



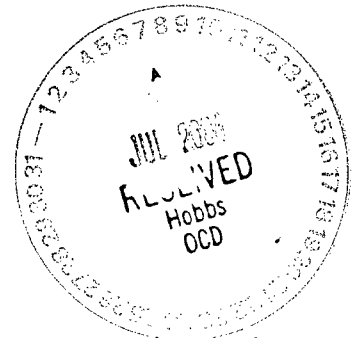
BNC Environmental Services, Inc.

AUSTIN ■ DALLAS ■ HOUSTON ■ MIDLAND ■ NEW MEXICO ■ OKLAHOMA

June 21, 2004

Mr. Mike Stansifer  
**BP PIPELINES (NORTH AMERICA), INC.**  
502 North West Avenue  
Levelland, Texas 79336

**Subject: Soil Assessment and Analytical Results  
Saunders Station  
Lea County, New Mexico**



Dear Mr. Stansifer:

BNC Environmental Services, Inc. (BNC) is pleased to submit soil assessment data and analytical results from soil sampling activities conducted for BP Pipelines (North America), Inc. (BP) at the above referenced crude oil release site.

The BP Saunders Station (Site) is located approximately 12 miles west-northwest of Lovington, Lea County, New Mexico. The legal description of the Site is Section 3, T-15-S, R-33-E with GPS coordinates 33° 03.223' N and 103° 35.840' W (FIGURE 1). The Site consists of a tank-battery with two 210-barrel crude oil tanks, one 210-barrel produced water tank and a truck loading facility. The tanks are contained within a 45-foot by 90-foot firewall.

A New Mexico Oil Conservation Division (NMOCD) form C-141, Release Notification and Corrective Action was submitted to the agency on April 1, 2004. A crude oil release of approximately 21-barrels occurred on March 3, 2004 at the Site. Twenty-barrels were reported as recovered. A copy of the C-141 Form is attached to this correspondence. The release was the result a tank over-flow and was fully contained within the firewall. BP personnel took corrective action subsequent to the release. Hydrocarbon-impacted soils associated with the crude oil release were excavated by CJR Construction (CJR) personnel and delineated using a backhoe. The vertical and horizontal extents of the excavation were assessed by field personnel using visual observation. Impacted soil was removed from the excavation, spread and tilled outside the firewall location and treated with microblaze to enhance the hydrocarbon remediation effort. The extent of the remedial excavation and the Site details are presented in FIGURE 2.

The New Mexico Oil Conservation Division (NMOCD) has regulatory jurisdiction over oil and gas production operations including pipeline spill/closure in the State of New Mexico. This project was conducted under the regulatory jurisdiction of the NMOCD,

BP Pipeline = 209700  
facility = FPAC0601955291  
incident = NPAC0601955532  
application = pPAC0601955738

which requires that soil impacted by a crude oil spill be remediated in such a manner that the potential for future affects to groundwater or the environment are minimized. The NMOCD hydrocarbon remediation levels are determined by ranking criteria on a site-by-site basis, which is outlined in the NMOCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993. The ranking criteria are based on three site characteristics: depth to groundwater, wellhead protection and distance to surface water.

Information provided by Mr. Larry Johnson with the NMOCD indicated that the depth-to-groundwater at the Site is between 50 and 100 feet. Based on these Site characteristics and associated NMOCD ranking criteria presented in the table below, the following hydrocarbon remediation levels apply at the Site: benzene- 10 ppm, BTEX- 50 ppm and TPH- 1,000 ppm.

| CHARACTERISTIC            | SELECTION           | SCORE |
|---------------------------|---------------------|-------|
| Depth to Groundwater      | > 50 feet <100 feet | 10    |
| Wellhead Protection Area  | >1000 feet          | 0     |
| Distance to Surface Water | >1000 feet          | 0     |

**Total Ranking Score = 10**

Confirmation soil sampling collection events were conducted by BNC personnel on three separate occasions. Each soil sample was placed into a laboratory-supplied soil jar equipped with a Teflon-lined lid and placed on ice in an insulated cooler. These samples were submitted to TraceAnalysis, Inc. (Trace) in Lubbock, Texas for analysis of total petroleum hydrocarbons (TPH) diesel-range organics (DRO) and gasoline-range organics (GRO) by EPA Method 8015 modified and analysis of benzene, toluene, ethylbenzene and xylene (BTEX) by EPA method 8021B. The submitted coolers were sealed for shipment and proper chain-of-custody documentation accompanied the samples to the laboratory. The certified analytical reports are provided as an attachment.

On March 24, 2004, BNC personnel conducted a Site visit to collect confirmation soil samples from the remedial excavation and tilled-soils. Three grab samples were collected from the bottom of the excavation (E1, E2 and E3) and one ten-point composite sample was collected from the tilled-soils (SMA/SMB). In addition to TPH and BTEX, the soil sample SMA/SMB collected from the tilled-soil was further analyzed for reactivity, corrosivity and ignitability (RCI). Soil samples E2 and E3 exhibited TPH (DRO) concentrations that exceeded NMOCD hydrocarbon remediation levels (3,270 mg/Kg and 2,140 mg/Kg, respectively). The BTEX and RCI analytical results were below regulatory guidelines. The tilled soil sample (SMA/SMA) exhibited TPH and BTEX concentrations below regulatory limits and was non-reactive, non-corrosive, and non-ignitable.

On May 7, 2004, BNC conducted an additional confirmation soil sampling event. Activities conducted by CJR subsequent to the previous sampling event included over-excavation of the release Site. Two grab samples were collected from the bottom of the remedial excavation at locations with TPH concentrations previously above regulatory

levels and submitted to the laboratory for BTEX and TPH (DRO/GRO) analysis (SE and EE). The soil sample SE exhibited a TPH (DRO) concentration that exceeded NMOCD hydrocarbon remediation levels (1,180 mg/Kg). The BTEX and TPH (GRO) analytical results were below regulatory guidelines at the EE location.

BNC conducted the third and final confirmation soil sampling event on May 27, 2004 that was witnessed by NMOCD District personnel, Larry Johnson and Paul Sheely. Activities conducted by CJR subsequent to the previous sampling event included a microblaze application to enhance the remediation effort. One grab sample was collected from the bottom of the remedial excavation (bedrock) at the location that previously exhibited TPH concentrations above regulatory levels and submitted to the laboratory for TPH (DRO/GRO) analysis (SL-2). The analytical results indicated TPH (DRO/GRO) concentrations were below regulatory guidelines.

NMOCD review of this report and approval to place mixed soils back into excavation should be considered before performing subsequent activities at the Saunders Station location.

BNC appreciates this opportunity to provide environmental consulting services for BP. If you have any questions or comments with regards to this correspondence please call do not hesitate to contact our Midland office at (432) 686-0086.

Respectfully,  
**BNC Environmental Services, Inc.**



Luke D. Markham  
Project Manager



Will Murley, P.G.  
Project Geologist



Tom Larson, P.G.  
Operations Manager

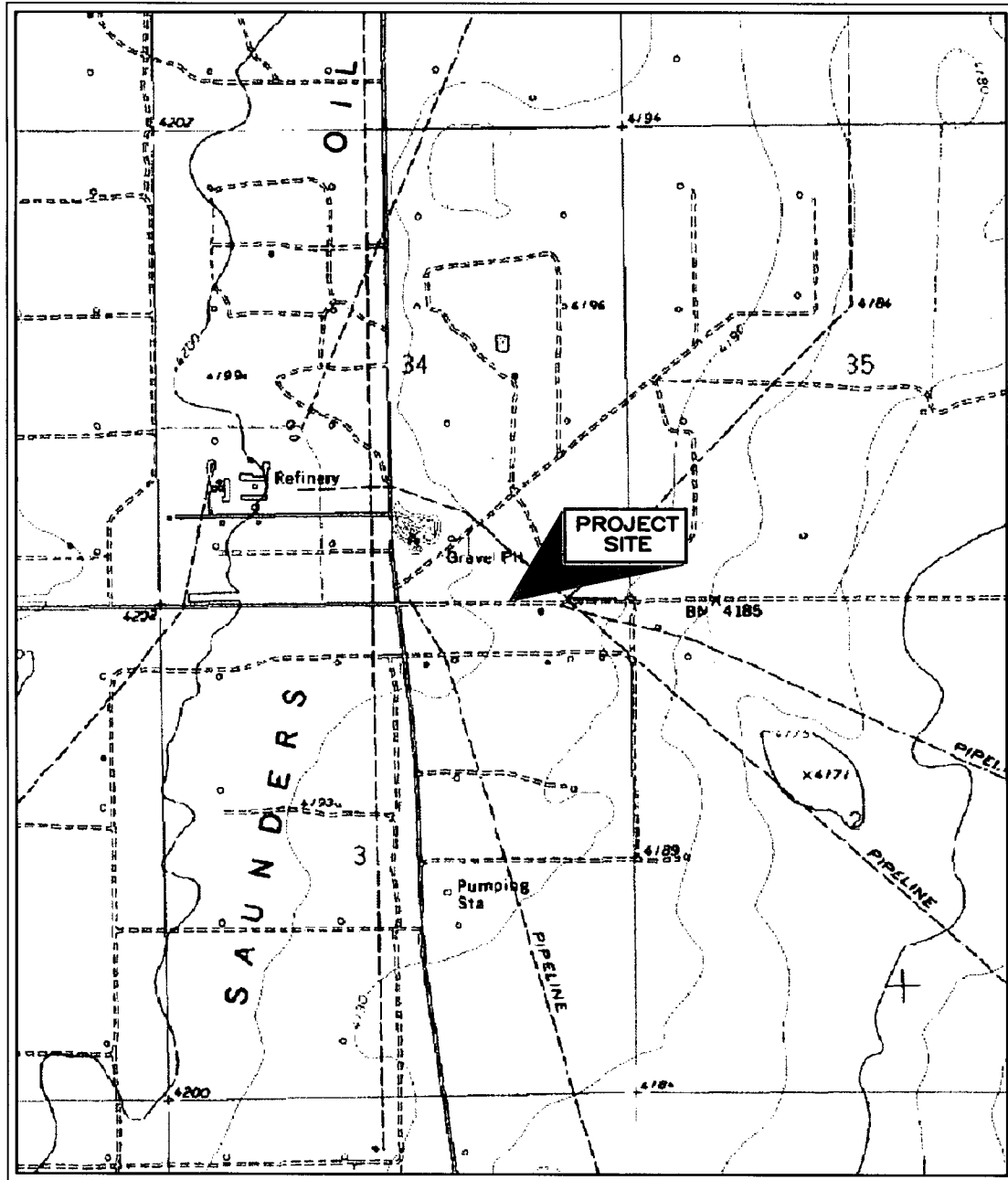
**Attachments:** FIGURE 1- Site Location Map  
FIGURE 2- Site Details  
Certified Laboratory Analytical Reports  
C-141 Form

Cc: Mr. Jim Lutter, BP PIPELINES (NORTH AMERICA) INC., Levelland, Texas

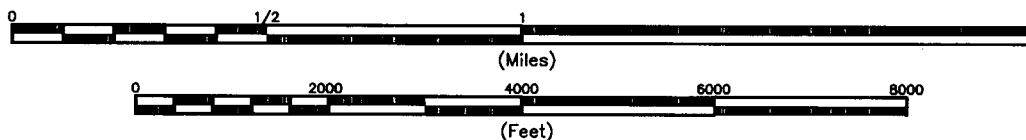
# FORT RANCH QUADRANGLE NEW MEXICO

LAT=33° 3.25' N  
LONG=103° 35.88' W

PHOTOREVISED 1973



SCALE 1:24000



CONTOUR INTERVAL 5 FEET



NORTH

1404 SLR 040504

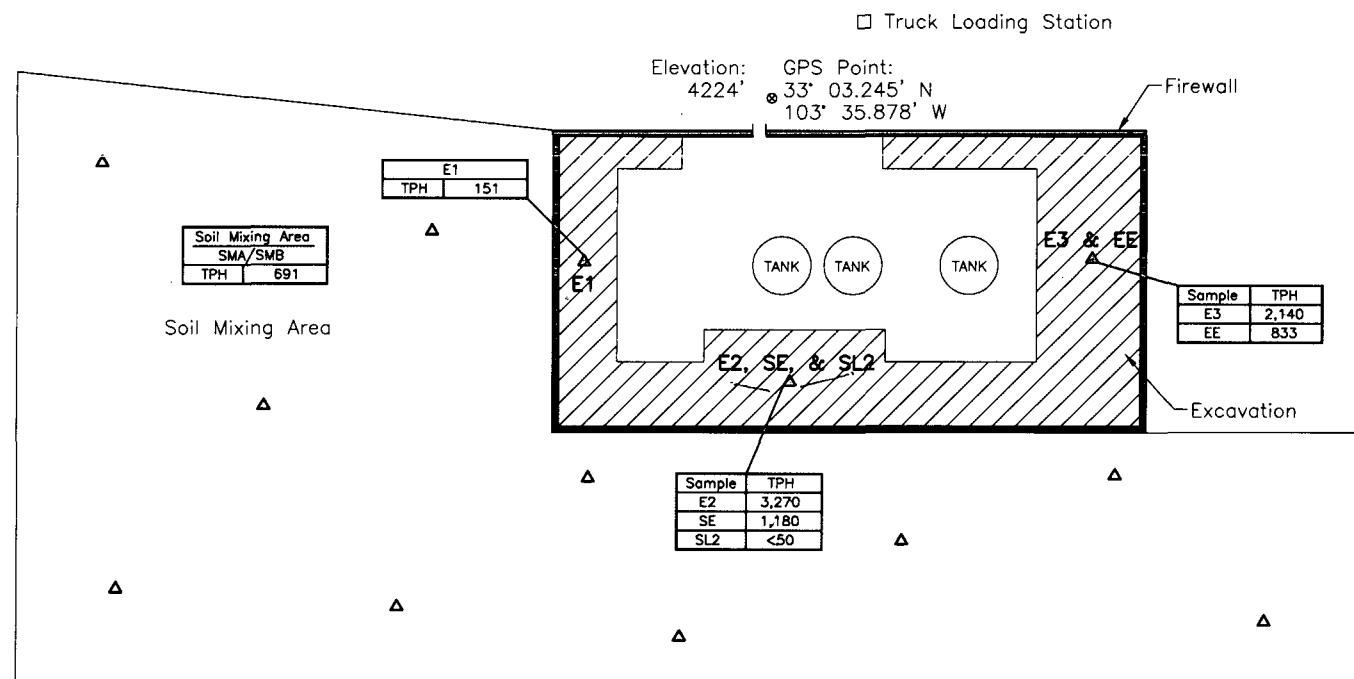
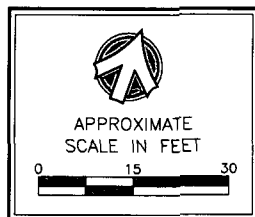


## SITE LOCATION MAP

BP PIPELINES (NORTH AMERICA) INC.  
SAUNDERS STATION LEA COUNTY, NEW MEXICO

JOB No.  
1404

FIGURE  
1



#### LEGEND

- ▲ Grab Sample Collecting Point
- △ Composite Sample Collecting Point

#### NOTES:

Sample point E2 resampled on May 7, 2004 as SE and on May 27, 2004 as SL2.

Sample point E3 resampled on May 7, 2004 as EE.

DRO (TPH) Concentrations in mg/Kg. (GRO concentrations below detection limits.)



#### SITE DETAILS

BP PIPELINES (NORTH AMERICA) INC.  
SAUNDERS STATION LEA COUNTY, NEW MEXICO

JOB No.  
1404

FIGURE  
2

Report Date: March 31, 2004  
1404

Work Order: 4032514

Page Number: 1 of 1  
Lovington,NM

## Summary Report

Will Murley  
BNC Midland  
2135 South Loop 250 West  
Midland, TX 79703

Report Date: March 31, 2004

Work Order: 4032514

Project Location: Lovington,NM  
Project Number: 1404

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 30328  | SMA/SMB     | soil   | 2004-03-24 | 10:56      | 2004-03-25    |
| 30329  | E1          | soil   | 2004-03-24 | 11:02      | 2004-03-25    |
| 30330  | E2          | soil   | 2004-03-24 | 11:05      | 2004-03-25    |
| 30331  | E3          | soil   | 2004-03-24 | 11:07      | 2004-03-25    |

| Sample - Field Code | BTEX               |                    |                         |                   | TPH DRO        | TPH GRO        |
|---------------------|--------------------|--------------------|-------------------------|-------------------|----------------|----------------|
|                     | Benzene<br>(mg/Kg) | Toluene<br>(mg/Kg) | Ethylbenzene<br>(mg/Kg) | Xylene<br>(mg/Kg) | DRO<br>(mg/Kg) | GRO<br>(mg/Kg) |
| 30328 - SMA/SMB     | <0.0500            | <0.0500            | <0.0500                 | <0.0500           | 691            | <5.00          |
| 30329 - E1          | <0.500             | <0.500             | <0.500                  | <0.500            | 151            | <50.0          |
| 30330 - E2          | <0.500             | <0.500             | <0.500                  | 0.662             | 3270           | <50.0          |
| 30331 - E3          | <0.100             | <0.100             | <0.100                  | <0.100            | 2140           | <10.0          |

### Sample: 30328 - SMA/SMB

| Param            | Flag | Result        | Units | RL   |
|------------------|------|---------------|-------|------|
| Reactivity       |      | non-reactive  |       | 0.00 |
| Hydrogen Sulfide |      | <10.0         | mg/Kg | 10.0 |
| Hydrogen Cyanide |      | <2.50         | mg/Kg | 2.50 |
| Corrosivity      |      | non-corrosive | mm/yr | 0.00 |
| pH               |      | 8.40          | s.u.  | 0.00 |
| Ignitability     |      | non-ignitable |       | 0.00 |

# 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

Will Murley  
BNC Midland  
2135 South Loop 250 West  
Midland, TX 79703

Report Date: March 31, 2004

Work Order: 4032514

Project Location: Lovington, NM  
Project Number: 1404

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 30328  | SMA/SMB     | soil   | 2004-03-24 | 10:56      | 2004-03-25    |
| 30329  | E1          | soil   | 2004-03-24 | 11:02      | 2004-03-25    |
| 30330  | E2          | soil   | 2004-03-24 | 11:05      | 2004-03-25    |
| 30331  | E3          | soil   | 2004-03-24 | 11:07      | 2004-03-25    |

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

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

  
Dr. Blair Leftwich, Director

## Analytical Report

### Sample: 30328 - SMA/SMB

|                  |                            |                     |
|------------------|----------------------------|---------------------|
| Analysis: BTEX   | Analytical Method: S 8021B | Prep Method: S 5035 |
| QC Batch: 8591   | Date Analyzed: 2004-03-29  | Analyzed By: MT     |
| Prep Batch: 7655 | Date Prepared: 2004-03-29  | Prepared By: MT     |

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL      |
|--------------|------|--------------|-------|----------|---------|
| Benzene      | 1    | <0.0500      | mg/Kg | 50       | 0.00100 |
| Toluene      |      | <0.0500      | mg/Kg | 50       | 0.00100 |
| Ethylbenzene |      | <0.0500      | mg/Kg | 50       | 0.00100 |
| Xylene       |      | <0.0500      | mg/Kg | 50       | 0.00100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | 2    | 0.924  | mg/Kg | 50       | 0.100           | 18                  | 74.4 - 114         |
| 4-Bromofluorobenzene (4-BFB) | 3    | 0.861  | mg/Kg | 50       | 0.100           | 17                  | 76.9 - 112         |

### Sample: 30328 - SMA/SMB

|                  |   |                  |
|------------------|---|------------------|
| Analysis: RCI    | Analytical Method: ASTM D 5049-90/4978-95 | Prep Method: N/A |
| QC Batch: 8508   | Date Analyzed: 2004-03-25                 | Analyzed By: JH  |
| Prep Batch: 7571 | Date Prepared: 2004-03-25                 | Prepared By: JH  |
| Analysis: RCI    | Analytical Method: S 1110                 | Prep Method: N/A |
| Analysis: RCI    | Analytical Method: SW-846 Ch. 7.1         | Prep Method: N/A |

| Parameter        | Flag | RL<br>Result  | Units | Dilution | RL   |
|------------------|------|---------------|-------|----------|------|
| Reactivity       |      | non-reactive  |       | 1        | 0.00 |
| Hydrogen Sulfide |      | <10.0         | mg/Kg | 1        | 10.0 |
| Hydrogen Cyanide |      | <2.50         | mg/Kg | 1        | 2.50 |
| Corrosivity      |      | non-corrosive | mm/yr | 1        | 0.00 |
| pH               |      | 8.40          | s.u.  | 1        | 0.00 |
| Ignitability     |      | non-ignitable |       | 1        | 0.00 |

### Sample: 30328 - SMA/SMB

|                   |                               |                  |
|-------------------|-------------------------------|------------------|
| Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A |
| QC Batch: 8595    | Date Analyzed: 2004-03-29     | Analyzed By: BP  |
| Prep Batch: 7654  | Date Prepared: 2004-03-26     | Prepared By: DS  |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 691          | mg/Kg | 1        | 50.0 |

<sup>1</sup>Sample diluted due to surfactants.

<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.



| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 230    | mg/Kg | 1        | 150          | 153              | 64.7 - 162      |

**Sample: 30328 - SMA/SMB**

|             |         |                    |            |              |        |
|-------------|---------|--------------------|------------|--------------|--------|
| Analysis:   | TPH GRO | Analytical Method: | S 8015B    | Prep Method: | S 5035 |
| QC Batch:   | 8594    | Date Analyzed:     | 2004-03-29 | Analyzed By: | MT     |
| Prep Batch: | 7655    | Date Prepared:     | 2004-03-29 | Prepared By: | MT     |

| Parameter | Flag | RL Result | Units | Dilution | RL    |
|-----------|------|-----------|-------|----------|-------|
| GRO       | 4    | <5.00     | mg/Kg | 50       | 0.100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       | 5    | 0.770  | mg/Kg | 50       | 0.100        | 15               | 51.9 - 147      |
| 4-Bromofluorobenzene (4-BFB) | 6    | 0.937  | mg/Kg | 50       | 0.100        | 19               | 50.6 - 141      |

**Sample: 30329 - E1**

|             |      |                    |            |              |        |
|-------------|------|--------------------|------------|--------------|--------|
| Analysis:   | BTEX | Analytical Method: | S 8021B    | Prep Method: | S 5035 |
| QC Batch:   | 8591 | Date Analyzed:     | 2004-03-29 | Analyzed By: | MT     |
| Prep Batch: | 7655 | Date Prepared:     | 2004-03-29 | Prepared By: | MT     |

| Parameter    | Flag | RL Result | Units | Dilution | RL      |
|--------------|------|-----------|-------|----------|---------|
| Benzene      | 7    | <0.500    | mg/Kg | 500      | 0.00100 |
| Toluene      |      | <0.500    | mg/Kg | 500      | 0.00100 |
| Ethylbenzene |      | <0.500    | mg/Kg | 500      | 0.00100 |
| Xylene       |      | <0.500    | mg/Kg | 500      | 0.00100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       | 8    | 0.916  | mg/Kg | 500      | 0.100        | 2                | 74.4 - 114      |
| 4-Bromofluorobenzene (4-BFB) | 9    | 0.889  | mg/Kg | 500      | 0.100        | 2                | 76.9 - 112      |

**Sample: 30329 - E1**

|             |         |                    |            |              |     |
|-------------|---------|--------------------|------------|--------------|-----|
| Analysis:   | TPH DRO | Analytical Method: | Mod. 8015B | Prep Method: | N/A |
| QC Batch:   | 8595    | Date Analyzed:     | 2004-03-29 | Analyzed By: | BP  |
| Prep Batch: | 7654    | Date Prepared:     | 2004-03-26 | Prepared By: | DS  |

*continued...*

<sup>4</sup>Sample diluted due to surfactants.

<sup>5</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>6</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>7</sup>Sample diluted due to surfactants.

<sup>8</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

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

sample 30329 continued...

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
| DRO       |      | 151          | mg/Kg | 1        | 50.0 |

| Surrogate     | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|---------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Triacontane |      | 163    | mg/Kg | 1        | 150             | 109                 | 64.7 - 162         |

Sample: 30329 - E1

Analysis: TPH GRO      Analytical Method: S 8015B      Prep Method: S 5035  
QC Batch: 8594      Date Analyzed: 2004-03-29      Analyzed By: MT  
Prep Batch: 7655      Date Prepared: 2004-03-29      Prepared By: MT

| Parameter | Flag          | RL<br>Result | Units | Dilution | RL    |
|-----------|---------------|--------------|-------|----------|-------|
| GRO       | <sup>10</sup> | <50.0        | mg/Kg | 500      | 0.100 |

| Surrogate                    | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | <sup>11</sup> | 0.820  | mg/Kg | 500      | 0.100           | 2                   | 51.9 - 147         |
| 4-Bromofluorobenzene (4-BFB) | <sup>12</sup> | 0.00   | mg/Kg | 500      | 0.100           | 0                   | 50.6 - 141         |

Sample: 30330 - E2

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5035  
QC Batch: 8591      Date Analyzed: 2004-03-29      Analyzed By: MT  
Prep Batch: 7655      Date Prepared: 2004-03-29      Prepared By: MT

| Parameter    | Flag          | RL<br>Result | Units | Dilution | RL      |
|--------------|---------------|--------------|-------|----------|---------|
| Benzene      | <sup>13</sup> | <0.500       | mg/Kg | 500      | 0.00100 |
| Toluene      |               | <0.500       | mg/Kg | 500      | 0.00100 |
| Ethylbenzene |               | <0.500       | mg/Kg | 500      | 0.00100 |
| Xylene       |               | 0.662        | mg/Kg | 500      | 0.00100 |

| Surrogate                    | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | <sup>14</sup> | 0.950  | mg/Kg | 500      | 0.100           | 2                   | 74.4 - 114         |
| 4-Bromofluorobenzene (4-BFB) | <sup>15</sup> | 1.26   | mg/Kg | 500      | 0.100           | 2                   | 76.9 - 112         |

<sup>10</sup>Sample diluted due to surfactants.

<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.

<sup>13</sup>Sample diluted due to surfactants.

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

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

**Sample: 30330 - E2**

|                   |                               |                  |
|-------------------|-------------------------------|------------------|
| Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A |
| QC Batch: 8595    | Date Analyzed: 2004-03-29     | Analyzed By: BP  |
| Prep Batch: 7654  | Date Prepared: 2004-03-26     | Prepared By: DS  |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 3270         | mg/Kg | 5        | 50.0 |

| Surrogate     | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|---------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Triacontane | <sup>16</sup> | 427    | mg/Kg | 5        | 30.0            | 285                 | 64.7 - 162         |

**Sample: 30330 - E2**

|                   |                            |                     |
|-------------------|----------------------------|---------------------|
| Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035 |
| QC Batch: 8594    | Date Analyzed: 2004-03-29  | Analyzed By: MT     |
| Prep Batch: 7655  | Date Prepared: 2004-03-29  | Prepared By: MT     |

| Parameter | Flag          | RL<br>Result | Units | Dilution | RL    |
|-----------|---------------|--------------|-------|----------|-------|
| GRO       | <sup>17</sup> | <50.0        | mg/Kg | 500      | 0.100 |

| Surrogate                    | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | <sup>18</sup> | 0.890  | mg/Kg | 500      | 0.100           | 2                   | 51.9 - 147         |
| 4-Bromofluorobenzene (4-BFB) | <sup>19</sup> | 1.22   | mg/Kg | 500      | 0.100           | 2                   | 50.6 - 141         |

**Sample: 30331 - E3**

|                  |                            |                     |
|------------------|----------------------------|---------------------|
| Analysis: BTEX   | Analytical Method: S 8021B | Prep Method: S 5035 |
| QC Batch: 8591   | Date Analyzed: 2004-03-29  | Analyzed By: MT     |
| Prep Batch: 7655 | Date Prepared: 2004-03-29  | Prepared By: MT     |

| Parameter    | Flag          | RL<br>Result | Units | Dilution | RL      |
|--------------|---------------|--------------|-------|----------|---------|
| Benzene      | <sup>20</sup> | <0.100       | mg/Kg | 100      | 0.00100 |
| Toluene      |               | <0.100       | mg/Kg | 100      | 0.00100 |
| Ethylbenzene |               | <0.100       | mg/Kg | 100      | 0.00100 |
| Xylene       |               | <0.100       | mg/Kg | 100      | 0.00100 |

| Surrogate                    | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | <sup>21</sup> | 0.890  | mg/Kg | 100      | 0.100           | 9                   | 74.4 - 114         |
| 4-Bromofluorobenzene (4-BFB) | <sup>22</sup> | 0.767  | mg/Kg | 100      | 0.100           | 8                   | 76.9 - 112         |

<sup>16</sup>Surrogate recovery out of range due to peak interference. QC show the process within control.

<sup>17</sup>Sample diluted due to surfactants.

<sup>18</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>19</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>20</sup>Sample diluted due to surfactants.

<sup>21</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>22</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

**Sample: 30331 - E3**

|                   |                               |                  |
|-------------------|-------------------------------|------------------|
| Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A |
| QC Batch: 8595    | Date Analyzed: 2004-03-29     | Analyzed By: BP  |
| Prep Batch: 7654  | Date Prepared: 2004-03-26     | Prepared By: DS  |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 2140         | mg/Kg | 5        | 50.0 |

| Surrogate     | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|---------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Triacontane | <sup>23</sup> | 438    | mg/Kg | 5        | 30.0            | 292                 | 64.7 - 162         |

**Sample: 30331 - E3**

|                   |                            |                     |
|-------------------|----------------------------|---------------------|
| Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035 |
| QC Batch: 8594    | Date Analyzed: 2004-03-29  | Analyzed By: MT     |
| Prep Batch: 7655  | Date Prepared: 2004-03-29  | Prepared By: MT     |

| Parameter | Flag          | RL<br>Result | Units | Dilution | RL    |
|-----------|---------------|--------------|-------|----------|-------|
| GRO       | <sup>24</sup> | <10.0        | mg/Kg | 100      | 0.100 |

| Surrogate                    | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | <sup>25</sup> | 0.706  | mg/Kg | 100      | 0.100           | 7                   | 51.9 - 147         |
| 4-Bromofluorobenzene (4-BFB) | <sup>26</sup> | 0.770  | mg/Kg | 100      | 0.100           | 8                   | 50.6 - 141         |

**Method Blank (1) QC Batch: 8591**

| Parameter    | Flag | Result  | Units | RL    |
|--------------|------|---------|-------|-------|
| Benzene      |      | <0.0100 | mg/Kg | 0.001 |
| Toluene      |      | <0.0100 | mg/Kg | 0.001 |
| Ethylbenzene |      | <0.0100 | mg/Kg | 0.001 |
| Xylene       |      | <0.0100 | mg/Kg | 0.001 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 0.961  | mg/Kg | 10       | 0.100           | 96                  | 64 - 113           |
| 4-Bromofluorobenzene (4-BFB) |      | 0.841  | mg/Kg | 10       | 0.100           | 84                  | 61 - 123           |

**Method Blank (1) QC Batch: 8594**

<sup>23</sup>Surrogate recovery out of range due to peak interference. QC show the process within control.

<sup>24</sup>Sample diluted due to surfactants.

<sup>25</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>26</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

| Parameter | Flag | Result | Units | RL  |
|-----------|------|--------|-------|-----|
| GRO       |      | 1.79   | mg/Kg | 0.1 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 0.937  | mg/Kg | 10       | 0.100        | 94               | 51.1 - 152      |
| 4-Bromofluorobenzene (4-BFB) |      | 0.883  | mg/Kg | 10       | 0.100        | 88               | 40.6 - 126      |

**Method Blank (1)** QC Batch: 8595

| Parameter | Flag | Result | Units | RL |
|-----------|------|--------|-------|----|
| DRO       |      | <50.0  | mg/Kg | 50 |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 134    | mg/Kg | 1        | 150          | 90               | 64.7 - 162      |

**Duplicate (1)** QC Batch: 8508

| Param            | Duplicate Result | Sample Result | Units | Dilution | RPD | RPD Limit |
|------------------|------------------|---------------|-------|----------|-----|-----------|
| Reactivity       | non-reactive     | non-reactive  |       | 1        | 0   |           |
| Hydrogen Sulfide | 0.00             | 0.00          | mg/Kg | 1        | 0   | 20        |
| Hydrogen Cyanide | 0.00             | 0.00          | mg/Kg | 1        | 0   | 20        |
| Corrosivity      | non-corrosive    | non-corrosive | mm/yr | 1        | 0   | 20        |
| pH               | 8.40             | 8.40          | s.u.  | 1        | 0   | 20        |
| Ignitability     | non-ignitable    | non-ignitable |       | 1        | 0   | 20        |

**Laboratory Control Spike (LCS-1)** QC Batch: 8591

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| Benzene      | 1.01       | 1.01        | mg/Kg | 10   | 0.100        | <0.0333       | 101  | 0   | 76 - 115   | 35        |
| Toluene      | 0.969      | 0.967       | mg/Kg | 10   | 0.100        | <0.0353       | 97   | 0   | 75.6 - 115 | 36        |
| Ethylbenzene | 0.960      | 0.951       | mg/Kg | 10   | 0.100        | <0.0339       | 96   | 1   | 76.3 - 112 | 40        |
| Xylene       | 2.90       | 2.87        | mg/Kg | 10   | 0.300        | <0.103        | 96   | 1   | 75.2 - 114 | 39        |

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

| Surrogate                    | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|------------------------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| Trifluorotoluene (TFT)       | 0.957      | 0.898       | mg/Kg | 10   | 0.100        | 96       | 90        | 74.4 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 0.933      | 0.889       | mg/Kg | 10   | 0.100        | 93       | 89        | 76.9 - 112 |

**Laboratory Control Spike (LCS-1)** QC Batch: 8594

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| GRO   | 10.4       | 10.6        | mg/Kg | 10   | 1.00         | <0.381        | 104  | 2   | 67.2 - 127 | 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 | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|------------------------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| Trifluorotoluene (TFT)       | 0.914      | 0.917       | mg/Kg | 10   | 0.100        | 91       | 92        | 51.9 - 147 |
| 4-Bromofluorobenzene (4-BFB) | 0.939      | 0.952       | mg/Kg | 10   | 0.100        | 94       | 95        | 50.6 - 141 |

**Laboratory Control Spike (LCS-1)** QC Batch: 8595

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| DRO   | 210        | 204         | mg/Kg | 1    | 250          | <12.0         | 84   | 3   | 64.2 - 138 | 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 | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| n-Triacontane | 127        | 128         | mg/Kg | 1    | 150          | 85       | 86        | 64.7 - 162 |

**Matrix Spike (MS-1)** QC Batch: 8591

| Param        | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|--------------|-----------|------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| Benzene      | 0.839     | 0.747      | mg/Kg | 10   | 0.100        | <0.0333       | 84   | 12  | 52.2 - 110 | 22        |
| Toluene      | 0.825     | 0.738      | mg/Kg | 10   | 0.100        | <0.0353       | 82   | 11  | 43.6 - 125 | 20        |
| Ethylbenzene | 0.832     | 0.743      | mg/Kg | 10   | 0.100        | <0.0339       | 83   | 11  | 11.8 - 158 | 15        |
| Xylene       | 2.52      | 2.26       | mg/Kg | 10   | 0.300        | <0.103        | 84   | 11  | 0 - 183    | 19        |

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

| Surrogate                    | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|------------------------------|-----------|------------|-------|------|--------------|---------|----------|------------|
| Trifluorotoluene (TFT)       | 0.829     | 0.723      | mg/Kg | 10   | 0.1          | 83      | 72       | 36.9 - 133 |
| 4-Bromofluorobenzene (4-BFB) | 0.812     | 0.717      | mg/Kg | 10   | 0.1          | 81      | 72       | 0 - 207    |

**Matrix Spike (MS-1)** QC Batch: 8594

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| GRO   | 7.60      | 7.39       | mg/Kg | 50   | 1.00         | <1.91         | 15   | 3   | 0 - 169    | 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 | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|------------------------------|-----------|------------|-------|------|--------------|---------|----------|------------|
| Trifluorotoluene (TFT)       | 0.785     | 0.731      | mg/Kg | 50   | 0.1          | 16      | 15       | 0 - 202    |
| 4-Bromofluorobenzene (4-BFB) | 0.962     | 0.931      | mg/Kg | 50   | 0.1          | 19      | 19       | 0 - 2644   |

**Matrix Spike (MS-1)** QC Batch: 8595

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| DRO   | 191       | 193        | mg/Kg | 1    | 250          | <12.0         | 76   | 1   | 62.4 - 128 | 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 | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---------------|-----------|------------|-------|------|--------------|---------|----------|------------|
| n-Triacontane | 121       | 120        | mg/Kg | 1    | 150          | 81      | 80       | 64.7 - 162 |

Standard (ICV-1) QC Batch: 8591

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Benzene      |      | mg/L  | 0.100           | 0.104            | 104                   | 85 - 115                | 2004-03-29    |
| Toluene      |      | mg/L  | 0.100           | 0.0989           | 99                    | 85 - 115                | 2004-03-29    |
| Ethylbenzene |      | mg/L  | 0.100           | 0.0976           | 98                    | 85 - 115                | 2004-03-29    |
| Xylene       |      | mg/L  | 0.300           | 0.294            | 98                    | 85 - 115                | 2004-03-29    |

Standard (CCV-1) QC Batch: 8591

| Param        | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|--------------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| Benzene      |      | mg/L  | 0.100           | 0.101            | 101                   | 85 - 115                | 2004-03-29    |
| Toluene      |      | mg/L  | 0.100           | 0.0980           | 98                    | 85 - 115                | 2004-03-29    |
| Ethylbenzene |      | mg/L  | 0.100           | 0.0967           | 97                    | 85 - 115                | 2004-03-29    |
| Xylene       |      | mg/L  | 0.300           | 0.293            | 98                    | 85 - 115                | 2004-03-29    |

Standard (ICV-1) QC Batch: 8594

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/L  | 1.00            | 1.04             | 104                   | 85 - 115                | 2004-03-29    |

Standard (CCV-1) QC Batch: 8594

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| GRO   |      | mg/L  | 1.00            | 1.01             | 101                   | 85 - 115                | 2004-03-29    |

Standard (ICV-1) QC Batch: 8595

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------|------------------|-----------------------|-------------------------|---------------|
| DRO   |      | mg/Kg | 250             | 212              | 85                    | 64.2 - 138              | 2004-03-29    |

Standard (CCV-1) QC Batch: 8595

Report Date: March 31, 2004  
1404

Work Order: 4032514

Page Number: 10 of 11  
Lovington, NM

| 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                   | 217                    | 87                          | 64.2 - 138                    | 2004-03-29       |



|  |  |  |  |   |  |  |  |   |  |  |  |
|--|--|--|--|---|--|--|--|---|--|--|--|
| 6701 Aberdeen Avenue, Ste. 9<br>Lubbock, Texas 79424<br>Tel (806) 794-1296<br>Fax (806) 794-1298<br>1 (800) 378-1296 |  |  |  | <h2 style="margin: 0;">TraceAnalysis, Inc.</h2> |  |  |  | 155 McCutcheon, Suite H<br>El Paso, Texas 79932<br>Tel (915) 585-3443<br>Fax (915) 585-4944<br>1 (888) 588-3443 |  |  |  |
| Company Name: <u>BNC</u>   |  |  |  | Phone #: <u>432-686-2086</u>                    |  |  |  |   |  |  |  |
| Address: (Street, City, Zip)<br><u>2135 S Loop 250 West Midland TX 79703</u>   |  |  |  | Fax #: <u>432-686-0186</u>                      |  |  |  |   |  |  |  |
| Contact Person: <u>Will Murley</u>   |  |  |  |   |  |  |  |   |  |  |  |
| Invoice to:<br>(If different from above)   |  |  |  |   |  |  |  |   |  |  |  |
| Project #: <u>1404</u>   |  |  |  | Project Name: <u>SAMPLES STATION</u>            |  |  |  |   |  |  |  |
| Project Location: <u>LOVINGTON NM</u>  |  |  |  | Sampler Signature: <u>W-M</u>                   |  |  |  |   |  |  |  |

| CHAIN-OF-CUSTODY AND ANALYSIS REQUEST              |                          |            |               |        |      |     |        |                     |                  |                                |      |          |         |                |                |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      |      |      |  |
|--|--------------------------|------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|----------|---------|----------------|----------------|-------------------|-----------|---|-------------------------------------|----------------|---------------------|-----------------|-----|---------------------|--------------------------|---------------|----------------------|------------|------|---|------|------|------|--|
| LAB Order ID # <u>4032514</u>                      |                          |            |               |        |      |     |        |                     |                  |                                |      |          |         |                |                |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      |      |      |  |
| ANALYSIS REQUEST<br>(Circle or Specify Method No.) |                          |            |               |        |      |     |        |                     |                  |                                |      |          |         |                |                |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      |      |      |  |
| LAB #<br>(LAB USE ONLY)                            | FIELD CODE               | CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      | SAMPLING |         | MTBE 8021B/602 | BTEX 8021B/602 | TPH 418 1/TX 1005 | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007 | 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 | HPLC | Turn Around Time if different from standard | Hold |      |      |  |
|  |                          |            |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE      | NONE    |                |                |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      | DATE | TIME |  |
| 30328  | SMA/SMB (Need Composite) | 2          | 402           |        | ✓    |     |        |                     |                  |                                | ✓    |          | 3/24/04 | 1052/04        | ✓              |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      |      |      |  |
| 09   | E 1                      | 1          |               |        |      |     |        |                     |                  |                                | ✓    |          |         | 1102           | ✓              |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      |      |      |  |
| 30   | E 2                      | 1          |               |        |      |     |        |                     |                  |                                | ✓    |          |         | 1105           | ✓              |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      |      |      |  |
| 31   | E 3                      | 1          |               |        |      |     |        |                     |                  |                                | ✓    |          |         | 1107           | ✓              |                   |           |   |                                     |                |                     |                 |     |                     |                          |               |                      |            |      |   |      |      |      |  |

|  |  |  |  |   |          |
|--|--|--|--|---|----------|
| Relinquished by: <u>Will Murley</u> Date: <u>3/24/04</u> Time: <u>1430</u>   |  | Received by: <u>Helene Helton</u> Date: <u>3/24/04</u> Time: <u>1430</u>       |  | <b>LAB USE ONLY</b><br>Intact <input checked="" type="radio"/> Y <input type="radio"/> N<br>Headspace <input type="radio"/> Y <input type="radio"/> N<br>Temp <u>4°C</u><br>Log-in Review <u>MA</u> | REMARKS: |
| Relinquished by: <u>Helene Helton</u> Date: <u>3/24/04</u> Time: <u>1700</u> |  | Received by: _____ Date: _____ Time: _____                                     |  |   |          |
| Relinquished by: _____ Date: _____ Time: _____                               |  | Received at Laboratory by: <u>U.ck</u> Date: <u>3/25/04</u> Time: <u>10:59</u> |  |   |          |

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6701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
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# TraceAnalysis, Inc.

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

4032514

Company Name:

BNC

Phone #:

432-686-0086

Address:

(Street, City, Zip)

Fax #:

432-686-0186

Contact Person:

Will Murley

Invoice to:

(If different from above)

Project #:

1404

Project Name:

SANDERS STATION

Project Location:

LOVINGTON NM

Sampler Signature:

WM

| LAB #<br>(LAB USE ONLY) | FIELD CODE                    | # CONTAINERS | Volume/Amount | MATRIX |      |     |        | PRESERVATIVE METHOD |                  |                                |      |     |      | SAMPLING |  | DATE    | TIME    | MTBE 8021B/602 | BTEX 8021B/602 | TPH 418.1/TX1005 | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | TCLP Pesticides | RCI | GC/MS Vol 8260B/624 | GC/MS Semi Vol 8270C/625 | PCBs 8082/608 | Pesticides 8081A/608 | BOD, TSS, pH | TPH 8016 0.001/0.002 | Turn Around Time if different from standard | Hold |
|-------------------------|-------------------------------|--------------|---------------|--------|------|-----|--------|---------------------|------------------|--------------------------------|------|-----|------|----------|--|---------|---------|----------------|----------------|------------------|-----------|--|-------------------------------------|----------------|---------------------|-----------------|-----|---------------------|--------------------------|---------------|----------------------|--------------|----------------------|---|------|
|                         |                               |              |               | WATER  | SOIL | AIR | SLUDGE | HCl                 | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | NaOH | ICE | NONE |          |  |         |         |                |                |                  |           |  |                                     |                |                     |                 |     |                     |                          |               |                      |              |                      |   |      |
| 30328                   | SMA/SMB (Need composite date) | 1            | 4oz           |        | ✓    |     |        |                     |                  |                                |      | ✓   |      |          |  | 3/24/04 | 1052107 | ✓              | ✓              | ✓                | ✓         |  |                                     |                |                     |                 |     |                     |                          |               |                      |              |                      |   |      |
| 29                      | E1                            | 1            | ✓             |        | ✓    |     |        |                     |                  |                                |      | ✓   |      |          |  | ✓       | 1102    | ✓              | ✓              | ✓                | ✓         |  |                                     |                |                     |                 |     |                     |                          |               |                      |              |                      |   |      |
| 30                      | E2                            | 1            | ✓             |        | ✓    |     |        |                     |                  |                                |      | ✓   |      |          |  | ✓       | 1105    | ✓              | ✓              | ✓                | ✓         |  |                                     |                |                     |                 |     |                     |                          |               |                      |              |                      |   |      |
| 31                      | E3                            | 1            | ✓             |        | ✓    |     |        |                     |                  |                                |      | ✓   |      |          |  | ✓       | 1107    | ✓              | ✓              | ✓                | ✓         |  |                                     |                |                     |                 |     |                     |                          |               |                      |              |                      |   |      |

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Will Murley

3/24/04

1430

Helene Shelton

3/24/04

1430

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Helene Shelton

3/24/04

1700

Relinquished by:

Date:

Time:

Received at Laboratory by:

Date:

Time:

Helene Shelton

3/24/04

1700

Helene Shelton

3/24/04

10:54

### LAB USE ONLY

Intact: ☒ Y ☐ NHeadspace: ☒ Y ☐ N

Temp: 4°C

Log-in Review: MA

REMARKS:

☐ Check If Special Reporting Limits Are Needed

3/31/04

Carrier #

Zone Star P524073

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

5 samples HS

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Report Date: May 18, 2004  
1404

Work Order: 4051014

Page Number: 2 of 2  
Lovington, NM

## Summary Report

Will Murley  
BNC Midland  
2135 South Loop 250 West  
Midland, TX 79703

Report Date: May 18, 2004

Work Order: 4051014

Project Location: Lovington, NM  
Project Number: 1404

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 33466  | SE          | soil   | 2004-05-07 | 11:31      | 2004-05-10    |
| 33467  | EE          | soil   | 2004-05-07 | 11:34      | 2004-05-10    |

| Sample - Field Code | BTEX               |                    |                         |                   | TPH DRO        | TPH GRO        |
|---------------------|--------------------|--------------------|-------------------------|-------------------|----------------|----------------|
|                     | Benzene<br>(mg/Kg) | Toluene<br>(mg/Kg) | Ethylbenzene<br>(mg/Kg) | Xylene<br>(mg/Kg) | DRO<br>(mg/Kg) | GRO<br>(mg/Kg) |
| 33466 - SE          | <0.100             | <0.100             | <0.100                  | <0.100            | 1180           | <10.0          |
| 33467 - EE          | <0.0100            | <0.0100            | <0.0100                 | <0.0100           | 833            | <1.00          |

## Analytical and Quality Control Report

Will Murley  
BNC Midland  
2135 South Loop 250 West  
Midland, TX 79703

Report Date: May 18, 2004

Work Order: 4051014

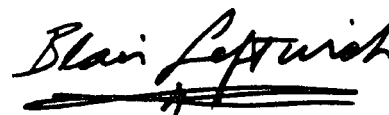
Project Location: Lovington, NM  
Project Number: 1404

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

| Sample | Description | Matrix | Date<br>Taken | Time<br>Taken | Date<br>Received |
|--------|-------------|--------|---------------|---------------|------------------|
| 33466  | SE          | soil   | 2004-05-07    | 11:31         | 2004-05-10       |
| 33467  | EE          | soil   | 2004-05-07    | 11:34         | 2004-05-10       |

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

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

## Analytical Report

Sample: 33466 - SE

Analysis: BTEX  
QC Batch: 9712  
Prep Batch: 8616

Analytical Method: S 8021B  
Date Analyzed: 2004-05-17  
Date Prepared: 2004-05-17

Prep Method: S 5035  
Analyzed By: MT  
Prepared By: MT

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL      |
|--------------|------|--------------|-------|----------|---------|
| Benzene      | 1    | <0.100       | mg/Kg | 100      | 0.00100 |
| Toluene      |      | <0.100       | mg/Kg | 100      | 0.00100 |
| Ethylbenzene |      | <0.100       | mg/Kg | 100      | 0.00100 |
| Xylene       |      | <0.100       | mg/Kg | 100      | 0.00100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | 2    | 0.686  | mg/Kg | 100      | 0.100           | 7                   | 74.4 - 114         |
| 4-Bromofluorobenzene (4-BFB) | 3    | 0.901  | mg/Kg | 100      | 0.100           | 9                   | 76.9 - 112         |

Sample: 33466 - SE

Analysis: TPH DRO  
QC Batch: 9672  
Prep Batch: 8588

Analytical Method: Mod. 8015B  
Date Analyzed: 2004-05-14  
Date Prepared: 2004-05-14

Prep Method: N/A  
Analyzed By: BP  
Prepared By: DS

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 1180         | mg/Kg | 5        | 50.0 |

| Surrogate     | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|---------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Triacontane | 4    | 292    | mg/Kg | 5        | 30.0            | 195                 | 64.7 - 162         |

Sample: 33466 - SE

Analysis: TPH GRO  
QC Batch: 9713  
Prep Batch: 8616

Analytical Method: S 8015B  
Date Analyzed: 2004-05-17  
Date Prepared: 2004-05-17

Prep Method: S 5035  
Analyzed By: MT  
Prepared By: MT

| Parameter | Flag | RL<br>Result | Units | Dilution | RL    |
|-----------|------|--------------|-------|----------|-------|
| GRO       | 5    | <10.0        | mg/Kg | 100      | 0.100 |

| Surrogate              | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT) | 6    | 0.675  | mg/Kg | 100      | 0.100           | 7                   | 51.9 - 147         |

continued ...

<sup>1</sup> Sample diluted due to surfactants.

<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.

<sup>4</sup> Surrogate recovery out of range due to peak interference. QC show the process within control.

<sup>5</sup> Sample diluted due to surfactants.

<sup>6</sup> Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

sample continued ...

| Surrogate                    | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| 4-Bromofluorobenzene (4-BFB) | <sup>7</sup> | 1.13   | mg/Kg | 100      | 0.100        | 11               | 50.6 - 141      |

**Sample: 33467 - EE**

|                  |                            |                     |
|------------------|----------------------------|---------------------|
| Analysis: BTEX   | Analytical Method: S 8021B | Prep Method: S 5035 |
| QC Batch: 9712   | Date Analyzed: 2004-05-17  | Analyzed By: MT     |
| Prep Batch: 8616 | Date Prepared: 2004-05-17  | Prepared By: MT     |

| Parameter    | Flag | RL Result | Units | Dilution | RL      |
|--------------|------|-----------|-------|----------|---------|
| Benzene      |      | <0.0100   | mg/Kg | 10       | 0.00100 |
| Toluene      |      | <0.0100   | mg/Kg | 10       | 0.00100 |
| Ethylbenzene |      | <0.0100   | mg/Kg | 10       | 0.00100 |
| Xylene       |      | <0.0100   | mg/Kg | 10       | 0.00100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 0.877  | mg/Kg | 10       | 0.100        | 88               | 74.4 - 114      |
| 4-Bromofluorobenzene (4-BFB) |      | 0.872  | mg/Kg | 10       | 0.100        | 87               | 76.9 - 112      |

**Sample: 33467 - EE**

|                   |                               |                  |
|-------------------|-------------------------------|------------------|
| Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A |
| QC Batch: 9672    | Date Analyzed: 2004-05-14     | Analyzed By: BP  |
| Prep Batch: 8588  | Date Prepared: 2004-05-14     | Prepared By: DS  |

| Parameter | Flag | RL Result | Units | Dilution | RL   |
|-----------|------|-----------|-------|----------|------|
| DRO       |      | 833       | mg/Kg | 5        | 50.0 |

| Surrogate     | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane | <sup>8</sup> | 222    | mg/Kg | 5        | 30.0         | 148              | 64.7 - 162      |

**Sample: 33467 - EE**

|                   |                            |                     |
|-------------------|----------------------------|---------------------|
| Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035 |
| QC Batch: 9713    | Date Analyzed: 2004-05-17  | Analyzed By: MT     |
| Prep Batch: 8616  | Date Prepared: 2004-05-17  | Prepared By: MT     |

| Parameter | Flag | RL Result | Units | Dilution | RL    |
|-----------|------|-----------|-------|----------|-------|
| GRO       |      | <1.00     | mg/Kg | 10       | 0.100 |

<sup>7</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>8</sup>Changed spike amount from 150 to 30 due to post prep dilution.

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 0.867  | mg/Kg | 10       | 0.100        | 87               | 51.9 - 147      |
| 4-Bromofluorobenzene (4-BFB) |      | 0.978  | mg/Kg | 10       | 0.100        | 98               | 50.6 - 141      |

**Method Blank (1)** QC Batch: 9672

| Parameter | Flag | Result | Units | RL |
|-----------|------|--------|-------|----|
| DRO       |      | <50.0  | mg/Kg | 50 |

| Surrogate     | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---------------|------|--------|-------|----------|--------------|------------------|-----------------|
| n-Triacontane |      | 126    | mg/Kg | 1        | 150          | 84               | 64.7 - 162      |

**Method Blank (1)** QC Batch: 9712

| Parameter    | Flag | Result  | Units | RL    |
|--------------|------|---------|-------|-------|
| Benzene      |      | <0.0100 | mg/Kg | 0.001 |
| Toluene      |      | <0.0100 | mg/Kg | 0.001 |
| Ethylbenzene |      | <0.0100 | mg/Kg | 0.001 |
| Xylene       |      | <0.0100 | mg/Kg | 0.001 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 0.960  | mg/Kg | 10       | 0.100        | 96               | 64 - 113        |
| 4-Bromofluorobenzene (4-BFB) |      | 0.787  | mg/Kg | 10       | 0.100        | 79               | 61 - 123        |

**Method Blank (1)** QC Batch: 9713

| Parameter | Flag | Result | Units | RL  |
|-----------|------|--------|-------|-----|
| GRO       |      | 1.70   | mg/Kg | 0.1 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 0.958  | mg/Kg | 10       | 0.100        | 96               | 51.1 - 152      |
| 4-Bromofluorobenzene (4-BFB) |      | 0.860  | mg/Kg | 10       | 0.100        | 86               | 40.6 - 126      |

**Laboratory Control Spike (LCS-1)** QC Batch: 9672

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| DRO   | 239        | 238         | mg/Kg | 1    | 250          | <12.0         | 96   | 0   | 64.2 - 138 | 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 | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| n-Triacontane | 127        | 127         | mg/Kg | 1    | 150          | 84       | 84        | 64.7 - 162 |

**Laboratory Control Spike (LCS-1)** QC Batch: 9712

| Param        | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|--------------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| Benzene      | 0.888      | 0.886       | mg/Kg | 10   | 0.100        | <0.0333       | 89   | 0   | 76 - 115   | 35        |
| Toluene      | 0.934      | 0.947       | mg/Kg | 10   | 0.100        | <0.0353       | 93   | 1   | 75.6 - 115 | 36        |
| Ethylbenzene | 0.954      | 0.968       | mg/Kg | 10   | 0.100        | <0.0339       | 95   | 2   | 76.3 - 112 | 40        |
| Xylene       | 2.90       | 2.93        | mg/Kg | 10   | 0.300        | <0.103        | 96   | 1   | 75.2 - 114 | 39        |

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

| Surrogate                    | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|------------------------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| Trifluorotoluene (TFT)       | 0.968      | 0.988       | mg/Kg | 10   | 0.100        | 97       | 99        | 74.4 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 0.911      | 0.914       | mg/Kg | 10   | 0.100        | 91       | 91        | 76.9 - 112 |

**Laboratory Control Spike (LCS-1)** QC Batch: 9713

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| GRO   | 11.0       | 11.5        | mg/Kg | 10   | 1.00         | <0.381        | 110  | 4   | 67.2 - 127 | 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 | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|------------------------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| Trifluorotoluene (TFT)       | 0.982      | 0.998       | mg/Kg | 10   | 0.100        | 98       | 100       | 51.9 - 147 |
| 4-Bromofluorobenzene (4-BFB) | 0.993      | 1.02        | mg/Kg | 10   | 0.100        | 99       | 102       | 50.6 - 141 |

**Matrix Spike (MS-1)** QC Batch: 9672

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| DRO   | 209       | 213        | mg/Kg | 1    | 250          | <12.0         | 84   | 2   | 62.4 - 128 | 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 | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---------------|-----------|------------|-------|------|--------------|---------|----------|------------|
| n-Triacontane | 120       | 121        | mg/Kg | 1    | 150          | 80      | 80       | 64.7 - 162 |

**Matrix Spike (MS-1)** QC Batch: 9713

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| GRO   | 12.6      | 12.7       | mg/Kg | 10   | 1.00         | <0.381        | 126  | 1   | 0 - 169    | 20        |

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



| Surrogate                    | MS<br>Result | MSD<br>Result | Units | Dil. | Spike<br>Amount | MS<br>Rec. | MSD<br>Rec. | Rec.<br>Limit |
|------------------------------|--------------|---------------|-------|------|-----------------|------------|-------------|---------------|
| Trifluorotoluene (TFT)       | 1.06         | 1.07          | mg/Kg | 10   | 0.1             | 106        | 107         | 0 - 202       |
| 4-Bromofluorobenzene (4-BFB) | 1.06         | 1.09          | mg/Kg | 10   | 0.1             | 106        | 109         | 0 - 2644      |

Standard (ICV-1) QC Batch: 9672

| 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                   | 241                    | 96                          | 64.2 - 138                    | 2004-05-14       |

Standard (CCV-1) QC Batch: 9672

| 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                    | 101                         | 64.2 - 138                    | 2004-05-14       |

Standard (ICV-1) QC Batch: 9712

| 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 |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/Kg | 0.100                 | 0.0873                 | 87                          | 85 - 115                      | 2004-05-17       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0936                 | 94                          | 85 - 115                      | 2004-05-17       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0957                 | 96                          | 85 - 115                      | 2004-05-17       |
| Xylene       |      | mg/Kg | 0.300                 | 0.291                  | 97                          | 85 - 115                      | 2004-05-17       |

Standard (CCV-1) QC Batch: 9712

| 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 |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/Kg | 0.100                 | 0.0910                 | 91                          | 85 - 115                      | 2004-05-17       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0980                 | 98                          | 85 - 115                      | 2004-05-17       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.100                  | 100                         | 85 - 115                      | 2004-05-17       |
| Xylene       |      | mg/Kg | 0.300                 | 0.306                  | 102                         | 85 - 115                      | 2004-05-17       |

Standard (ICV-1) QC Batch: 9713

| 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/L  | 1.00                  | 1.00                   | 100                         | 85 - 115                      | 2004-05-17       |

Standard (CCV-1) QC Batch: 9713

Report Date: May 18, 2004  
1404

Work Order: 4051014

Page Number: 7 of 8  
Lovington, NM

| 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/L  | 1.00                  | 1.12                   | 112                         | 85 - 115                      | 2004-05-17       |

[illegible]

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

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## Analytical and Quality Control Report

Will Murley  
BNC Midland  
2135 South Loop 250 West  
Midland, TX 79703

Report Date: June 3, 2004

Work Order: 4052811

Project Location: Lovington, NM  
Project Name: Saunders Station  
Project Number: 1404

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

| Sample | Description | Matrix | Date<br>Taken | Time<br>Taken | Date<br>Received |
|--------|-------------|--------|---------------|---------------|------------------|
| 35460  | SL-2        | soil   | 2004-05-27    | 12:38         | 2004-05-28       |

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

This report consists of a total of 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

## Analytical Report

### Sample: 35460 - SL-2

|                   |                               |                  |
|-------------------|-------------------------------|------------------|
| Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A |
| QC Batch: 10084   | Date Analyzed: 2004-05-29     | Analyzed By: BP  |
| Prep Batch: 8930  | Date Prepared: 2004-05-28     | Prepared By: DS  |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | <50.0        | mg/Kg | 1        | 50.0 |

| Surrogate     | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|---------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Triacontane |      | 139    | mg/Kg | 1        | 150             | 93                  | 64.7 - 162         |

### Sample: 35460 - SL-2

|                   |                            |                     |
|-------------------|----------------------------|---------------------|
| Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035 |
| QC Batch: 10088   | Date Analyzed: 2004-05-28  | Analyzed By: MS     |
| Prep Batch: 8932  | Date Prepared: 2004-05-28  | Prepared By: MS     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL    |
|-----------|------|--------------|-------|----------|-------|
| GRO       |      | <1.00        | mg/Kg | 10       | 0.100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 0.913  | mg/Kg | 10       | 0.100           | 91                  | 70 - 130           |
| 4-Bromofluorobenzene (4-BFB) |      | 0.983  | mg/Kg | 10       | 0.100           | 98                  | 70 - 130           |

### Method Blank (1) QC Batch: 10084

| Parameter | Flag | Result | Units | RL |
|-----------|------|--------|-------|----|
| DRO       |      | <50.0  | mg/Kg | 50 |

| Surrogate     | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|---------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Triacontane |      | 149    | mg/Kg | 1        | 150             | 99                  | 64.7 - 162         |

### Method Blank (1) QC Batch: 10088

| Parameter | Flag | Result | Units | RL  |
|-----------|------|--------|-------|-----|
| GRO       |      | 1.92   | mg/Kg | 0.1 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 1.02   | mg/Kg | 10       | 0.100           | 102                 | 70 - 130           |
| 4-Bromofluorobenzene (4-BFB) |      | 0.900  | mg/Kg | 10       | 0.100           | 90                  | 70 - 130           |

**Laboratory Control Spike (LCS-1)** QC Batch: 10084

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| DRO   | 237        | 238         | mg/Kg | 1    | 250          | <12.0         | 95   | 0   | 64.2 - 138 | 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 | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| n-Triacontane | 144        | 144         | mg/Kg | 1    | 150          | 96       | 96        | 64.7 - 162 |

**Laboratory Control Spike (LCS-1)** QC Batch: 10088

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|------------|-------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| GRO   | 11.0       | 10.5        | mg/Kg | 10   | 1.00         | <0.381        | 110  | 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 | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|------------------------------|------------|-------------|-------|------|--------------|----------|-----------|------------|
| Trifluorotoluene (TFT)       | 1.02       | 1.08        | mg/Kg | 10   | 0.100        | 102      | 108       | 70 - 130   |
| 4-Bromofluorobenzene (4-BFB) | 1.06       | 1.05        | mg/Kg | 10   | 0.100        | 106      | 105       | 70 - 130   |

**Matrix Spike (MS-1)** QC Batch: 10084

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| DRO   | 253       | 257        | mg/Kg | 1    | 250          | <12.0         | 101  | 2   | 62.4 - 128 | 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 | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---------------|-----------|------------|-------|------|--------------|---------|----------|------------|
| n-Triacontane | 130       | 130        | mg/Kg | 1    | 150          | 87      | 87       | 64.7 - 162 |

**Matrix Spike (MS-1)** QC Batch: 10088

| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|-------|-----------|------------|-------|------|--------------|---------------|------|-----|------------|-----------|
| GRO   | 10.3      | 10.2       | mg/Kg | 10   | 1.00         | <0.381        | 103  | 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 | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|------------------------------|-----------|------------|-------|------|--------------|---------|----------|------------|
| Trifluorotoluene (TFT)       | 0.800     | 0.902      | mg/Kg | 10   | 0.1          | 80      | 90       | 70 - 130   |
| 4-Bromofluorobenzene (4-BFB) | 1.02      | 1.03       | mg/Kg | 10   | 0.1          | 102     | 103      | 70 - 130   |

**Standard (ICV-1)** QC Batch: 10084

Report Date: June 3, 2004  
1404

Work Order: 4052811  
Saunders Station

Page Number: 4 of 5  
Lovington, NM

| 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                   | 245                    | 98                          | 64.2 - 138                    | 2004-05-29       |

Standard (CCV-1) QC Batch: 10084

| 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                   | 275                    | 110                         | 64.2 - 138                    | 2004-05-29       |

Standard (ICV-1) QC Batch: 10088

| 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/L  | 1.00                  | 1.08                   | 108                         | 85 - 115                      | 2004-05-28       |

Standard (CCV-1) QC Batch: 10088

| 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/L  | 1.00                  | 1.04                   | 104                         | 85 - 115                      | 2004-05-28       |

# TraceAnalysis, Inc.

155 McCutcheon, Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (800) 588-3443

LAB Order ID # 4052811

|                   |             |
|-------------------|-------------|
| Project Location: | Sampler Sig |
| LOVINGTON, NM     | Wm          |

## (Circle or Specify Method No.)

|                      |                |             |                            |                |             |   |   |
|----------------------|----------------|-------------|----------------------------|----------------|-------------|---|---|
| Relinquished by:     | Date:          | Time:       | Received by:               | Date:          | Time:       | <b>LAB USE ONLY</b><br>Intact <u>Y / N</u><br>Headspace <u>Y / N</u><br>Temp <u>30</u> °<br>Log-in Review <u>MF</u> | REMARKS:<br><br><input type="checkbox"/> Check If Special Reporting Limits Are Needed |
| <i>Wilemberg</i>     | <i>5/27/04</i> | <i>1630</i> | <i>Luisa Shelton</i>       | <i>5-27-04</i> | <i>4:50</i> |   |   |
| Relinquished by:     | Date:          | Time:       | Received by:               | Date:          | Time:       |   |   |
| <i>Luisa Shelton</i> | <i>5/27/04</i> | <i>1930</i> |                            |                |             |   |   |
| Relinquished by:     | Date:          | Time:       | Received at Laboratory by: | Date:          | Time:       |   |   |
|                      |                |             | <i>Nick Dem</i>            | <i>5-28-04</i> | <i>9:51</i> |   |   |

ORIGINAL COPY

Intact Y / N  
Headspace Y / N  
Temp 3°C  
Log-in Review MT

☐ Check If Special Reporting Limits Are Needed

Carrier # Lone Star P924285



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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

### Release Notification and Corrective Action

#### OPERATOR

xx Initial Report ☐ Final Report

|                 |                        |               |                  |
|-----------------|------------------------|---------------|------------------|
| Name of Company | BP Pipelines (NA) Inc. | Contact       | Mike Stansifer   |
| Address         | 502 N. West Avenue     | Telephone No. | 806-897-7003     |
| Facility Name   | Saunders Station       | Facility Type | Pipeline station |
| Surface Owner   | BP Pipelines           | Mineral Owner | NA               |
|                 |                        | Lease No.     | NA               |

#### LOCATION OF RELEASE

|             |         |          |       |               |                  |               |                |        |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|             | 3       | 15       | 33    |               |                  |               |                | Lea    |

Latitude N 33 03.223 Longitude W103.35.84

#### NATURE OF RELEASE

|   |   |                   |          |                            |          |
|---|---|-------------------|----------|----------------------------|----------|
| Type of Release                           | Crude Oil Spill   | Volume of Release | 21 bbl   | Volume Recovered           | 20       |
| Source of Release                         | Tank  | Date and Hour     | 11:30 PM | Date and Hour of Discovery | 11:30 PM |
| Was Immediate Notice Given?               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required |                   |          |                            |          |
| By Whom?                                  | If YES, To Whom?  |                   |          |                            |          |
| Was a Watercourse Reached?                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                       |                   |          |                            |          |
| If YES, Volume Impacting the Watercourse. |   |                   |          |                            |          |

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

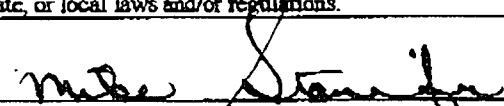
Tank overflowed while being filled by transports. Drivers fired.

Describe Area Affected and Cleanup Action Taken.\*

Tank firewall area. Oil removed and remediated in place using NMOCD cleanup level guidelines

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

#### OIL CONSERVATION DIVISION

|  |                                  |                  |                                   |
|--|----------------------------------|------------------|-----------------------------------|
| Signature:  | Approved by District Supervisor: |                  |                                   |
| Printed Name: Mike Stansifer   |                                  |                  |                                   |
| Title: Trucking Supervisor   | Approval Date:                   | Expiration Date: |                                   |
| E-mail Address: stansing@bp.com  | Conditions of Approval:          |                  | Attached <input type="checkbox"/> |
| Date: 4/1/2004   | Phone: 806-897-7003              |                  |                                   |

\* Attach Additional Sheets If Necessary

COPY