21430 Date Analyzed: 6/27/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20349 Date Prepared: 6/27/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 59.1   | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 110    | mg/Kg | 1        | 150          | 73               | 70 - 130        |

**Sample: 200243 - S-6 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21409 Date Analyzed: 6/27/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20333 Date Prepared: 6/27/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 9.47   | mg/Kg | 1        | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1      | mg/Kg | 10       | 0.10         | 100              | 70 - 130        |
| 4-BFB     |      | 1.27   | mg/Kg | 10       | 0.10         | 127              | 70 - 130        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21408

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.10   | mg/Kg | 10       | 1            | 110              | 70 - 130        |
| 4-BFB     |      | 0.980  | mg/Kg | 10       | 1            | 98               | 70 - 130        |

Method Blank      QCBatch:    QC21409

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.07   | mg/Kg | 10       | 0.10         | 107              | 70 - 130        |
| 4-BFB     |      | 0.906  | mg/Kg | 10       | 0.10         | 91               | 70 - 130        |

Method Blank      QCBatch:    QC21430

| 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 |      | 114    | mg/Kg | 1        | 150          | 76               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC21408

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 1          | 0.951       | mg/Kg | 10   | 1                  | <0.010        | 100   | 5   | 70 - 130    | 20        |
| Benzene      | 1.02       | 0.845       | mg/Kg | 10   | 1                  | <0.010        | 102   | 18  | 70 - 130    | 20        |
| Toluene      | 1.01       | 0.822       | mg/Kg | 10   | 1                  | <0.010        | 101   | 20  | 70 - 130    | 20        |
| Ethylbenzene | 0.993      | 0.812       | mg/Kg | 10   | 1                  | <0.010        | 99    | 20  | 70 - 130    | 20        |
| M,P,O-Xylene | 2.89       | 2.36        | mg/Kg | 10   | 3                  | <0.010        | 96    | 20  | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.06       | 0.898       | mg/Kg | 10       | 1            | 106       | 89         | 70 - 130        |
| 4-BFB     | 0.999      | 0.825       | mg/Kg | 10       | 1            | 99        | 82         | 70 - 130        |

Laboratory Control Spikes      QCBatch:    QC21409

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.1        | 9.09        | mg/Kg | 10   | 1                  | <1            | 91    | 0   | 80 - 120    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.883      | 0.863       | mg/Kg | 10       | 0.10         | 88        | 86         | 70 - 130        |
| 4-BFB     | 0.944      | 0.935       | mg/Kg | 10       | 0.10         | 94        | 93         | 70 - 130        |

Laboratory Control Spikes      QCBatch:    QC21430

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 236        | 247         | mg/Kg | 1    | 250                | <50.0         | 94    | 4   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 111        | 117         | mg/Kg | 1        | 150          | 74        | 78         | 70 - 130        |

## Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes      QCBatch:    QC21408

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.872     | 0.884      | mg/Kg | 10   | 1                  | <0.010        | 87    | 1   | 70 - 130    | 20        |
| Toluene      | 0.881     | 0.891      | mg/Kg | 10   | 1                  | <0.010        | 88    | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.859     | 0.874      | mg/Kg | 10   | 1                  | 0.0107        | 84    | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.48      | 2.53       | mg/Kg | 10   | 3                  | 0.0165        | 82    | 2   | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.895     | 0.916      | mg/Kg | 10       | 1            | 89       | 91        | 70 - 130        |
| 4-BFB     | 0.843     | 0.885      | mg/Kg | 10       | 1            | 84       | 88        | 70 - 130        |

**Matrix Spikes**                      QCBatch:    QC21409

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 8.94      | 8.33       | mg/Kg | 10   | 1                  | <1            | 89    | 7   | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.793     | 0.75       | mg/Kg | 10       | 0.10         | 79       | 75        | 70 - 130        |
| 4-BFB     | 0.876     | 0.819      | mg/Kg | 10       | 0.10         | 88       | 82        | 70 - 130        |

**Matrix Spikes**                      QCBatch:    QC21430

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 217       | 221        | mg/Kg | 1    | 250                | <50           | 87    | 2   | 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 | 105       | 107        | mg/Kg | 1        | 150          | 70       | 71        | 70 - 130        |

## Quality Control Report Continuing Calibration Verification Standards

CCV (1)                      QCBatch:    QC21408

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 6/27/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 6/27/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.1                    | 100                         | 85 - 115                      | 6/27/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0979                 | 97                          | 85 - 115                      | 6/27/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.284                  | 94                          | 85 - 115                      | 6/27/02          |

CCV (2)            QCBatch:    QC21408

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.106                  | 106                         | 85 - 115                      | 6/27/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 6/27/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 6/27/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0985                 | 98                          | 85 - 115                      | 6/27/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.287                  | 95                          | 85 - 115                      | 6/27/02          |

ICV (1)            QCBatch:    QC21408

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0975                 | 97                          | 85 - 115                      | 6/27/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 6/27/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0998                 | 99                          | 85 - 115                      | 6/27/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0974                 | 97                          | 85 - 115                      | 6/27/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.28                   | 93                          | 85 - 115                      | 6/27/02          |

CCV (1)            QCBatch:    QC21409

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.939                  | 93                          | 85 - 115                      | 6/27/02          |

CCV (2)            QCBatch:    QC21409

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.909                  | 90                          | 85 - 115                      | 6/27/02          |



ICV (1)            QCBatch:    QC21409

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.944                  | 94                          | 85 - 115                      | 6/27/02          |

CCV (1)            QCBatch:    QC21430

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 231                    | 92                          | 75 - 125                      | 6/27/02          |

ICV (1)            QCBatch:    QC21430

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 244                    | 98                          | 75 - 125                      | 6/27/02          |

# Trace Analysis, Inc.

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

Company Name: Environ Service Inc Phone #: 915-570-8726  
 Address: 306 West Wall, Suite 1312, Midland, Tx 79701 Fax #: 915-684-7587  
 Contact Person: Jeffrey Kindley  
 Invoice to: Kyle Lamberson  
 (if different from above) Equipe Services  
 Project #: EQ-112  
 Project Name: Barber Ranch  
 Project Location: Lea County, New Mexico  
 Sampler Signatory: Kyle Kindley

| LAB #<br>(LAB USE ONLY) | FIELD CODE  | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |      |     | SAMPLING |      |
|-------------------------|-------------|--------------|---------------|--------|------|-----|--------|---------------------|------|-----|----------|------|
|                         |             |              |               | WATER  | SOIL | AIR | SLUDGE | HCL                 | HNO3 | ICE | DATE     | TIME |
| 200385                  | MW-15       | 1            | 1 Lit         | ✓      |      |     |        |                     |      | ✓   | 6/26/02  | 0740 |
| 86                      | S-7 (3-5)   | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/26/02  | 0915 |
| 87                      | S-7 (25-27) | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/26/02  | 1005 |
| 88                      | S-8 (13-15) | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/26/02  | 1110 |
| 89                      | S-8 (30-32) | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/26/02  | 1210 |

Relinquished by: Jeffrey Kindley Date: June 27 2002 Time: 0900  
 Relinquished by: Helen Shelton Date: 6/27/02 Time: 1830  
 Received by: Helen Shelton Date: 6/27/02 Time: 0900  
 Received by: Mell Sheen Date: 6-28-02 Time: 10:00am  
 Received at Laboratory by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # ABZ 042825

| ANALYSIS REQUEST<br>(Circle or Specify Method No.) | Turn Around Time if different from standard | Hold |
|--|---|------|
| PAH 8270 ✓   |   |      |
| TPH  |   |      |
| BTEX 8020/602 *                                    |   |      |
| MTBE 8020/602                                      |   |      |
| Total Metals Ag As Ba Cd Cr Pb Hg Se               |   |      |
| TCLP Metals Ag As Ba Cd Cr Pb Hg Se                |   |      |
| TCLP Volatiles                                     |   |      |
| TCLP Semi Volatiles                                |   |      |
| GC/MS Vol. 8240/8260/824                           |   |      |
| GC/MS Semi. Vol. 8270/825                          |   |      |
| PCB's 8080/608                                     |   |      |
| Pest. 8080/608                                     |   |      |
| BOD, TSS, PH                                       |   |      |
| TPH (Backlog) 8015M **                             |   |      |
| SOLP TPH *** 6/26/02                               |   |      |

REMARKS:  
 \*\* - Run TPH backlogs in 3 Days.  
 \*\*\* Run SOLP TPH on any sample  
 Add SOLP a RPL/600 of 2 100 ppm.  
 Run SOLP on BTEX of 2-8  
 2 10ppm and/or Total BTEX  
 2 50ppm. No SOLP BTEX per RPL

LAB USE ONLY  
 Intact: Y/N  
 Headspace: Y/N  
 Temp: 30  
 Log-in Review: MA  
 Carrier # Shelton 6111/635468848

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 5 Samples - HS

## Summary Report

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

Report Date: July 16, 2002

Order ID Number: A02062825

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description  | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------|--------|------------|------------|---------------|
| 200386 | S-7 (3-5')   | Soil   | 6/26/02    | 9:15       | 6/28/02       |
| 200387 | S-7 (25-27') | Soil   | 6/26/02    | 10:05      | 6/28/02       |

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: 200386 - S-7 (3-5')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | 0.751  | mg/L  |

### Sample: 200387 - S-7 (25-27')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.1   | mg/L  |

Report Date: July 8, 2002 Order Number: A02062825  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 8, 2002

Order ID Number: A02062825

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description  | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------|--------|------------|------------|---------------|
| 200386 | S-7 (3-5')   | Soil   | 6/26/02    | 9:15       | 6/28/02       |
| 200387 | S-7 (25-27') | Soil   | 6/26/02    | 10:05      | 6/28/02       |
| 200388 | S-8 (13-15') | Soil   | 6/26/02    | 11:10      | 6/28/02       |
| 200389 | S-8 (30-32') | Soil   | 6/26/02    | 12:10      | 6/28/02       |

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 - Field Code   | BTEX          |               |                    |                    |                  | TPH DRO   | TPH GRO   |
|-----------------------|---------------|---------------|--------------------|--------------------|------------------|-----------|-----------|
|                       | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | DRO (ppm) | GRO (ppm) |
| 200386 - S-7 (3-5')   | 1.30          | <0.050        | 2.58               | 2.79               | 6.67             | 1870      | 502       |
| 200387 - S-7 (25-27') | 0.0114        | <0.01         | 0.0328             | 0.0744             | 0.119            | 92.7      | 10.8      |
| 200388 - S-8 (13-15') | <0.020        | 0.125         | <0.020             | 0.0584             | 0.183            | <50.0     | <2.00     |
| 200389 - S-8 (30-32') | <0.010        | <0.010        | <0.010             | <0.010             | <0.010           | <50.0     | <1.00     |

# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9  
155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296  
El Paso, Texas 79932 888•588•3443  
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: July 16, 2002

Order ID Number: A02062825

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|--------------|--------|------------|------------|---------------|
| 200386 | S-7 (3-5')   | Soil   | 6/26/02    | 9:15       | 6/28/02       |
| 200387 | S-7 (25-27') | Soil   | 6/26/02    | 10:05      | 6/28/02       |

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

This report consists of a total of 4 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of Trace Analysis, Inc.



Dr. Blair Leftwich, Director

### Analytical Report

**Sample: 200386 - S-7 (3-5')**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200386 - S-7 (3-5')**

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | 0.751  | mg/L  | 1        | 0.10 |

**Sample: 200387 - S-7 (25-27')**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200387 - S-7 (25-27')**

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.1   | mg/L  | 1        | 0.10 |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21772

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

Method Blank      QCBatch:    QC21864

| 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:    QC21772

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP GRO | 0.912      | 0.886       | mg/L  | 1    | 1                  | <0.1          | 91    | 2   | 70 - 130    | 20        |

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

Laboratory Control Spikes      QCBatch:    QC21864

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP DRO | 28         | 26.2        | mg/L  | 0.10 | 250                | <5.00         | 112   | 6   | 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:    QC21772

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP GRO |      | mg/L  | 1               | 0.852            | 85                    | 85 - 115                | 7/10/02       |

ICV (1)            QCBatch:    QC21772

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 0.901                  | 90                          | 85 - 115                      | 7/10/02          |

CCV (1)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 267                    | 106                         | 75 - 125                      | 7/14/02          |

CCV (2)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 265                    | 106                         | 75 - 125                      | 7/14/02          |

ICV (1)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 279                    | 111                         | 75 - 125                      | 7/14/02          |



# TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: July 8, 2002

Order ID Number: A02062825

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|--------------|--------|------------|------------|---------------|
| 200386 | S-7 (3-5')   | Soil   | 6/26/02    | 9:15       | 6/28/02       |
| 200387 | S-7 (25-27') | Soil   | 6/26/02    | 10:05      | 6/28/02       |
| 200388 | S-8 (13-15') | Soil   | 6/26/02    | 11:10      | 6/28/02       |
| 200389 | S-8 (30-32') | Soil   | 6/26/02    | 12:10      | 6/28/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 200386 - S-7 (3-5')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 1.30   | mg/Kg | 50       | 0.001 |
| Toluene      |      | <0.050 | mg/Kg | 50       | 0.001 |
| Ethylbenzene |      | 2.58   | mg/Kg | 50       | 0.001 |
| M,P,O-Xylene |      | 2.79   | mg/Kg | 50       | 0.001 |
| Total BTEX   |      | 6.67   | mg/Kg | 50       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.744  | mg/Kg | 50       | 1            | 74               | 70 - 130        |
| 4-BFB     | 1    | 8.72   | mg/Kg | 50       | 1            | 872              | 70 - 130        |

**Sample: 200386 - S-7 (3-5')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21584 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20480 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 1870   | mg/Kg | 5        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | 2    | 232    | mg/Kg | 5        | 150          | 154              | 70 - 130        |

**Sample: 200386 - S-7 (3-5')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 502    | mg/Kg | 50       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 3    | 0.422  | mg/Kg | 50       | 0.10         | 42               | 70 - 130        |
| 4-BFB     | 4    | 20.8   | mg/Kg | 50       | 0.10         | 2080             | 70 - 130        |

<sup>1</sup>High surrogate recovery due to peak interference.

<sup>2</sup>Poor surrogate recovery due to dilution. LCS and LCSD show the process is in control.

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>4</sup>High surrogate recovery due to peak interference.

**Sample: 200387 - S-7 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | 0.0114 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.01  | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0328 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0744 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.119  | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.881  | mg/Kg | 10       | 1            | 89               | 70 - 130        |
| 4-BFB     |      | 0.903  | mg/Kg | 10       | 1            | 90               | 70 - 130        |

**Sample: 200387 - S-7 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21584 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20480 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 92.7   | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 106    | mg/Kg | 1        | 150          | 71               | 70 - 130        |

**Sample: 200387 - S-7 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 10.8   | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.798  | mg/Kg | 10       | 0.10         | 80               | 70 - 130        |
| 4-BFB     | 5    | 1.35   | mg/Kg | 10       | 0.10         | 135              | 70 - 130        |

**Sample: 200388 - S-8 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

<sup>5</sup>High surrogate recovery due to peak interference.

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene       |      | 0.125  | mg/Kg | 20       | 0.001 |
| Ethylbenzene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | 0.0584 | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | 0.183  | mg/Kg | 20       | 0.001 |
| Test Comments | 6    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 7    | 0.689  | mg/Kg | 20       | 1            | 68               | 70 - 130        |
| 4-BFB     | 8    | 0.643  | mg/Kg | 20       | 1            | 64               | 70 - 130        |

**Sample: 200388 - S-8 (13-15')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21584 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20480 Date Prepared: 7/1/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 109    | mg/Kg | 1        | 150          | 73               | 70 - 130        |

**Sample: 200388 - S-8 (13-15')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.717  | mg/Kg | 20       | 0.10         | 72               | 70 - 130        |
| 4-BFB     | 9    | 0.592  | mg/Kg | 20       | 0.10         | 59               | 70 - 130        |

**Sample: 200389 - S-8 (30-32')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | <0.010 | mg/Kg | 10       | 0.001 |

Continued ...

<sup>6</sup>Sample ran at a dilution due to hydrocarbons beyond xylene. Sample has a benzene concentration of less than 0.00473 which is the MDL.

<sup>7</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>8</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>9</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Continued Sample: 200389 Analysis: BTEX

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

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |               | 0.753  | mg/Kg | 10       | 1            | 75               | 70 - 130        |
| 4-BFB     | <sup>10</sup> | 0.676  | mg/Kg | 10       | 1            | 67               | 70 - 130        |

Sample: 200389 - S-8 (30-32')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21584 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20480 Date Prepared: 7/1/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| 1-Triacontane |      | 114    | mg/Kg | 1        | 150          | 76               | 70 - 130        |

Sample: 200389 - S-8 (30-32')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

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

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |               | 1.03   | mg/Kg | 10       | 0.10         | 103              | 70 - 130        |
| 4-BFB     | <sup>11</sup> | 0.630  | mg/Kg | 10       | 0.10         | 63               | 70 - 130        |

<sup>10</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

<sup>11</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21507

| 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   |      | < 0.01  | mg/Kg | 0.001           |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.06   | mg/Kg | 10       | 1            | 106              | 70 - 130        |
| 4-BFB     |      | 0.959  | mg/Kg | 10       | 1            | 96               | 70 - 130        |

Method Blank      QCBatch:    QC21508

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.03   | mg/Kg | 10       | 0.10         | 103              | 70 - 130        |
| 4-BFB     |      | 0.901  | mg/Kg | 10       | 0.10         | 90               | 70 - 130        |

Method Blank      QCBatch:    QC21584

| 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 |      | 112    | mg/Kg | 1        | 150          | 80               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC21507

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 1.06       | 1.04        | mg/Kg | 10   | 1                  | <0.010        | 106   | 2   | 70 - 130    | 20        |
| Benzene      | 1.03       | 1.03        | mg/Kg | 10   | 1                  | <0.010        | 103   | 0   | 70 - 130    | 20        |
| Toluene      | 1.01       | 1.01        | mg/Kg | 10   | 1                  | <0.010        | 101   | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.998      | 0.997       | mg/Kg | 10   | 1                  | <0.010        | 100   | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.91       | 2.92        | mg/Kg | 10   | 3                  | <0.010        | 97    | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.02       | 1.03        | mg/Kg | 10       | 1            | 102       | 103        | 70 - 130        |
| 4-BFB     | 0.975      | 0.983       | mg/Kg | 10       | 1            | 98        | 98         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch: QC21508

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.67       | 9.54        | mg/Kg | 10   | 1                  | <1            | 97    | 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       | 0.909      | 0.89        | mg/Kg | 10       | 0.10         | 91        | 89         | 70 - 130        |
| 4-BFB     | 0.958      | 0.935       | mg/Kg | 10       | 0.10         | 96        | 94         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch: QC21584

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 238        | 225         | mg/Kg | 1    | 250                | <50.0         | 95    | 6   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 117        | 105         | mg/Kg | 1        | 150          | 78        | 70         | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**      QCBatch: QC21507

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 1.06      | 0.971      | mg/Kg | 10   | 1                  | <0.010        | 106   | 8   | 70 - 130    | 20        |
| Toluene      | 1.01      | 0.95       | mg/Kg | 10   | 1                  | <0.010        | 101   | 6   | 70 - 130    | 20        |
| Ethylbenzene | 0.95      | 0.861      | mg/Kg | 10   | 1                  | <0.010        | 95    | 9   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.7       | 2.42       | mg/Kg | 10   | 3                  | 0.0135        | 89    | 10  | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 1.08      | 1.06       | mg/Kg | 10       | 1            | 108      | 106       | 70 - 130        |
| 4-BFB     | 0.916     | 0.839      | mg/Kg | 10       | 1            | 91       | 83        | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC21508

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.3       | 8.5        | mg/Kg | 10   | 1                  | 3             | 93    | 13  | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.945     | 0.877      | mg/Kg | 10       | 0.10         | 95       | 88        | 70 - 130        |
| 4-BFB     | 0.732     | 0.721      | mg/Kg | 10       | 0.10         | 73       | 72        | 70 - 130        |

**Matrix Spikes**      QCBatch:    QC21584

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 227       | 208        | mg/Kg | 1    | 250                | <50.0         | 91    | 9   | 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 | 119       | 101        | mg/Kg | 1        | 150          | 79       | 67        | 70 - 130        |

**Quality Control Report  
Continuing Calibration Verification Standards**

CCV (1)

QCBatch:    QC21507



| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.1                    | 100                         | 85 - 115                      | 7/1/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.291                  | 97                          | 85 - 115                      | 7/1/02           |

CCV (2)            QCBatch:    QC21507

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/1/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/1/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0987                 | 98                          | 85 - 115                      | 7/1/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.287                  | 95                          | 85 - 115                      | 7/1/02           |

ICV (1)            QCBatch:    QC21507

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.107                  | 107                         | 85 - 115                      | 7/1/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.105                  | 105                         | 85 - 115                      | 7/1/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/1/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.295                  | 98                          | 85 - 115                      | 7/1/02           |

CCV (1)            QCBatch:    QC21508

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.9522                 | 95                          | 85 - 115                      | 7/1/02           |

CCV (2)            QCBatch:    QC21508

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.961                  | 96                          | 85 - 115                      | 7/1/02           |

Report Date: July 8, 2002  
EQ-112

Order Number: A02062825  
Barber Ranch 3000109

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

ICV (1)            QCBatch:    QC21508

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.9468                 | 94                          | 85 - 115                      | 7/1/02           |

CCV (1)            QCBatch:    QC21584

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 237                    | 95                          | 75 - 125                      | 7/2/02           |

ICV (1)            QCBatch:    QC21584

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 221                    | 88                          | 75 - 125                      | 7/2/02           |

# Trace Analysis, Inc.

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

Company Name: Environ Services Inc Phone #: 915-570-8726  
 Address: 306 West Wall, Suite 1312, Midland, TX 79701 Fax #: 915-684-7587  
 Contact Person: Zaffang Kindley  
 Invoice to: Kyle Landonway  
 (if different from above) Environ Services  
 Project #: EQ-11Z Incident # 300009  
 Project Name: Barber Ranch

Project Location: Love County, New Mexico  
 Sampler Signature: Zaffang Kindley

| LAB #<br>(LAB USE ONLY) | FIELD CODE                   | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |      |      | SAMPLING |      |
|-------------------------|------------------------------|--------------|---------------|--------|------|-----|--------|---------------------|------|------|----------|------|
|                         |                              |              |               | WATER  | SOIL | AIR | SLUDGE | HCL                 | HNO3 | ICE  | DATE     | TIME |
| 80479                   | S-9 (13-15)                  | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 0945 |
| 80                      | S-9 (25-27)                  | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 1000 |
| 81                      | S-10 (8-10)                  | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 1110 |
| 82                      | S-10 (26-28) (labeled 25-27) | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 1140 |
| 83                      | S-11 (8-10)                  | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 1440 |
| 84                      | S-11 (25-27)                 | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 1510 |
| 85                      | S-12 (13-15)                 | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 1615 |
| 86                      | S-12 (30-32)                 | 1            | 407           | ✓      |      |     |        |                     | ✓    | NONE | 6/27/02  | 1650 |

Relinquished by: [Signature] Date: 6/29/02 Time: 9:00  
 Received by: [Signature] Date: 6/28/02 Time: 0900  
 Relinquished by: [Signature] Date: 6/28/02 Time: 1830  
 Received by: [Signature] Date: 6-29-02 Time: 0930

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # AD2070111

| ANALYSIS REQUEST<br>(Circle or Specify Method No.) | MTBE 8020/602 | BTEX 8020/602 | TPH | PAH 8270 | Total Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8240/8260/824 | GC/MS Semi. Vol. 8270/625 | PCB's 8080/608 | Pest. 8080/608 | BOD, TSS, PH | TPH (Residue) | Turn Around Time if different from standard | Hold |   |
|--|---------------|---------------|-----|----------|--------------------------------------|-------------------------------------|----------------|---------------------|-----|--------------------------|---------------------------|----------------|----------------|--------------|---------------|---|------|---|
|  | ✓             | ✓             | ✓   | ✓        | ✓                                    | ✓                                   | ✓              | ✓                   | ✓   | ✓                        | ✓                         | ✓              | ✓              | ✓            | ✓             | ✓   | ✓    | ✓ |

REMARKS:  
 TPH Breakdown Turnaround 10/15/02  
 3 days. Any TPH Breakdowns  
 ≥ 100ppm run additional  
 Grab samples for SLIP TPH  
 No SLIP BTEX on BL 7/3/02  
 Any Benzene ≥ 100ppm and/or  
 Toluene ≥ 50ppm run

Report Date: July 16, 2002 Order Number: A02070111  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 2  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 16, 2002

Order ID Number: A02070111

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description  | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------|--------|------------|------------|---------------|
| 200480 | S-9 (25-27)  | Soil   | 6/27/02    | 10:00      | 6/29/02       |
| 200481 | S-10 (8-10)  | Soil   | 6/27/02    | 11:10      | 6/29/02       |
| 200482 | S-10 (26-28) | Soil   | 6/27/02    | 11:40      | 6/29/02       |
| 200483 | S-11 (8-10)  | Soil   | 6/27/02    | 14:40      | 6/29/02       |
| 200484 | S-11 (25-27) | Soil   | 6/27/02    | 15:10      | 6/29/02       |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

### Sample: 200480 - S-9 (25-27)

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.5   | mg/L  |

### Sample: 200481 - S-10 (8-10)

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.5   | mg/L  |

### Sample: 200482 - S-10 (26-28)

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | 0.232  | mg/L  |

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

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: July 16, 2002 Order Number: A02070111  
EQ-112 Barber Ranch 3000109

Page Number: 2 of 2  
Barber Lea County, New Mexico

**Sample: 200483 - S-11 (8-10)**

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.5   | mg/L  |

**Sample: 200484 - S-11 (25-27)**

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.5   | mg/L  |

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

Report Date: July 8, 2002 Order Number: A02070111

Page Number: 1 of 1

EQ-112

Barber Ranch 3000109

Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 8, 2002

Order ID Number: A02070111

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description  | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------|--------|------------|------------|---------------|
| 200479 | S-9 (13-15)  | Soil   | 6/27/02    | 9:45       | 6/29/02       |
| 200480 | S-9 (25-27)  | Soil   | 6/27/02    | 10:00      | 6/29/02       |
| 200481 | S-10 (8-10)  | Soil   | 6/27/02    | 11:10      | 6/29/02       |
| 200482 | S-10 (26-28) | Soil   | 6/27/02    | 11:40      | 6/29/02       |
| 200483 | S-11 (8-10)  | Soil   | 6/27/02    | 14:40      | 6/29/02       |
| 200484 | S-11 (25-27) | Soil   | 6/27/02    | 15:10      | 6/29/02       |
| 200485 | S-12 (13-15) | Soil   | 6/27/02    | 16:15      | 6/29/02       |
| 200486 | S-12 (30-32) | Soil   | 6/27/02    | 16:50      | 6/29/02       |

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

| Sample - Field Code   | BTEX          |               |                    |                    |                  | TPH DRO   | TPH GRO   |
|-----------------------|---------------|---------------|--------------------|--------------------|------------------|-----------|-----------|
|                       | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) | DRO (ppm) | GRO (ppm) |
| 200479 - S-9 (13-15)  | <0.010        | <0.010        | 0.0114             | 0.011              | 0.0224           | <50.0     | <1.00     |
| 200480 - S-9 (25-27)  | <0.020        | <0.020        | <0.020             | <0.020             | <0.020           | 194       | 9.1       |
| 200481 - S-10 (8-10)  | <0.050        | <0.050        | 0.342              | 0.52               | 0.862            | 1550      | 171       |
| 200482 - S-10 (26-28) | 0.170         | <0.010        | 0.495              | 1.51               | 2.18             | 464       | 202       |
| 200483 - S-11 (8-10)  | <0.020        | <0.020        | 0.106              | 0.2006             | 0.307            | 789       | 69.6      |
| 200484 - S-11 (25-27) | <0.010        | <0.010        | 0.0388             | 0.07               | 0.109            | 85.5      | 17        |
| 200485 - S-12 (13-15) | <0.010        | <0.010        | <0.010             | 0.0542             | 0.0542           | <50.0     | 3         |
| 200486 - S-12 (30-32) | <0.010        | 0.0918        | 0.0102             | 0.051              | 0.153            | <50.0     | <1.00     |

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

# TRACE ANALYSIS, INC.

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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: July 16, 2002

Order ID Number: A02070111

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|--------------|--------|------------|------------|---------------|
| 200480 | S-9 (25-27)  | Soil   | 6/27/02    | 10:00      | 6/29/02       |
| 200481 | S-10 (8-10)  | Soil   | 6/27/02    | 11:10      | 6/29/02       |
| 200482 | S-10 (26-28) | Soil   | 6/27/02    | 11:40      | 6/29/02       |
| 200483 | S-11 (8-10)  | Soil   | 6/27/02    | 14:40      | 6/29/02       |
| 200484 | S-11 (25-27) | Soil   | 6/27/02    | 15:10      | 6/29/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

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: 200480 - S-9 (25-27)**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/11/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200480 - S-9 (25-27)**

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.5   | mg/L  | 5        | 0.10 |

**Sample: 200481 - S-10 (8-10)**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/11/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200481 - S-10 (8-10)**

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.5   | mg/L  | 5        | 0.10 |

**Sample: 200482 - S-10 (26-28)**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/11/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200482 - S-10 (26-28)**

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | 0.232  | mg/L  | 1        | 0.10 |



**Sample: 200483 - S-11 (8-10)**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/11/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200483 - S-11 (8-10)**

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.5   | mg/L  | 5        | 0.10 |

**Sample: 200484 - S-11 (25-27)**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/11/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200484 - S-11 (25-27)**

Analysis: SPLP GRO Analytical Method: 8015 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.5   | mg/L  | 5        | 0.10 |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21772

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

Method Blank      QCBatch:    QC21864

| 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:    QC21772

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP GRO | 0.912      | 0.886       | mg/L  | 1    | 1                  | <0.1          | 91    | 2   | 70 - 130    | 20        |

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

Laboratory Control Spikes      QCBatch:    QC21864

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP DRO | 28         | 26.2        | mg/L  | 0.10 | 250                | <5.00         | 112   | 6   | 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:    QC21772

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP GRO |      | mg/L  | 1               | 0.852            | 85                    | 85 - 115                | 7/10/02       |

ICV (1)            QCBatch:    QC21772

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP GRO |      | mg/L  | 1                     | 0.901                  | 90                          | 85 - 115                      | 7/10/02          |

CCV (1)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 267                    | 106                         | 75 - 125                      | 7/14/02          |

CCV (2)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 265                    | 106                         | 75 - 125                      | 7/14/02          |

ICV (1)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 279                    | 111                         | 75 - 125                      | 7/14/02          |

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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: July 8, 2002

Order ID Number: A02070111

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|--------------|--------|------------|------------|---------------|
| 200479 | S-9 (13-15)  | Soil   | 6/27/02    | 9:45       | 6/29/02       |
| 200480 | S-9 (25-27)  | Soil   | 6/27/02    | 10:00      | 6/29/02       |
| 200481 | S-10 (8-10)  | Soil   | 6/27/02    | 11:10      | 6/29/02       |
| 200482 | S-10 (26-28) | Soil   | 6/27/02    | 11:40      | 6/29/02       |
| 200483 | S-11 (8-10)  | Soil   | 6/27/02    | 14:40      | 6/29/02       |
| 200484 | S-11 (25-27) | Soil   | 6/27/02    | 15:10      | 6/29/02       |
| 200485 | S-12 (13-15) | Soil   | 6/27/02    | 16:15      | 6/29/02       |
| 200486 | S-12 (30-32) | Soil   | 6/27/02    | 16:50      | 6/29/02       |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

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Dr. Blair Leftwich, Director

### Analytical Report

**Sample: 200479 - S-9 (13-15)**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0114 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.011  | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.0224 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.822  | mg/Kg | 10       | 1            | 82               | 70 - 130        |
| 4-BFB     |      | 0.792  | mg/Kg | 10       | 1            | 80               | 70 - 130        |

**Sample: 200479 - S-9 (13-15)**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 106    | mg/Kg | 1        | 150          | 71               | 70 - 130        |

**Sample: 200479 - S-9 (13-15)**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

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

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | <sup>1</sup> | 0.68   | mg/Kg | 10       | 0.10         | 68               | 70 - 130        |
| 4-BFB     |              | 0.723  | mg/Kg | 10       | 0.10         | 72               | 70 - 130        |

<sup>1</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

**Sample: 200480 - S-9 (25-27)**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Toluene       |      | <0.020 | mg/Kg | 20       | 0.001 |
| Ethylbenzene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | <0.020 | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | <0.020 | mg/Kg | 20       | 0.001 |
| Test Comments | 2    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.834  | mg/Kg | 20       | 1            | 83               | 70 - 130        |
| 4-BFB     |      | 0.857  | mg/Kg | 20       | 1            | 86               | 70 - 130        |

**Sample: 200480 - S-9 (25-27)**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 194    | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 121    | mg/Kg | 1        | 150          | 81               | 70 - 130        |

**Sample: 200480 - S-9 (25-27)**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 9.1    | mg/Kg | 20       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 3    | 0.63   | mg/Kg | 20       | 0.10         | 63               | 70 - 130        |
| 4-BFB     |      | 1.08   | mg/Kg | 20       | 0.10         | 108              | 70 - 130        |

**Sample: 200481 - S-10 (8-10)**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

<sup>2</sup>Sample diluted at a dilution due to hydrocarbons beyond xylene. Sample has a benzene concentration of less than 0.00473 which is the MDL.

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Benzene       |      | <0.050 | mg/Kg | 50       | 0.001 |
| Toluene       |      | <0.050 | mg/Kg | 50       | 0.001 |
| Ethylbenzene  |      | 0.342  | mg/Kg | 50       | 0.001 |
| M,P,O-Xylene  |      | 0.52   | mg/Kg | 50       | 0.001 |
| Total BTEX    |      | 0.862  | mg/Kg | 50       | 0.001 |
| Test Comments | 4    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.934  | mg/Kg | 50       | 1            | 93               | 70 - 130        |
| 4-BFB     | 5    | 4.19   | mg/Kg | 50       | 1            | 419              | 70 - 130        |

**Sample: 200481 - S-10 (8-10)**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 1550   | mg/Kg | 5        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | 6    | 236    | mg/Kg | 5        | 150          | 157              | 70 - 130        |

**Sample: 200481 - S-10 (8-10)**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 171    | mg/Kg | 50       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.956  | mg/Kg | 50       | 0.10         | 96               | 70 - 130        |
| 4-BFB     | 7    | 8.19   | mg/Kg | 50       | 0.10         | 819              | 70 - 130        |

**Sample: 200482 - S-10 (26-28)**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | 0.170  | mg/Kg | 10       | 0.001 |

Continued ...

<sup>4</sup>Sample ran at a dilution due to hydrocarbons beyond xylene. Sample has a benzene concentration of less than 0.1183 which is the MDL.

<sup>5</sup>High surrogate recovery due to peak interference.

<sup>6</sup>Poor surrogate recovery due to dilution. LCS and LCSD show the process is in control.

<sup>7</sup>High surrogate recovery due to peak interference.

Continued Sample: 200482 Analysis: BTEX

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.495  | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 1.51   | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 2.18   | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.927  | mg/Kg | 10       | 1            | 93               | 70 - 130        |
| 4-BFB     | 8    | 5.04   | mg/Kg | 10       | 1            | 504              | 70 - 130        |

Sample: 200482 - S-10 (26-28)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 464    | mg/Kg | 1        | 50  |

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

Sample: 200482 - S-10 (26-28)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 202    | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 9    | 0.614  | mg/Kg | 10       | 0.10         | 62               | 70 - 130        |
| 4-BFB     | 10   | 21.5   | mg/Kg | 10       | 0.10         | 2150             | 70 - 130        |

Sample: 200483 - S-11 (8-10)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

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

Continued ...

<sup>8</sup>High surrogate recovery due to peak interference.

<sup>9</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>10</sup>High surrogate recovery due to peak interference.



Continued Sample: 200483 Analysis: BTEX

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Ethylbenzene  |      | 0.106  | mg/Kg | 20       | 0.001 |
| M,P,O-Xylene  |      | 0.2006 | mg/Kg | 20       | 0.001 |
| Total BTEX    |      | 0.307  | mg/Kg | 20       | 0.001 |
| Test Comments | 11   | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.837  | mg/Kg | 20       | 1            | 84               | 70 - 130        |
| 4-BFB     | 12   | 1.97   | mg/Kg | 20       | 1            | 197              | 70 - 130        |

Sample: 200483 - S-11 (8-10)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 789    | mg/Kg | 1        | 50  |

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

Sample: 200483 - S-11 (8-10)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 69.6   | mg/Kg | 20       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.996  | mg/Kg | 20       | 0.10         | 100              | 70 - 130        |
| 4-BFB     | 13   | 3.60   | mg/Kg | 20       | 0.10         | 360              | 70 - 130        |

Sample: 200484 - S-11 (25-27)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

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

Continued ...

<sup>11</sup>Sample ran at a dilution due to hydrocarbons beyond xylene. Sample has a benzene concentration of less than 0.00473 which is the MDL.

<sup>12</sup>High surrogate recovery due to peak interference.

<sup>13</sup>High surrogate recovery due to peak interference.

Continued Sample: 200484 Analysis: BTEX

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Ethylbenzene |      | 0.0388 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.07   | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.109  | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.869  | mg/Kg | 10       | 1            | 87               | 70 - 130        |
| 4-BFB     |      | 1.10   | mg/Kg | 10       | 1            | 110              | 70 - 130        |

Sample: 200484 - S-11 (25-27)

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 85.5   | mg/Kg | 1        | 50  |

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

Sample: 200484 - S-11 (25-27)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 17     | mg/Kg | 10       | 0.10 |

| Surrogate | Flag          | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|---------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |               | 0.883  | mg/Kg | 10       | 0.10         | 88               | 70 - 130        |
| 4-BFB     | <sup>14</sup> | 1.50   | mg/Kg | 10       | 0.10         | 150              | 70 - 130        |

Sample: 200485 - S-12 (13-15)

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | <0.010 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0542 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.0542 | mg/Kg | 10       | 0.001 |

<sup>14</sup>High surrogate recovery due to peak interference.

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.911  | mg/Kg | 10       | 1            | 91               | 70 - 130        |
| 4-BFB     |      | 0.767  | mg/Kg | 10       | 1            | 76               | 70 - 130        |

**Sample: 200485 - S-12 (13-15)**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 108    | mg/Kg | 1        | 150          | 72               | 70 - 130        |

**Sample: 200485 - S-12 (13-15)**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 3      | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.18   | mg/Kg | 10       | 0.10         | 118              | 70 - 130        |
| 4-BFB     |      | 0.833  | mg/Kg | 10       | 0.10         | 83               | 70 - 130        |

**Sample: 200486 - S-12 (30-32)**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21507 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | 0.0918 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0102 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.051  | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.153  | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.990  | mg/Kg | 10       | 1            | 99               | 70 - 130        |
| 4-BFB     |      | 0.846  | mg/Kg | 10       | 1            | 85               | 70 - 130        |

**Sample: 200486 - S-12 (30-32)**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Date Analyzed: 7/2/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Date Prepared: 7/2/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 107    | mg/Kg | 1        | 150          | 71               | 70 - 130        |

**Sample: 200486 - S-12 (30-32)**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21508 Date Analyzed: 7/1/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20408 Date Prepared: 7/1/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.26   | mg/Kg | 10       | 0.10         | 126              | 70 - 130        |
| L-BFB     |      | 0.785  | mg/Kg | 10       | 0.10         | 78               | 70 - 130        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21507

| 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   |      | < 0.01  | mg/Kg | 0.001           |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.06   | mg/Kg | 10       | 1            | 106              | 70 - 130        |
| 4-BFB     |      | 0.959  | mg/Kg | 10       | 1            | 96               | 70 - 130        |

Method Blank      QCBatch:    QC21508

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.03   | mg/Kg | 10       | 0.10         | 103              | 70 - 130        |
| 4-BFB     |      | 0.901  | mg/Kg | 10       | 0.10         | 90               | 70 - 130        |

Method Blank      QCBatch:    QC21586

| 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 |      | 118    | mg/Kg | 1        | 150          | 73               | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC21507

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 1.06       | 1.04        | mg/Kg | 10   | 1                  | <0.010        | 106   | 2   | 70 - 130    | 20        |
| Benzene      | 1.03       | 1.03        | mg/Kg | 10   | 1                  | <0.010        | 103   | 0   | 70 - 130    | 20        |
| Toluene      | 1.01       | 1.01        | mg/Kg | 10   | 1                  | <0.010        | 101   | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.998      | 0.997       | mg/Kg | 10   | 1                  | <0.010        | 100   | 0   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.91       | 2.92        | mg/Kg | 10   | 3                  | <0.010        | 97    | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.02       | 1.03        | mg/Kg | 10       | 1            | 102       | 103        | 70 - 130        |
| 4-BFB     | 0.975      | 0.983       | mg/Kg | 10       | 1            | 98        | 98         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC21508

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.67       | 9.54        | mg/Kg | 10   | 1                  | <1            | 97    | 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       | 0.909      | 0.89        | mg/Kg | 10       | 0.10         | 91        | 89         | 70 - 130        |
| 4-BFB     | 0.958      | 0.935       | mg/Kg | 10       | 0.10         | 96        | 94         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC21586

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 240        | 225         | mg/Kg | 1    | 250                | <50.0         | 96    | 6   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 124        | 115         | mg/Kg | 1        | 150          | 83        | 77         | 70 - 130        |

**Quality Control Report  
Matrix Spikes and Duplicate Spikes**

**Matrix Spikes**      QCBatch:    QC21507

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 1.06      | 0.971      | mg/Kg | 10   | 1                  | <0.010        | 106   | 8   | 70 - 130    | 20        |
| Toluene      | 1.01      | 0.95       | mg/Kg | 10   | 1                  | <0.010        | 101   | 6   | 70 - 130    | 20        |
| Ethylbenzene | 0.95      | 0.861      | mg/Kg | 10   | 1                  | <0.010        | 95    | 9   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.7       | 2.42       | mg/Kg | 10   | 3                  | 0.0135        | 89    | 10  | 70 - 130    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 1.08      | 1.06       | mg/Kg | 10       | 1            | 108      | 106       | 70 - 130        |
| 4-BFB     | 0.916     | 0.839      | mg/Kg | 10       | 1            | 91       | 83        | 70 - 130        |

**Matrix Spikes**                      QCBatch:    QC21508

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.3       | 8.5        | mg/Kg | 10   | 1                  | 3             | 93    | 13  | 80 - 120    | 20        |

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

| Surrogate | MS Result | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.945     | 0.877      | mg/Kg | 10       | 0.10         | 95       | 88        | 70 - 130        |
| 4-BFB     | 0.732     | 0.721      | mg/Kg | 10       | 0.10         | 73       | 72        | 70 - 130        |

**Matrix Spikes**                      QCBatch:    QC21586

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 195       | 198        | mg/Kg | 1    | 250                | <50.0         | 78    | 2   | 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 | 98.2      | 101        | mg/Kg | 1        | 150          | 65       | 67        | 70 - 130        |

**Quality Control Report**  
**Continuing Calibration Verification Standards**

CCV (1)                      QCBatch:    QC21507

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.1                    | 100                         | 85 - 115                      | 7/1/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.291                  | 97                          | 85 - 115                      | 7/1/02           |

CCV (2)            QCBatch:    QC21507

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/1/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/1/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0987                 | 98                          | 85 - 115                      | 7/1/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.287                  | 95                          | 85 - 115                      | 7/1/02           |

ICV (1)            QCBatch:    QC21507

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.107                  | 107                         | 85 - 115                      | 7/1/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.105                  | 105                         | 85 - 115                      | 7/1/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/1/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/1/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.295                  | 98                          | 85 - 115                      | 7/1/02           |

CCV (1)            QCBatch:    QC21508

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.9522                 | 95                          | 85 - 115                      | 7/1/02           |

CCV (2)            QCBatch:    QC21508

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.961                  | 96                          | 85 - 115                      | 7/1/02           |



ICV (1)            QCBatch:    QC21508

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.9468                 | 94                          | 85 - 115                      | 7/1/02           |

CCV (1)            QCBatch:    QC21586

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 218                    | 87                          | 75 - 125                      | 7/2/02           |

CCV (2)            QCBatch:    QC21586

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 225                    | 90                          | 75 - 125                      | 7/2/02           |

CCV (3)            QCBatch:    QC21586

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 232                    | 92                          | 75 - 125                      | 7/2/02           |

ICV (1)            QCBatch:    QC21586

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 214                    | 86                          | 75 - 125                      | 7/2/02           |

# TraceAnalysis, Inc.

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

Company Name: Environ Services, Inc. Phone #: 915-570-8726  
 Address: 3016 West Valley, Suite 1312, Midland, TX 79701 Fax #: 915-684-7587  
 Contact Person: Jeffrey Kinley  
 Invoice to: Kyle Henderson  
 (If different from above) Environ Services  
 Project #: EQ-112 Project Name: Bushen Ranch  
 Project Location: Lico County, New Mexico Sampler Signature: Jeffrey Kinley

| LAB #<br>(LAB USE ONLY) | FIELD CODE     | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |      |     | SAMPLING |      |
|-------------------------|----------------|--------------|---------------|--------|------|-----|--------|---------------------|------|-----|----------|------|
|                         |                |              |               | WATER  | SOIL | AIR | SLUDGE | HCL                 | HNO3 | ICE | DATE     | TIME |
| 60610                   | S-13 (13-15')  | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/25/02  | 945  |
| 611                     | S-13 (25-27')  | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/25/02  | 1000 |
| 612                     | S-14 (8-10')   | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/25/02  | 1103 |
| 613                     | S-14 (25-27')  | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/25/02  | 1135 |
| 614                     | MW-19 (13-15') | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/25/02  | 1420 |
| 615                     | MW-19 (25-27') | 1            | 4oz           | ✓      |      |     |        |                     |      | ✓   | 6/25/02  | 1450 |

Relinquished by: Jeffrey Kinley Date: 7/1/02 Time: 11:15 AM  
 Received by: William Shelton Date: 7/01/02 Time: 11:15 AM  
 Relinquished by: William Shelton Date: 7/01/02 Time: 1830  
 Received by: William Shelton Date: 7/01/02 Time: 10:00

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. to samples - 145

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # A02070207

| MTBE 8020/602 | TPH | PAH 8270 | Total Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | RCl | GC/MS Vol. 8240/8260/624 | GC/MS Semi. Vol. 8270/625 | PCB's 8080/608 | Pest. 8080/608 | BOD, TSS, PH | TF (Dissolved) SLSM | TF (Total) SLSM | Turn Around Time if different from standard | Hold |
|---------------|-----|----------|--------------------------------------|-------------------------------------|----------------|-----|--------------------------|---------------------------|----------------|----------------|--------------|---------------------|-----------------|---|------|
| ✓             | ✓   |          | ✓                                    | ✓                                   | ✓              |     |                          |                           |                |                |              | ✓                   | ✓               |   |      |
| ✓             | ✓   |          | ✓                                    | ✓                                   | ✓              |     |                          |                           |                |                |              | ✓                   | ✓               |   |      |
| ✓             | ✓   |          | ✓                                    | ✓                                   | ✓              |     |                          |                           |                |                |              | ✓                   | ✓               |   |      |
| ✓             | ✓   |          | ✓                                    | ✓                                   | ✓              |     |                          |                           |                |                |              | ✓                   | ✓               |   |      |
| ✓             | ✓   |          | ✓                                    | ✓                                   | ✓              |     |                          |                           |                |                |              | ✓                   | ✓               |   |      |
| ✓             | ✓   |          | ✓                                    | ✓                                   | ✓              |     |                          |                           |                |                |              | ✓                   | ✓               |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |
|               |     |          |                                      |                                     |                |     |                          |                           |                |                |              |                     |                 |   |      |

LAB USE ONLY  
 Intact: Y/N  
 Headspace: Y/N  
 Temp: 30  
 Log-in Review: MS

REMARKS:  
 3 Day Turn around on TPH (MW 602)  
 Any sample with compound like this  
 of 2 litruggin can be added in  
 had sample. Any sample with 7/1/02  
 Sample - 10 ppm and state of TX  
 Sample - 10 ppm and state of TX

Carrier # Jeffrey Kinley Date: 7/1/02

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: July 16, 2002  
EQ-112

Order Number: A02070207  
Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 16, 2002

Order ID Number: A02070207

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description   | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------|--------|------------|------------|---------------|
| 200610 | 5-13 (13-15') | Soil   | 6/28/02    | 9:45       | 7/2/02        |
| 200612 | S-14 (8-10')  | Soil   | 6/28/02    | 11:03      | 7/2/02        |

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: 200610 - 5-13 (13-15')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.5   | mg/L  |

### Sample: 200612 - S-14 (8-10')

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| SPLP DRO |      | <5.00  | mg/L  |
| SPLP GRO |      | <0.5   | mg/L  |

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

Report Date: July 11, 2002 Order Number: A02070207  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Barber Lea County, New Mexico

## Summary Report

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

Report Date: July 11, 2002

Order ID Number: A02070207

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description    | Matrix | Date Taken | Time Taken | Date Received |
|--------|----------------|--------|------------|------------|---------------|
| 200610 | 5-13 (13-15')  | Soil   | 6/28/02    | 9:45       | 7/2/02        |
| 200611 | S-13 (25-27')  | Soil   | 6/28/02    | 10:00      | 7/2/02        |
| 200612 | S-14 (8-10')   | Soil   | 6/28/02    | 11:03      | 7/2/02        |
| 200613 | S-14 25-27')   | Soil   | 6/28/02    | 11:35      | 7/2/02        |
| 200614 | MW-19 (13-15') | Soil   | 6/28/02    | 14:20      | 7/2/02        |
| 200615 | MW-19 (25-27') | Soil   | 6/28/02    | 14:50      | 7/2/02        |

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

| Sample - Field Code     | BTEX             |                  |                       |                       |                     | TPH DRO<br>DRO<br>(ppm) | TPH GRO<br>GRO<br>(ppm) |
|-------------------------|------------------|------------------|-----------------------|-----------------------|---------------------|-------------------------|-------------------------|
|                         | Benzene<br>(ppm) | Toluene<br>(ppm) | Ethylbenzene<br>(ppm) | M,P,O-Xylene<br>(ppm) | Total BTEX<br>(ppm) |                         |                         |
| 200610 - 5-13 (13-15')  | <0.010           | <0.010           | 0.549                 | 0.8                   | 1.35                | 104                     | 123                     |
| 200611 - S-13 (25-27')  | <0.010           | <0.010           | 0.014                 | 0.0135                | 0.0275              | <50.0                   | 6.67                    |
| 200612 - S-14 (8-10')   | <0.050           | <0.050           | 3.89                  | 5.16                  | 9.05                | 1100                    | 447                     |
| 200613 - S-14 25-27')   | <0.010           | <0.010           | 0.0896                | 0.147                 | 0.237               | <50.0                   | 42.4                    |
| 200614 - MW-19 (13-15') | <0.010           | <0.010           | 0.0193                | 0.0536                | 0.0729              | <50.0                   | 7.72                    |
| 200615 - MW-19 (25-27') | <0.010           | <0.010           | <0.010                | <0.010                | <0.010              | <50.0                   | <1.00                   |

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

# TRACE ANALYSIS, INC.

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FAX 806•794•1298  
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: July 16, 2002

Order ID Number: A02070207

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
|--------|---------------|--------|------------|------------|---------------|
| 200610 | 5-13 (13-15') | Soil   | 6/28/02    | 9:45       | 7/2/02        |
| 200612 | S-14 (8-10')  | Soil   | 6/28/02    | 11:03      | 7/2/02        |

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

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: 200610 - 5-13 (13-15')**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/11/02

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

**Sample: 200610 - 5-13 (13-15')**

Analysis: SPLP GRO Analytical Method: Mod. 602 QC Batch: QC21802 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20649 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.5   | mg/L  | 5        | 0.10 |

**Sample: 200612 - S-14 (8-10')**

Analysis: SPLP DRO Analytical Method: Mod. 8015B QC Batch: QC21864 Date Analyzed: 7/14/02  
Analyst: MM Preparation Method: 1312 Prep Batch: PB20694 Date Prepared: 7/11/02

| Param    | Flag | Result | Units | Dilution | RDL |
|----------|------|--------|-------|----------|-----|
| SPLP DRO |      | <5.00  | mg/L  | 0.10     | 50  |

**Sample: 200612 - S-14 (8-10')**

Analysis: SPLP GRO Analytical Method: Mod. 602 QC Batch: QC21772 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 1312 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param    | Flag | Result | Units | Dilution | RDL  |
|----------|------|--------|-------|----------|------|
| SPLP GRO |      | <0.5   | mg/L  | 5        | 0.10 |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21772

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

Method Blank      QCBatch:    QC21802

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

Method Blank      QCBatch:    QC21864

| 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:    QC21772

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP GRO | 0.912      | 0.886       | mg/L  | 1    | 1                  | <0.1          | 91    | 2   | 70 - 130    | 20        |

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

Laboratory Control Spikes      QCBatch:    QC21802

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP GRO | 0.924      | 0.872       | mg/L  | 1    | 1                  | <0.1          | 92    | 5   | 70 - 130    | 20        |

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

Laboratory Control Spikes      QCBatch:    QC21864

| Param    | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|----------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| SPLP DRO | 28         | 26.2        | mg/L  | 0.10 | 250                | <5.00         | 112   | 6   | 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:    QC21772

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP GRO |      | mg/L  | 1               | 0.852            | 85                    | 85 - 115                | 7/10/02       |

ICV (1)            QCBatch:    QC21772

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP GRO |      | mg/L  | 1               | 0.901            | 90                    | 85 - 115                | 7/10/02       |

CCV (1)            QCBatch:    QC21802

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP GRO |      | mg/L  | 1               | 0.923            | 92                    | 85 - 115                | 7/10/02       |

ICV (1)            QCBatch:    QC21802

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP GRO |      | mg/L  | 1               | 0.852            | 85                    | 85 - 115                | 7/10/02       |

CCV (1)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| SPLP DRO |      | mg/L  | 250             | 267              | 106                   | 75 - 125                | 7/14/02       |



CCV (2)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 265                    | 106                         | 75 - 125                      | 7/14/02          |

ICV (1)            QCBatch:    QC21864

| Param    | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| SPLP DRO |      | mg/L  | 250                   | 279                    | 111                         | 75 - 125                      | 7/14/02          |

# TRACE ANALYSIS, INC.

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

## Analytical and Quality Control Report

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

Report Date: July 11, 2002

Order ID Number: A02070207

Project: EQ-112  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Barber 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 |
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| 200610 | 5-13 (13-15')  | Soil   | 6/28/02    | 9:45       | 7/2/02        |
| 200611 | S-13 (25-27')  | Soil   | 6/28/02    | 10:00      | 7/2/02        |
| 200612 | S-14 (8-10')   | Soil   | 6/28/02    | 11:03      | 7/2/02        |
| 200613 | S-14 25-27')   | Soil   | 6/28/02    | 11:35      | 7/2/02        |
| 200614 | MW-19 (13-15') | Soil   | 6/28/02    | 14:20      | 7/2/02        |
| 200615 | MW-19 (25-27') | Soil   | 6/28/02    | 14:50      | 7/2/02        |

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The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 200610 - 5-13 (13-15')**

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC21576      Date Analyzed: 7/2/02  
Analyst: DN      Preparation Method: S 5035      Prep Batch: PB20472      Date Prepared: 7/2/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.549  | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.8    | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 1.35   | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.719  | mg/Kg | 10       | 1            | 72               | 70 - 130        |
| 4-BFB     | 1    | 3.93   | mg/Kg | 10       | 1            | 393              | 70 - 130        |

**Sample: 200610 - 5-13 (13-15')**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC21574      Date Analyzed: 7/3/02  
Analyst: MM      Preparation Method: 3550 B      Prep Batch: PB20471      Date Prepared: 7/3/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 104    | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 105    | mg/Kg | 1        | 150          | 72               | 70 - 130        |

**Sample: 200610 - 5-13 (13-15')**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC21575      Date Analyzed: 7/2/02  
Analyst: DN      Preparation Method: 5035      Prep Batch: PB20472      Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 123    | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 2    | 0.558  | mg/Kg | 10       | 0.10         | 56               | 70 - 130        |
| 4-BFB     | 3    | 2.78   | mg/Kg | 10       | 0.10         | 278              | 70 - 130        |

<sup>1</sup>High surrogate recovery due to peak interference.

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

<sup>3</sup>High surrogate recovery due to peak interference.

**Sample: 200611 - S-13 (25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21576 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.014  | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0135 | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.0275 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.768  | mg/Kg | 10       | 1            | 77               | 70 - 130        |
| 4-BFB     |      | 0.749  | mg/Kg | 10       | 1            | 75               | 70 - 130        |

**Sample: 200611 - S-13 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21574 Date Analyzed: 7/3/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20471 Date Prepared: 7/3/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 110    | mg/Kg | 1        | 150          | 73               | 70 - 130        |

**Sample: 200611 - S-13 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21575 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 6.67   | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.940  | mg/Kg | 10       | 0.10         | 94               | 70 - 130        |
| 4-BFB     |      | 0.869  | mg/Kg | 10       | 0.10         | 87               | 70 - 130        |

**Sample: 200612 - S-14 (8-10')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21784 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: S 5035 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | <0.050 | mg/Kg | 50       | 0.001 |

Continued ...

*Continued* Sample: 200612 Analysis: BTEX

| Param         | Flag | Result | Units | Dilution | RDL   |
|---------------|------|--------|-------|----------|-------|
| Toluene       |      | <0.050 | mg/Kg | 50       | 0.001 |
| Ethylbenzene  |      | 3.89   | mg/Kg | 50       | 0.001 |
| M,P,O-Xylene  |      | 5.16   | mg/Kg | 50       | 0.001 |
| Total BTEX    |      | 9.05   | mg/Kg | 50       | 0.001 |
| Test Comments | 4    | *      | mg/Kg | 1        |       |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.871  | mg/Kg | 50       | 1            | 87               | 70 - 130        |
| 4-BFB     | 5    | 9.81   | mg/Kg | 50       | 1            | 981              | 70 - 130        |

**Sample: 200612 - S-14 (8-10')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21574 Date Analyzed: 7/3/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20471 Date Prepared: 7/3/02

| Param | Flag | Result | Units | Dilution | RDL |
|-------|------|--------|-------|----------|-----|
| DRO   |      | 1100   | mg/Kg | 1        | 50  |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 132    | mg/Kg | 1        | 150          | 88               | 70 - 130        |

**Sample: 200612 - S-14 (8-10')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21773 Date Analyzed: 7/10/02  
Analyst: CG Preparation Method: 5035 Prep Batch: PB20626 Date Prepared: 7/10/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 447    | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       | 6    | 0.493  | mg/Kg | 10       | 0.10         | 49               | 70 - 130        |
| 4-BFB     | 7    | 24.3   | mg/Kg | 10       | 0.10         | 2430             | 70 - 130        |

**Sample: 200613 - S-14 25-27')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21576 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

| Param   | Flag | Result | Units | Dilution | RDL   |
|---------|------|--------|-------|----------|-------|
| Benzene |      | <0.010 | mg/Kg | 10       | 0.001 |

*Continued ...*

<sup>4</sup>Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.01183 which is the MDL.

<sup>5</sup>High surrogate recovery due to peak interference.

<sup>6</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>7</sup>High surrogate recovery due to peak interference.

*Continued* Sample: 200613 Analysis: BTEX

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0896 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.147  | mg/Kg | 10       | 0.001 |
| Total BTEX   |      | 0.237  | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.808  | mg/Kg | 10       | 1            | 81               | 70 - 130        |
| 4-BFB     |      | 1.14   | mg/Kg | 10       | 1            | 114              | 70 - 130        |

**Sample: 200613 - S-14 25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21574 Date Analyzed: 7/3/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20471 Date Prepared: 7/3/02

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

| Surrogate   | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Triacontane |      | 107    | mg/Kg | 1        | 150          | 71               | 70 - 130        |

**Sample: 200613 - S-14 25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21575 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 42.4   | mg/Kg | 10       | 0.10 |

| Surrogate | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |              | 0.823  | mg/Kg | 10       | 0.10         | 82               | 70 - 130        |
| 4-BFB     | <sup>8</sup> | 1.41   | mg/Kg | 10       | 0.10         | 141              | 70 - 130        |

**Sample: 200614 - MW-19 (13-15')**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21576 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Toluene      |      | <0.010 | mg/Kg | 10       | 0.001 |
| Ethylbenzene |      | 0.0193 | mg/Kg | 10       | 0.001 |
| M,P,O-Xylene |      | 0.0536 | mg/Kg | 10       | 0.001 |

*Continued ...*

<sup>8</sup>High surrogate recovery due to peak interference.

Continued Sample: 200614 Analysis: BTEX

| Param      | Flag | Result | Units | Dilution | RDL   |
|------------|------|--------|-------|----------|-------|
| Total BTEX |      | 0.0729 | mg/Kg | 10       | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.900  | mg/Kg | 10       | 1            | 90               | 70 - 130        |
| 4-BFB     |      | 0.757  | mg/Kg | 10       | 1            | 76               | 70 - 130        |

Sample: 200614 - MW-19 (13-15')

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21574 Date Analyzed: 7/3/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20471 Date Prepared: 7/3/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 107    | mg/Kg | 1        | 150          | 71               | 70 - 130        |

Sample: 200614 - MW-19 (13-15')

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21575 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

| Param | Flag | Result | Units | Dilution | RDL  |
|-------|------|--------|-------|----------|------|
| GRO   |      | 7.72   | mg/Kg | 10       | 0.10 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.758  | mg/Kg | 10       | 0.10         | 76               | 70 - 130        |
| 4-BFB     |      | 1.07   | mg/Kg | 10       | 0.10         | 107              | 70 - 130        |

Sample: 200615 - MW-19 (25-27')

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21576 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: S 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.796  | mg/Kg | 10       | 1            | 80               | 70 - 130        |
| 4-BFB     |      | 0.737  | mg/Kg | 10       | 1            | 74               | 70 - 130        |

**Sample: 200615 - MW-19 (25-27')**

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21574 Date Analyzed: 7/3/02  
Analyst: MM Preparation Method: 3550 B Prep Batch: PB20471 Date Prepared: 7/3/02

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

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 110    | mg/Kg | 1        | 150          | 73               | 70 - 130        |

**Sample: 200615 - MW-19 (25-27')**

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC21575 Date Analyzed: 7/2/02  
Analyst: DN Preparation Method: 5035 Prep Batch: PB20472 Date Prepared: 7/2/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.936  | mg/Kg | 10       | 0.10         | 94               | 70 - 130        |
| 4-BFB     |      | 0.750  | mg/Kg | 10       | 0.10         | 75               | 70 - 130        |



### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21574

| 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 |      | 111    | mg/Kg | 1        | 150          | 74               | 70 - 130        |

Method Blank      QCBatch:    QC21575

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.06   | mg/Kg | 10       | 0.10         | 106              | 70 - 130        |
| 4-BFB     |      | 0.920  | mg/Kg | 10       | 0.10         | 92               | 70 - 130        |

Method Blank      QCBatch:    QC21576

| 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   |      | < 0.01  | mg/Kg | 0.001           |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 1.05   | mg/Kg | 10       | 1            | 105              | 70 - 130        |
| 4-BFB     |      | 0.931  | mg/Kg | 10       | 1            | 93               | 70 - 130        |

Method Blank      QCBatch:    QC21773

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.932  | mg/Kg | 10       | 0.10         | 93               | 70 - 130        |
| 4-BFB     | 9    | 0.634  | mg/Kg | 10       | 0.10         | 63               | 70 - 130        |

Method Blank            QCBatch:    QC21784

| 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       |      | 0.926  | mg/Kg | 10       | 1            | 92               | 70 - 130        |
| 4-BFB     | 10   | 0.685  | mg/Kg | 10       | 1            | 68               | 70 - 130        |

## Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes            QCBatch:    QC21574

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 213        | 209         | mg/Kg | 1    | 250                | <50.0         | 85    | 2   | 70 - 130    | 20        |

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

| Surrogate     | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|---------------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| n-Triacontane | 108        | 107         | mg/Kg | 1        | 150          | 72        | 71         | 70 - 130        |

Laboratory Control Spikes            QCBatch:    QC21575

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.36       | 9.75        | mg/Kg | 10   | 1                  | <1            | 94    | 0   | 80 - 120    | 20        |

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

<sup>9</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

<sup>10</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.89       | 0.9         | mg/Kg | 10       | 0.10         | 89        | 90         | 70 - 130        |
| 4-BFB     | 0.895      | 0.947       | mg/Kg | 10       | 0.10         | 89        | 95         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC21576

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.999      | 0.964       | mg/Kg | 10   | 1                  | <0.010        | 99    | 4   | 70 - 130    | 20        |
| Benzene      | 1.04       | 1.01        | mg/Kg | 10   | 1                  | <0.010        | 104   | 3   | 70 - 130    | 20        |
| Toluene      | 1.02       | 0.989       | mg/Kg | 10   | 1                  | <0.010        | 102   | 3   | 70 - 130    | 20        |
| Ethylbenzene | 1.02       | 0.986       | mg/Kg | 10   | 1                  | <0.010        | 102   | 3   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.94       | 2.86        | mg/Kg | 10   | 3                  | <0.010        | 98    | 3   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.03       | 1.02        | mg/Kg | 10       | 1            | 103       | 102        | 70 - 130        |
| 4-BFB     | 0.965      | 0.959       | mg/Kg | 10       | 1            | 97        | 96         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC21773

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 9.12       | 8.86        | mg/Kg | 10   | 1                  | <1            | 91    | 2   | 80 - 120    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 1.01       | 1.03        | mg/Kg | 10       | 0.10         | 101       | 103        | 70 - 130        |
| 4-BFB     | 0.839      | 0.836       | mg/Kg | 10       | 0.10         | 84        | 84         | 70 - 130        |

**Laboratory Control Spikes**      QCBatch:    QC21784

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.961      | 0.955       | mg/Kg | 10   | 1                  | <0.010        | 96    | 0   | 70 - 130    | 20        |
| Benzene      | 0.983      | 0.983       | mg/Kg | 10   | 1                  | <0.010        | 98    | 0   | 70 - 130    | 20        |
| Toluene      | 0.961      | 0.961       | mg/Kg | 10   | 1                  | <0.010        | 96    | 0   | 70 - 130    | 20        |
| Ethylbenzene | 0.925      | 0.936       | mg/Kg | 10   | 1                  | <0.010        | 92    | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 2.64       | 2.66        | mg/Kg | 10   | 3                  | <0.010        | 88    | 0   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.933      | 0.927       | mg/Kg | 10       | 1            | 93        | 92         | 70 - 130        |
| 4-BFB     | 0.862      | 0.858       | mg/Kg | 10       | 1            | 86        | 85         | 70 - 130        |

### Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes      QCBatch:    QC21574

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| DRO   | 213       | 207        | mg/Kg | 1    | 250                | <50.0         | 85    | 3   | 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 | 101       | 103        | mg/Kg | 1        | 150          | 67       | 69        | 70 - 130        |

Matrix Spikes      QCBatch:    QC21575

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | 6.86      | 8.91       | mg/Kg | 10   | 1                  | 7.72          | 69    | 0   | 80 - 120    | 20        |

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

| Surrogate | MS Result           | MSD Result | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|---------------------|------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | <sup>11</sup> 0.653 | 0.884      | mg/Kg | 10       | 0.10         | 65       | 88        | 70 - 130        |
| 4-BFB     | <sup>12</sup> 0.548 | 0.756      | mg/Kg | 10       | 0.10         | 58       | 76        | 70 - 130        |

Matrix Spikes      QCBatch:    QC21576

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.792     | 0.721      | mg/Kg | 10   | 1                  | <0.010        | 79    | 9   | 70 - 130    | 20        |
| Toluene      | 0.861     | 0.752      | mg/Kg | 10   | 1                  | <0.010        | 86    | 157 | 70 - 130    | 20        |
| Ethylbenzene | 0.811     | 0.712      | mg/Kg | 10   | 1                  | 0.0193        | 81    | 13  | 70 - 130    | 20        |
| m,p,o-Xylene | 2.40      | 2.05       | mg/Kg | 10   | 3                  | 0.0536        | 80    | 16  | 70 - 130    | 20        |

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

<sup>11</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>12</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Surrogate | MS Result | MSD Result          | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|-----------|---------------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | 0.819     | 0.721               | mg/Kg | 10       | 1            | 82       | 72        | 70 - 130        |
| 4-BFB     | 0.807     | <sup>13</sup> 0.661 | mg/Kg | 10       | 1            | 81       | 66        | 70 - 130        |

Matrix Spikes            QCBatch:    QC21773

| Param | MS Result         | MSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|-------------------|------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| GRO   | <sup>14</sup> 593 | 559        | mg/Kg | 10   | 1                  | 447           | 146   | 0   | 80 - 120    | 20        |

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

| Surrogate | MS Result           | MSD Result          | Units | Dilution | Spike Amount | MS % Rec | MSD % Rec | Recovery Limits |
|-----------|---------------------|---------------------|-------|----------|--------------|----------|-----------|-----------------|
| TFT       | <sup>15</sup> 0.641 | <sup>16</sup> 0.637 | mg/Kg | 10       | 0.10         | 64       | 64        | 70 - 130        |
| 4-BFB     | <sup>17</sup> 29.6  | <sup>18</sup> 30    | mg/Kg | 10       | 0.10         | 2960     | 3000      | 70 - 130        |

### Quality Control Report Continuing Calibration Verification Standards

CCV (1)                    QCBatch:    QC21574

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 219              | 87                    | 75 - 125                | 7/3/02        |

CCV (2)                    QCBatch:    QC21574

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 217              | 86                    | 75 - 125                | 7/3/02        |

CCV (3)                    QCBatch:    QC21574

<sup>13</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

<sup>14</sup>High MS recovery due to high amounts of analytes in the sample.

<sup>15</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>16</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>17</sup>High MS recovery due to high amounts of analytes in the sample.

<sup>18</sup>High MSD recovery due to high amounts of analytes in the sample.

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 260                    | 104                         | 75 - 125                      | 7/3/02           |

ICV (1)            QCBatch:    QC21574

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 228                    | 91                          | 75 - 125                      | 7/3/02           |

CCV (1)            QCBatch:    QC21575

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.978                  | 97                          | 85 - 115                      | 7/2/02           |

CCV (2)            QCBatch:    QC21575

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 1.04                   | 104                         | 85 - 115                      | 7/2/02           |

ICV (1)            QCBatch:    QC21575

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.9766                 | 97                          | 85 - 115                      | 7/2/02           |

CCV (1)            QCBatch:    QC21576

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0919                 | 92                          | 85 - 115                      | 7/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0992                 | 99                          | 85 - 115                      | 7/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0989                 | 99                          | 85 - 115                      | 7/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0972                 | 97                          | 85 - 115                      | 7/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.283                  | 94                          | 85 - 115                      | 7/2/02           |

CCV (2)                    QCBatch:    QC21576

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.1012                 | 101                         | 85 - 115                      | 7/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.1002                 | 100                         | 85 - 115                      | 7/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.1008                 | 100                         | 85 - 115                      | 7/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0964                 | 96                          | 85 - 115                      | 7/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.2907                 | 96                          | 85 - 115                      | 7/2/02           |

ICV (1)                    QCBatch:    QC21576

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0995                 | 100                         | 85 - 115                      | 7/2/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/2/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.100                  | 100                         | 85 - 115                      | 7/2/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.106                  | 106                         | 85 - 115                      | 7/2/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.301                  | 100                         | 85 - 115                      | 7/2/02           |

CCV (1)                    QCBatch:    QC21773

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.852                  | 85                          | 85 - 115                      | 7/10/02          |

ICV (1)                    QCBatch:    QC21773

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1                     | 0.901                  | 90                          | 85 - 115                      | 7/10/02          |

CCV (1)                    QCBatch:    QC21784

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0969                 | 96                          | 85 - 115                      | 7/10/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.1                    | 100                         | 85 - 115                      | 7/10/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.0993                 | 99                          | 85 - 115                      | 7/10/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0924                 | 92                          | 85 - 115                      | 7/10/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.264                  | 88                          | 85 - 115                      | 7/10/02          |

ICV (1)      QCBatch:    QC21784

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0947                 | 94                          | 85 - 115                      | 7/10/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0977                 | 97                          | 85 - 115                      | 7/10/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.095                  | 95                          | 85 - 115                      | 7/10/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0925                 | 92                          | 85 - 115                      | 7/10/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.265                  | 88                          | 85 - 115                      | 7/10/02          |



200724

Page 1 of 1

# Trace Analysis, Inc.

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

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # **A02070313**

Company Name: **Enacon Services Inc.** Phone #: **915-570-8726**  
 Address: **306 West Wall, Suite 1312, Midland Tx 79701 915-684-7587** Fax #:   
 Contact Person: **Jeffrey Kindley**  
 Invoice to: **Kyle Lanchoreau**  
 (if different from above) **Egavita Services**  
 Project #: **EQ-112** Incident # **300109**

Project Location: **Monument, Lea County New Mexico**  
 Sampler Signature: **Jeffrey Kindley**  
**Garber Ranch**

| LAB #<br>(LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX PRESERVATIVE METHOD |      |     |        |     |      | DATE | SAMPLING TIME |      |
|-------------------------|------------|--------------|---------------|----------------------------|------|-----|--------|-----|------|------|---------------|------|
|                         |            |              |               | WATER                      | SOIL | AIR | SLUDGE | HCL | HNO3 |      |               | ICE  |
| 200724                  | MW-16      | 2            | 46ml          | ✓                          |      |     |        | ✓   |      |      | 07/02/02      | 1310 |
|                         | MW-16      | 1            | 145g          | ✓                          |      |     |        | ✓   |      |      | 07/02/02      | 1310 |

| ANALYSIS REQUEST<br>(Circle or Specify Method No.) |  | Turn Around Time if different from standard |
|--|--|---|
| PAH 8270   |  |   |
| Total Metals Ag As Ba Cd Cr Pb Hg Se               |  |   |
| TCLP Metals Ag As Ba Cd Cr Pb Hg Se                |  |   |
| TCLP Volatiles                                     |  |   |
| TCLP Semi Volatiles                                |  |   |
| RCI  |  |   |
| GC/MS Vol. 8240/8260/824                           |  |   |
| GC/MS Semi. Vol. 8270/825                          |  |   |
| PCB's 8080/608                                     |  |   |
| Pest. 8080/608                                     |  |   |
| BOD, TSS, PH                                       |  |   |

REMARKS:

**LAB USE ONLY**

Intact:  Y  N

Headspace:  Y  N

Temp: 2

Log-in Review: M

Carrier # 7116 FIP

Jeffrey Kindley

Relinquished by: Jeffrey Kindley Date: July 2, 2002 Time: 0900

Received by: Aileen Shelton Date: 7/02/02 Time: 0900

Relinquished by: Aileen Shelton Date: 7/02/02 Time: 1830

Received at Laboratory by: Dick Cheney Date: 7:30a 10/02 Time:

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 3 samples - HS

Report Date: July 16, 2002 Order Number: A02070313  
EQ-112 Barber Ranch 3000109

Page Number: 1 of 1  
Monument, Lea County, New Mexico

## Summary Report

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

Report Date: July 16, 2002

Order ID Number: A02070313

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, Lea County, New Mexico  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 200724 | MW-16       | Water  | 7/1/02     | 13:10      | 7/3/02        |

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

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 200724 - MW-16      | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |

### Sample: 200724 - MW-16

| Param                  | Flag | Result  | Units |
|------------------------|------|---------|-------|
| Naphthalene            |      | <0.0002 | mg/L  |
| Acenaphthylene         |      | <0.0002 | mg/L  |
| Acenaphthene           |      | <0.0002 | mg/L  |
| Fluorene               |      | <0.0002 | mg/L  |
| Phenanthrene           |      | <0.0002 | mg/L  |
| Anthracene             |      | <0.0002 | mg/L  |
| Fluoranthene           |      | <0.0002 | mg/L  |
| Pyrene                 |      | <0.0002 | mg/L  |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  |
| Chrysene               |      | <0.0002 | mg/L  |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  |

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

# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9  
155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296  
El Paso, Texas 79932 888•588•3443  
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

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

Report Date: July 16, 2002

Order ID Number: A02070313

Project: EQ-112 Monument  
TA Job Code: Barber Ranch 3000109  
Casualty Code: EQ-112  
Project Location: Monument, 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 |
|--------|-------------|--------|------------|------------|---------------|
| 200724 | MW-16       | Water  | 7/1/02     | 13:10      | 7/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 6 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: 200724 - MW-16**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21599 Date Analyzed: 7/5/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20488 Date Prepared: 7/5/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.107  | mg/L  | 5        | 0.10         | 107              | 70 - 130        |
| 4-BFB     |      | 0.109  | mg/L  | 5        | 0.10         | 109              | 70 - 130        |

**Sample: 200724 - MW-16**

Analysis: PAH Analytical Method: S 8270C QC Batch: QC21902 Date Analyzed: 7/12/02  
Analyst: RC Preparation Method: E 3510C Prep Batch: PB20672 Date Prepared: 7/8/02

| Param                  | Flag | Result  | Units | Dilution | RDL    |
|------------------------|------|---------|-------|----------|--------|
| Naphthalene            |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthylene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Acenaphthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluorene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Phenanthrene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Anthracene             |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Fluoranthene           |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Pyrene                 |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Chrysene               |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 1        | 0.0002 |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 1        | 0.0002 |

| Surrogate        | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Nitrobenzene-d5  |      | 64.82  | mg/L  | 1        | 80           | 81               | 35 - 114        |
| 2-Fluorobiphenyl |      | 58.8   | mg/L  | 1        | 80           | 73               | 43 - 116        |
| Terphenyl-d14    |      | 47.22  | mg/L  | 1        | 80           | 59               | 33 - 141        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21599

| 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       |      | 0.0917 | mg/L  | 1        | 0.10         | 92               | 70 - 130        |
| 4-BFB     |      | 0.0873 | mg/L  | 1        | 0.10         | 87               | 70 - 130        |

Method Blank      QCBatch:    QC21902

| Param                  | Flag | Results | Units | Reporting Limit |
|------------------------|------|---------|-------|-----------------|
| Naphthalene            |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthylene         |      | <0.0002 | mg/L  | 0.0002          |
| Acenaphthene           |      | <0.0002 | mg/L  | 0.0002          |
| Fluorene               |      | <0.0002 | mg/L  | 0.0002          |
| Phenanthrene           |      | <0.0002 | mg/L  | 0.0002          |
| Anthracene             |      | <0.0002 | mg/L  | 0.0002          |
| Fluoranthene           |      | <0.0002 | mg/L  | 0.0002          |
| Pyrene                 |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)anthracene     |      | <0.0002 | mg/L  | 0.0002          |
| Chrysene               |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(b)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(k)fluoranthene   |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(a)pyrene         |      | <0.0002 | mg/L  | 0.0002          |
| Indeno(1,2,3-cd)pyrene |      | <0.0002 | mg/L  | 0.0002          |
| Dibenzo(a,h)anthracene |      | <0.0002 | mg/L  | 0.0002          |
| Benzo(g,h,i)perylene   |      | <0.0002 | mg/L  | 0.0002          |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes      QCBatch:    QC21599

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE  | 0.0954     | 0.0948      | mg/L  | 1    | 0.10               | <0.001        | 95    | 1   | 70 - 130    | 20        |

Continued ...

... Continued

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Benzene      | 0.102      | 0.104       | mg/L  | 1    | 0.10               | <0.001        | 102   | 2   | 70 - 130    | 20        |
| Toluene      | 0.102      | 0.106       | mg/L  | 1    | 0.10               | <0.001        | 102   | 4   | 70 - 130    | 20        |
| Ethylbenzene | 0.105      | 0.106       | mg/L  | 1    | 0.10               | <0.001        | 105   | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.309      | 0.312       | mg/L  | 1    | 0.30               | <0.001        | 103   | 1   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.112      | 0.115       | mg/L  | 1        | 0.10         | 112       | 115        | 70 - 130        |
| 4-BFB     | 0.113      | 0.111       | mg/L  | 1        | 0.10         | 113       | 111        | 70 - 130        |

Laboratory Control Spikes

QCBatch: QC21902

| Param                  | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|------------------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Naphthalene            | 68.06      | 64.5        | mg/L  | 1    | 80                 | <0.0002       | 85    | 5   | 16 - 96     | 20        |
| Acenaphthylene         | 72.61      | 72.3        | mg/L  | 1    | 80                 | <0.0002       | 90    | 0   | 20 - 110    | 20        |
| Acenaphthene           | 69.84      | 70.54       | mg/L  | 1    | 80                 | <0.0002       | 87    | 0   | 18 - 108    | 20        |
| Fluorene               | 66.78      | 66.9        | mg/L  | 1    | 80                 | <0.0002       | 83    | 0   | 22 - 102    | 20        |
| Phenanthrene           | 70.47      | 68.77       | mg/L  | 1    | 80                 | <0.0002       | 88    | 2   | 25 - 103    | 20        |
| Anthracene             | 71.59      | 71.62       | mg/L  | 1    | 80                 | <0.0002       | 89    | 0   | 22 - 110    | 20        |
| Fluoranthene           | 86.55      | 87.63       | mg/L  | 1    | 80                 | <0.0002       | 108   | 1   | 21 - 110    | 20        |
| Pyrene                 | 61.77      | 59.13       | mg/L  | 1    | 80                 | <0.0002       | 77    | 4   | 22 - 100    | 20        |
| Benzo(a)anthracene     | 66.41      | 66.32       | mg/L  | 1    | 80                 | <0.0002       | 83    | 0   | 30 - 99     | 20        |
| Chrysene               | 61.34      | 61.63       | mg/L  | 1    | 80                 | <0.0002       | 76    | 0   | 27 - 108    | 20        |
| Benzo(b)fluoranthene   | 50.81      | 51.42       | mg/L  | 1    | 80                 | <0.0002       | 63    | 1   | 19 - 102    | 20        |
| Benzo(k)fluoranthene   | 63.72      | 62.85       | mg/L  | 1    | 80                 | <0.0002       | 79    | 1   | 35 - 103    | 20        |
| Benzo(a)pyrene         | 53.22      | 51.64       | mg/L  | 1    | 80                 | <0.0002       | 66    | 3   | 24 - 105    | 20        |
| Indeno(1,2,3-cd)pyrene | 59.58      | 55.3        | mg/L  | 1    | 80                 | <0.0002       | 74    | 7   | 22 - 108    | 20        |
| Dibenzo(a,h)anthracene | 41.51      | 40.41       | mg/L  | 1    | 80                 | <0.0002       | 51    | 2   | 23 - 77     | 20        |
| Benzo(g,h,i)perylene   | 52.84      | 50.23       | mg/L  | 1    | 80                 | <0.0002       | 66    | 5   | 19 - 119    | 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  | 80.93      | 79.38       | mg/L  | 1        | 80           | 101       | 99         | 35 - 114        |
| 2-Fluorobiphenyl | 74.86      | 74.26       | mg/L  | 1        | 80           | 93        | 92         | 43 - 116        |
| Terphenyl-d14    | 29.72      | 28.88       | mg/L  | 1        | 80           | 37        | 36         | 33 - 141        |

Quality Control Report  
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC21599

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.094                  | 94                          | 85 - 115                      | 7/5/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/5/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/5/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.104                  | 104                         | 85 - 115                      | 7/5/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.308                  | 103                         | 85 - 115                      | 7/5/02           |

CCV (2)            QCBatch:    QC21599

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0959                 | 95                          | 85 - 115                      | 7/5/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 7/5/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/5/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/5/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.304                  | 101                         | 85 - 115                      | 7/5/02           |

ICV (1)            QCBatch:    QC21599

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0953                 | 95                          | 85 - 115                      | 7/5/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 7/5/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 7/5/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.105                  | 105                         | 85 - 115                      | 7/5/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.313                  | 104                         | 85 - 115                      | 7/5/02           |

CCV (1)            QCBatch:    QC21902

| Param                | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene          |      | mg/L  | 60                    | 67.87                  | 113                         | 80 - 120                      | 7/12/02          |
| Acenaphthylene       |      | mg/L  | 60                    | 70.11                  | 116                         | 80 - 120                      | 7/12/02          |
| Acenaphthene         |      | mg/L  | 60                    | 69.3                   | 115                         | 80 - 120                      | 7/12/02          |
| Fluorene             |      | mg/L  | 60                    | 67.17                  | 111                         | 80 - 120                      | 7/12/02          |
| Phenanthrene         |      | mg/L  | 60                    | 70.25                  | 117                         | 80 - 120                      | 7/12/02          |
| Anthracene           |      | mg/L  | 60                    | 69.74                  | 116                         | 80 - 120                      | 7/12/02          |
| Fluoranthene         |      | mg/L  | 60                    | 67.97                  | 113                         | 80 - 120                      | 7/12/02          |
| Pyrene               |      | mg/L  | 60                    | 64.23                  | 107                         | 80 - 120                      | 7/12/02          |
| Benzo(a)anthracene   |      | mg/L  | 60                    | 63.94                  | 106                         | 80 - 120                      | 7/12/02          |
| Chrysene             |      | mg/L  | 60                    | 65.87                  | 109                         | 80 - 120                      | 7/12/02          |
| Benzo(b)fluoranthene |      | mg/L  | 60                    | 53.42                  | 89                          | 80 - 120                      | 7/12/02          |
| Benzo(k)fluoranthene |      | mg/L  | 60                    | 69.11                  | 115                         | 80 - 120                      | 7/12/02          |

Continued ...

... Continued

| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzo(a)pyrene         |      | mg/L  | 60                    | 55.16                  | 91                          | 80 - 120                      | 7/12/02          |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 59.87                  | 99                          | 80 - 120                      | 7/12/02          |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 58.18                  | 96                          | 80 - 120                      | 7/12/02          |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 55.8                   | 93                          | 80 - 120                      | 7/12/02          |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 64.19                  | 106                         | 80 - 120                      | 7/12/02          |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 70.94                  | 118                         | 80 - 120                      | 7/12/02          |
| Terphenyl-d14          |      | mg/L  | 60                    | 60.03                  | 100                         | 80 - 120                      | 7/12/02          |

CCV (2)

QCBatch: QC21902

| Param                  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|------------------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Naphthalene            |      | mg/L  | 60                    | 67.02                  | 111                         | 80 - 120                      | 7/12/02          |
| Acenaphthylene         |      | mg/L  | 60                    | 70.84                  | 118                         | 80 - 120                      | 7/12/02          |
| Acenaphthene           |      | mg/L  | 60                    | 69.08                  | 115                         | 80 - 120                      | 7/12/02          |
| Fluorene               |      | mg/L  | 60                    | 64.76                  | 107                         | 80 - 120                      | 7/12/02          |
| Phenanthrene           |      | mg/L  | 60                    | 69.67                  | 116                         | 80 - 120                      | 7/12/02          |
| Anthracene             |      | mg/L  | 60                    | 68.86                  | 114                         | 80 - 120                      | 7/12/02          |
| Fluoranthene           |      | mg/L  | 60                    | 66.83                  | 111                         | 80 - 120                      | 7/12/02          |
| Pyrene                 |      | mg/L  | 60                    | 59.33                  | 98                          | 80 - 120                      | 7/12/02          |
| Benzo(a)anthracene     |      | mg/L  | 60                    | 61.16                  | 101                         | 80 - 120                      | 7/12/02          |
| Chrysene               |      | mg/L  | 60                    | 62.15                  | 103                         | 80 - 120                      | 7/12/02          |
| Benzo(b)fluoranthene   |      | mg/L  | 60                    | 51.49                  | 85                          | 80 - 120                      | 7/12/02          |
| Benzo(k)fluoranthene   |      | mg/L  | 60                    | 65.76                  | 109                         | 80 - 120                      | 7/12/02          |
| Benzo(a)pyrene         |      | mg/L  | 60                    | 54.97                  | 91                          | 80 - 120                      | 7/12/02          |
| Indeno(1,2,3-cd)pyrene |      | mg/L  | 60                    | 62.23                  | 103                         | 80 - 120                      | 7/12/02          |
| Dibenzo(a,h)anthracene |      | mg/L  | 60                    | 59.88                  | 99                          | 80 - 120                      | 7/12/02          |
| Benzo(g,h,i)perylene   |      | mg/L  | 60                    | 56.84                  | 94                          | 80 - 120                      | 7/12/02          |
| Nitrobenzene-d5        |      | mg/L  | 60                    | 68.21                  | 113                         | 80 - 120                      | 7/12/02          |
| 2-Fluorobiphenyl       |      | mg/L  | 60                    | 69.8                   | 116                         | 80 - 120                      | 7/12/02          |
| Terphenyl-d14          |      | mg/L  | 60                    | 57.14                  | 95                          | 80 - 120                      | 7/12/02          |



Report Date: July 10, 2002 Order Number: A02070508  
EQ 102 97236398

Page Number: 1 of 1  
Lea Station

## Summary Report

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

Report Date: July 10, 2002

Order ID Number: A02070508

Project: EQ 102  
TA Job Code: 97236398  
Casualty Code: EQ 102  
Project Location: Lea Station  
Project Address:  
Enercon Services Inc. / Midland / Jeff Kindley

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 200879 | MW-6        | Water  | 7/2/02     | 14:00      | 7/3/02        |
| 200880 | MW-7        | Water  | 7/2/02     | 14:20      | 7/3/02        |
| 200881 | MW-10       | Water  | 7/2/02     | 13:15      | 7/3/02        |
| 200882 | MW-5        | Water  | 7/2/02     | 13:45      | 7/3/02        |
| 200883 | MW-9        | Water  | 7/2/02     | 12:50      | 7/3/02        |
| 200884 | MW-4        | Water  | 7/2/02     | 12:10      | 7/3/02        |

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

| Sample - Field Code | BTEX          |               |                    |                    |                  |
|---------------------|---------------|---------------|--------------------|--------------------|------------------|
|                     | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | M,P,O-Xylene (ppm) | Total BTEX (ppm) |
| 200879 - MW-6       | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 200880 - MW-7       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 200881 - MW-10      | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 200882 - MW-5       | <0.005        | <0.005        | <0.005             | <0.005             | <0.005           |
| 200883 - MW-9       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |
| 200884 - MW-4       | <0.001        | <0.001        | <0.001             | <0.001             | <0.001           |

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

3701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

# Trace Analysis, Inc.

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

Company Name: Environ Services, Inc.

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

Contact Person: Jeffrey Kindley

Office to: Kyle/Landon/aw Squiva Service

Project #: EQ-102

Project Location: Lea County, New Mexico

Phone #: 915-570-8726

Fax #: 915-570-8726

Incident # 972 36398

Project Name: Lea Station

Sampler Signature: Jeffrey Kindley

| LAB #<br>(AB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING DATE | TIME |
|------------------------|------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|---------------|------|
|                        |            |              |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH |               |      |
| 00879                  | MW-6       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 7/23/02       | 1700 |
| 80                     | MW-7       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 7/23/02       | 1720 |
| 81                     | MW-10      | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 7/23/02       | 1315 |
| 82                     | MW-5       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 7/23/02       | 1345 |
| 83                     | MW-9       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 7/23/02       | 1250 |
| 84                     | MW-4       | 2            | 40ml          | ✓      |      |     |        | ✓                   |                  |                                |      | 7/23/02       | 1210 |

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A02070508

### ANALYSIS REQUEST

(Circle or Specify Method No.)

|                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | MTBE 8021B/602                                   |
| <input checked="" type="checkbox"/> | BTEX 8021B/602                                   |
| <input checked="" type="checkbox"/> | TPH 418.1/TX1005                                 |
| <input checked="" type="checkbox"/> | PAH 8270C  |
| <input type="checkbox"/>            | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 |
| <input type="checkbox"/>            | TCLP Volatiles                                   |
| <input type="checkbox"/>            | TCLP Semi Volatiles                              |
| <input type="checkbox"/>            | TCLP Pesticides                                  |
| <input type="checkbox"/>            | RCI  |
| <input type="checkbox"/>            | GC/MS Vol. 8260B/624                             |
| <input type="checkbox"/>            | GC/MS Semi. Vol. 8270C/625                       |
| <input type="checkbox"/>            | PCBs 8082/608                                    |
| <input type="checkbox"/>            | Pesticides 8081A/608                             |
| <input type="checkbox"/>            | BOD, TSS, pH                                     |

Turn Around Time if different from standard

### LAB USE ONLY

REMARKS: Normal  
7/10 fsp  
 Check If Special Reporting Limits Are Needed

Inact: Y / N  
Headspace: Y / N  
Temp: 3  
Log-in Review: MK  
Carrier #: Jeffrey Kindley

Inquired by: Jeffrey Kindley Date: July 23, 2002 Time: 1630  
 Dispatched by: Wen Shults Date: 7/23/02 Time: 1830  
 Received by: Wen Shults Date: 7/23/02 Time: 1630  
 Received by: Wen Shults Date: 07/23/02 Time: 1730  
 Received at Laboratory by: Wen Shults Date: 07/23/02 Time: 1730

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



# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9  
155 McCutcheon, Suite H

Lubbock, Texas 79424  
El Paso, Texas 79932

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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: July 10, 2002

Order ID Number: A02070508

Project: EQ 102  
TA Job Code: 97236398  
Casualty Code: EQ 102  
Project Location: Lea Station  
Enercon Services Inc. / Midland / Jeff Kindley

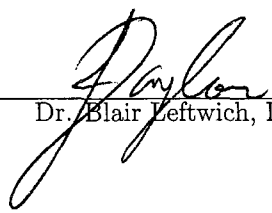
Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 200879 | MW-6        | Water  | 7/2/02     | 14:00      | 7/3/02        |
| 200880 | MW-7        | Water  | 7/2/02     | 14:20      | 7/3/02        |
| 200881 | MW-10       | Water  | 7/2/02     | 13:15      | 7/3/02        |
| 200882 | MW-5        | Water  | 7/2/02     | 13:45      | 7/3/02        |
| 200883 | MW-9        | Water  | 7/2/02     | 12:50      | 7/3/02        |
| 200884 | MW-4        | Water  | 7/2/02     | 12:10      | 7/3/02        |

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

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 9 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: 200879 - MW-6**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21600 Date Analyzed: 7/5/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20489 Date Prepared: 7/5/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.104  | mg/L  | 5        | 0.10         | 104              | 70 - 130        |
| 4-BFB     |      | 0.112  | mg/L  | 5        | 0.10         | 112              | 70 - 130        |

**Sample: 200880 - MW-7**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21600 Date Analyzed: 7/5/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20489 Date Prepared: 7/5/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.106  | mg/L  | 1        | 0.10         | 106              | 70 - 130        |
| 4-BFB     |      | 0.110  | mg/L  | 1        | 0.10         | 110              | 70 - 130        |

**Sample: 200881 - MW-10**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21637 Date Analyzed: 7/7/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20518 Date Prepared: 7/7/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.111  | mg/L  | 5        | 0.10         | 111              | 70 - 130        |
| 4-BFB     |      | 0.112  | mg/L  | 5        | 0.10         | 112              | 70 - 130        |

**Sample: 200882 - MW-5**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21665 Date Analyzed: 7/7/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20539 Date Prepared: 7/7/02

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.102  | mg/L  | 5        | 0.10         | 102              | 70 - 130        |
| 4-BFB     |      | 0.104  | mg/L  | 5        | 0.10         | 104              | 70 - 130        |

**Sample: 200883 - MW-9**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21637 Date Analyzed: 7/7/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20518 Date Prepared: 7/7/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.112  | mg/L  | 1        | 0.10         | 112              | 70 - 130        |
| 4-BFB     |      | 0.118  | mg/L  | 1        | 0.10         | 118              | 70 - 130        |

**Sample: 200884 - MW-4**

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC21637 Date Analyzed: 7/7/02  
Analyst: DN Preparation Method: S 5030B Prep Batch: PB20518 Date Prepared: 7/7/02

| Param        | Flag | Result | Units | Dilution | RDL   |
|--------------|------|--------|-------|----------|-------|
| Benzene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Toluene      |      | <0.001 | mg/L  | 1        | 0.001 |
| Ethylbenzene |      | <0.001 | mg/L  | 1        | 0.001 |
| M,P,O-Xylene |      | <0.001 | mg/L  | 1        | 0.001 |
| Total BTEX   |      | <0.001 | mg/L  | 1        | 0.001 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| TFT       |      | 0.113  | mg/L  | 1        | 0.10         | 113              | 70 - 130        |
| 4-BFB     |      | 0.119  | mg/L  | 1        | 0.10         | 119              | 70 - 130        |

### Quality Control Report Method Blank

Method Blank      QCBatch:    QC21600

| 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       |      | 0.103  | mg/L  | 1        | 0.10         | 103              | 70 - 130        |
| 4-BFB     |      | 0.101  | mg/L  | 1        | 0.10         | 101              | 70 - 130        |

Method Blank      QCBatch:    QC21637

| 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       |      | 0.121  | mg/L  | 1        | 0.10         | 121              | 70 - 130        |
| 4-BFB     |      | 0.119  | mg/L  | 1        | 0.10         | 119              | 70 - 130        |

Method Blank      QCBatch:    QC21665

| 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       |      | 0.106  | mg/L  | 1        | 0.10         | 106              | 70 - 130        |

Continued ...

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|-----------|------|--------|-------|----------|--------------|------------------|-----------------|
| 4-BFB     |      | 0.106  | mg/L  | 1        | 0.10         | 106              | 70 - 130        |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

**Laboratory Control Spikes**                      QCBatch:    QC21600

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.0924     | 0.0955      | mg/L  | 1    | 0.10               | <0.001        | 92    | 3   | 70 - 130    | 20        |
| Benzene      | 0.0953     | 0.0999      | mg/L  | 1    | 0.10               | <0.001        | 95    | 5   | 70 - 130    | 20        |
| Toluene      | 0.0945     | 0.0993      | mg/L  | 1    | 0.10               | <0.001        | 94    | 5   | 70 - 130    | 20        |
| Ethylbenzene | 0.0968     | 0.104       | mg/L  | 1    | 0.10               | <0.001        | 97    | 7   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.289      | 0.307       | mg/L  | 1    | 0.30               | <0.001        | 96    | 6   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.103      | 0.107       | mg/L  | 1        | 0.10         | 103       | 107        | 70 - 130        |
| 4-BFB     | 0.107      | 0.111       | mg/L  | 1        | 0.10         | 107       | 111        | 70 - 130        |

**Laboratory Control Spikes**                      QCBatch:    QC21637

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE         | 0.104      | 0.104       | mg/L  | 1    | 0.10               | <0.001        | 104   | 0   | 70 - 130    | 20        |
| Benzene      | 0.105      | 0.103       | mg/L  | 1    | 0.10               | <0.001        | 105   | 2   | 70 - 130    | 20        |
| Toluene      | 0.104      | 0.103       | mg/L  | 1    | 0.10               | <0.001        | 104   | 1   | 70 - 130    | 20        |
| Ethylbenzene | 0.109      | 0.106       | mg/L  | 1    | 0.10               | <0.001        | 109   | 3   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.324      | 0.318       | mg/L  | 1    | 0.30               | <0.001        | 108   | 2   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.116      | 0.113       | mg/L  | 1        | 0.10         | 116       | 113        | 70 - 130        |
| 4-BFB     | 0.118      | 0.118       | mg/L  | 1        | 0.10         | 118       | 118        | 70 - 130        |

**Laboratory Control Spikes**                      QCBatch:    QC21665

| Param   | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|---------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| MTBE    | 0.0978     | 0.0998      | mg/L  | 1    | 0.10               | <0.001        | 98    | 2   | 70 - 130    | 20        |
| Benzene | 0.0992     | 0.0993      | mg/L  | 1    | 0.10               | <0.001        | 99    | 0   | 70 - 130    | 20        |
| Toluene | 0.098      | 0.0991      | mg/L  | 1    | 0.10               | <0.001        | 98    | 1   | 70 - 130    | 20        |

Continued ...



Continued

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount Added | Matrix Result | % Rec | RPD | % Rec Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------------|---------------|-------|-----|-------------|-----------|
| Ethylbenzene | 0.101      | 0.102       | mg/L  | 1    | 0.10               | <0.001        | 101   | 1   | 70 - 130    | 20        |
| M,P,O-Xylene | 0.300      | 0.305       | mg/L  | 1    | 0.30               | <0.001        | 100   | 2   | 70 - 130    | 20        |

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

| Surrogate | LCS Result | LCSD Result | Units | Dilution | Spike Amount | LCS % Rec | LCSD % Rec | Recovery Limits |
|-----------|------------|-------------|-------|----------|--------------|-----------|------------|-----------------|
| TFT       | 0.107      | 0.109       | mg/L  | 1        | 0.10         | 107       | 109        | 70 - 130        |
| 4-BFB     | 0.111      | 0.113       | mg/L  | 1        | 0.10         | 111       | 113        | 70 - 130        |

### Quality Control Report Continuing Calibration Verification Standards

CCV (1)                      QCBatch:    QC21600

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0961           | 96                    | 85 - 115                | 7/5/02        |
| Benzene      |      | mg/L  | 0.10            | 0.100            | 100                   | 85 - 115                | 7/5/02        |
| Toluene      |      | mg/L  | 0.10            | 0.0997           | 100                   | 85 - 115                | 7/5/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.102            | 102                   | 85 - 115                | 7/5/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.300            | 100                   | 85 - 115                | 7/5/02        |

CCV (2)                      QCBatch:    QC21600

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.096            | 96                    | 85 - 115                | 7/5/02        |
| Benzene      |      | mg/L  | 0.10            | 0.0986           | 98                    | 85 - 115                | 7/5/02        |
| Toluene      |      | mg/L  | 0.10            | 0.0981           | 98                    | 85 - 115                | 7/5/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.1              | 100                   | 85 - 115                | 7/5/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.299            | 99                    | 85 - 115                | 7/5/02        |

ICV (1)                      QCBatch:    QC21600

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| MTBE         |      | mg/L  | 0.10            | 0.0882           | 88                    | 85 - 115                | 7/5/02        |
| Benzene      |      | mg/L  | 0.10            | 0.0952           | 95                    | 85 - 115                | 7/5/02        |
| Toluene      |      | mg/L  | 0.10            | 0.0947           | 95                    | 85 - 115                | 7/5/02        |
| Ethylbenzene |      | mg/L  | 0.10            | 0.0975           | 98                    | 85 - 115                | 7/5/02        |
| M,P,O-Xylene |      | mg/L  | 0.30            | 0.289            | 96                    | 85 - 115                | 7/5/02        |

CCV (1)            QCBatch:    QC21637

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 7/7/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 7/7/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/7/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.106                  | 106                         | 85 - 115                      | 7/7/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.317                  | 106                         | 85 - 115                      | 7/7/02           |

CCV (2)            QCBatch:    QC21637

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.1                    | 100                         | 85 - 115                      | 7/7/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0997                 | 99                          | 85 - 115                      | 7/7/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0991                 | 99                          | 85 - 115                      | 7/7/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.102                  | 102                         | 85 - 115                      | 7/7/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.3047                 | 101                         | 85 - 115                      | 7/7/02           |

ICV (1)            QCBatch:    QC21637

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.110                  | 110                         | 85 - 115                      | 7/7/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.109                  | 109                         | 85 - 115                      | 7/7/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.109                  | 109                         | 85 - 115                      | 7/7/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.115                  | 115                         | 85 - 115                      | 7/7/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.342                  | 114                         | 85 - 115                      | 7/7/02           |

CCV (1)            QCBatch:    QC21665

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0968                 | 97                          | 85 - 115                      | 7/7/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0965                 | 96                          | 85 - 115                      | 7/7/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0954                 | 95                          | 85 - 115                      | 7/7/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.0978                 | 98                          | 85 - 115                      | 7/7/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.295                  | 98                          | 85 - 115                      | 7/7/02           |

CCV (2)            QCBatch:    QC21665

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0975                 | 97                          | 85 - 115                      | 7/7/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.0988                 | 98                          | 85 - 115                      | 7/7/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0986                 | 98                          | 85 - 115                      | 7/7/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/7/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.3011                 | 100                         | 85 - 115                      | 7/7/02           |

## ICV (1)

QCBatch: QC21665

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0998                 | 100                         | 85 - 115                      | 7/7/02           |
| Benzene      |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/7/02           |
| Toluene      |      | mg/L  | 0.10                  | 0.0993                 | 99                          | 85 - 115                      | 7/7/02           |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.103                  | 103                         | 85 - 115                      | 7/7/02           |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.308                  | 103                         | 85 - 115                      | 7/7/02           |