



**TETRA TECH**

RECEIVED JUN 04 2010

May 12, 2010

Mr. Mike Bratcher  
Environmental Engineer Specialist  
Oil Conservation Division, District 2  
1301 West Grand Avenue  
Artesia, NM 88210

**Re: Assessment and Closure Report – for the COG Operating, LLC, Skelly #942 Tank Battery Facility, Located in Unit Letter B, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico.**

Mr. Bratcher:

Tetra Tech, Inc. was contacted by COG Operating, LLC to investigate the two (2) spills that occurred at the Skelly #942 Tank Battery. The tank battery is located in Unit Letter B, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico. The site coordinates are N 32° 49.482', W 103° 51.340. The Site is shown on Figures 1 and 2.

### **Background**

#### Spill #1, 11/12/09

The spill occurred on November 12, 2009, when the safety gauges float malfunctioned, causing the production tank to overflow. An estimated 170 barrels of oil were spilled with 160 barrels recovered with a vacuum truck. The spill was fully contained within the facility firewall. The spill location is shown on Figure 3. The C-141 (initial) is included in Appendix A.

#### Spill #2, 12/27/09

On December 27, 2009, the water meter on the heater plugged, which overran the equalizers. An estimated 38 barrels of oil were spilled with 35 barrels recovered with a vacuum truck. The spill was fully contained within the facility firewall. However, the spill migrated into an open excavation from the first spill. The spill location is shown on Figure 3. The C-141 (initial) is included in Appendix A.

**Tetra Tech**

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com

2 RP-347



## **Groundwater and Regulatory**

According to the NMOCD groundwater map, the depth to groundwater in this area is greater than 300' below surface. The Geology and Groundwater Resources of Eddy County, New Mexico (Report 3) did show one well located in Section 34 with a reported depth to groundwater of 271'. The groundwater data is enclosed in Appendix B.

A risk-based evaluation was performed for the Site in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene and xylene). Based on the regional groundwater data, the proposed RRAL for TPH is 5,000 mg/kg.

## **Assessment and Corrective Action**

On November 18, 2009, Tetra Tech personnel inspected the facility. Prior to sampling, COG had scraped approximately 6" of impacted soil from inside the tank battery. A total of eight (8) auger holes were installed using a stainless steel hand auger. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chlorides by EPA method 300.0. The laboratory reports are shown in Appendix C. The results are summarized in Table 1.

Referring to Table 1, the samples in AH-1 through AH-6 did showed elevated BTEX above the RRAL. The TPH concentrations were all below the RRAL of 5,000 mg/kg. In addition, the chloride concentrations did show a shallow impact to the soil from 1.0' to 3.0' below surface.

On December 15, 2009, Tetra Tech supervised the excavation of these soils to depths ranging from 1.0' to 3.5' to remove the elevated BTEX and chlorides above the RRAL. Once completed, confirmation samples were collected from these areas. As shown in Table 1, all the samples were below the RRAL for BTEX. The excavated soil was hauled to proper disposal. The sample locations and spill area are shown on Figure 3.

On December 27, 2009, a second spill occurred and migrated into the open excavation near AH-2 and measure 10' x 30' at a depth of 3.0'. On January 12, 2010, Tetra Tech installed one auger hole to assess the spill to a depth of 3.5' below excavation bottom. Referring to Table 2, the BTEX concentrations were above the RRAL were not defined. A backhoe trench was installed on January 13, 2010, to vertically define the impacted area to a depth of 7.0' below excavation bottom, which showed BTEX concentrations below the reporting limits. Based on the results, the area



**TETRA TECH**

was excavated down to 7.0' below excavation bottom to remove the soil above the RRAL. The excavated soil was transported to proper disposal. The area was then backfilled with clean soil. The sample locations and spill areas are shown on Figure 3. Copies of the laboratory reports and chain of custody documents are included in Appendix C.

#### **Closure Request**

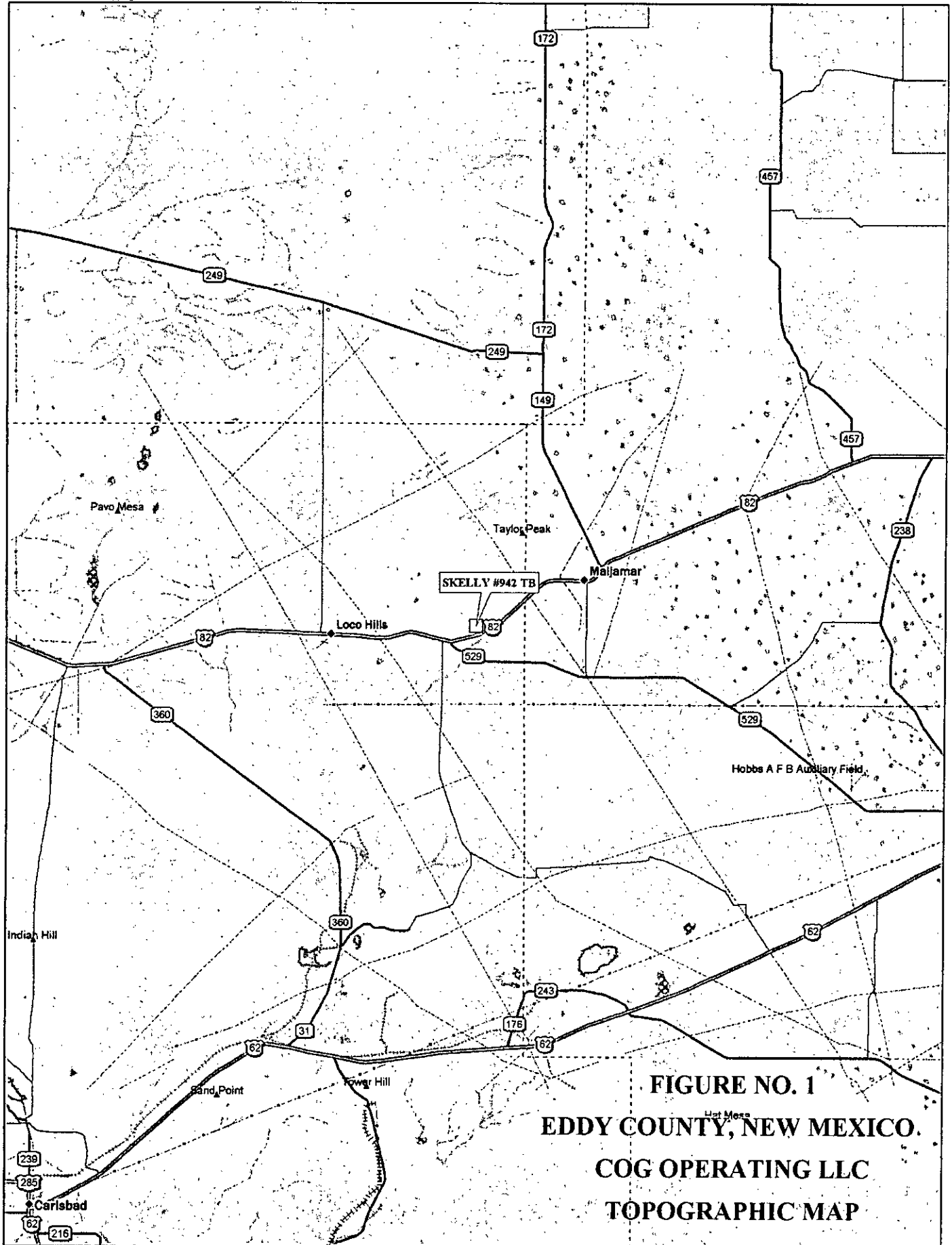
Based upon the results of the investigation and remediation performed at this site, COG Operating LLC requests closure of this site. The C-141 (Final) is included in Appendix A. If you have any question or comments concerning the assessment or the activities performed at the Site, please call me at (432) 682-4559.

Respectfully submitted,  
Tetra Tech Inc.

Ike Tavaréz P.G.  
Senior Project Manager

cc: Pat Ellis - COG

## FIGURES

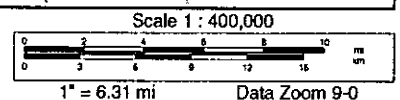


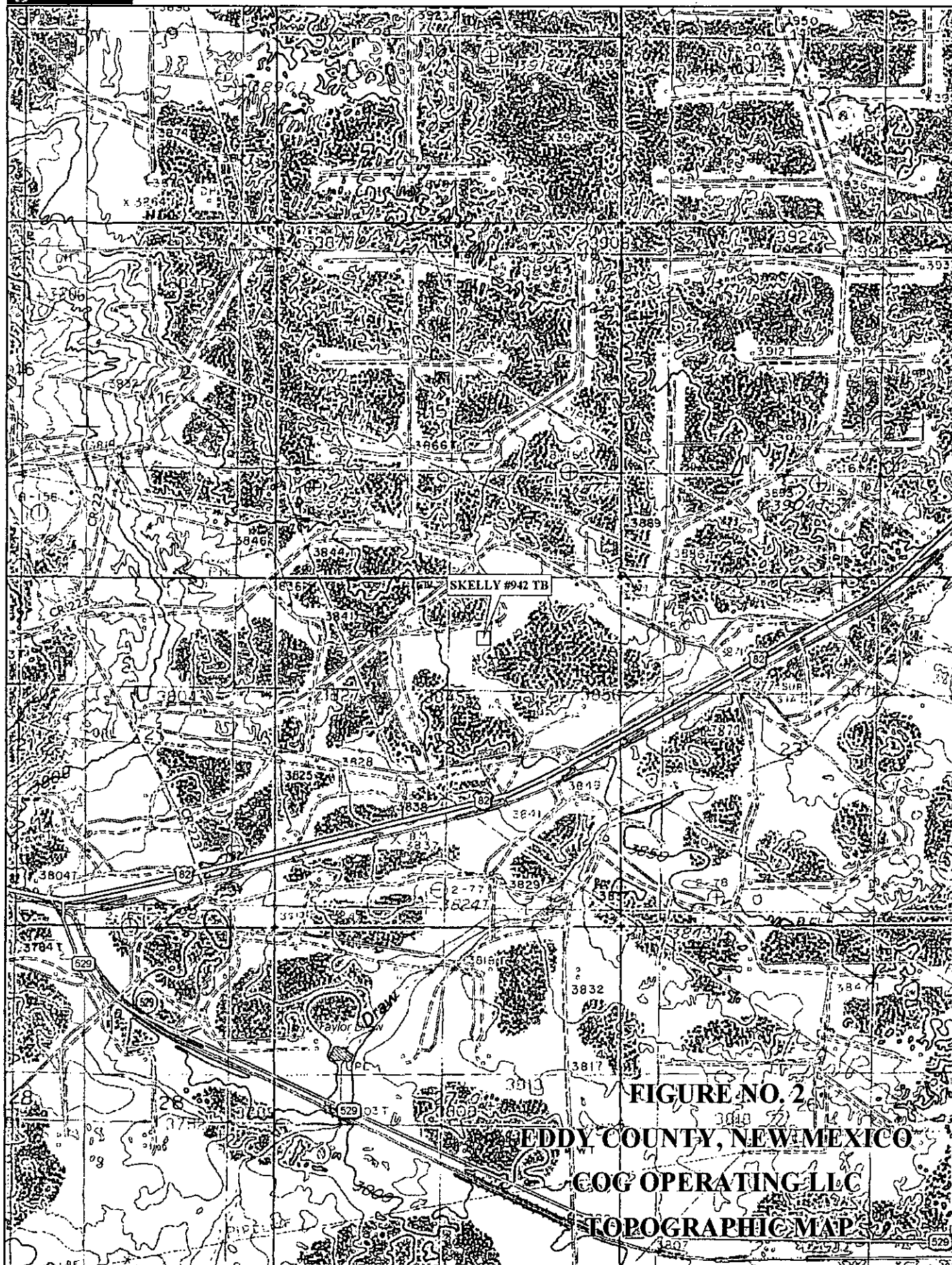
**FIGURE NO. 1**  
**EDDY COUNTY, NEW MEXICO.**  
**COG OPERATING LLC**  
**TOPOGRAPHIC MAP**

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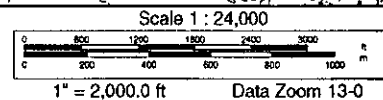




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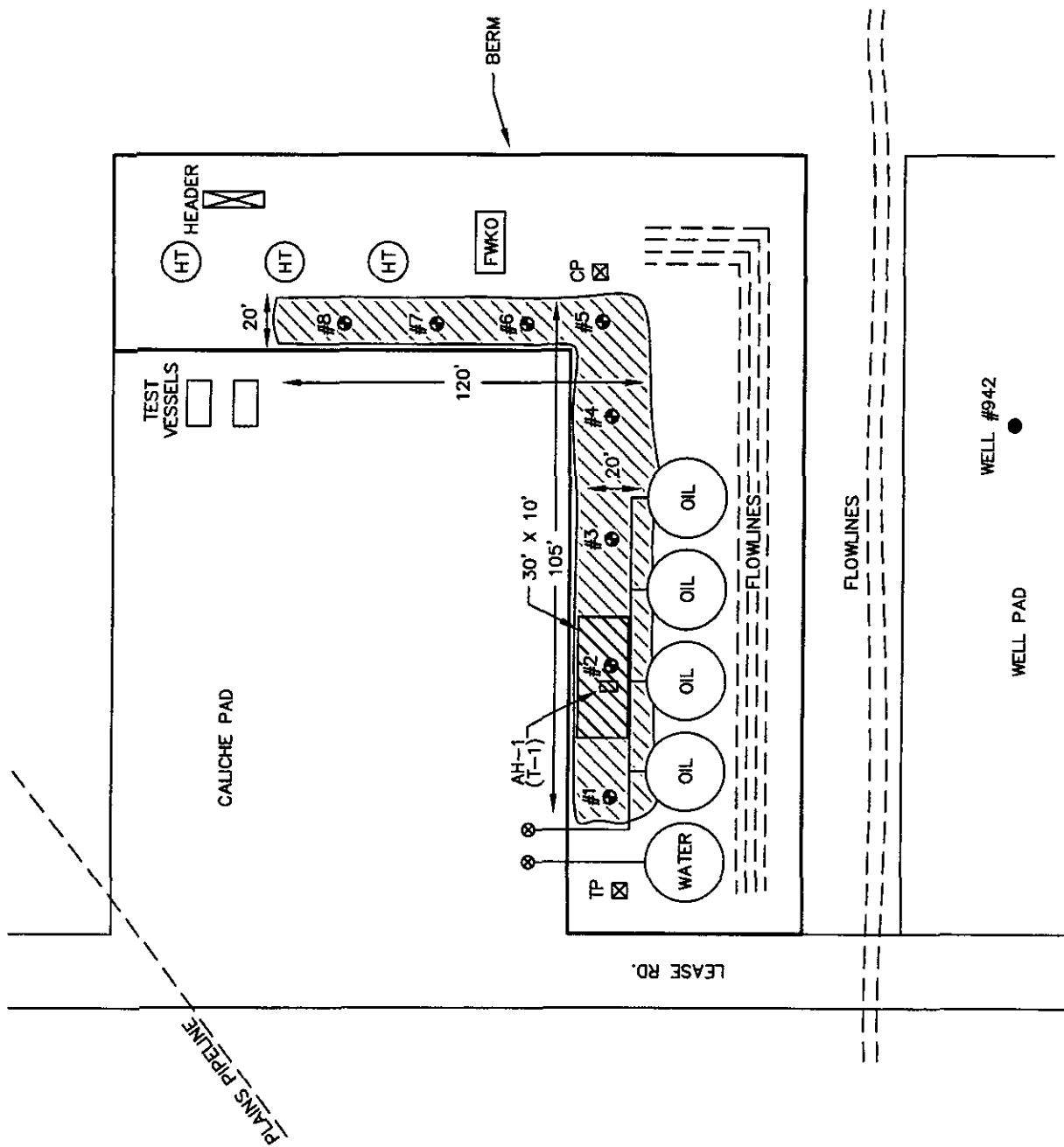


FIGURE NO. 3

|                                    |
|------------------------------------|
| EDDY COUNTY, NEW MEXICO            |
| COG OPERATING                      |
| SKELLY #942 TB                     |
| TETRA TECH, INC.<br>MIDLAND, TEXAS |

|                   |                 |                         |
|-------------------|-----------------|-------------------------|
| DATE:<br>11/20/09 | DRAWN BY:<br>JJ | FILE:<br>MIDLAND-942-09 |
|-------------------|-----------------|-------------------------|

NOT TO SCALE

- SPILL & ECAVATED AREA (SPILL #1)
- SAMPLE TRENCH
- SPILL & ECAVATED AREA (SPILL #2)
- AUGER HOLE SAMPLE LOCATIONS

## TABLES

Table 1  
COG Operating LLC.  
SKELLY 942  
Spill #1  
EDDY COUNTY, NEW MEXICO

| Sample ID | Date Sampled | Sample Depth (ft) | Depth (BEB) | Soil Status |         | TPH (mg/kg) |       |       | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylene (mg/kg) | Chloride (mg/kg) |
|-----------|--------------|-------------------|-------------|-------------|---------|-------------|-------|-------|-----------------|-----------------|----------------------|----------------|------------------|
|           |              |                   |             | In-Situ     | Removed | GRO         | DRO   | Total |                 |                 |                      |                |                  |
| AH-1      | 11/18/2009   | 0-1'              | 6"          |             | X       | 1,180       | 1,830 | 3,010 | 2.11            | 35              | 38.4                 | 46.4           | 2,340            |
|           |              | 1-1.5'            | 6"          | X           | X       | -           | -     | -     | -               | -               | -                    | -              | 784              |
|           |              | 2-2.5'            | 6"          | X           |         | -           | -     | -     | <0.0100         | <0.0100         | <0.0100              | <0.0100        | 837              |
|           |              | 3-3.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | 1,370            |
| CS-1      | 12/15/2009   |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
|           |              | 0-1'              | 1'          | X           |         | -           | -     | -     | <0.0100         | <0.0100         | <0.0100              | 0.205          | -                |
| AH-2      | 11/18/2009   | 0-1'              | 6"          |             | X       | 3,180       | 1,110 | 4,290 | -               | -               | -                    | -              | 2,560            |
|           |              | 1-1.5'            | 6"          |             | X       | -           | -     | -     | -               | -               | -                    | -              | <200             |
|           |              | 2-2.5'            | 6"          |             | X       | -           | -     | -     | 2.36            | 61.90           | 61.10                | 6.94           | <200             |
|           |              | 3-3.5'            | 6"          |             | X       | -           | -     | -     | 0.69            | 28.00           | 36.30                | 45.60          | <200             |
|           |              | 4-4.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | 224              |
| CS-2      | 12/15/2009   |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
|           |              | 0-1'              | 3'          | X           |         | -           | -     | -     | <0.0100         | <0.0100         | <0.0100              | <0.0100        | -                |
| AH-3      | 11/18/2009   | 0-1'              | 6"          |             | X       | 2,980       | 1,160 | 4,140 | 20.8            | 102             | 76.4                 | 79.2           | 3,290            |
|           |              | 1-1.5'            | 6"          | X           | X       | -           | -     | -     | -               | -               | -                    | -              | <200             |
|           |              | 2-2.5'            | 6"          | X           |         | -           | -     | -     | <0.0100         | 0.2             | 1.54                 | 3.13           | <200             |
|           |              | 3-3.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | <200             |
| CS-3      | 12/15/2009   |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
|           |              | 0-1'              | 1'          | X           |         | -           | -     | -     | 0.668           | 12.6            | 9.44                 | 18.4           | -                |

Table 1  
COG Operating LLC.  
SKELLY 942  
Spill #1

EDDY COUNTY, NEW MEXICO

| Sample ID | Date Sampled | Sample Depth (ft) | Depth (BEB) | Soil Status |         | TPH (mg/kg) |       |       | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylene (mg/kg) | Chloride (mg/kg) |
|-----------|--------------|-------------------|-------------|-------------|---------|-------------|-------|-------|-----------------|-----------------|----------------------|----------------|------------------|
|           |              |                   |             | In-Situ     | Removed | GRO         | DRO   | Total |                 |                 |                      |                |                  |
| AH-4      | 11/18/2009   | 0-1'              | 6"          |             | X       | 1,200       | 558   | 1,758 | 3.4             | 38.4            | 39.7                 | 40             | 1,350            |
|           |              | 1-1.5'            | 6"          |             | X       | -           | -     | -     | -               | -               | -                    | -              | 1,760            |
|           |              | 2-2.5'            | 6"          | X           |         | -           | -     | -     | <0.0100         | <0.0100         | <0.0100              | <0.0100        | <200             |
|           |              | 3-3.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | <200             |
|           |              | 4-4.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | <200             |
| CS-4      |              |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
|           | 12/15/2009   | 0-1'              | 1.5'        | X           |         | -           | -     | -     | <0.0100         | 0.0641          | 0.39                 | 0.741          | -                |
| AH-5      | 11/18/2009   | 0-1'              | 6"          |             | X       | 2,520       | 1,770 | 4,290 | 1.68            | 53.2            | 73.8                 | 79.9           | 849              |
|           |              | 1-1.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | <200             |
|           |              | 2-2.5'            | 6"          | X           |         | -           | -     | -     | <0.0100         | <0.0100         | <0.0100              | <0.0100        | <200             |
|           |              | 3-3.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | <200             |
|           |              |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
| CS-5      |              |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
|           | 12/15/2009   | 0-1'              | 1'          |             | X       | -           | -     | -     | 4.02            | 58              | 74                   | 82.5           | -                |
| AH-6      | 11/18/2009   | 0-1'              | 6"          |             | X       | 3,130       | 1,100 | 1,758 | 3.49            | 75.2            | 78.3                 | 90.7           | 1,090            |
|           |              | 1-1.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | <200             |
|           |              | 2-2.5'            | 6"          | X           |         | -           | -     | -     | <0.0100         | <0.0100         | <0.0100              | <0.0100        | <200             |
|           |              | 3-3.5'            | 6"          | X           |         | -           | -     | -     | -               | -               | -                    | -              | <200             |
|           |              |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
| CS-6      |              |                   |             |             |         |             |       |       |                 |                 |                      |                |                  |
|           | 12/15/2009   | 0-1'              | 1'          |             |         | -           | -     | -     | 0.14            | 11.3            | 18.6                 | 19.2           | -                |

Table 1  
COG Operating LLC.  
SKELLY 942  
Spill #1  
EDDY COUNTY, NEW MEXICO

| Sample ID | Date Sampled | Sample     |  | Depth (BEB) | Soil Status |         | TPH (mg/kg) |     |       | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylene (mg/kg) | Chloride (mg/kg) |
|-----------|--------------|------------|--|-------------|-------------|---------|-------------|-----|-------|-----------------|-----------------|----------------------|----------------|------------------|
|           |              | Depth (ft) |  |             | In-Situ     | Removed | GRO         | DRO | Total |                 |                 |                      |                |                  |
| AH-7      | 11/18/2009   | 0-1'       |  | 6"          |             | X       | 146         | 226 | 372   | -               | -               | -                    | -              | 883              |
|           |              | 1-1.5'     |  | 6"          |             | X       | -           | -   | -     | -               | -               | -                    | -              | 2,950            |
|           |              | 2-2.5'     |  | 6"          |             | X       | -           | -   | -     | -               | -               | -                    | -              | 3,010            |
|           |              | 3-3.5'     |  | 6"          |             | X       | -           | -   | -     | -               | -               | -                    | -              | 482              |
|           |              | 4-4.5'     |  | 6"          | X           |         | -           | -   | -     | -               | -               | -                    | -              | <200             |
| CS-7      | 12/15/2009   | 0-1'       |  | 3'          | X           |         | -           | -   | -     | <0.0100         | <0.0100         | <0.0100              | <0.0100        |                  |
| AH-8      | 11/18/2009   | 0-1'       |  | 6"          |             | X       | 111         | 170 | 281   | -               | -               | -                    | -              | 1,110            |
|           |              | 1-1.5'     |  | 6"          | X           |         | -           | -   | -     | -               | -               | -                    | -              | <200             |
|           |              | 2-2.5'     |  | 6"          | X           |         | -           | -   | -     | -               | -               | -                    | -              | 361              |
|           | 11/18/2009   | 3-3.5'     |  | 6"          | X           |         | -           | -   | -     | -               | -               | -                    | -              | 422              |
| CS-8      | 12/15/2009   | 0-1'       |  | 1'          | X           |         | -           | -   | -     | <0.0100         | 0.29            | 1.86                 | 1.72           | -                |

☐ Impacted soil excavated and hauled to disposal  
(-) Not Analyzed

Table 2  
COG Operating LLC.  
SKELLY 942  
Spill #2  
EDDY COUNTY, NEW MEXICO

| Sample ID                                                                           | Date Sampled | Sample Depth (ft) | Depth (BEB) | Soil Status |         | TPH (mg/kg) |     |       | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylene (mg/kg) | Chloride (mg/kg) |   |
|-------------------------------------------------------------------------------------|--------------|-------------------|-------------|-------------|---------|-------------|-----|-------|-----------------|-----------------|----------------------|----------------|------------------|---|
|                                                                                     |              |                   |             | In-Situ     | Removed | GRO         | DRO | Total |                 |                 |                      |                |                  |   |
| 2nd Spill (12/27/09) migrated into open excavation from first spill in area of AH-2 |              |                   |             |             |         |             |     |       |                 |                 |                      |                |                  |   |
| AH-1                                                                                | 1/12/2010    | 0-1'              |             |             |         |             |     | -     |                 | 268             | 594                  | 323            | 342              | - |
|                                                                                     |              | 3-3.5'            |             |             |         |             |     | -     |                 | 87.2            | 246                  | 146            | 153              | - |
| T-1                                                                                 | 1/13/2010    | 6'                |             |             |         |             |     | -     |                 | 3.37            | 39.9                 | 34.9           | 37.9             | - |
|                                                                                     |              | 7'                |             |             |         |             |     | -     |                 | <0.01           | <0.01                | <0.01          | <0.01            | - |

☐ Impacted soil excavated and hauled to disposal  
(-) Not Analyzed

## APPENDIX A

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

(Spill #1)

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**

☒ Initial Report ☐ Final Report

|                 |                                            |               |                 |
|-----------------|--------------------------------------------|---------------|-----------------|
| Name of Company | COG OPERATING LLC                          | Contact       | Chasity Jackson |
| Address         | 550 W. Texas, Suite 1300 Midland, TX 79701 | Telephone No. | 432-686-3087    |
| Facility Name   | Skelly Unit 942                            | Facility Type | Battery         |

|               |         |               |  |           |              |
|---------------|---------|---------------|--|-----------|--------------|
| Surface Owner | Federal | Mineral Owner |  | Lease No. | 30-015-34645 |
|---------------|---------|---------------|--|-----------|--------------|

**LOCATION OF RELEASE**

|             |         |          |       |               |                  |               |                |        |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
| B           | 22      | 17S      | 31E   | 1210          | North            | 2195          | East           | Eddy   |

Latitude

Longitude

**NATURE OF RELEASE**

|                                                                                                                                          |                                                             |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------|
| Type of Release-Oil                                                                                                                      | Volume of Release-170bbbls                                  | Volume Recovered-160bbbls                        |
| Source of Release- Production tank                                                                                                       | Date and Hour of Occurrence-<br>11/12/09 Approx AM          | Date and Hour of Discovery<br>11/12/09 Approx AM |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom?<br>Terry Gregston BLM<br>Mike Bratcher OCD |                                                  |
| By Whom? Rick Wright                                                                                                                     | Date and Hour 11/12/09 in the AM                            |                                                  |
| Was a Watercourse Reached?<br><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.\*

A safety gauge float malfunctioned causing the production oil tank to run over. The safety gauge has been repaired.

Describe Area Affected and Cleanup Action Taken.\*

The area inside the dyke has been cleaned but not backfilled. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

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.

|                                              |  |                                   |                  |
|----------------------------------------------|--|-----------------------------------|------------------|
| Signature: <i>C Jackson</i>                  |  | <b>OIL CONSERVATION DIVISION</b>  |                  |
| Printed Name: Chasity Jackson                |  | Approved by District Supervisor:  |                  |
| Title: Agent for COG                         |  | Approval Date:                    | Expiration Date: |
| E-mail Address: cjackson@conchoresources.com |  | Conditions of Approval:           |                  |
| Date: 11/17/09 Phone: 432-686-3087           |  | Attached <input type="checkbox"/> |                  |

Attach Additional Sheets If Necessary

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

#2  
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**

☒ Initial Report ☐ Final Report

|                 |                                            |               |                  |
|-----------------|--------------------------------------------|---------------|------------------|
| Name of Company | COG OPERATING LLC                          | Contact       | Kanicia Carrillo |
| Address         | 550 W. Texas, Suite 1300 Midland, TX 79701 | Telephone No. | 432-685-4332     |
| Facility Name   | Skelly Unit 942                            | Facility Type | Battery          |
| Surface Owner   | Federal                                    | Mineral Owner |                  |
|                 |                                            | Lease No.     | NM1.C-029419A    |

**LOCATION OF RELEASE**

|                  |               |                 |              |               |                  |               |                |                |
|------------------|---------------|-----------------|--------------|---------------|------------------|---------------|----------------|----------------|
| Unit Letter<br>B | Section<br>22 | Township<br>17S | Range<br>31E | Feet from the | North/South Line | Feet from the | East/West Line | County<br>Eddy |
|------------------|---------------|-----------------|--------------|---------------|------------------|---------------|----------------|----------------|

Latitude N32.49.479'

Longitude W103.51.338

**NATURE OF RELEASE**

|                                                                                                                                          |                                           |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------|
| Type of Release-Oil                                                                                                                      | Volume of Release-38bbbls                 | Volume Recovered- 35bbbls              |
| Source of Release- Oil tank                                                                                                              | Date and Hour of Occurrence-<br>12/27/09  | Date and Hour of Discovery<br>12/27/09 |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom?<br>Mike Bratcher OCD     |                                        |
| By Whom? Rick Wright                                                                                                                     | Date and Hour 12/27/09 PM                 |                                        |
| Was a Watercourse Reached?<br><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.\*

Caused by a plugged water meter on a heater which then sent too much fluid to tank outrunning the equalizers.

Describe Area Affected and Cleanup Action Taken.\*

Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

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.

|                                                                                                |                         |                                  |                                   |
|------------------------------------------------------------------------------------------------|-------------------------|----------------------------------|-----------------------------------|
| Signature:  |                         | <u>OIL CONSERVATION DIVISION</u> |                                   |
| Printed Name: Chasity Jackson                                                                  |                         | Approved by District Supervisor: |                                   |
| Title: Agent for COG                                                                           | Approval Date:          | Expiration Date:                 |                                   |
| E-mail Address: cjackson@conchoresources.com                                                   | Conditions of Approval: |                                  | Attached <input type="checkbox"/> |
| Date: 1/7/10                                                                                   | Phone: 432-686-3087     |                                  |                                   |

\* Attach Additional Sheets If Necessary

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

☐ Initial Report ☒ Final Report

|                 |                                               |               |                |
|-----------------|-----------------------------------------------|---------------|----------------|
| Name of Company | COG Operating LLC                             | Contact       | Pat Ellis      |
| Address         | 550 W. Texas, Suite 1300 Midland, Texas 79701 | Telephone No. | (432) 685-4332 |
| Facility Name   | Skelly 942                                    | Facility Type | Tank Battery   |
| Surface Owner   | Federal                                       | Mineral Owner |                |
|                 |                                               | Lease No.     | 30-015-34645   |

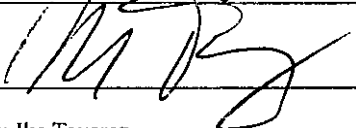
#### LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| B           | 22      | 17S      | 31E   | 1210          | North            | 2195          | East           | Eddy   |

Latitude N 32°49.482 Longitude W 103°51.340

#### NATURE OF RELEASE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------|
| Type of Release Oil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Volume of Release 38 bbls                        | Volume Recovered 35 bbls               |
| Source of Release<br>Production tank                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Date and Hour of Occurrence<br>Unknown 12/27/09  | Date and Hour of Discovery<br>12/27/09 |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | If YES, To Whom?<br>Mike Bratcher OCD            |                                        |
| By Whom? Rick Wright                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Date and Hour 12/27/09                           |                                        |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | If YES, Volume Impacting the Watercourse.<br>N/A |                                        |
| If a Watercourse was Impacted, Describe Fully.*<br><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                  |                                        |
| Describe Cause of Problem and Remedial Action Taken.*<br><br>Cause by a plugged water meter on a heater which then sent too much fluid to tank outrunning the equalizer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                  |                                        |
| Describe Area Affected and Cleanup Action Taken.*<br>The spill was contained inside the facility firewalls. The spill migrated into an open excavation (10' x 30') performed during a previous release, which was in progress. The area was assessed evaluate the spill. The impacted soils above the RRAL were removed and hauled to CRI for disposal. The excavations was been backfilled with clean soil. A closure report has been prepared and submitted to the NMOCD for review and approval.                                                                                                                                                                                                                                                                                                                            |                                                  |                                        |
| 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. |                                                  |                                        |

|                                                                                                |  |                                   |                  |
|------------------------------------------------------------------------------------------------|--|-----------------------------------|------------------|
| Signature:  |  | <u>OIL CONSERVATION DIVISION</u>  |                  |
| Printed Name: Ike Tavarez                                                                      |  | Approved by District Supervisor:  |                  |
| Title: Project Manager                                                                         |  | Approval Date:                    | Expiration Date: |
| E-mail Address: ike.tavarez@tetrattech.com                                                     |  | Conditions of Approval:           |                  |
| Date: 6-2-10 Phone: (432) 682-4559                                                             |  | Attached <input type="checkbox"/> |                  |

\* Attach Additional Sheets If Necessary

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
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State of New Mexico  
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1220 South St. Francis Dr.  
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Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
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side of form

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

|                 |                                               |               |                |
|-----------------|-----------------------------------------------|---------------|----------------|
| Name of Company | COG Operating LLC                             | Contact       | Pat Ellis      |
| Address         | 550 W. Texas, Suite 1300 Midland, Texas 79701 | Telephone No. | (432) 685-4332 |
| Facility Name   | Skelly 942                                    | Facility Type | Tank Battery   |
| Surface Owner   | Federal                                       | Mineral Owner |                |
|                 |                                               | Lease No.     | 30-015-34645   |

### LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| B           | 22      | 17S      | 31E   | 1210          | North            | 2195          | East           | Eddy   |

Latitude N 32°49.482 Longitude W 103°51.340

### NATURE OF RELEASE

|                             |                                                                                                           |             |                            |          |
|-----------------------------|-----------------------------------------------------------------------------------------------------------|-------------|----------------------------|----------|
| Type of Release Oil         | Volume of Release                                                                                         | 170 bbls    | Volume Recovered           | 160 bbls |
| Source of Release           | Date and Hour of Occurrence                                                                               |             | Date and Hour of Discovery |          |
| Production tank             | Unknown                                                                                                   | 11/12/09 AM | 11/12/09 AM                |          |
| Was Immediate Notice Given? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required |             |                            |          |
|                             | If YES, To Whom?                                                                                          |             |                            |          |
|                             | Mike Bratcher OCD                                                                                         |             |                            |          |
|                             | Terry Gregston BLM                                                                                        |             |                            |          |
| By Whom? Rick Wright        | Date and Hour 11/12/09 am                                                                                 |             |                            |          |
| Was a Watercourse Reached?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                       |             |                            |          |
|                             | If YES, Volume Impacting the Watercourse.                                                                 |             |                            |          |
|                             | N/A                                                                                                       |             |                            |          |

If a Watercourse was Impacted, Describe Fully.\*

N/A

Describe Cause of Problem and Remedial Action Taken.\*

Safety gauge float malfunctioned causing the production oil tank to run over. The safety gauge has been repaired.

Describe Area Affected and Cleanup Action Taken.\*

The spill was contained inside the facility firewalls. The spill area was assessed to evaluate the spill area. The impacted soils above the RRAL were removed and hauled to CRI for disposal. The excavation was backfilled with clean soil. A closure report has been prepared and submitted to the NMOCD for review and approval.

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: Ike Tavaréz                 |                                  |                  |                                   |
| Title: Project Manager                    | Approval Date:                   | Expiration Date: |                                   |
| E-mail Address: ike.tavarez@tetratech.com | Conditions of Approval:          |                  | Attached <input type="checkbox"/> |
| Date:                                     | Phone: (432) 682-4559            |                  |                                   |

\* Attach Additional Sheets If Necessary

## **APPENDIX B**

**Water Well Data**  
**Average Depth to Groundwater (ft)**  
**COG - Skelly 942 Tank Battery**  
**Eddy County, New Mexico**

| 16 South |    |    | 30 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 16 South |    |    | 31 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 16 South |    |    | 32 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 17 South |    |    | 30 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 17 South |    |    | 31 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 17 South |    |    | 32 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 18 South |    |    | 30 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 18 South |    |    | 31 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

| 18 South |    |    | 32 East |    |    |
|----------|----|----|---------|----|----|
| 6        | 5  | 4  | 3       | 2  | 1  |
| 7        | 8  | 9  | 10      | 11 | 12 |
| 18       | 17 | 16 | 15      | 14 | 13 |
| 19       | 20 | 21 | 22      | 23 | 24 |
| 30       | 29 | 28 | 27      | 26 | 25 |
| 31       | 32 | 33 | 34      | 35 | 36 |

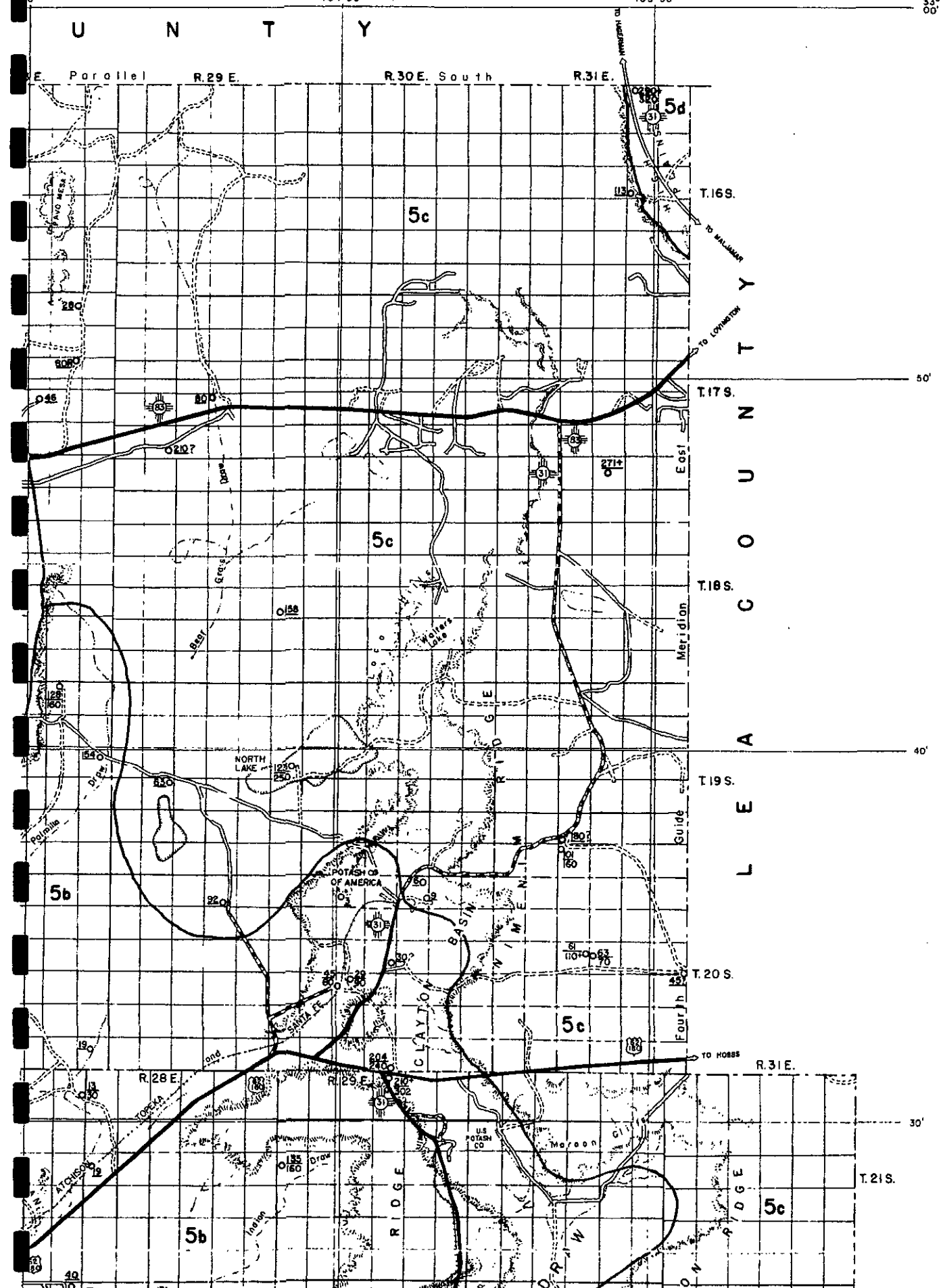
- 88** New Mexico State Engineers Well Reports
- 105** USGS Well Reports
- 90** Geology and Groundwater Conditions in Southern Lea, County, NM
- 34** NMOCD - Groundwater Data
- 123** Field water level
- 362** New Mexico Water and Infrastructure Data System

## 103° 50'

33°  
00'

U N T Y

**R.31 E.**



## APPENDIX C

## Summary Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX 79705

Report Date: December 1, 2009

Work Order: 9111903



Project Location: Eddy County, NM  
Project Name: COG/Skelly 942  
Project Number: 114-6400369

| Sample | Description            | Matrix | Date Taken | Time Taken | Date Received |
|--------|------------------------|--------|------------|------------|---------------|
| 215203 | AH-1 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215204 | AH-1 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215205 | AH-1 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215206 | AH-1 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215207 | AH-2 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215208 | AH-2 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215209 | AH-2 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215210 | AH-2 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215211 | AH-3 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215212 | AH-3 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215213 | AH-3 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215214 | AH-4 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215215 | AH-4 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215216 | AH-4 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215217 | AH-4 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215218 | AH-4 4'-4.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215219 | AH-5 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215220 | AH-5 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215221 | AH-5 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215222 | AH-5 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215223 | AH-6 0-1' 6 in. BEB    | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215224 | AH-6 1'-1.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215225 | AH-6 2'-2.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215226 | AH-6 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215227 | AH-7 0-1' 6 in. BEB    | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215228 | AH-7 1'-1.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215229 | AH-7 2'-2.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215230 | AH-7 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215231 | AH-7 4'-4.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215232 | AH-8 0-1' 6 in. BEB    | soil   | 2009-11-18 | 00:00      | 2009-11-18    |

| Sample | Description            | Matrix | Date Taken | Time Taken | Date Received |
|--------|------------------------|--------|------------|------------|---------------|
| 215233 | AH-8 1'-1.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215234 | AH-8 2'-2.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215235 | AH-8 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215236 | AH-2 4'-4.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215237 | AH-3 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |

| Sample - Field Code             | BTEX               |                    |                         |                   | TPH DRO - NEW  | 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) |
| 215203 - AH-1 0-1' 6 in. BEB    |                    |                    |                         |                   | 1180           | 1830           |
| 215205 - AH-1 2'-2.5' 6 in. BEB | <0.0100            | <0.0100            | <0.0100                 | <0.0100           |                |                |
| 215207 - AH-2 0-1' 6 in. BEB    |                    |                    |                         |                   | 1110           | 3180           |
| 215209 - AH-2 2'-2.5' 6 in. BEB | 2.36               | 61.9               | 61.1                    | 6.94              |                |                |
| 215210 - AH-2 3'-3.5' 6 in. BEB | 0.690              | 28.0               | 36.3                    | 45.6              |                |                |
| 215211 - AH-3 0-1' 6 in. BEB    |                    |                    |                         |                   | 1160           | 2980           |
| 215213 - AH-3 2'-2.5' 6 in. BEB | <0.0100            | 0.200              | 1.54                    | 3.13              |                |                |
| 215214 - AH-4 0-1' 6 in. BEB    |                    |                    |                         |                   | 558            | 1200           |
| 215216 - AH-4 2'-2.5' 6 in. BEB | <0.0100            | <0.0100            | <0.0100                 | <0.0100           |                |                |
| 215219 - AH-5 0-1' 6 in. BEB    |                    |                    |                         |                   | 1770           | 2520           |
| 215221 - AH-5 2'-2.5' 6 in. BEB | <0.0100            | <0.0100            | <0.0100                 | <0.0100           |                |                |
| 215223 - AH-6 0-1' 6 in. BEB    |                    |                    |                         |                   | 1100           | 3130           |
| 215225 - AH-6 2'-2.5' 6 in. BEB | <0.0100            | <0.0100            | <0.0100                 | <0.0100           |                |                |
| 215227 - AH-7 0-1' 6 in. BEB    |                    |                    |                         |                   | 226            | 146            |
| 215232 - AH-8 0-1' 6 in. BEB    |                    |                    |                         |                   | 170            | 111            |

## Sample: 215203 - AH-1 0-1' 6 in. BEB

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 2340   | mg/Kg | 4.00 |

## Sample: 215204 - AH-1 1'-1.5' 6 in. BEB

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 784    | mg/Kg | 4.00 |

## Sample: 215205 - AH-1 2'-2.5' 6 in. BEB

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 837    | mg/Kg | 4.00 |

## Sample: 215206 - AH-1 3'-3.5' 6 in. BEB

continued ...

*sample 215206 continued ...*

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Param    | Flag | Result | Units | RL   |
| Chloride |      | 1370   | mg/Kg | 4.00 |

**Sample: 215207 - AH-2 0-1' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 2560   | mg/Kg | 4.00 |

**Sample: 215208 - AH-2 1'-1.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215209 - AH-2 2'-2.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215210 - AH-2 3'-3.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215211 - AH-3 0-1' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 3290   | mg/Kg | 4.00 |

**Sample: 215212 - AH-3 1'-1.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215213 - AH-3 2'-2.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215214 - AH-4 0-1' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 1350   | mg/Kg | 4.00 |

**Sample: 215215 - AH-4 1'-1.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 1790   | mg/Kg | 4.00 |

**Sample: 215216 - AH-4 2'-2.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215217 - AH-4 3'-3.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215218 - AH-4 4'-4.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215219 - AH-5 0-1' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 849    | mg/Kg | 4.00 |

**Sample: 215220 - AH-5 1'-1.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215221 - AH-5 2'-2.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215222 - AH-5 3'-3.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215223 - AH-6 0-1' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 1090   | mg/Kg | 4.00 |

**Sample: 215224 - AH-6 1'-1.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215225 - AH-6 2'-2.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215226 - AH-6 3'-3.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215227 - AH-7 0-1' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 883    | mg/Kg | 4.00 |

**Sample: 215228 - AH-7 1'-1.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 2950   | mg/Kg | 4.00 |

**Sample: 215229 - AH-7 2'-2.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 3010   | mg/Kg | 4.00 |

**Sample: 215230 - AH-7 3'-3.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 482    | mg/Kg | 4.00 |

**Sample: 215231 - AH-7 4'-4.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215232 - AH-8 0-1' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 1110   | mg/Kg | 4.00 |

**Sample: 215233 - AH-8 1'-1.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 215234 - AH-8 2'-2.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 361    | mg/Kg | 4.00 |

**Sample: 215235 - AH-8 3'-3.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 422    | mg/Kg | 4.00 |

**Sample: 215236 - AH-2 4'-4.5' 6 in. BEB**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 224    | mg/Kg | 4.00 |

---

Sample: 215237 - AH-3 3'-3.5' 6 in. BEB

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

---

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## Certifications

WBENC: 237019

HUB: 1752439743100-86536  
NCTRCA WFWB38444Y0909

DBE: VN 20657

## NELAP Certifications

Lubbock: T104704219-08-TX  
LELAP-02003  
Kansas E-10317

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX, 79705

Report Date: December 1, 2009

Work Order: 9111903



Project Location: Eddy County, NM  
Project Name: COG/Skelly 942  
Project Number: 114-6400369

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 |
|--------|------------------------|--------|------------|------------|---------------|
| 215203 | AH-1 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215204 | AH-1 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215205 | AH-1 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215206 | AH-1 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215207 | AH-2 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215208 | AH-2 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215209 | AH-2 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215210 | AH-2 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215211 | AH-3 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215212 | AH-3 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |

| Sample | Description            | Matrix | Date Taken | Time Taken | Date Received |
|--------|------------------------|--------|------------|------------|---------------|
| 215213 | AH-3 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215214 | AH-4 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215215 | AH-4 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215216 | AH-4 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215217 | AH-4 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215218 | AH-4 4'-4.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215219 | AH-5 0-1' 6 in. BEB    | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215220 | AH-5 1'-1.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215221 | AH-5 2'-2.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215222 | AH-5 3'-3.5' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215223 | AH-6 0-1' 6 in. BEB    | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215224 | AH-6 1'-1.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215225 | AH-6 2'-2.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215226 | AH-6 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215227 | AH-7 0-1' 6 in. BEB    | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215228 | AH-7 1'-1.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215229 | AH-7 2'-2.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215230 | AH-7 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215231 | AH-7 4'-4.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215232 | AH-8 0-1' 6 in. BEB    | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215233 | AH-8 1'-1.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215234 | AH-8 2'-2.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215235 | AH-8 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215236 | AH-2 4'-4.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |
| 215237 | AH-3 3'-3.5' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |

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 35 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director  
Dr. Michael Abel, Project Manager

#### Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project COG/Skelly 942 were received by TraceAnalysis, Inc. on 2009-11-18 and assigned to work order 9111903. Samples for work order 9111903 were received intact at a temperature of 4.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

| Test                 | Method       | Prep<br>Batch | Prep<br>Date        | QC<br>Batch | Analysis<br>Date    |
|----------------------|--------------|---------------|---------------------|-------------|---------------------|
| BTEX                 | S 8021B      | 56012         | 2009-11-23 at 13:00 | 65542       | 2009-11-23 at 17:16 |
| BTEX                 | S 8021B      | 56089         | 2009-11-25 at 11:00 | 65629       | 2009-11-25 at 03:26 |
| Chloride (Titration) | SM 4500-Cl B | 55983         | 2009-11-23 at 10:15 | 65528       | 2009-11-23 at 15:46 |
| Chloride (Titration) | SM 4500-Cl B | 55984         | 2009-11-23 at 10:16 | 65529       | 2009-11-23 at 15:48 |
| Chloride (Titration) | SM 4500-Cl B | 55985         | 2009-11-23 at 10:16 | 65530       | 2009-11-23 at 15:48 |
| Chloride (Titration) | SM 4500-Cl B | 55986         | 2009-11-23 at 10:17 | 65531       | 2009-11-23 at 15:49 |
| TPH DRO - NEW        | Mod. 8015B   | 55929         | 2009-11-19 at 15:20 | 65453       | 2009-11-19 at 15:20 |
| TPH GRO              | S 8015B      | 55928         | 2009-11-19 at 11:00 | 65457       | 2009-11-20 at 00:23 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9111903 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 4 of 35  
Eddy County, NM

## Analytical Report

Sample: 215203 - AH-1 0-1' 6 in. BEB

|             |                      |                     |              |              |     |
|-------------|----------------------|---------------------|--------------|--------------|-----|
| Laboratory: | Midland              | Analytical Method:  | SM 4500-Cl B | Prep Method: | N/A |
| Analysis:   | Chloride (Titration) | Date Analyzed:      | 2009-11-23   | Analyzed By: | AR  |
| QC Batch:   | 65528                | Sample Preparation: | 2009-11-23   | Prepared By: | AR  |
| Prep Batch: | 55983                |                     |              |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 2340         | mg/Kg | 100      | 4.00 |

Sample: 215203 - AH-1 0-1' 6 in. BEB

|             |               |                     |            |              |     |
|-------------|---------------|---------------------|------------|--------------|-----|
| Laboratory: | Midland       | Analytical Method:  | Mod. 8015B | Prep Method: | N/A |
| Analysis:   | TPH DRO - NEW | Date Analyzed:      | 2009-11-19 | Analyzed By: | kg  |
| QC Batch:   | 65453         | Sample Preparation: | 2009-11-19 | Prepared By: | kg  |
| Prep Batch: | 55929         |                     |            |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 1180         | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane | 1    | 135    | mg/Kg | 1        | 100             | 135                 | 70 - 130           |

Sample: 215203 - AH-1 0-1' 6 in. BEB

|             |         |                     |            |              |        |
|-------------|---------|---------------------|------------|--------------|--------|
| Laboratory: | Midland | Analytical Method:  | S 8015B    | Prep Method: | S 5035 |
| Analysis:   | TPH GRO | Date Analyzed:      | 2009-11-20 | Analyzed By: | AG     |
| QC Batch:   | 65457   | Sample Preparation: | 2009-11-19 | Prepared By: | AG     |
| Prep Batch: | 55928   |                     |            |              |        |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 1830         | mg/Kg | 50       | 1.00 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 54.5   | mg/Kg | 50       | 50.0            | 109                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) |      | 60.2   | mg/Kg | 50       | 50.0            | 120                 | 61.7 - 121.1       |

<sup>1</sup> High surrogate recovery due to peak interference.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 5 of 35  
Eddy County, NM

**Sample: 215204 - AH-1 1'-1.5' 6 in. BEB**

|             |                      |                     |              |              |     |
|-------------|----------------------|---------------------|--------------|--------------|-----|
| Laboratory: | Midland              | Analytical Method:  | SM 4500-Cl B | Prep Method: | N/A |
| Analysis:   | Chloride (Titration) | Date Analyzed:      | 2009-11-23   | Analyzed By: | AR  |
| QC Batch:   | 65528                | Sample Preparation: | 2009-11-23   | Prepared By: | AR  |
| Prep Batch: | 55983                |                     |              |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 784          | mg/Kg | 50       | 4.00 |

**Sample: 215205 - AH-1 2'-2.5' 6 in. BEB**

|             |         |                     |            |              |        |
|-------------|---------|---------------------|------------|--------------|--------|
| Laboratory: | Midland | Analytical Method:  | S 8021B    | Prep Method: | S 5035 |
| Analysis:   | BTEX    | Date Analyzed:      | 2009-11-23 | Analyzed By: | tn     |
| QC Batch:   | 65542   | Sample Preparation: | 2009-11-23 | Prepared By: | tn     |
| Prep Batch: | 56012   |                     |            |              |        |

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | <0.0100      | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.19   | mg/Kg | 1        | 2.00            | 110                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.92   | mg/Kg | 1        | 2.00            | 96                  | 43.1 - 128.4       |

**Sample: 215205 - AH-1 2'-2.5' 6 in. BEB**

|             |                      |                     |              |              |     |
|-------------|----------------------|---------------------|--------------|--------------|-----|
| Laboratory: | Midland              | Analytical Method:  | SM 4500-Cl B | Prep Method: | N/A |
| Analysis:   | Chloride (Titration) | Date Analyzed:      | 2009-11-23   | Analyzed By: | AR  |
| QC Batch:   | 65528                | Sample Preparation: | 2009-11-23   | Prepared By: | AR  |
| Prep Batch: | 55983                |                     |              |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 837          | mg/Kg | 50       | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 6 of 35  
Eddy County, NM

**Sample: 215206 - AH-1 3'-3.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65528                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55983                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 1370         | mg/Kg | 50       | 4.00 |

**Sample: 215207 - AH-2 0-1' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65528                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55983                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 2560         | mg/Kg | 100      | 4.00 |

**Sample: 215207 - AH-2 0-1' 6 in. BEB**

|             |               |                     |            |
|-------------|---------------|---------------------|------------|
| Laboratory: | Midland       |                     |            |
| Analysis:   | TPH DRO - NEW | Analytical Method:  | Mod. 8015B |
| QC Batch:   | 65453         | Date Analyzed:      | 2009-11-19 |
| Prep Batch: | 55929         | Sample Preparation: | 2009-11-19 |
|             |               | Prep Method:        | N/A        |
|             |               | Analyzed By:        | kg         |
|             |               | Prepared By:        | kg         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 1110         | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane |      | 127    | mg/Kg | 1        | 100             | 127                 | 70 - 130           |

**Sample: 215207 - AH-2 0-1' 6 in. BEB**

|             |         |                     |            |
|-------------|---------|---------------------|------------|
| Laboratory: | Midland |                     |            |
| Analysis:   | TPH GRO | Analytical Method:  | S 8015B    |
| QC Batch:   | 65457   | Date Analyzed:      | 2009-11-20 |
| Prep Batch: | 55928   | Sample Preparation: | 2009-11-19 |
|             |         | Prep Method:        | S 5035     |
|             |         | Analyzed By:        | AG         |
|             |         | Prepared By:        | AG         |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 7 of 35  
Eddy County, NM

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 3180         | mg/Kg | 50       | 1.00 |

| Surrogate                    | Flag         | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|--------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       | <sup>2</sup> | 78.8   | mg/Kg | 50       | 50.0            | 158                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) | <sup>3</sup> | 80.9   | mg/Kg | 50       | 50.0            | 162                 | 61.7 - 121.1       |

**Sample: 215208 - AH-2 1'-1.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 65528      Date Analyzed: 2009-11-23      Analyzed By: AR  
Prep Batch: 55983      Sample Preparation: 2009-11-23      Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215209 - AH-2 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5035  
QC Batch: 65542      Date Analyzed: 2009-11-23      Analyzed By: tn  
Prep Batch: 56012      Sample Preparation: 2009-11-23      Prepared By: tn

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 2.36         | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 61.9         | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 61.1         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 6.94         | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 53.4   | mg/Kg | 50       | 50.0            | 107                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 64.1   | mg/Kg | 50       | 50.0            | 128                 | 43.1 - 128.4       |

**Sample: 215209 - AH-2 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 65528      Date Analyzed: 2009-11-23      Analyzed By: AR  
Prep Batch: 55983      Sample Preparation: 2009-11-23      Prepared By: AR

<sup>2</sup>High surrogate recovery due to peak interference.

<sup>3</sup>High surrogate recovery due to peak interference.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 8 of 35  
Eddy County, NM

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

Sample: 215210 - AH-2 3'-3.5' 6 in. BEB

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 0.690        | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 28.0         | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 36.3         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 45.6         | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 54.4   | mg/Kg | 50       | 50.0            | 109                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 58.5   | mg/Kg | 50       | 50.0            | 117                 | 43.1 - 128.4       |

Sample: 215210 - AH-2 3'-3.5' 6 in. BEB

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65528                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55983                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

Sample: 215211 - AH-3 0-1' 6 in. BEB

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65528                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55983                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 3290         | mg/Kg | 100      | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 9 of 35  
Eddy County, NM

**Sample: 215211 - AH-3 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: TPH DRO - NEW Analytical Method: Mod. 8015B Prep Method: N/A  
QC Batch: 65453 Date Analyzed: 2009-11-19 Analyzed By: kg  
Prep Batch: 55929 Sample Preparation: 2009-11-19 Prepared By: kg

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 1160         | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane | 4    | 131    | mg/Kg | 1        | 100             | 131                 | 70 - 130           |

**Sample: 215211 - AH-3 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035  
QC Batch: 65457 Date Analyzed: 2009-11-20 Analyzed By: AG  
Prep Batch: 55928 Sample Preparation: 2009-11-19 Prepared By: AG

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 2980         | mg/Kg | 50       | 1.00 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 52.7   | mg/Kg | 50       | 50.0            | 105                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) | 5    | 69.7   | mg/Kg | 50       | 50.0            | 139                 | 61.7 - 121.1       |

**Sample: 215212 - AH-3 1'-1.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 65528 Date Analyzed: 2009-11-23 Analyzed By: AR  
Prep Batch: 55983 Sample Preparation: 2009-11-23 Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

<sup>4</sup>High surrogate recovery due to peak interference.

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

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 10 of 35  
Eddy County, NM

**Sample: 215213 - AH-3 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 65542  
Prep Batch: 56012

Analytical Method: S 8021B  
Date Analyzed: 2009-11-23  
Sample Preparation: 2009-11-23

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | 0.200        | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | 1.54         | mg/Kg | 1        | 0.0100 |
| Xylene       |      | 3.13         | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.20   | mg/Kg | 1        | 2.00            | 110                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) | 6    | 3.25   | mg/Kg | 1        | 2.00            | 162                 | 43.1 - 128.4       |

**Sample: 215213 - AH-3 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)  
QC Batch: 65529  
Prep Batch: 55984

Analytical Method: SM 4500-Cl B  
Date Analyzed: 2009-11-23  
Sample Preparation: 2009-11-23

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215214 - AH-4 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)  
QC Batch: 65529  
Prep Batch: 55984

Analytical Method: SM 4500-Cl B  
Date Analyzed: 2009-11-23  
Sample Preparation: 2009-11-23

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 1350         | mg/Kg | 50       | 4.00 |

<sup>6</sup>High surrogate recovery due to peak interference.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 11 of 35  
Eddy County, NM

**Sample: 215214 - AH-4 0-1' 6 in. BEB**

|             |               |                     |            |
|-------------|---------------|---------------------|------------|
| Laboratory: | Midland       |                     |            |
| Analysis:   | TPH DRO - NEW | Analytical Method:  | Mod. 8015B |
| QC Batch:   | 65453         | Date Analyzed:      | 2009-11-19 |
| Prep Batch: | 55929         | Sample Preparation: | 2009-11-19 |
|             |               | Prep Method:        | N/A        |
|             |               | Analyzed By:        | kg         |
|             |               | Prepared By:        | kg         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 558          | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane |      | 116    | mg/Kg | 1        | 100             | 116                 | 70 - 130           |

**Sample: 215214 - AH-4 0-1' 6 in. BEB**

|             |         |                     |            |
|-------------|---------|---------------------|------------|
| Laboratory: | Midland |                     |            |
| Analysis:   | TPH GRO | Analytical Method:  | S 8015B    |
| QC Batch:   | 65457   | Date Analyzed:      | 2009-11-20 |
| Prep Batch: | 55928   | Sample Preparation: | 2009-11-19 |
|             |         | Prep Method:        | S 5035     |
|             |         | Analyzed By:        | AG         |
|             |         | Prepared By:        | AG         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 1200         | mg/Kg | 50       | 1.00 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 54.1   | mg/Kg | 50       | 50.0            | 108                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) |      | 58.1   | mg/Kg | 50       | 50.0            | 116                 | 61.7 - 121.1       |

**Sample: 215215 - AH-4 1'-1.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65529                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55984                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 1790         | mg/Kg | 50       | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 12 of 35  
Eddy County, NM

**Sample: 215216 - AH-4 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 65542  
Prep Batch: 56012

Analytical Method: S 8021B  
Date Analyzed: 2009-11-23  
Sample Preparation: 2009-11-23

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | <0.0100      | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.12   | mg/Kg | 1        | 2.00            | 106                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.88   | mg/Kg | 1        | 2.00            | 94                  | 43.1 - 128.4       |

**Sample: 215216 - AH-4 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)  
QC Batch: 65529  
Prep Batch: 55984

Analytical Method: SM 4500-Cl B  
Date Analyzed: 2009-11-23  
Sample Preparation: 2009-11-23

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215217 - AH-4 3'-3.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)  
QC Batch: 65529  
Prep Batch: 55984

Analytical Method: SM 4500-Cl B  
Date Analyzed: 2009-11-23  
Sample Preparation: 2009-11-23

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 13 of 35  
Eddy County, NM

**Sample: 215218 - AH-4 4'-4.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 65529 Date Analyzed: 2009-11-23 Analyzed By: AR  
Prep Batch: 55984 Sample Preparation: 2009-11-23 Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215219 - AH-5 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 65529 Date Analyzed: 2009-11-23 Analyzed By: AR  
Prep Batch: 55984 Sample Preparation: 2009-11-23 Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 849          | mg/Kg | 50       | 4.00 |

**Sample: 215219 - AH-5 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: TPH DRO - NEW Analytical Method: Mod. 8015B Prep Method: N/A  
QC Batch: 65453 Date Analyzed: 2009-11-19 Analyzed By: kg  
Prep Batch: 55929 Sample Preparation: 2009-11-19 Prepared By: kg

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 1770         | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane | 7    | 151    | mg/Kg | 1        | 100             | 151                 | 70 - 130           |

**Sample: 215219 - AH-5 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035  
QC Batch: 65457 Date Analyzed: 2009-11-20 Analyzed By: AG  
Prep Batch: 55928 Sample Preparation: 2009-11-19 Prepared By: AG

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

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 14 of 35  
Eddy County, NM

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 2520         | mg/Kg | 50       | 1.00 |

| Surrogate                    | Flag         | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|--------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |              | 54.1   | mg/Kg | 50       | 50.0            | 108                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) | <sup>8</sup> | 69.5   | mg/Kg | 50       | 50.0            | 139                 | 61.7 - 121.1       |

**Sample: 215220 - AH-5 1'-1.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 65529      Date Analyzed: 2009-11-23      Analyzed By: AR  
Prep Batch: 55984      Sample Preparation: 2009-11-23      Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215221 - AH-5 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5035  
QC Batch: 65542      Date Analyzed: 2009-11-23      Analyzed By: tn  
Prep Batch: 56012      Sample Preparation: 2009-11-23      Prepared By: tn

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | <0.0100      | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.16   | mg/Kg | 1        | 2.00            | 108                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.92   | mg/Kg | 1        | 2.00            | 96                  | 43.1 - 128.4       |

**Sample: 215221 - AH-5 2'-2.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 65529      Date Analyzed: 2009-11-23      Analyzed By: AR  
Prep Batch: 55984      Sample Preparation: 2009-11-23      Prepared By: AR

<sup>8</sup>High surrogate recovery due to peak interference.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 15 of 35  
Eddy County, NM

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215222 - AH-5 3'-3.5' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 65529 Date Analyzed: 2009-11-23 Analyzed By: AR  
Prep Batch: 55984 Sample Preparation: 2009-11-23 Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215223 - AH-6 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 65530 Date Analyzed: 2009-11-23 Analyzed By: AR  
Prep Batch: 55985 Sample Preparation: 2009-11-23 Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 1090         | mg/Kg | 50       | 4.00 |

**Sample: 215223 - AH-6 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: TPH DRO - NEW Analytical Method: Mod. 8015B Prep Method: N/A  
QC Batch: 65453 Date Analyzed: 2009-11-19 Analyzed By: kg  
Prep Batch: 55929 Sample Preparation: 2009-11-19 Prepared By: kg

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 1100         | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane |      | 128    | mg/Kg | 1        | 100             | 128                 | 70 - 130           |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 16 of 35  
Eddy County, NM

**Sample: 215223 - AH-6 0-1' 6 in. BEB**

|             |         |                     |            |
|-------------|---------|---------------------|------------|
| Laboratory: | Midland |                     |            |
| Analysis:   | TPH GRO | Analytical Method:  | S 8015B    |
| QC Batch:   | 65437   | Date Analyzed:      | 2009-11-20 |
| Prep Batch: | 55928   | Sample Preparation: | 2009-11-19 |
|             |         | Prep Method:        | S 5035     |
|             |         | Analyzed By:        | AG         |
|             |         | Prepared By:        | AG         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 3130         | mg/Kg | 50       | 1.00 |

| Surrogate                    | Flag         | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|--------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |              | 53.8   | mg/Kg | 50       | 50.0            | 108                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) | <sup>9</sup> | 76.6   | mg/Kg | 50       | 50.0            | 153                 | 61.7 - 121.1       |

**Sample: 215224 - AH-6 1'-1.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215225 - AH-6 2'-2.5' 6 in. BEB**

|             |         |                     |            |
|-------------|---------|---------------------|------------|
| Laboratory: | Midland |                     |            |
| Analysis:   | BTEX    | Analytical Method:  | S 8021B    |
| QC Batch:   | 65542   | Date Analyzed:      | 2009-11-23 |
| Prep Batch: | 56012   | Sample Preparation: | 2009-11-23 |
|             |         | Prep Method:        | S 5035     |
|             |         | Analyzed By:        | tn         |
|             |         | Prepared By:        | tn         |

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | <0.0100      | mg/Kg | 1        | 0.0100 |

| Surrogate              | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT) |      | 2.12   | mg/Kg | 1        | 2.00            | 106                 | 64.4 - 111.2       |

*continued ...*

<sup>9</sup>High surrogate recovery due to peak interference.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 17 of 35  
Eddy County, NM

*sample continued ...*

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| 4-Bromofluorobenzene (4-BFB) |      | 1.88   | mg/Kg | 1        | 2.00         | 94               | 43.1 - 128.4    |

**Sample: 215225 - AH-6 2'-2.5' 6 in. BEB**

|             |                      |                     |              |                  |
|-------------|----------------------|---------------------|--------------|------------------|
| Laboratory: | Midland              |                     |              |                  |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B | Prep Method: N/A |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   | Analyzed By: AR  |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   | Prepared By: AR  |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215226 - AH-6 3'-3.5' 6 in. BEB**

|             |                      |                     |              |                  |
|-------------|----------------------|---------------------|--------------|------------------|
| Laboratory: | Midland              |                     |              |                  |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B | Prep Method: N/A |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   | Analyzed By: AR  |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   | Prepared By: AR  |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215227 - AH-7 0-1' 6 in. BEB**

|             |                      |                     |              |                  |
|-------------|----------------------|---------------------|--------------|------------------|
| Laboratory: | Midland              |                     |              |                  |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B | Prep Method: N/A |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   | Analyzed By: AR  |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   | Prepared By: AR  |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 883          | mg/Kg | 50       | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 18 of 35  
Eddy County, NM

**Sample: 215227 - AH-7 0-1' 6 in. BEB**

|             |               |                     |            |
|-------------|---------------|---------------------|------------|
| Laboratory: | Midland       |                     |            |
| Analysis:   | TPH DRO - NEW | Analytical Method:  | Mod. 8015B |
| QC Batch:   | 65453         | Date Analyzed:      | 2009-11-19 |
| Prep Batch: | 55929         | Sample Preparation: | 2009-11-19 |
|             |               | Prep Method:        | N/A        |
|             |               | Analyzed By:        | kg         |
|             |               | Prepared By:        | kg         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 226          | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane |      | 108    | mg/Kg | 1        | 100             | 108                 | 70 - 130           |

**Sample: 215227 - AH-7 0-1' 6 in. BEB**

|             |         |                     |            |
|-------------|---------|---------------------|------------|
| Laboratory: | Midland |                     |            |
| Analysis:   | TPH GRO | Analytical Method:  | S 8015B    |
| QC Batch:   | 65457   | Date Analyzed:      | 2009-11-20 |
| Prep Batch: | 55928   | Sample Preparation: | 2009-11-19 |
|             |         | Prep Method:        | S 5035     |
|             |         | Analyzed By:        | AG         |
|             |         | Prepared By:        | AG         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 146          | mg/Kg | 5        | 1.00 |

| Surrogate                    | Flag          | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|---------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |               | 5.41   | mg/Kg | 5        | 5.00            | 108                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) | <sup>10</sup> | 6.16   | mg/Kg | 5        | 5.00            | 123                 | 61.7 - 121.1       |

**Sample: 215228 - AH-7 1'-1.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 2950         | mg/Kg | 100      | 4.00 |

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

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 19 of 35  
Eddy County, NM

**Sample: 215229 - AH-7 2'-2.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 3010         | mg/Kg | 100      | 4.00 |

**Sample: 215230 - AH-7 3'-3.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 482          | mg/Kg | 50       | 4.00 |

**Sample: 215231 - AH-7 4'-4.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

**Sample: 215232 - AH-8 0-1' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65530                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55985                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 1110         | mg/Kg | 50       | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 20 of 35  
Eddy County, NM

**Sample: 215232 - AH-8 0-1' 6 in. BEB**

|             |               |                     |            |
|-------------|---------------|---------------------|------------|
| Laboratory: | Midland       |                     |            |
| Analysis:   | TPH DRO - NEW | Analytical Method:  | Mod. 8015B |
| QC Batch:   | 65453         | Date Analyzed:      | 2009-11-19 |
| Prep Batch: | 55929         | Sample Preparation: | 2009-11-19 |
|             |               | Prep Method:        | N/A        |
|             |               | Analyzed By:        | kg         |
|             |               | Prepared By:        | kg         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| DRO       |      | 170          | mg/Kg | 1        | 50.0 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane |      | 107    | mg/Kg | 1        | 100             | 107                 | 70 - 130           |

**Sample: 215232 - AH-8 0-1' 6 in. BEB**

|             |         |                     |            |
|-------------|---------|---------------------|------------|
| Laboratory: | Midland |                     |            |
| Analysis:   | TPH GRO | Analytical Method:  | S 8015B    |
| QC Batch:   | 65457   | Date Analyzed:      | 2009-11-20 |
| Prep Batch: | 55928   | Sample Preparation: | 2009-11-19 |
|             |         | Prep Method:        | S 5035     |
|             |         | Analyzed By:        | AG         |
|             |         | Prepared By:        | AG         |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | 111          | mg/Kg | 5        | 1.00 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 5.37   | mg/Kg | 5        | 5.00            | 107                 | 65.3 - 115         |
| 4-Bromofluorobenzene (4-BFB) |      | 5.32   | mg/Kg | 5        | 5.00            | 106                 | 61.7 - 121.1       |

**Sample: 215233 - AH-8 1'-1.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65531                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55986                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 21 of 35  
Eddy County, NM

**Sample: 215234 - AH-8 2'-2.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65531                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55986                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 361          | mg/Kg | 50       | 4.00 |

**Sample: 215235 - AH-8 3'-3.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65531                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55986                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 422          | mg/Kg | 50       | 4.00 |

**Sample: 215236 - AH-2 4'-4.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65531                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55986                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 224          | mg/Kg | 50       | 4.00 |

**Sample: 215237 - AH-3 3'-3.5' 6 in. BEB**

|             |                      |                     |              |
|-------------|----------------------|---------------------|--------------|
| Laboratory: | Midland              |                     |              |
| Analysis:   | Chloride (Titration) | Analytical Method:  | SM 4500-Cl B |
| QC Batch:   | 65531                | Date Analyzed:      | 2009-11-23   |
| Prep Batch: | 55986                | Sample Preparation: | 2009-11-23   |
|             |                      | Prep Method:        | N/A          |
|             |                      | Analyzed By:        | AR           |
|             |                      | Prepared By:        | AR           |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 22 of 35  
Eddy County, NM

**Method Blank (1)**      QC Batch: 65453

QC Batch: 65453  
Prep Batch: 55929

Date Analyzed: 2009-11-19  
QC Preparation: 2009-11-19

Analyzed By: kg  
Prepared By: kg

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| DRO       |      | <5.86         | mg/Kg | 50 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane |      | 95.2   | mg/Kg | 1        | 100             | 95                  | 70 - 130           |

**Method Blank (1)**      QC Batch: 65457

QC Batch: 65457  
Prep Batch: 55928

Date Analyzed: 2009-11-20  
QC Preparation: 2009-11-19

Analyzed By: AG  
Prepared By: AG

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| GRO       |      | <0.396        | mg/Kg | 1  |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.21   | mg/Kg | 1        | 2.00            | 110                 | 66.2 - 125         |
| 4-Bromofluorobenzene (4-BFB) |      | 1.82   | mg/Kg | 1        | 2.00            | 91                  | 62 - 120.5         |

**Method Blank (1)**      QC Batch: 65528

QC Batch: 65528  
Prep Batch: 55983

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| Chloride  |      | <2.18         | mg/Kg | 4  |

**Method Blank (1)**      QC Batch: 65529

QC Batch: 65529  
Prep Batch: 55984

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 23 of 35  
Eddy County, NM

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| Chloride  |      | <2.18         | mg/Kg | 4  |

Method Blank (1) QC Batch: 65530

QC Batch: 65530 Date Analyzed: 2009-11-23 Analyzed By: AR  
Prep Batch: 55985 QC Preparation: 2009-11-23 Prepared By: AR

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| Chloride  |      | <2.18         | mg/Kg | 4  |

Method Blank (1) QC Batch: 65531

QC Batch: 65531 Date Analyzed: 2009-11-23 Analyzed By: AR  
Prep Batch: 55986 QC Preparation: 2009-11-23 Prepared By: AR

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| Chloride  |      | <2.18         | mg/Kg | 4  |

Method Blank (1) QC Batch: 65542

QC Batch: 65542 Date Analyzed: 2009-11-23 Analyzed By: tn  
Prep Batch: 56012 QC Preparation: 2009-11-23 Prepared By: tn

| Parameter    | Flag | MDL<br>Result | Units | RL   |
|--------------|------|---------------|-------|------|
| Benzene      |      | <0.00410      | mg/Kg | 0.01 |
| Toluene      |      | <0.00310      | mg/Kg | 0.01 |
| Ethylbenzene |      | <0.00240      | mg/Kg | 0.01 |
| Xylene       |      | <0.00650      | mg/Kg | 0.01 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.14   | mg/Kg | 1        | 2.00            | 107                 | 64.9 - 122.7       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.80   | mg/Kg | 1        | 2.00            | 90                  | 43.9 - 121.9       |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 24 of 35  
Eddy County, NM

**Method Blank (1)**      QC Batch: 65629

QC Batch: 65629  
Prep Batch:

Date Analyzed:  
QC Preparation:

Analyzed By:  
Prepared By:

| Parameter    | Flag | MDL<br>Result | Units | RL   |
|--------------|------|---------------|-------|------|
| Benzene      |      | <0.00410      | mg/Kg | 0.01 |
| Toluene      |      | <0.00310      | mg/Kg | 0.01 |
| Ethylbenzene |      | <0.00240      | mg/Kg | 0.01 |
| Xylene       |      | <0.00650      | mg/Kg | 0.01 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.12   | mg/Kg | 1        | 2.00            | 106                 | 64.9 - 122.7       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.80   | mg/Kg | 1        | 2.00            | 90                  | 43.9 - 121.9       |

**Laboratory Control Spike (LCS-1)**

QC Batch: 65453  
Prep Batch: 55929

Date Analyzed: 2009-11-19  
QC Preparation: 2009-11-19

Analyzed By: kg  
Prepared By: kg

| Param | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|
| DRO   | 203           | mg/Kg | 1    | 250             | <5.86            | 81   | 57.4 - 133.4  |

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

| Param | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| DRO   | 203            | mg/Kg | 1    | 250             | <5.86            | 81   | 57.4 - 133.4  | 0   | 20           |

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

| Surrogate   | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|-------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| n-Tricosane | 108           | 107            | mg/Kg | 1    | 100             | 108         | 107          | 70 - 130      |

**Laboratory Control Spike (LCS-1)**

QC Batch: 65457  
Prep Batch: 55928

Date Analyzed: 2009-11-20  
QC Preparation: 2009-11-19

Analyzed By: AG  
Prepared By: AG

| Param | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|
| GRO   | 14.5          | mg/Kg | 1    | 20.0            | <0.396           | 72   | 52.5 - 114.3  |

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 25 of 35  
Eddy County, NM

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

| Param | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| GRO   | 14.4           | mg/Kg | 1    | 20.0            | <0.396           | 72   | 52.5 - 114.3  | 1   | 20           |

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

| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 2.17          | 2.16           | mg/Kg | 1    | 2.00            | 108         | 108          | 66.2 - 128.7  |
| 4-Bromofluorobenzene (4-BFB) | 1.87          | 1.84           | mg/Kg | 1    | 2.00            | 94          | 92           | 64.1 - 127.4  |

#### Laboratory Control Spike (LCS-1)

QC Batch: 65528  
Prep Batch: 55983

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Param    | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 101           | mg/Kg | 1    | 100             | <2.18            | 101  | 85 - 115      |

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

| Param    | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 102            | mg/Kg | 1    | 100             | <2.18            | 102  | 85 - 115      | 1   | 20           |

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

#### Laboratory Control Spike (LCS-1)

QC Batch: 65529  
Prep Batch: 55984

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Param    | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 99.6          | mg/Kg | 1    | 100             | <2.18            | 100  | 85 - 115      |

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

| Param    | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 103            | mg/Kg | 1    | 100             | <2.18            | 103  | 85 - 115      | 3   | 20           |

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

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 26 of 35  
Eddy County, NM

#### Laboratory Control Spike (LCS-1)

QC Batch: 65530  
Prep Batch: 55985

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Param    | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 98.8          | mg/Kg | 1    | 100             | <2.18            | 99   | 85 - 115      |

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

| Param    | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 101            | mg/Kg | 1    | 100             | <2.18            | 101  | 85 - 115      | 2   | 20           |

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

#### Laboratory Control Spike (LCS-1)

QC Batch: 65531  
Prep Batch: 55986

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Param    | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 99.7          | mg/Kg | 1    | 100             | <2.18            | 100  | 85 - 115      |

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

| Param    | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 100            | mg/Kg | 1    | 100             | <2.18            | 100  | 85 - 115      | 0   | 20           |

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

#### Laboratory Control Spike (LCS-1)

QC Batch: 65542  
Prep Batch: 56012

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: tn  
Prepared By: tn

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 1.97          | mg/Kg | 1    | 2.00            | <0.00410         | 98   | 75.4 - 115.7  |
| Toluene      | 1.96          | mg/Kg | 1    | 2.00            | <0.00310         | 98   | 78.4 - 113.6  |
| Ethylbenzene | 1.93          | mg/Kg | 1    | 2.00            | <0.00240         | 96   | 76 - 114.2    |
| Xylene       | 5.76          | mg/Kg | 1    | 6.00            | <0.00650         | 96   | 76.9 - 113.6  |

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

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 27 of 35  
Eddy County, NM

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 2.01          | mg/Kg | 1    | 2.00            | <0.00410         | 100  | 75.4 - 115.7  | 2   | 20           |
| Toluene      | 1.99          | mg/Kg | 1    | 2.00            | <0.00310         | 100  | 78.4 - 113.6  | 2   | 20           |
| Ethylbenzene | 1.97          | mg/Kg | 1    | 2.00            | <0.00240         | 98   | 76 - 114.2    | 2   | 20           |
| Xylene       | 5.90          | mg/Kg | 1    | 6.00            | <0.00650         | 98   | 76.9 - 113.6  | 2   | 20           |

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

| Surrogate                    | LCS<br>Result | LCS<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCS<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|---------------|-------|------|-----------------|-------------|-------------|---------------|
| Trifluorotoluene (TFT)       | 2.08          | 2.10          | mg/Kg | 1    | 2.00            | 104         | 105         | 65 - 122.9    |
| 4-Bromofluorobenzene (4-BFB) | 1.88          | 1.88          | mg/Kg | 1    | 2.00            | 94          | 94          | 43.8 - 124.9  |

#### Laboratory Control Spike (LCS-1)

QC Batch: 65629  
Prep Batch:

Date Analyzed:  
QC Preparation:

Analyzed By:  
Prepared By:

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.00          | mg/Kg | 1    | 2.00            | <0.00410         | 100  | 75.4 - 115.7  |
| Toluene      | 1.99          | mg/Kg | 1    | 2.00            | <0.00310         | 100  | 78.4 - 113.6  |
| Ethylbenzene | 1.95          | mg/Kg | 1    | 2.00            | <0.00240         | 98   | 76 - 114.2    |
| Xylene       | 5.82          | mg/Kg | 1    | 6.00            | <0.00650         | 97   | 76.9 - 113.6  |

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

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 1.95          | mg/Kg | 1    | 2.00            | <0.00410         | 98   | 75.4 - 115.7  | 2   | 20           |
| Toluene      | 1.94          | mg/Kg | 1    | 2.00            | <0.00310         | 97   | 78.4 - 113.6  | 2   | 20           |
| Ethylbenzene | 1.91          | mg/Kg | 1    | 2.00            | <0.00240         | 96   | 76 - 114.2    | 2   | 20           |
| Xylene       | 5.70          | mg/Kg | 1    | 6.00            | <0.00650         | 95   | 76.9 - 113.6  | 2   | 20           |

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

| Surrogate                    | LCS<br>Result | LCS<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCS<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|---------------|-------|------|-----------------|-------------|-------------|---------------|
| Trifluorotoluene (TFT)       | 2.13          | 2.11          | mg/Kg | 1    | 2.00            | 106         | 106         | 65 - 122.9    |
| 4-Bromofluorobenzene (4-BFB) | 1.91          | 1.88          | mg/Kg | 1    | 2.00            | 96          | 94          | 43.8 - 124.9  |

#### Matrix Spike (MS-1) Spiked Sample: 215283

QC Batch: 65453  
Prep Batch: 55929

Date Analyzed: 2009-11-19  
QC Preparation: 2009-11-19

Analyzed By: kg  
Prepared By: kg

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 28 of 35  
Eddy County, NM

| Param | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|--------------|-------|------|-----------------|------------------|------|---------------|
| DRO   | 157          | mg/Kg | 1    | 250             | <5.86            | 63   | 35.2 - 167.1  |

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

| Param | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| DRO   | 162           | mg/Kg | 1    | 250             | <5.86            | 65   | 35.2 - 167.1  | 3   | 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 |
|-------------|--------------|---------------|-------|------|-----------------|------------|-------------|---------------|
| n-Tricosane | 85.8         | 91.6          | mg/Kg | 1    | 100             | 86         | 92          | 70 - 130      |

**Matrix Spike (MS-1)** Spiked Sample: 214963

QC Batch: 65457  
Prep Batch: 55928

Date Analyzed: 2009-11-20  
QC Preparation: 2009-11-19

Analyzed By: AG  
Prepared By: AG

| Param | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|--------------|-------|------|-----------------|------------------|------|---------------|
| GRO   | 13.9         | mg/Kg | 1    | 20.0            | <0.396           | 70   | 10 - 198.3    |

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

| Param | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| GRO   | 15.0          | mg/Kg | 1    | 20.0            | <0.396           | 75   | 10 - 198.3    | 8   | 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)       | 2.04         | 2.12          | mg/Kg | 1    | 2               | 102        | 106         | 65.5 - 123    |
| 4-Bromofluorobenzene (4-BFB) | 1.91         | 1.93          | mg/Kg | 1    | 2               | 96         | 96          | 58.6 - 140    |

**Matrix Spike (MS-1)** Spiked Sample: 215212

QC Batch: 65528  
Prep Batch: 55983

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Param    | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|--------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 9730         | mg/Kg | 100  | 10000           | <218             | 97   | 85 - 115      |

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

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 29 of 35  
Eddy County, NM

| Param    | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 10100         | mg/Kg | 100  | 10000           | <218             | 101  | 85 - 115      | 4   | 20           |

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

**Matrix Spike (MS-1)** Spiked Sample: 215222

QC Batch: 65529  
Prep Batch: 55984

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Param    | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|--------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 10500        | mg/Kg | 100  | 10000           | <218             | 105  | 85 - 115      |

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

| Param    | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 10600         | mg/Kg | 100  | 10000           | <218             | 106  | 85 - 115      | 1   | 20           |

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

**Matrix Spike (MS-1)** Spiked Sample: 215232

QC Batch: 65530  
Prep Batch: 55985

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

| Param    | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|--------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 11500        | mg/Kg | 100  | 10000           | 1110             | 104  | 85 - 115      |

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

| Param    | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 11700         | mg/Kg | 100  | 10000           | 1110             | 106  | 85 - 115      | 2   | 20           |

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

**Matrix Spike (MS-1)** Spiked Sample: 215496

QC Batch: 65531  
Prep Batch: 55986

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: AR  
Prepared By: AR

*continued ...*

matrix spikes continued ...

| Param    | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|--------------|-------|------|-----------------|------------------|------|---------------|
| Param    | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
| Chloride | 10900        | mg/Kg | 100  | 10000           | 813              | 101  | 85 - 115      |

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

| Param    | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 11200         | mg/Kg | 100  | 10000           | 813              | 104  | 85 - 115      | 3   | 20           |

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

**Matrix Spike (MS-1) Spiked Sample: 215283**

QC Batch: 65542  
Prep Batch: 56012

Date Analyzed: 2009-11-23  
QC Preparation: 2009-11-23

Analyzed By: tn  
Prepared By: tn

| Param        | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.20         | mg/Kg | 1    | 2.00            | <0.00410         | 110  | 57.7 - 140.7  |
| Toluene      | 2.22         | mg/Kg | 1    | 2.00            | <0.00310         | 111  | 53.4 - 146.6  |
| Ethylbenzene | 2.26         | mg/Kg | 1    | 2.00            | <0.00240         | 113  | 62.1 - 141.6  |
| Xylene       | 6.77         | mg/Kg | 1    | 6.00            | <0.00650         | 113  | 61.2 - 142.7  |

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

| Param        | MSD<br>Result      | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|--------------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | <sup>11</sup> 1.74 | mg/Kg | 1    | 2.00            | <0.00410         | 87   | 57.7 - 140.7  | 23  | 20           |
| Toluene      | <sup>12</sup> 1.77 | mg/Kg | 1    | 2.00            | <0.00310         | 88   | 53.4 - 146.6  | 23  | 20           |
| Ethylbenzene | <sup>13</sup> 1.81 | mg/Kg | 1    | 2.00            | <0.00240         | 90   | 62.1 - 141.6  | 22  | 20           |
| Xylene       | <sup>14</sup> 5.43 | mg/Kg | 1    | 6.00            | <0.00650         | 90   | 61.2 - 142.7  | 22  | 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)       | 2.11         | 2.09          | mg/Kg | 1    | 2               | 106        | 104         | 62.7 - 119.6  |
| 4-Bromofluorobenzene (4-BFB) | 1.89         | 1.89          | mg/Kg | 1    | 2               | 94         | 94          | 49.6 - 136.7  |

<sup>11</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>12</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>13</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>14</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 31 of 35  
Eddy County, NM

**Matrix Spike (MS-1)** Spiked Sample: 215596

QC Batch: 65629  
Prep Batch:

Date Analyzed:  
QC Preparation:

Analyzed By:  
Prepared By:

| Param        |               | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | <sup>15</sup> | 3.04         | mg/Kg | 1    | 2.00            | <0.00410         | 152  | 57.7 - 140.7  |
| Toluene      | <sup>16</sup> | 3.12         | mg/Kg | 1    | 2.00            | <0.00310         | 156  | 53.4 - 146.6  |
| Ethylbenzene | <sup>17</sup> | 3.21         | mg/Kg | 1    | 2.00            | <0.00240         | 160  | 62.1 - 141.6  |
| Xylene       | <sup>18</sup> | 9.65         | mg/Kg | 1    | 6.00            | <0.00650         | 161  | 61.2 - 142.7  |

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

| Param        |  | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|--|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      |  | 2.51          | mg/Kg | 1    | 2.00            | <0.00410         | 126  | 57.7 - 140.7  | 19  | 20           |
| Toluene      |  | 2.56          | mg/Kg | 1    | 2.00            | <0.00310         | 128  | 53.4 - 146.6  | 20  | 20           |
| Ethylbenzene |  | 2.65          | mg/Kg | 1    | 2.00            | <0.00240         | 132  | 62.1 - 141.6  | 19  | 20           |
| Xylene       |  | 7.92          | mg/Kg | 1    | 6.00            | <0.00650         | 132  | 61.2 - 142.7  | 20  | 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)       | 2.08         | 2.00          | mg/Kg | 1    | 2               | 104        | 100         | 62.7 - 119.6  |
| 4-Bromofluorobenzene (4-BFB) | 1.94         | 1.82          | mg/Kg | 1    | 2               | 97         | 91          | 49.6 - 136.7  |

**Standard (CCV-1)**

QC Batch: 65453

Date Analyzed: 2009-11-19

Analyzed By: kg

| 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                   | 207                    | 83                          | 80 - 120                      | 2009-11-19       |

**Standard (CCV-2)**

QC Batch: 65453

Date Analyzed: 2009-11-19

Analyzed By: kg

<sup>15</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>16</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>17</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>18</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 32 of 35  
Eddy County, 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                   | 206                    | 82                          | 80 - 120                      | 2009-11-19       |

Standard (CCV-3)

QC Batch: 65453                      Date Analyzed: 2009-11-19                      Analyzed By: kg

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO   |      | mg/Kg | 250                   | 214                    | 86                          | 80 - 120                      | 2009-11-19       |

Standard (CCV-2)

QC Batch: 65457                      Date Analyzed: 2009-11-20                      Analyzed By: AG

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1.00                  | 0.921                  | 92                          | 80 - 120                      | 2009-11-20       |

Standard (CCV-3)

QC Batch: 65457                      Date Analyzed: 2009-11-20                      Analyzed By: AG

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1.00                  | 0.987                  | 99                          | 80 - 120                      | 2009-11-20       |

Standard (ICV-1)

QC Batch: 65528                      Date Analyzed: 2009-11-23                      Analyzed By: AR

| Param    | Flag | Units | ICVs<br>True<br>Conc. | ICVs<br>Found<br>Conc. | ICVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 106                    | 106                         | 85 - 115                      | 2009-11-23       |

Standard (CCV-1)

QC Batch: 65528                      Date Analyzed: 2009-11-23                      Analyzed By: AR

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 33 of 35  
Eddy County, 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 |
|----------|------|-------|-----------------------|------------------------|------------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 94.2                   | 94                           | 85 - 115                      | 2009-11-23       |

**Standard (ICV-1)**

QC Batch: 65529

Date Analyzed: 2009-11-23

Analyzed By: AR

| Param    | Flag | Units | ICVs<br>True<br>Conc. | ICVs<br>Found<br>Conc. | ICVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 96.2                   | 96                          | 85 - 115                      | 2009-11-23       |

**Standard (CCV-1)**

QC Batch: 65529

Date Analyzed: 2009-11-23

Analyzed By: AR

| 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 |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 104                    | 104                         | 85 - 115                      | 2009-11-23       |

**Standard (ICV-1)**

QC Batch: 65530

Date Analyzed: 2009-11-23

Analyzed By: AR

| Param    | Flag | Units | ICVs<br>True<br>Conc. | ICVs<br>Found<br>Conc. | ICVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 98.1                   | 98                          | 85 - 115                      | 2009-11-23       |

**Standard (CCV-1)**

QC Batch: 65530

Date Analyzed: 2009-11-23

Analyzed By: AR

| 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 |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 102                    | 102                         | 85 - 115                      | 2009-11-23       |

**Standard (ICV-1)**

QC Batch: 65531

Date Analyzed: 2009-11-23

Analyzed By: AR

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 34 of 35  
Eddy County, NM

| Param    | Flag | Units | ICVs<br>True<br>Conc. | ICVs<br>Found<br>Conc. | ICVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 102                    | 102                         | 85 - 115                      | 2009-11-23       |

**Standard (CCV-1)**

QC Batch: 65531

Date Analyzed: 2009-11-23

Analyzed By: AR

| 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 |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 97.9                   | 98                          | 85 - 115                      | 2009-11-23       |

**Standard (CCV-1)**

QC Batch: 65542

Date Analyzed: 2009-11-23

Analyzed By: tn

| 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                 | 0.0984                 | 98                          | 80 - 120                      | 2009-11-23       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0972                 | 97                          | 80 - 120                      | 2009-11-23       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0968                 | 97                          | 80 - 120                      | 2009-11-23       |
| Xylene       |      | mg/Kg | 0.300                 | 0.290                  | 97                          | 80 - 120                      | 2009-11-23       |

**Standard (CCV-2)**

QC Batch: 65542

Date Analyzed: 2009-11-23

Analyzed By: tn

| 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                 | 0.0990                 | 99                          | 80 - 120                      | 2009-11-23       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0978                 | 98                          | 80 - 120                      | 2009-11-23       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0958                 | 96                          | 80 - 120                      | 2009-11-23       |
| Xylene       |      | mg/Kg | 0.300                 | 0.287                  | 96                          | 80 - 120                      | 2009-11-23       |

**Standard (CCV-2)**

QC Batch: 65629

Date Analyzed:

Analyzed By:

Report Date: December 1, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 35 of 35  
Eddy County, 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 |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/Kg | 0.100                 | 0.0979                 | 98                          | 80 - 120                      | 2009-11-25       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0973                 | 97                          | 80 - 120                      | 2009-11-25       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0957                 | 96                          | 80 - 120                      | 2009-11-25       |
| Xylene       |      | mg/Kg | 0.300                 | 0.285                  | 95                          | 80 - 120                      | 2009-11-25       |

Standard (CCV-3)

QC Batch: 65629

Date Analyzed:

Analyzed By:

| 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                 | 0.104                  | 104                         | 80 - 120                      | 2009-11-25       |
| Toluene      |      | mg/Kg | 0.100                 | 0.103                  | 103                         | 80 - 120                      | 2009-11-25       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.101                  | 101                         | 80 - 120                      | 2009-11-25       |
| Xylene       |      | mg/Kg | 0.300                 | 0.300                  | 100                         | 80 - 120                      | 2009-11-25       |



Order # 911903

# Analysis Request of Chain of Custody Record

PAGE: 2 OF: 4

ANALYSIS REQUEST  
(Circle or Specify Method No.)



**TETRA TECH**

1910 N. Big Spring St.  
Midland, Texas 79705  
(432) 682-4559 • Fax (432) 682-3946

| CLIENT NAME: C126        |       | SITE MANAGER: F Lee Tavares |        | PROJECT NAME: C126 / 5th 14 942 |        | PRESERVATIVE METHOD |   |
|--------------------------|-------|-----------------------------|--------|---------------------------------|--------|---------------------|---|
| PROJECT NO.: 114-6402369 |       | SAMPLE IDENTIFICATION       |        | NUMBER OF CONTAINERS            |        | HCL HNO3 ICE NONE   |   |
| LAB I.D. NUMBER          | DATE  | TIME                        | MATRIX | COMP.                           | GRAB   |                     |   |
| 215213                   | 11/17 |                             | S      | X                               | 2-2.5' | 6" BEB              | X |
| 214                      |       |                             |        |                                 | 0-1'   | 6" BEB              |   |
| 215                      |       |                             |        |                                 | 1-1.5' | 6" BEB              |   |
| 216                      |       |                             |        |                                 | 2-2.5' | 6" BEB              |   |
| 217                      |       |                             |        |                                 | 3-3.5' | 6" BEB              |   |
| 218                      |       |                             |        |                                 | 4-4.5' | 6" BEB              |   |
| 219                      |       |                             |        |                                 | 0-1'   | 6" BEB              |   |
| 220                      |       |                             |        |                                 | 1-1.5' | 6" BEB              |   |
| 221                      |       |                             |        |                                 | 2-2.5' | 6" BEB              |   |
| 222                      |       |                             |        |                                 | 3-3.5' | 6" BEB              |   |

| REINQUISHED BY: (Signature) | Date:    | Time: | RECEIVED BY: (Signature) | Date:    | Time: |
|-----------------------------|----------|-------|--------------------------|----------|-------|
| <i>[Signature]</i>          | 11/18/04 | 17:02 | <i>[Signature]</i>       | 11/18/04 | 17:02 |
| REINQUISHED BY: (Signature) | Date:    | Time: | RECEIVED BY: (Signature) | Date:    | Time: |
| REINQUISHED BY: (Signature) | Date:    | Time: | RECEIVED BY: (Signature) | Date:    | Time: |
| REINQUISHED BY: (Signature) | Date:    | Time: | RECEIVED BY: (Signature) | Date:    | Time: |

| RECEIVING LABORATORY: | STATE: | ZIP:  |
|-----------------------|--------|-------|
| Midland               | Texas  | 79705 |
| CITY:                 | STATE: | ZIP:  |
| CONTACT:              | PHONE: |       |

| SAMPLE CONDITION WHEN RECEIVED: |  | REMARKS:                                                                                                                                         |  |
|---------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 4.0e in bag                     |  | Rush deeper sample if TPH exceed 5000 mg/kg<br>Rush (6) BTEX highest TPH, Rush deeper BTEX, P/B Benzene exceed 10 mg/kg<br>T: 1m BTEX exceed 50" |  |

| PAH 8270                          | RCRA Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8240/8260/624 | GC/MS Semi. Vol. 8270/825 | PCB's 8080/608 | Pest. 808/608 | Chloride | Gamma Spec. | Alpha Beta (Am) | PLM (Asbestos) | Major Anions/Cations, pH, TDS |
|-----------------------------------|-------------------------------------|-------------------------------------|----------------|---------------------|-----|--------------------------|---------------------------|----------------|---------------|----------|-------------|-----------------|----------------|-------------------------------|
| TXH 8015 MOD TX1005 (Ext. to C35) |                                     |                                     |                |                     |     |                          |                           |                |               | X        |             |                 |                |                               |
| BTEX 8021B                        |                                     |                                     |                |                     |     |                          |                           |                |               |          |             |                 |                |                               |

| SAMPLED BY: (Print & Initial) | Date:    | Time: | AIRBILL #: |
|-------------------------------|----------|-------|------------|
| <i>[Signature]</i>            | 11/18/04 | 17:02 | 6840       |
| SAMPLE SHIPPED BY: (Circle)   |          |       |            |
| FEDEX                         |          |       |            |
| BUS                           |          |       |            |
| UPS                           |          |       |            |
| OTHER:                        |          |       |            |
| TETRA TECH CONTACT PERSON:    |          |       |            |
| <i>[Signature]</i>            |          |       |            |
| Results by:                   |          |       |            |
| RUSH Charges Authorized:      |          |       |            |
| Yes No                        |          |       |            |



## Analysis Request of Chain of Custody Record

PAGE: 4

ANALYSIS REQUEST  
(Circle or Specify Method No.)

PAGE: 4 OF: 4



# TETRA TECH

**1910 N. Big Spring St.  
Midland, Texas 79705  
(432) 682-4559 • Fax (432) 682-3946**

[illegible]

Please fill out all copies - Laboratory retains Yellow/copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy

## Summary Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX 79705

Report Date: December 9, 2009

Work Order: 9111903



Project Location: Eddy County, NM  
Project Name: COG/Skelly 942  
Project Number: 114-6400369

| Sample | Description         | Matrix | Date Taken | Time Taken | Date Received |
|--------|---------------------|--------|------------|------------|---------------|
| 215203 | AH-1 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215211 | AH-3 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215214 | AH-4 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215219 | AH-5 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215223 | AH-6 0-1' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |

| Sample - Field Code          | BTEX               |                    |                         |                   |
|------------------------------|--------------------|--------------------|-------------------------|-------------------|
|                              | Benzene<br>(mg/Kg) | Toluene<br>(mg/Kg) | Ethylbenzene<br>(mg/Kg) | Xylene<br>(mg/Kg) |
| 215203 - AH-1 0-1' 6 in. BEB | 2.11               | 35.0               | 38.4                    | 46.4              |
| 215211 - AH-3 0-1' 6 in. BEB | 20.8               | 102                | 76.4                    | 79.2              |
| 215214 - AH-4 0-1' 6 in. BEB | 3.40               | 38.4               | 39.7                    | 40.0              |
| 215219 - AH-5 0-1' 6 in. BEB | 1.68               | 53.2               | 73.8                    | 79.9              |
| 215223 - AH-6 0-1' 6 in. BEB | 3.49               | 75.2               | 78.3                    | 90.7              |

# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1295 806•794•1296 FAX 806•794•1298  
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944  
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260  
E-Mail: lab@traceanalysis.com

## Certifications

WBENC: 237019 HUB: 1752439743100-86536 DBE: VN 20657  
NCTRCA WFWB38444Y0909

## NELAP Certifications

Lubbock: T104704219-08-TX El Paso: T104704221-08-TX Midland: T104704392-08-TX  
LELAP-02003 LELAP-02002  
Kansas E-10317

## Analytical and Quality Control Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX, 79705

Report Date: December 9, 2009

Work Order: 9111903



Project Location: Eddy County, NM  
Project Name: COG/Skelly 942  
Project Number: 114-6400369

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 |
|--------|---------------------|--------|------------|------------|---------------|
| 215203 | AH-1 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215211 | AH-3 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215214 | AH-4 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215219 | AH-5 0-1' 6 in. BEB | soil   | 2009-11-17 | 00:00      | 2009-11-18    |
| 215223 | AH-6 0-1' 6 in. BEB | soil   | 2009-11-18 | 00:00      | 2009-11-18    |

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  
Dr. Michael Abel, Project Manager

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project COG/Skelly 942 were received by TraceAnalysis, Inc. on 2009-11-18 and assigned to work order 9111903. Samples for work order 9111903 were received intact at a temperature of 4.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

| Test | Method  | Prep<br>Batch | Prep<br>Date        | QC<br>Batch | Analysis<br>Date    |
|------|---------|---------------|---------------------|-------------|---------------------|
| BTEX | S 8021B | 55928         | 2009-11-19 at 11:00 | 65456       | 2009-11-19 at 23:56 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9111903 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: December 9, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 4 of 8  
Eddy County, NM

## Analytical Report

Sample: 215203 - AH-1 0-1' 6 in. BEB

Laboratory: Midland

Analysis: BTEX

QC Batch: 65456

Prep Batch: 55928

Analytical Method: S 8021B

Date Analyzed: 2009-11-19

Sample Preparation: 2009-11-19

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 2.11         | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 35.0         | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 38.4         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 46.4         | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 54.4   | mg/Kg | 50       | 50.0            | 109                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 40.3   | mg/Kg | 50       | 50.0            | 81                  | 43.1 - 128.4       |

Sample: 215211 - AH-3 0-1' 6 in. BEB

Laboratory: Midland

Analysis: BTEX

QC Batch: 65456

Prep Batch: 55928

Analytical Method: S 8021B

Date Analyzed: 2009-11-19

Sample Preparation: 2009-11-19

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 20.8         | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 102          | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 76.4         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 79.2         | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 52.3   | mg/Kg | 50       | 50.0            | 105                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 42.7   | mg/Kg | 50       | 50.0            | 85                  | 43.1 - 128.4       |

Sample: 215214 - AH-4 0-1' 6 in. BEB

Laboratory: Midland

Analysis: BTEX

QC Batch: 65456

Prep Batch: 55928

Analytical Method: S 8021B

Date Analyzed: 2009-11-19

Sample Preparation: 2009-11-19

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

Report Date: December 9, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 5 of 8  
Eddy County, NM

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 3.40         | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 38.4         | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 39.7         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 40.0         | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 53.8   | mg/Kg | 50       | 50.0            | 108                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 39.6   | mg/Kg | 50       | 50.0            | 79                  | 43.1 - 128.4       |

**Sample: 215219 - AH-5 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 65456  
Prep Batch: 55928

Analytical Method: S 8021B  
Date Analyzed: 2009-11-19  
Sample Preparation: 2009-11-19

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 1.68         | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 53.2         | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 73.8         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 79.9         | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 53.8   | mg/Kg | 50       | 50.0            | 108                 | 64.4 - 111.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 45.5   | mg/Kg | 50       | 50.0            | 91                  | 43.1 - 128.4       |

**Sample: 215223 - AH-6 0-1' 6 in. BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 65456  
Prep Batch: 55928

Analytical Method: S 8021B  
Date Analyzed: 2009-11-19  
Sample Preparation: 2009-11-19

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 3.49         | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 75.2         | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 78.3         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 90.7         | mg/Kg | 50       | 0.0100 |

Report Date: December 9, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 6 of 8  
Eddy County, NM

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 53.6   | mg/Kg | 50       | 50.0         | 107              | 64.4 - 111.2    |
| 4-Bromofluorobenzene (4-BFB) |      | 46.0   | mg/Kg | 50       | 50.0         | 92               | 43.1 - 128.4    |

**Method Blank (1)**      QC Batch: 65456

QC Batch: 65456  
Prep Batch: 55928

Date Analyzed: 2009-11-19  
QC Preparation: 2009-11-19

Analyzed By: AG  
Prepared By: AG

| Parameter    | Flag | MDL Result | Units | RL   |
|--------------|------|------------|-------|------|
| Benzene      |      | <0.00410   | mg/Kg | 0.01 |
| Toluene      |      | <0.00310   | mg/Kg | 0.01 |
| Ethylbenzene |      | <0.00240   | mg/Kg | 0.01 |
| Xylene       |      | <0.00650   | mg/Kg | 0.01 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 2.15   | mg/Kg | 1        | 2.00         | 108              | 64.9 - 122.7    |
| 4-Bromofluorobenzene (4-BFB) |      | 1.31   | mg/Kg | 1        | 2.00         | 66               | 43.9 - 121.9    |

**Laboratory Control Spike (LCS-1)**

QC Batch: 65456  
Prep Batch: 55928

Date Analyzed: 2009-11-19  
QC Preparation: 2009-11-19

Analyzed By: AG  
Prepared By: AG

| Param        | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit   |
|--------------|------------|-------|------|--------------|---------------|------|--------------|
| Benzene      | 1.92       | mg/Kg | 1    | 2.00         | <0.00410      | 96   | 75.4 - 115.7 |
| Toluene      | 1.90       | mg/Kg | 1    | 2.00         | <0.00310      | 95   | 78.4 - 113.6 |
| Ethylbenzene | 1.86       | mg/Kg | 1    | 2.00         | <0.00240      | 93   | 76 - 114.2   |
| Xylene       | 5.57       | mg/Kg | 1    | 6.00         | <0.00650      | 93   | 76.9 - 113.6 |

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

| Param        | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit   | RPD | RPD Limit |
|--------------|-------------|-------|------|--------------|---------------|------|--------------|-----|-----------|
| Benzene      | 1.94        | mg/Kg | 1    | 2.00         | <0.00410      | 97   | 75.4 - 115.7 | 1   | 20        |
| Toluene      | 1.93        | mg/Kg | 1    | 2.00         | <0.00310      | 96   | 78.4 - 113.6 | 2   | 20        |
| Ethylbenzene | 1.90        | mg/Kg | 1    | 2.00         | <0.00240      | 95   | 76 - 114.2   | 2   | 20        |
| Xylene       | 5.69        | mg/Kg | 1    | 6.00         | <0.00650      | 95   | 76.9 - 113.6 | 2   | 20        |

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

Report Date: December 9, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 7 of 8  
Eddy County, NM

| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 2.09          | 2.13           | mg/Kg | 1    | 2.00            | 104         | 106          | 65 - 122.9    |
| 4-Bromofluorobenzene (4-BFB) | 1.34          | 1.37           | mg/Kg | 1    | 2.00            | 67          | 68           | 43.8 - 124.9  |

Matrix Spike (MS-1) Spiked Sample: 214963

QC Batch: 65456  
Prep Batch: 55928

Date Analyzed: 2009-11-19  
QC Preparation: 2009-11-19

Analyzed By: AG  
Prepared By: AG

| Param        | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.16         | mg/Kg | 1    | 2.00            | <0.00410         | 108  | 57.7 - 140.7  |
| Toluene      | 2.18         | mg/Kg | 1    | 2.00            | <0.00310         | 109  | 53.4 - 146.6  |
| Ethylbenzene | 2.20         | mg/Kg | 1    | 2.00            | <0.00240         | 110  | 62.1 - 141.6  |
| Xylene       | 6.59         | mg/Kg | 1    | 6.00            | <0.00650         | 110  | 61.2 - 142.7  |

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

| Param        |              | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | <sup>1</sup> | 1.29          | mg/Kg | 1    | 2.00            | <0.00410         | 64   | 57.7 - 140.7  | 50  | 20           |
| Toluene      | <sup>2</sup> | 1.32          | mg/Kg | 1    | 2.00            | <0.00310         | 66   | 53.4 - 146.6  | 49  | 20           |
| Ethylbenzene | <sup>3</sup> | 1.35          | mg/Kg | 1    | 2.00            | <0.00240         | 68   | 62.1 - 141.6  | 48  | 20           |
| Xylene       | <sup>4</sup> | 4.03          | mg/Kg | 1    | 6.00            | <0.00650         | 67   | 61.2 - 142.7  | 48  | 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)       | 2.15         | 2.15          | mg/Kg | 1    | 2               | 108        | 108         | 62.7 - 119.6  |
| 4-Bromofluorobenzene (4-BFB) | 1.39         | 1.39          | mg/Kg | 1    | 2               | 70         | 70          | 49.6 - 136.7  |

Standard (CCV-2)

QC Batch: 65456

Date Analyzed: 2009-11-19

Analyzed By: AG

| 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                 | 0.0961                 | 96                          | 80 - 120                      | 2009-11-19       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0945                 | 94                          | 80 - 120                      | 2009-11-19       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0925                 | 92                          | 80 - 120                      | 2009-11-19       |

continued ...

<sup>1</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>2</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>3</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>4</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: December 9, 2009  
114-6400369

Work Order: 9111903  
COG/Skelly 942

Page Number: 8 of 8  
Eddy County, NM

*standard continued ...*

| Param  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Xylene |      | mg/Kg | 0.300                 | 0.274                  | 91                          | 80 - 120                      | 2009-11-19       |

**Standard (CCV-3)**

QC Batch: 65456

Date Analyzed: 2009-11-19

Analyzed By: AG

| 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                 | 0.0972                 | 97                          | 80 - 120                      | 2009-11-19       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0966                 | 97                          | 80 - 120                      | 2009-11-19       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0940                 | 94                          | 80 - 120                      | 2009-11-19       |
| Xylene       |      | mg/Kg | 0.300                 | 0.280                  | 93                          | 80 - 120                      | 2009-11-19       |

Order #: 9111903

# Analysis Request of Chain of Custody Record

PAGE: 1 OF 2



**TETRA TECH**

1910 N. Big Spring St.  
Midland, Texas 79705  
(432) 682-4559 • Fax (432) 682-3946

SITE MANAGER:

*Elke Tavaraz*

PROJECT NAME:

*COG / Shelby 542  
Edley Co. NM*

SAMPLE IDENTIFICATION

PRESERVATIVE METHOD

NUMBER OF CONTAINERS

HC  
HNO3  
ICE  
NONE

TCRA Metals Ag As Ba Cd Cr Pb Hg Se  
TCRP Metals Ag As Ba Cd Cr Pb Hg Se  
TCRP Semi Volatiles  
TCRP Semi Volatiles  
RCI  
GC/MS Vol. 8240/8260/824  
GC/MS Semi Vol. 8270/825  
PCB's 8080/808  
Pest. 808/608  
Gamma Spec.  
Alpha Beta (Air)  
PLM (Asbestos)  
Major Anions/Cations, pH, TDS

PAH 8270  
TPH 8015 MOB, TX1005 (Ext to C35)  
BTX 8021B

LAB ID. NUMBER

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COMP

GRAB

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## Analysis Request of Chain of Custody Record

PAGE: 7 OF: 4

OF: 4

ANALYSIS REQUEST  
(Circle or Specify Method No.)

# TETRA TECH

**1910 N. Big Spring St.**

**Midland, Texas 79705**

**(432) 682-4559 • Fax (432) 682-3946**

| CLIENT NAME:    |      | PROJECT NAME:      |        | SITE MANAGER:           |      | PRESERVATIVE METHOD  |                |
|-----------------|------|--------------------|--------|-------------------------|------|----------------------|----------------|
| C-026           |      | C-026 / 5th St 942 |        | T. Lee / 1000 S. 3rd St |      |                      |                |
| PROJECT NO.:    |      | PROJECT NAME:      |        | SAMPLE IDENTIFICATION   |      | NUMBER OF CONTAINERS |                |
| 114-6100236     |      | C-026 / 5th St 942 |        | Edley Co. N.M.          |      |                      |                |
| LAB I.D. NUMBER | DATE | TIME               | MATRIX | COMP                    | GRAB |                      |                |
| 215213          | 4/17 |                    | S      |                         | X    | AH-3                 | 2'-2.5' 6" BED |
| 214             |      |                    |        |                         |      | AH-4                 | 0-1' 6" BED    |
| 215             |      |                    |        |                         |      | AH-4                 | 1-1.5' 6" BED  |
| 216             |      |                    |        |                         |      | AH-4                 | 2'-2.5' 6" BED |
| 217             |      |                    |        |                         |      | AH-4                 | 3'-3.5' 6" BED |
| 218             |      |                    |        |                         |      | AH-4                 | 4'-4.5' 6" BED |
| 219             |      |                    |        |                         |      | AH-5                 | 0-1' 6" BED    |
| 220             |      |                    |        |                         |      | AH-5                 | 1-1.5' 6" BED  |
| 221             |      |                    |        |                         |      | AH-5                 | 2'-2.5' 6" BED |
| 222             | ✓    |                    | ✓      |                         | ✓    | AH-5                 | 3'-3.5' 6" BED |

RELINQUISHED BY: (Signature) \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_

Date: 11/14/95

Time: 1:02

Date: 11/14/95

Time: 1:02

Date: 11/14/95

Time: 1:02

RECEIVING LABORATORY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_

DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

**SAMPLE CONDITION WHEN RECEIVED:**

4.0e. in Attack

2

*radices*

110

reach 5000 miles

\_\_\_\_\_

1

*Two degree sample of TPI exceed 5,000 Hk  
Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.  
Run (6) BTEX highest TPH, Run deplete BTEX, 17 Benzene over 4/10/94/99  
(samples) or Total BTEX exceeds 50 mg*

Order #: 9111903

# Analysis Request of Chain of Custody Record

PAGE: 3 OF: 4

ANALYSIS REQUEST  
(Circle or Specify Method No.)



**TETRA TECH**

1910 N. Big Spring St.  
Midland, Texas 79705  
(432) 682-4559 • Fax (432) 682-3946

| CLIENT NAME: <u>COG</u>        |       | SITE MANAGER: <u>Mike Tavares</u>    |                       |
|--------------------------------|-------|--------------------------------------|-----------------------|
| PROJECT NO.: <u>1147400305</u> |       | PROJECT NAME: <u>COG / Sully 942</u> |                       |
| LAB I.D. NUMBER                | DATE  | TIME                                 | SAMPLE IDENTIFICATION |
| 215223                         | 11/18 |                                      | 5 X AH-6 0-1' 6" BEB  |
| 224                            |       |                                      | AH-6 1-1.5' 6" BEB    |
| 225                            |       |                                      | AH-6 2-2.5' 6" BEB    |
| 226                            |       |                                      | AH-6 3-3.5' 6" BEB    |
| 227                            |       |                                      | AH-7 0-1' 6" BEB      |
| 228                            |       |                                      | AH-7 1-1.5' 6" BEB    |
| 229                            |       |                                      | AH-7 2-2.5' 6" BEB    |
| 230                            |       |                                      | AH-7 3-3.5' 6" BEB    |
| 231                            |       |                                      | AH-7 4-4.5' 6" BEB    |
| 232                            |       |                                      | AH-8 0-1' 6" BEB      |

| NUMBER OF CONTAINERS | PRELIMINARY METHOD | BTX 8021B | TPH 8015 MOD | TX1005 (Ext to C35) | PAH 8270 | RCRA Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8240/8260/624 | GC/MS Semi Vol. 8270/625 | PCBs 8080/808 | Pest. 809/808 | Chlorides | Gamma Spec. | Alpha Beta (Air) | PLM (Asbestos) | Major Anions/Cations, pH, TDS |
|----------------------|--------------------|-----------|--------------|---------------------|----------|-------------------------------------|-------------------------------------|----------------|---------------------|-----|--------------------------|--------------------------|---------------|---------------|-----------|-------------|------------------|----------------|-------------------------------|
|                      |                    |           | X            |                     |          |                                     |                                     |                |                     |     |                          |                          |               |               | X         |             |                  |                |                               |

|                                                              |                                        |                              |
|--------------------------------------------------------------|----------------------------------------|------------------------------|
| RELINQUISHED BY: (Signature) <u>Robert Cabbs</u>             | Date: <u>11/18/03</u>                  | Time: <u>17:15</u>           |
| RELINQUISHED BY: (Signature) <u>Robert Cabbs</u>             | Date: <u>11/18/03</u>                  | Time: <u>17:15</u>           |
| RELINQUISHED BY: (Signature) <u>Mike Tavares</u>             | Date: <u>11/18/03</u>                  | Time: <u>17:15</u>           |
| RECEIVING LABORATORY: <u>Tetra Tech</u>                      | ADDRESS: <u>1910 N. Big Spring St.</u> | CITY: <u>Midland</u>         |
| STATE: <u>TX</u>                                             | ZIP: <u>79705</u>                      | PHONE: <u>(432) 682-4559</u> |
| REMARKS: <u>Two cleaner samples if TPH exceed 5000 mg/kg</u> |                                        |                              |
| SAMPLE CONDITION WHEN RECEIVED: <u>4.0°C intact</u>          |                                        |                              |

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 911903

# Analysis Request of Chain of Custody Record

PAGE: 4 OF: 4

ANALYSIS REQUEST  
(Circle or Specify Method No.)



**TETRA TECH**

1910 N. Big Spring St.  
Midland, Texas 79705  
(432) 682-4559 • Fax (432) 682-3946

|                                     |          |                                     |                       |
|-------------------------------------|----------|-------------------------------------|-----------------------|
| CLIENT NAME: C.O.G.                 |          | SITE MANAGER: T. Hernandez          |                       |
| PROJECT NO.: 14-440369              |          | PROJECT NAME: C.O.G. / Shelly 942   |                       |
| LAB I.D. NUMBER                     | DATE     | TIME                                | SAMPLE IDENTIFICATION |
| 215233                              | 11/18/09 |                                     | 1'-1.5' 6" BED        |
| 234                                 |          |                                     | 2'-2.5' 6" BED        |
| 235                                 |          |                                     | 3'-3.5' 6" BED        |
| 236                                 |          |                                     | 4'-4.5' 6" BED        |
| 237                                 |          |                                     | 5'-5.5' 6" BED        |
| NUMBER OF CONTAINERS                |          | PRESERVATIVE METHOD                 |                       |
| HCL                                 |          | HNO3                                |                       |
| ICE                                 |          | NONE                                |                       |
| FILTERED (Y/N)                      |          |                                     |                       |
| RCRA Metals Ag As Ba Cd Cr Pb Hg Se |          | TCLP Metals Ag As Ba Cd Cr Pb Hg Se |                       |
| TCLP Semi Volatiles                 |          | TCLP Semi Volatiles                 |                       |
| RCI                                 |          | GC/MS Vol. 8240/8260/824            |                       |
| GC/MS Semi. Vol. 8270/825           |          | PCB's 8080/808                      |                       |
| Pest. 808/808                       |          | Gamma Spec.                         |                       |
| Alpha Beta (Air)                    |          | PLM (Asbestos)                      |                       |
| Major Anions/Cations, pH, TDS       |          |                                     |                       |

|                                              |                              |                                          |                              |
|----------------------------------------------|------------------------------|------------------------------------------|------------------------------|
| RELINQUISHED BY: (Signature)<br>Robert Leach | Date: 11/18/09<br>Time: 1:00 | RECEIVED BY: (Signature)<br>T. Hernandez | Date: 11/18/09<br>Time: 1:00 |
| RELINQUISHED BY: (Signature)                 | Date: _____<br>Time: _____   | RECEIVED BY: (Signature)                 | Date: _____<br>Time: _____   |
| RELINQUISHED BY: (Signature)                 | Date: _____<br>Time: _____   | RECEIVED BY: (Signature)                 | Date: _____<br>Time: _____   |
| RECEIVING LABORATORY: Tetra Tech             |                              | RECEIVED BY: (Signature)                 |                              |
| ADDRESS: Midland, TX                         | STATE: TX                    | ZIP: _____                               | DATE: _____                  |
| CONTACT: _____                               | PHONE: _____                 | REMARKS: 4.0 c intact                    |                              |

Please fill out all copies - Laboratory retains Yellow copy - Return original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

## Summary Report

Ike Tavaréz  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX 79705

Report Date: December 31, 2009

Work Order: 9121601



Project Location: Eddy County, NM  
Project Name: COG/Skelly 942  
Project Number: 114-6400369

| Sample | Description        | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------------|--------|------------|------------|---------------|
| 217285 | CS-1 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217287 | CS-2 0-1' 3' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217288 | CS-3 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217290 | CS-4 0-1' 1.5' BEB | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217291 | CS-5 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217292 | CS-5 1-1.5' 1' BEB | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217293 | CS-6 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217295 | CS-7 0-1' 3' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217296 | CS-8 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |

| Sample - Field Code         | BTEX               |                    |                         |                   |
|-----------------------------|--------------------|--------------------|-------------------------|-------------------|
|                             | Benzene<br>(mg/Kg) | Toluene<br>(mg/Kg) | Ethylbenzene<br>(mg/Kg) | Xylene<br>(mg/Kg) |
| 217285 - CS-1 0-1' 1' BEB   | <0.0100            | <0.0100            | <0.0100                 | 0.205             |
| 217287 - CS-2 0-1' 3' BEB   | <0.0100            | <0.0100            | <0.0100                 | <0.0100           |
| 217288 - CS-3 0-1' 1' BEB   | 0.668              | 12.6               | 9.44                    | 18.4              |
| 217290 - CS-4 0-1' 1.5' BEB | <0.0100            | 0.0641             | 0.390                   | 0.741             |
| 217291 - CS-5 0-1' 1' BEB   | 4.02               | 58.0               | 74.0                    | 82.5              |
| 217292 - CS-5 1-1.5' 1' BEB | <0.0200            | <0.0200            | 0.0239                  | 0.0433            |
| 217293 - CS-6 0-1' 1' BEB   | 0.140              | 11.3               | 18.6                    | 19.2              |
| 217295 - CS-7 0-1' 3' BEB   | <0.0100            | <0.0100            | <0.0100                 | <0.0100           |
| 217296 - CS-8 0-1' 1' BEB   | <0.0100            | 0.290              | 1.86                    | 1.72              |

# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944  
5032 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260  
E-Mail: lab@traceanalysis.com

## Certifications

WBENC: 237019 HUB: 1752439743100-86536 DBE: VN 20657  
NCTRCA WFWB38444Y0909

## NELAP Certifications

Lubbock: T104704219-08-TX El Paso: T104704221-08-TX Midland: T104704392-08-TX  
LELAP-02003 LELAP-02002  
Kansas E-10317

## Analytical and Quality Control Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX, 79705

Report Date: December 31, 2009

Work Order: 9121601



Project Location: Eddy County, NM  
Project Name: COG/Skelly 942  
Project Number: 114-6400369

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 |
|--------|--------------------|--------|------------|------------|---------------|
| 217285 | CS-1 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217287 | CS-2 0-1' 3' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217288 | CS-3 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217290 | CS-4 0-1' 1.5' BEB | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217291 | CS-5 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217292 | CS-5 1-1.5' 1' BEB | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217293 | CS-6 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217295 | CS-7 0-1' 3' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |
| 217296 | CS-8 0-1' 1' BEB   | soil   | 2009-12-15 | 00:00      | 2009-12-15    |

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 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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Dr. Blair Leftwich, Director  
Dr. Michael Abel, Project Manager

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project COG/Skelly 942 were received by TraceAnalysis, Inc. on 2009-12-15 and assigned to work order 9121601. Samples for work order 9121601 were received intact at a temperature of 4.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

| Test | Method  | Prep<br>Batch | Prep<br>Date        | QC<br>Batch | Analysis<br>Date    |
|------|---------|---------------|---------------------|-------------|---------------------|
| BTEX | S 8021B | 56577         | 2009-12-21 at 15:00 | 66187       | 2009-12-21 at 12:51 |
| BTEX | S 8021B | 56739         | 2009-12-30 at 15:26 | 66373       | 2009-12-30 at 15:26 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9121601 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 4 of 12  
Eddy County, NM

## Analytical Report

Sample: 217285 - CS-1 0-1' 1' BEB

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | 0.205        | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.54   | mg/Kg | 1        | 2.00            | 127                 | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 2.29   | mg/Kg | 1        | 2.00            | 114                 | 43.1 - 158.4       |

Sample: 217287 - CS-2 0-1' 3' BEB

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | <0.0100      | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.62   | mg/Kg | 1        | 2.00            | 131                 | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 2.25   | mg/Kg | 1        | 2.00            | 112                 | 43.1 - 158.4       |

Sample: 217288 - CS-3 0-1' 1' BEB

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 5 of 12  
Eddy County, NM

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 0.668        | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 12.6         | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 9.44         | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 18.4         | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 57.5   | mg/Kg | 50       | 50.0            | 115                 | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 56.4   | mg/Kg | 50       | 50.0            | 113                 | 43.1 - 158.4       |

**Sample: 217290 - CS-4 0-1' 1.5' BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | 0.0641       | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | 0.390        | mg/Kg | 1        | 0.0100 |
| Xylene       |      | 0.741        | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.80   | mg/Kg | 1        | 2.00            | 140                 | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 2.97   | mg/Kg | 1        | 2.00            | 148                 | 43.1 - 158.4       |

**Sample: 217291 - CS-5 0-1' 1' BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 4.02         | mg/Kg | 20       | 0.0100 |
| Toluene      |      | 58.0         | mg/Kg | 20       | 0.0100 |
| Ethylbenzene |      | 74.0         | mg/Kg | 20       | 0.0100 |
| Xylene       |      | 82.5         | mg/Kg | 20       | 0.0100 |

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 6 of 12  
Eddy County, NM

| Surrogate                    | Flag         | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|--------------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |              | 22.9   | mg/Kg | 20       | 20.0         | 114              | 64.4 - 141.2    |
| 4-Bromofluorobenzene (4-BFB) | <sup>1</sup> | 35.8   | mg/Kg | 20       | 20.0         | 179              | 43.1 - 158.4    |

**Sample: 217292 - CS-5 1-1.5' 1' BEB**

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 66373  
Prep Batch: 56739

Analytical Method: S 8021B  
Date Analyzed: 2009-12-30  
Sample Preparation: 2009-12-30

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0200      | mg/Kg | 1        | 0.0200 |
| Toluene      |      | <0.0200      | mg/Kg | 1        | 0.0200 |
| Ethylbenzene | B    | 0.0239       | mg/Kg | 1        | 0.0200 |
| Xylene       | B    | 0.0433       | mg/Kg | 1        | 0.0200 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 2.13   | mg/Kg | 1        | 2.00         | 106              | 71.8 - 112      |
| 4-Bromofluorobenzene (4-BFB) |      | 2.17   | mg/Kg | 1        | 2.00         | 108              | 72.8 - 115      |

**Sample: 217293 - CS-6 0-1' 1' BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 0.140        | mg/Kg | 10       | 0.0100 |
| Toluene      |      | 11.3         | mg/Kg | 10       | 0.0100 |
| Ethylbenzene |      | 18.6         | mg/Kg | 10       | 0.0100 |
| Xylene       |      | 19.2         | mg/Kg | 10       | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|--------------|------------------|-----------------|
| Trifluorotoluene (TFT)       |      | 11.4   | mg/Kg | 10       | 10.0         | 114              | 64.4 - 141.2    |
| 4-Bromofluorobenzene (4-BFB) |      | 13.8   | mg/Kg | 10       | 10.0         | 138              | 43.1 - 158.4    |

<sup>1</sup> High surrogate recovery due to peak interference.

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 7 of 12  
Eddy County, NM

**Sample: 217295 - CS-7 0-1' 3' BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | <0.0100      | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.40   | mg/Kg | 1        | 2.00            | 120                 | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 2.06   | mg/Kg | 1        | 2.00            | 103                 | 43.1 - 158.4       |

**Sample: 217296 - CS-8 0-1' 1' BEB**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 66187  
Prep Batch: 56577

Analytical Method: S 8021B  
Date Analyzed: 2009-12-21  
Sample Preparation: 2009-12-21

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

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | 0.290        | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | 1.86         | mg/Kg | 1        | 0.0100 |
| Xylene       |      | 1.72         | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.51   | mg/Kg | 1        | 2.00            | 126                 | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 3.06   | mg/Kg | 1        | 2.00            | 153                 | 43.1 - 158.4       |

**Method Blank (1) QC Batch: 66187**

QC Batch: 66187  
Prep Batch: 56577

Date Analyzed: 2009-12-21  
QC Preparation: 2009-12-21

Analyzed By: AG  
Prepared By: AG

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 8 of 12  
Eddy County, NM

| Parameter    | Flag | MDL<br>Result | Units | RL   |
|--------------|------|---------------|-------|------|
| Benzene      |      | <0.00410      | mg/Kg | 0.01 |
| Toluene      |      | <0.00310      | mg/Kg | 0.01 |
| Ethylbenzene |      | <0.00240      | mg/Kg | 0.01 |
| Xylene       |      | <0.00650      | mg/Kg | 0.01 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.40   | mg/Kg | 1        | 2.00            | 120                 | 64.9 - 142.7       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.95   | mg/Kg | 1        | 2.00            | 98                  | 43.9 - 141.9       |

Method Blank (1) QC Batch: 66373

QC Batch: 66373  
Prep Batch: 56739

Date Analyzed: 2009-12-30  
QC Preparation: 2009-12-30

Analyzed By: ER  
Prepared By: ER

| Parameter    | Flag | MDL<br>Result | Units | RL   |
|--------------|------|---------------|-------|------|
| Benzene      |      | <0.00331      | mg/Kg | 0.02 |
| Toluene      |      | 0.0135        | mg/Kg | 0.02 |
| Ethylbenzene |      | 0.0210        | mg/Kg | 0.02 |
| Xylene       |      | 0.0493        | mg/Kg | 0.02 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 1.96   | mg/Kg | 1        | 2.00            | 98                  | 71.8 - 112         |
| 4-Bromofluorobenzene (4-BFB) |      | 1.99   | mg/Kg | 1        | 2.00            | 100                 | 72.8 - 115         |

Laboratory Control Spike (LCS-1)

QC Batch: 66187  
Prep Batch: 56577

Date Analyzed: 2009-12-21  
QC Preparation: 2009-12-21

Analyzed By: AG  
Prepared By: AG

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 1.87          | mg/Kg | 1    | 2.00            | <0.00410         | 94   | 75.4 - 115.7  |
| Toluene      | 1.95          | mg/Kg | 1    | 2.00            | <0.00310         | 98   | 78.4 - 113.6  |
| Ethylbenzene | 1.96          | mg/Kg | 1    | 2.00            | <0.00240         | 98   | 76 - 114.2    |
| Xylene       | 5.84          | mg/Kg | 1    | 6.00            | <0.00650         | 97   | 76.9 - 113.6  |

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

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 9 of 12  
Eddy County, NM

| Param        | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 1.84           | mg/Kg | 1    | 2.00            | <0.00410         | 92   | 75.4 - 115.7  | 2   | 20           |
| Toluene      | 1.93           | mg/Kg | 1    | 2.00            | <0.00310         | 96   | 78.4 - 113.6  | 1   | 20           |
| Ethylbenzene | 1.93           | mg/Kg | 1    | 2.00            | <0.00240         | 96   | 76 - 114.2    | 2   | 20           |
| Xylene       | 5.76           | mg/Kg | 1    | 6.00            | <0.00650         | 96   | 76.9 - 113.6  | 1   | 20           |

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

| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 2.42          | 2.32           | mg/Kg | 1    | 2.00            | 121         | 116          | 65 - 142.9    |
| 4-Bromofluorobenzene (4-BFB) | 2.13          | 2.04           | mg/Kg | 1    | 2.00            | 106         | 102          | 43.8 - 144.9  |

#### Laboratory Control Spike (LCS-1)

QC Batch: 66373  
Prep Batch: 56739

Date Analyzed: 2009-12-30  
QC Preparation: 2009-12-30

Analyzed By: ER  
Prepared By: ER

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.05          | mg/Kg | 1    | 2.00            | <0.00331         | 102  | 78.9 - 113    |
| Toluene      | 1.99          | mg/Kg | 1    | 2.00            | 0.0135           | 100  | 78.3 - 116    |
| Ethylbenzene | 2.01          | mg/Kg | 1    | 2.00            | 0.021            | 100  | 79.1 - 117    |
| Xylene       | 6.22          | mg/Kg | 1    | 6.00            | 0.0493           | 104  | 79.6 - 116    |

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

| Param        | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 2.04           | mg/Kg | 1    | 2.00            | <0.00331         | 102  | 78.9 - 113    | 0   | 20           |
| Toluene      | 1.99           | mg/Kg | 1    | 2.00            | 0.0135           | 100  | 78.3 - 116    | 0   | 20           |
| Ethylbenzene | 1.97           | mg/Kg | 1    | 2.00            | 0.021            | 98   | 79.1 - 117    | 2   | 20           |
| Xylene       | 6.20           | mg/Kg | 1    | 6.00            | 0.0493           | 103  | 79.6 - 116    | 0   | 20           |

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

| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 2.02          | 2.01           | mg/Kg | 1    | 2.00            | 101         | 100          | 70.8 - 111    |
| 4-Bromofluorobenzene (4-BFB) | 2.03          | 2.03           | mg/Kg | 1    | 2.00            | 102         | 102          | 68.3 - 117    |

#### Matrix Spike (MS-1) Spiked Sample: 217295

QC Batch: 66187  
Prep Batch: 56577

Date Analyzed: 2009-12-21  
QC Preparation: 2009-12-21

Analyzed By: AG  
Prepared By: AG

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 10 of 12  
Eddy County, NM

| Param        | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 1.88         | mg/Kg | 1    | 2.00            | <0.00410         | 94   | 57.7 - 140.7  |
| Toluene      | 2.00         | mg/Kg | 1    | 2.00            | <0.00310         | 100  | 53.4 - 146.6  |
| Ethylbenzene | 2.05         | mg/Kg | 1    | 2.00            | <0.00240         | 102  | 62.1 - 141.6  |
| Xylene       | 6.12         | mg/Kg | 1    | 6.00            | <0.00650         | 102  | 61.2 - 142.7  |

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

| Param        | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 2.01          | mg/Kg | 1    | 2.00            | <0.00410         | 100  | 57.7 - 140.7  | 7   | 20           |
| Toluene      | 2.15          | mg/Kg | 1    | 2.00            | <0.00310         | 108  | 53.4 - 146.6  | 7   | 20           |
| Ethylbenzene | 2.20          | mg/Kg | 1    | 2.00            | <0.00240         | 110  | 62.1 - 141.6  | 7   | 20           |
| Xylene       | 6.56          | mg/Kg | 1    | 6.00            | <0.00650         | 109  | 61.2 - 142.7  | 7   | 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)       | 2.57         | 2.62          | mg/Kg | 1    | 2               | 128        | 131         | 62.7 - 139.6  |
| 4-Bromofluorobenzene (4-BFB) | 2.12         | 2.15          | mg/Kg | 1    | 2               | 106        | 108         | 49.6 - 146.7  |

Matrix Spike (MS-1) Spiked Sample: 218603

QC Batch: 66373  
Prep Batch: 56739

Date Analyzed: 2009-12-30  
QC Preparation: 2009-12-30

Analyzed By: ER  
Prepared By: ER

| Param        | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.03         | mg/Kg | 1    | 2.00            | <0.00331         | 102  | 61.5 - 134    |
| Toluene      | 2.21         | mg/Kg | 1    | 2.00            | <0.00528         | 110  | 64.2 - 143    |
| Ethylbenzene | 2.40         | mg/Kg | 1    | 2.00            | <0.00448         | 120  | 67.7 - 152    |
| Xylene       | 7.19         | mg/Kg | 1    | 6.00            | 0.0433           | 119  | 67.8 - 152    |

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

| Param        | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 2.01          | mg/Kg | 1    | 2.00            | <0.00331         | 100  | 61.5 - 134    | 1   | 20           |
| Toluene      | 2.25          | mg/Kg | 1    | 2.00            | <0.00528         | 112  | 64.2 - 143    | 2   | 20           |
| Ethylbenzene | 2.40          | mg/Kg | 1    | 2.00            | <0.00448         | 120  | 67.7 - 152    | 0   | 20           |
| Xylene       | 7.16          | mg/Kg | 1    | 6.00            | 0.0433           | 119  | 67.8 - 152    | 0   | 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) | 2.20         | 2.19          | mg/Kg | 1    | 2               | 110        | 110         | 65.3 - 134    |

continued ...

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 11 of 12  
Eddy County, NM

*matrix spikes continued ...*

| Surrogate                    | MS<br>Result | MSD<br>Result | Units | Dil. | Spike<br>Amount | MS<br>Rec. | MSD<br>Rec. | Rec.<br>Limit |
|------------------------------|--------------|---------------|-------|------|-----------------|------------|-------------|---------------|
| 4-Bromofluorobenzene (4-BFB) | 2.43         | 2.34          | mg/Kg | 1    | 2               | 122        | 117         | 61.9 - 143    |

**Standard (CCV-1)**

QC Batch: 66187

Date Analyzed: 2009-12-21

Analyzed By: AG

| 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                 | 0.0909                 | 91                          | 80 - 120                      | 2009-12-21       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0947                 | 95                          | 80 - 120                      | 2009-12-21       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0951                 | 95                          | 80 - 120                      | 2009-12-21       |
| Xylene       |      | mg/Kg | 0.300                 | 0.284                  | 95                          | 80 - 120                      | 2009-12-21       |

**Standard (CCV-2)**

QC Batch: 66187

Date Analyzed: 2009-12-21

Analyzed By: AG

| 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                 | 0.0828                 | 83                          | 80 - 120                      | 2009-12-21       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0865                 | 86                          | 80 - 120                      | 2009-12-21       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0859                 | 86                          | 80 - 120                      | 2009-12-21       |
| Xylene       |      | mg/Kg | 0.300                 | 0.256                  | 85                          | 80 - 120                      | 2009-12-21       |

**Standard (CCV-3)**

QC Batch: 66187

Date Analyzed: 2009-12-21

Analyzed By: AG

| 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                 | 0.0947                 | 95                          | 80 - 120                      | 2009-12-21       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0985                 | 98                          | 80 - 120                      | 2009-12-21       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0969                 | 97                          | 80 - 120                      | 2009-12-21       |
| Xylene       |      | mg/Kg | 0.300                 | 0.289                  | 96                          | 80 - 120                      | 2009-12-21       |

**Standard (CCV-1)**

QC Batch: 66373

Date Analyzed: 2009-12-30

Analyzed By: ER

Report Date: December 31, 2009  
114-6400369

Work Order: 9121601  
COG/Skelly 942

Page Number: 12 of 12  
Eddy County, 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 |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/Kg | 0.100                 | 0.103                  | 103                         | 80 - 120                      | 2009-12-30       |
| Toluene      |      | mg/Kg | 0.100                 | 0.102                  | 102                         | 80 - 120                      | 2009-12-30       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.102                  | 102                         | 80 - 120                      | 2009-12-30       |
| Xylene       |      | mg/Kg | 0.300                 | 0.315                  | 105                         | 80 - 120                      | 2009-12-30       |

**Standard (CCV-2)**

QC Batch: 66373

Date Analyzed: 2009-12-30

Analyzed By: ER

| 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                 | 0.0989                 | 99                          | 80 - 120                      | 2009-12-30       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0985                 | 98                          | 80 - 120                      | 2009-12-30       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0981                 | 98                          | 80 - 120                      | 2009-12-30       |
| Xylene       |      | mg/Kg | 0.300                 | 0.301                  | 100                         | 80 - 120                      | 2009-12-30       |





## Summary Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX 79705

Report Date: January 25, 2010

Work Order: 10011804



Project Location: Eddy Co., NM  
Project Name: COG/Skelly 942 TB (Spill 5)  
Project Number: 114-6400407

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 219872 | AH-1 0-1'   | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219873 | AH-1 1-1.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219874 | AH-1 2-2.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219875 | AH-1 3-3.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219876 | AH-1 4-4.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219877 | AH-1 5-5.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219878 | T-1 6'      | soil   | 2010-01-13 | 00:00      | 2010-01-15    |
| 219879 | T-1 7'      | soil   | 2010-01-13 | 00:00      | 2010-01-15    |

| Sample - Field Code  | BTEX               |                    |                         |                   | TPH DRO - NEW  | 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) |
| 219872 - AH-1 0-1'   | 268                | 594                | 323                     | 342               |                |                |
| 219875 - AH-1 3-3.5' | 87.2               | 246                | 146                     | 153               |                |                |
| 219878 - T-1 6'      | 3.37               | 39.9               | 34.9                    | 37.9              |                |                |
| 219879 - T-1 7'      | <0.0100            | <0.0100            | <0.0100                 | <0.0100           | <50.0          | <1.00          |

**Sample: 219872 - AH-1 0-1'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |

**Sample: 219873 - AH-1 1-1.5'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 718    | mg/Kg | 4.00 |

**Sample: 219874 - AH-1 2-2.5'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 861    | mg/Kg | 4.00 |

**Sample: 219875 - AH-1 3-3.5'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 753    | mg/Kg | 4.00 |

**Sample: 219876 - AH-1 4-4.5'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 1530   | mg/Kg | 4.00 |

**Sample: 219877 - AH-1 5-5.5'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 1290   | mg/Kg | 4.00 |

**Sample: 219878 - T-1 6'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | 374    | mg/Kg | 4.00 |

**Sample: 219879 - T-1 7'**

| Param    | Flag | Result | Units | RL   |
|----------|------|--------|-------|------|
| Chloride |      | <200   | mg/Kg | 4.00 |



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6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260  
E-Mail: lab@traceanalysis.com

## Certifications

WBENC: 237019

HUB: 1752439743100-86536  
NCTRCA WFWB38444Y0909

DBE: VN 20657

## NELAP Certifications

Lubbock: T104704219-08-TX  
LELAP-02003  
Kansas E-10317

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Ike Tavarez  
Tetra Tech  
1910 N. Big Spring Street  
Midland, TX, 79705

Report Date: January 25, 2010

Work Order: 10011804



Project Location: Eddy Co., NM  
Project Name: COG/Skelly 942 TB (Spill 5)  
Project Number: 114-6400407

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 |
|--------|-------------|--------|------------|------------|---------------|
| 219872 | AH-1 0-1'   | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219873 | AH-1 1-1.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219874 | AH-1 2-2.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219875 | AH-1 3-3.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219876 | AH-1 4-4.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219877 | AH-1 5-5.5' | soil   | 2010-01-12 | 00:00      | 2010-01-15    |
| 219878 | T-1 6'      | soil   | 2010-01-13 | 00:00      | 2010-01-15    |
| 219879 | T-1 7'      | soil   | 2010-01-13 | 00:00      | 2010-01-15    |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch

basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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



---

Dr. Blair Leftwich, Director  
Dr. Michael Abel, Project Manager

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project COG/Skelly 942 TB (Spill 5) were received by TraceAnalysis, Inc. on 2010-01-15 and assigned to work order 10011804. Samples for work order 10011804 were received intact at a temperature of 4.0 C.

Samples were analyzed for the following tests using their respective methods.

| Test                 | Method       | Prep<br>Batch | Prep<br>Date        | QC<br>Batch | Analysis<br>Date    |
|----------------------|--------------|---------------|---------------------|-------------|---------------------|
| BTEX                 | S 8021B      | 57175         | 2010-01-19 at 14:00 | 66862       | 2010-01-19 at 11:58 |
| BTEX                 | S 8021B      | 57264         | 2010-01-22 at 14:00 | 66976       | 2010-01-22 at 12:08 |
| Chloride (Titration) | SM 4500-Cl B | 57185         | 2010-01-20 at 12:55 | 66902       | 2010-01-21 at 10:08 |
| TPH DRO - NEW        | Mod. 8015B   | 57147         | 2010-01-18 at 10:36 | 66823       | 2010-01-18 at 10:36 |
| TPH GRO              | S 8015B      | 57175         | 2010-01-19 at 14:00 | 66863       | 2010-01-19 at 12:26 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10011804 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 4 of 17  
Eddy Co., NM

## Analytical Report

Sample: 219872 - AH-1 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 66976

Prep Batch: 57264

Analytical Method: S 8021B

Date Analyzed: 2010-01-22

Sample Preparation: 2010-01-22

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 268          | mg/Kg | 50       | 0.0100 |
| Toluene      |      | 594          | mg/Kg | 50       | 0.0100 |
| Ethylbenzene |      | 323          | mg/Kg | 50       | 0.0100 |
| Xylene       |      | 342          | mg/Kg | 50       | 0.0100 |

| Surrogate                    | Flag         | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|--------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |              | 46.4   | mg/Kg | 50       | 50.0            | 93                  | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) | <sup>1</sup> | 108    | mg/Kg | 50       | 50.0            | 216                 | 43.1 - 158.4       |

Sample: 219872 - AH-1 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 66902

Prep Batch: 57185

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-01-21

Sample Preparation: 2010-01-20

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

Sample: 219873 - AH-1 1-1.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 66902

Prep Batch: 57185

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-01-21

Sample Preparation: 2010-01-20

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 718          | mg/Kg | 50       | 4.00 |

<sup>1</sup> High surrogate recovery due to peak interference.

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 5 of 17  
Eddy Co., NM

**Sample: 219874 - AH-1 2-2.5'**

|             |                      |                     |              |              |     |
|-------------|----------------------|---------------------|--------------|--------------|-----|
| Laboratory: | Midland              | Analytical Method:  | SM 4500-Cl B | Prep Method: | N/A |
| Analysis:   | Chloride (Titration) | Date Analyzed:      | 2010-01-21   | Analyzed By: | AR  |
| QC Batch:   | 66902                | Sample Preparation: | 2010-01-20   | Prepared By: | AR  |
| Prep Batch: | 57185                |                     |              |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 861          | mg/Kg | 50       | 4.00 |

**Sample: 219875 - AH-1 3-3.5'**

|             |         |                     |            |              |        |
|-------------|---------|---------------------|------------|--------------|--------|
| Laboratory: | Midland | Analytical Method:  | S 8021B    | Prep Method: | S 5035 |
| Analysis:   | BTEX    | Date Analyzed:      | 2010-01-22 | Analyzed By: | AG     |
| QC Batch:   | 66976   | Sample Preparation: | 2010-01-22 | Prepared By: | AG     |
| Prep Batch: | 57264   |                     |            |              |        |

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 87.2         | mg/Kg | 20       | 0.0100 |
| Toluene      |      | 246          | mg/Kg | 20       | 0.0100 |
| Ethylbenzene |      | 146          | mg/Kg | 20       | 0.0100 |
| Xylene       |      | 153          | mg/Kg | 20       | 0.0100 |

| Surrogate                    | Flag         | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|--------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |              | 18.9   | mg/Kg | 20       | 20.0            | 94                  | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) | <sup>2</sup> | 45.2   | mg/Kg | 20       | 20.0            | 226                 | 43.1 - 158.4       |

**Sample: 219875 - AH-1 3-3.5'**

|             |                      |                     |              |              |     |
|-------------|----------------------|---------------------|--------------|--------------|-----|
| Laboratory: | Midland              | Analytical Method:  | SM 4500-Cl B | Prep Method: | N/A |
| Analysis:   | Chloride (Titration) | Date Analyzed:      | 2010-01-21   | Analyzed By: | AR  |
| QC Batch:   | 66902                | Sample Preparation: | 2010-01-20   | Prepared By: | AR  |
| Prep Batch: | 57185                |                     |              |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 753          | mg/Kg | 50       | 4.00 |

<sup>2</sup>High surrogate recovery due to peak interference.

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 6 of 17  
Eddy Co., NM

**Sample: 219876 - AH-1 4-4.5'**

|             |                      |                     |              |              |     |
|-------------|----------------------|---------------------|--------------|--------------|-----|
| Laboratory: | Midland              | Analytical Method:  | SM 4500-Cl B | Prep Method: | N/A |
| Analysis:   | Chloride (Titration) | Date Analyzed:      | 2010-01-21   | Analyzed By: | AR  |
| QC Batch:   | 66902                | Sample Preparation: | 2010-01-20   | Prepared By: | AR  |
| Prep Batch: | 57185                |                     |              |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 1530         | mg/Kg | 50       | 4.00 |

**Sample: 219877 - AH-1 5-5.5'**

|             |                      |                     |              |              |     |
|-------------|----------------------|---------------------|--------------|--------------|-----|
| Laboratory: | Midland              | Analytical Method:  | SM 4500-Cl B | Prep Method: | N/A |
| Analysis:   | Chloride (Titration) | Date Analyzed:      | 2010-01-21   | Analyzed By: | AR  |
| QC Batch:   | 66902                | Sample Preparation: | 2010-01-20   | Prepared By: | AR  |
| Prep Batch: | 57185                |                     |              |              |     |

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 1290         | mg/Kg | 50       | 4.00 |

**Sample: 219878 - T-1 6'**

|             |         |                     |            |              |        |
|-------------|---------|---------------------|------------|--------------|--------|
| Laboratory: | Midland | Analytical Method:  | S 8021B    | Prep Method: | S 5035 |
| Analysis:   | BTEX    | Date Analyzed:      | 2010-01-22 | Analyzed By: | AG     |
| QC Batch:   | 66976   | Sample Preparation: | 2010-01-22 | Prepared By: | AG     |
| Prep Batch: | 57264   |                     |            |              |        |

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | 3.37         | mg/Kg | 5        | 0.0100 |
| Toluene      |      | 39.9         | mg/Kg | 5        | 0.0100 |
| Ethylbenzene |      | 34.9         | mg/Kg | 5        | 0.0100 |
| Xylene       |      | 37.9         | mg/Kg | 5        | 0.0100 |

| Surrogate                    | Flag         | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|--------------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |              | 3.87   | mg/Kg | 5        | 5.00            | 77                  | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) | <sup>3</sup> | 10.5   | mg/Kg | 5        | 5.00            | 210                 | 43.1 - 158.4       |

<sup>3</sup>High surrogate recovery due to peak interference.

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 7 of 17  
Eddy Co., NM

**Sample: 219878 - T-1 6'**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 66902 Date Analyzed: 2010-01-21 Analyzed By: AR  
Prep Batch: 57185 Sample Preparation: 2010-01-20 Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | 374          | mg/Kg | 50       | 4.00 |

**Sample: 219879 - T-1 7'**

Laboratory: Midland  
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035  
QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG  
Prep Batch: 57175 Sample Preparation: 2010-01-19 Prepared By: AG

| Parameter    | Flag | RL<br>Result | Units | Dilution | RL     |
|--------------|------|--------------|-------|----------|--------|
| Benzene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Toluene      |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Ethylbenzene |      | <0.0100      | mg/Kg | 1        | 0.0100 |
| Xylene       |      | <0.0100      | mg/Kg | 1        | 0.0100 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 1.98   | mg/Kg | 1        | 2.00            | 99                  | 64.4 - 141.2       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.93   | mg/Kg | 1        | 2.00            | 96                  | 43.1 - 158.4       |

**Sample: 219879 - T-1 7'**

Laboratory: Midland  
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A  
QC Batch: 66902 Date Analyzed: 2010-01-21 Analyzed By: AR  
Prep Batch: 57185 Sample Preparation: 2010-01-20 Prepared By: AR

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| Chloride  |      | <200         | mg/Kg | 50       | 4.00 |

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 8 of 17  
Eddy Co., NM

**Sample: 219879 - T-1 7'**

Laboratory: Midland  
Analysis: TPH DRO - NEW  
QC Batch: 66823  
Prep Batch: 57147

Analytical Method: Mod. 8015B  
Date Analyzed: 2010-01-18  
Sample Preparation: 2010-01-18

Prep Method: N/A  
Analyzed By: kg  
Prepared By: kg

| 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-Tricosane |      | 98.8   | mg/Kg | 1        | 100             | 99                  | 70 - 130           |

**Sample: 219879 - T-1 7'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 66863  
Prep Batch: 57175

Analytical Method: S 8015B  
Date Analyzed: 2010-01-19  
Sample Preparation: 2010-01-19

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

| Parameter | Flag | RL<br>Result | Units | Dilution | RL   |
|-----------|------|--------------|-------|----------|------|
| GRO       |      | <1.00        | mg/Kg | 1        | 1.00 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.12   | mg/Kg | 1        | 2.00            | 106                 | 65.3 - 145         |
| 4-Bromofluorobenzene (4-BFB) |      | 2.03   | mg/Kg | 1        | 2.00            | 102                 | 61.7 - 131.1       |

**Method Blank (1) QC Batch: 66823**

QC Batch: 66823  
Prep Batch: 57147

Date Analyzed: 2010-01-18  
QC Preparation: 2010-01-18

Analyzed By: kg  
Prepared By: kg

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| DRO       |      | <5.86         | mg/Kg | 50 |

| Surrogate   | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| n-Tricosane |      | 91.6   | mg/Kg | 1        | 100             | 92                  | 70 - 130           |

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 9 of 17  
Eddy Co., NM

Method Blank (1) QC Batch: 66862

QC Batch: 66862  
Prep Batch: 57175

Date Analyzed: 2010-01-19  
QC Preparation: 2010-01-19

Analyzed By: AG  
Prepared By: AG

| Parameter    | Flag | MDL<br>Result | Units | RL   |
|--------------|------|---------------|-------|------|
| Benzene      |      | <0.00410      | mg/Kg | 0.01 |
| Toluene      |      | <0.00310      | mg/Kg | 0.01 |
| Ethylbenzene |      | <0.00240      | mg/Kg | 0.01 |
| Xylene       |      | <0.00650      | mg/Kg | 0.01 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.03   | mg/Kg | 1        | 2.00            | 102                 | 64.9 - 142.7       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.90   | mg/Kg | 1        | 2.00            | 95                  | 43.9 - 141.9       |

Method Blank (1) QC Batch: 66863

QC Batch: 66863  
Prep Batch: 57175

Date Analyzed: 2010-01-19  
QC Preparation: 2010-01-19

Analyzed By: AG  
Prepared By: AG

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| GRO       |      | <0.396        | mg/Kg | 1  |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 2.19   | mg/Kg | 1        | 2.00            | 110                 | 66.2 - 145         |
| 4-Bromofluorobenzene (4-BFB) |      | 1.98   | mg/Kg | 1        | 2.00            | 99                  | 62 - 120.5         |

Method Blank (1) QC Batch: 66902

QC Batch: 66902  
Prep Batch: 57185

Date Analyzed: 2010-01-21  
QC Preparation: 2010-01-20

Analyzed By: AR  
Prepared By: AR

| Parameter | Flag | MDL<br>Result | Units | RL |
|-----------|------|---------------|-------|----|
| Chloride  |      | <2.18         | mg/Kg | 4  |

Method Blank (1) QC Batch: 66976

QC Batch: 66976  
Prep Batch: 57264

Date Analyzed: 2010-01-22  
QC Preparation: 2010-01-22

Analyzed By: AG  
Prepared By: AG

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 10 of 17  
Eddy Co., NM

| Parameter    | Flag | MDL<br>Result | Units | RL   |
|--------------|------|---------------|-------|------|
| Benzene      |      | <0.00410      | mg/Kg | 0.01 |
| Toluene      |      | <0.00310      | mg/Kg | 0.01 |
| Ethylbenzene |      | <0.00240      | mg/Kg | 0.01 |
| Xylene       |      | <0.00650      | mg/Kg | 0.01 |

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 1.93   | mg/Kg | 1        | 2.00            | 96                  | 64.9 - 142.7       |
| 4-Bromofluorobenzene (4-BFB) |      | 1.90   | mg/Kg | 1        | 2.00            | 95                  | 43.9 - 141.9       |

#### Laboratory Control Spike (LCS-1)

QC Batch: 66823  
Prep Batch: 57147

Date Analyzed: 2010-01-18  
QC Preparation: 2010-01-18

Analyzed By: kg  
Prepared By: kg

| Param | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|
| DRO   | 284           | mg/Kg | 1    | 250             | <5.86            | 114  | 57.4 - 133.4  |

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

| Param | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| DRO   | 295            | mg/Kg | 1    | 250             | <5.86            | 118  | 57.4 - 133.4  | 4   | 20           |

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

| Surrogate   | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|-------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| n-Tricosane | 102           | 105            | mg/Kg | 1    | 100             | 102         | 105          | 70 - 130      |

#### Laboratory Control Spike (LCS-1)

QC Batch: 66862  
Prep Batch: 57175

Date Analyzed: 2010-01-19  
QC Preparation: 2010-01-19

Analyzed By: AG  
Prepared By: AG

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.02          | mg/Kg | 1    | 2.00            | <0.00410         | 101  | 75.4 - 115.7  |
| Toluene      | 1.85          | mg/Kg | 1    | 2.00            | <0.00310         | 92   | 78.4 - 113.6  |
| Ethylbenzene | 1.76          | mg/Kg | 1    | 2.00            | <0.00240         | 88   | 76 - 114.2    |
| Xylene       | 5.34          | mg/Kg | 1    | 6.00            | <0.00650         | 89   | 76.9 - 113.6  |

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

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 11 of 17  
Eddy Co., NM

| Param        | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 2.06           | mg/Kg | 1    | 2.00            | <0.00410         | 103  | 75.4 - 115.7  | 2   | 20           |
| Toluene      | 1.89           | mg/Kg | 1    | 2.00            | <0.00310         | 94   | 78.4 - 113.6  | 2   | 20           |
| Ethylbenzene | 1.80           | mg/Kg | 1    | 2.00            | <0.00240         | 90   | 76 - 114.2    | 2   | 20           |
| Xylene       | 5.44           | mg/Kg | 1    | 6.00            | <0.00650         | 91   | 76.9 - 113.6  | 2   | 20           |

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

| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 1.94          | 1.92           | mg/Kg | 1    | 2.00            | 97          | 96           | 65 - 142.9    |
| 4-Bromofluorobenzene (4-BFB) | 1.97          | 1.96           | mg/Kg | 1    | 2.00            | 98          | 98           | 43.8 - 144.9  |

#### Laboratory Control Spike (LCS-1)

QC Batch: 66863  
Prep Batch: 57175

Date Analyzed: 2010-01-19  
QC Preparation: 2010-01-19

Analyzed By: AG  
Prepared By: AG

| Param | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|
| GRO   | 16.9          | mg/Kg | 1    | 20.0            | <0.396           | 84   | 52.5 - 114.3  |

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

| Param | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| GRO   | 17.6           | mg/Kg | 1    | 20.0            | <0.396           | 88   | 52.5 - 114.3  | 4   | 20           |

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

| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 2.10          | 2.12           | mg/Kg | 1    | 2.00            | 105         | 106          | 66.2 - 148.7  |
| 4-Bromofluorobenzene (4-BFB) | 2.03          | 2.06           | mg/Kg | 1    | 2.00            | 102         | 103          | 64.1 - 127.4  |

#### Laboratory Control Spike (LCS-1)

QC Batch: 66902  
Prep Batch: 57185

Date Analyzed: 2010-01-21  
QC Preparation: 2010-01-20

Analyzed By: AR  
Prepared By: AR

| Param    | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 102           | mg/Kg | 1    | 100             | <2.18            | 102  | 85 - 115      |

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

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 12 of 17  
Eddy Co., NM

| Param    | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 99.9           | mg/Kg | 1    | 100             | <2.18            | 100  | 85 - 115      | 2   | 20           |

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

#### Laboratory Control Spike (LCS-1)

QC Batch: 66976  
Prep Batch: 57264

Date Analyzed: 2010-01-22  
QC Preparation: 2010-01-22

Analyzed By: AG  
Prepared By: AG

| Param        | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 1.95          | mg/Kg | 1    | 2.00            | <0.00410         | 98   | 75.4 - 115.7  |
| Toluene      | 1.83          | mg/Kg | 1    | 2.00            | <0.00310         | 92   | 78.4 - 113.6  |
| Ethylbenzene | 1.81          | mg/Kg | 1    | 2.00            | <0.00240         | 90   | 76 - 114.2    |
| Xylene       | 5.44          | mg/Kg | 1    | 6.00            | <0.00650         | 91   | 76.9 - 113.6  |

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

| Param        | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|----------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 1.94           | mg/Kg | 1    | 2.00            | <0.00410         | 97   | 75.4 - 115.7  | 0   | 20           |
| Toluene      | 1.82           | mg/Kg | 1    | 2.00            | <0.00310         | 91   | 78.4 - 113.6  | 0   | 20           |
| Ethylbenzene | 1.78           | mg/Kg | 1    | 2.00            | <0.00240         | 89   | 76 - 114.2    | 2   | 20           |
| Xylene       | 5.40           | mg/Kg | 1    | 6.00            | <0.00650         | 90   | 76.9 - 113.6  | 1   | 20           |

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

| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 1.88          | 1.80           | mg/Kg | 1    | 2.00            | 94          | 90           | 65 - 142.9    |
| 4-Bromofluorobenzene (4-BFB) | 1.96          | 1.88           | mg/Kg | 1    | 2.00            | 98          | 94           | 43.8 - 144.9  |

#### Matrix Spike (MS-1) Spiked Sample: 219597

QC Batch: 66823  
Prep Batch: 57147

Date Analyzed: 2010-01-18  
QC Preparation: 2010-01-18

Analyzed By: kg  
Prepared By: kg

| Param | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|--------------|-------|------|-----------------|------------------|------|---------------|
| DRO   | 323          | mg/Kg | 1    | 250             | <5.86            | 129  | 35.2 - 167.1  |

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

| Param | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| DRO   | 328           | mg/Kg | 1    | 250             | <5.86            | 131  | 35.2 - 167.1  | 2   | 20           |

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 13 of 17  
Eddy Co., NM

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 |
|-------------|--------------|---------------|-------|------|-----------------|------------|-------------|---------------|
| n-Tricosane | 97.8         | 98.0          | mg/Kg | 1    | 100             | 98         | 98          | 70 - 130      |

**Matrix Spike (MS-1)** Spiked Sample: 219728

QC Batch: 66862  
Prep Batch: 57175

Date Analyzed: 2010-01-19  
QC Preparation: 2010-01-19

Analyzed By: AG  
Prepared By: AG

| Param        | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.42         | mg/Kg | 1    | 2.00            | <0.00410         | 121  | 57.7 - 140.7  |
| Toluene      | 2.26         | mg/Kg | 1    | 2.00            | <0.00310         | 113  | 53.4 - 146.6  |
| Ethylbenzene | 2.22         | mg/Kg | 1    | 2.00            | <0.00240         | 111  | 62.1 - 141.6  |
| Xylene       | 6.71         | mg/Kg | 1    | 6.00            | <0.00650         | 112  | 61.2 - 142.7  |

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

| Param        | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 2.32          | mg/Kg | 1    | 2.00            | <0.00410         | 116  | 57.7 - 140.7  | 4   | 20           |
| Toluene      | 2.17          | mg/Kg | 1    | 2.00            | <0.00310         | 108  | 53.4 - 146.6  | 4   | 20           |
| Ethylbenzene | 2.12          | mg/Kg | 1    | 2.00            | <0.00240         | 106  | 62.1 - 141.6  | 5   | 20           |
| Xylene       | 6.42          | mg/Kg | 1    | 6.00            | <0.00650         | 107  | 61.2 - 142.7  | 4   | 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)       | 1.93         | 2.11          | mg/Kg | 1    | 2               | 96         | 106         | 62.7 - 139.6  |
| 4-Bromofluorobenzene (4-BFB) | 1.93         | 2.11          | mg/Kg | 1    | 2               | 96         | 106         | 49.6 - 146.7  |

**Matrix Spike (MS-1)** Spiked Sample: 219879

QC Batch: 66863  
Prep Batch: 57175

Date Analyzed: 2010-01-19  
QC Preparation: 2010-01-19

Analyzed By: AG  
Prepared By: AG

| Param | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|-------|--------------|-------|------|-----------------|------------------|------|---------------|
| GRO   | 18.6         | mg/Kg | 1    | 20.0            | <0.396           | 93   | 10 - 198.3    |

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

| Param | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|-------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| GRO   | 19.2          | mg/Kg | 1    | 20.0            | <0.396           | 96   | 10 - 198.3    | 3   | 20           |

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 14 of 17  
Eddy Co., NM

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)       | 2.29         | 2.13          | mg/Kg | 1    | 2               | 114        | 106         | 65.5 - 143    |
| 4-Bromofluorobenzene (4-BFB) | 2.33         | 2.21          | mg/Kg | 1    | 2               | 116        | 110         | 58.6 - 140    |

**Matrix Spike (MS-1)** Spiked Sample: 219879

QC Batch: 66902  
Prep Batch: 57185

Date Analyzed: 2010-01-21  
QC Preparation: 2010-01-20

Analyzed By: AR  
Prepared By: AR

| Param    | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|----------|--------------|-------|------|-----------------|------------------|------|---------------|
| Chloride | 10000        | mg/Kg | 100  | 10000           | <218             | 98   | 85 - 115      |

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

| Param    | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|----------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Chloride | 10200         | mg/Kg | 100  | 10000           | <218             | 100  | 85 - 115      | 2   | 20           |

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

**Matrix Spike (MS-1)** Spiked Sample: 219995

QC Batch: 66976  
Prep Batch: 57264

Date Analyzed: 2010-01-22  
QC Preparation: 2010-01-22

Analyzed By: AG  
Prepared By: AG

| Param        | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 2.05         | mg/Kg | 1    | 2.00            | <0.00410         | 102  | 57.7 - 140.7  |
| Toluene      | 1.96         | mg/Kg | 1    | 2.00            | <0.00310         | 98   | 53.4 - 146.6  |
| Ethylbenzene | 1.96         | mg/Kg | 1    | 2.00            | <0.00240         | 98   | 62.1 - 141.6  |
| Xylene       | 5.94         | mg/Kg | 1    | 6.00            | <0.00650         | 99   | 61.2 - 142.7  |

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

| Param        | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 2.19          | mg/Kg | 1    | 2.00            | <0.00410         | 110  | 57.7 - 140.7  | 7   | 20           |
| Toluene      | 2.10          | mg/Kg | 1    | 2.00            | <0.00310         | 105  | 53.4 - 146.6  | 7   | 20           |
| Ethylbenzene | 2.13          | mg/Kg | 1    | 2.00            | <0.00240         | 106  | 62.1 - 141.6  | 8   | 20           |
| Xylene       | 6.46          | mg/Kg | 1    | 6.00            | <0.00650         | 108  | 61.2 - 142.7  | 8   | 20           |

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

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 15 of 17  
Eddy Co., NM

| Surrogate                    | MS<br>Result | MSD<br>Result | Units | Dil. | Spike<br>Amount | MS<br>Rec. | MSD<br>Rec. | Rec.<br>Limit |
|------------------------------|--------------|---------------|-------|------|-----------------|------------|-------------|---------------|
| Trifluorotoluene (TFT)       | 1.85         | 1.79          | mg/Kg | 1    | 2               | 92         | 90          | 62.7 - 139.6  |
| 4-Bromofluorobenzene (4-BFB) | 1.91         | 1.84          | mg/Kg | 1    | 2               | 96         | 92          | 49.6 - 146.7  |

Standard (CCV-2)

QC Batch: 66823

Date Analyzed: 2010-01-18

Analyzed By: kg

| 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                   | 290                    | 116                         | 80 - 120                      | 2010-01-18       |

Standard (CCV-3)

QC Batch: 66823

Date Analyzed: 2010-01-18

Analyzed By: kg

| 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                   | 295                    | 118                         | 80 - 120                      | 2010-01-18       |

Standard (CCV-2)

QC Batch: 66862

Date Analyzed: 2010-01-19

Analyzed By: AG

| 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                 | 0.101                  | 101                         | 80 - 120                      | 2010-01-19       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0926                 | 93                          | 80 - 120                      | 2010-01-19       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0879                 | 88                          | 80 - 120                      | 2010-01-19       |
| Xylene       |      | mg/Kg | 0.300                 | 0.265                  | 88                          | 80 - 120                      | 2010-01-19       |

Standard (CCV-3)

QC Batch: 66862

Date Analyzed: 2010-01-19

Analyzed By: AG

| 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                 | 0.101                  | 101                         | 80 - 120                      | 2010-01-19       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0915                 | 92                          | 80 - 120                      | 2010-01-19       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0859                 | 86                          | 80 - 120                      | 2010-01-19       |

continued ...

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 16 of 17  
Eddy Co., NM

standard continued ...

| Param  | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Xylene |      | mg/Kg | 0.300                 | 0.259                  | 86                          | 80 - 120                      | 2010-01-19       |

**Standard (CCV-2)**

QC Batch: 66863

Date Analyzed: 2010-01-19

Analyzed By: AG

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1.00                  | 0.994                  | 99                          | 80 - 120                      | 2010-01-19       |

**Standard (CCV-3)**

QC Batch: 66863

Date Analyzed: 2010-01-19

Analyzed By: AG

| Param | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   |      | mg/Kg | 1.00                  | 1.13                   | 113                         | 80 - 120                      | 2010-01-19       |

**Standard (ICV-1)**

QC Batch: 66902

Date Analyzed: 2010-01-21

Analyzed By: AR

| Param    | Flag | Units | ICVs<br>True<br>Conc. | ICVs<br>Found<br>Conc. | ICVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 101                    | 101                         | 85 - 115                      | 2010-01-21       |

**Standard (CCV-1)**

QC Batch: 66902

Date Analyzed: 2010-01-21

Analyzed By: AR

| 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 |
|----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride |      | mg/Kg | 100                   | 99.0                   | 99                          | 85 - 115                      | 2010-01-21       |

**Standard (CCV-2)**

QC Batch: 66976

Date Analyzed: 2010-01-22

Analyzed By: AG

Report Date: January 25, 2010  
114-6400407

Work Order: 10011804  
COG/Skelly 942 TB (Spill 5)

Page Number: 17 of 17  
Eddy Co., 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 |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/Kg | 0.100                 | 0.0969                 | 97                          | 80 - 120                      | 2010-01-22       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0906                 | 91                          | 80 - 120                      | 2010-01-22       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0899                 | 90                          | 80 - 120                      | 2010-01-22       |
| Xylene       |      | mg/Kg | 0.300                 | 0.271                  | 90                          | 80 - 120                      | 2010-01-22       |

Standard (CCV-3)

QC Batch: 66976

Date Analyzed: 2010-01-22

Analyzed By: AG

| 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                 | 0.0994                 | 99                          | 80 - 120                      | 2010-01-22       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0949                 | 95                          | 80 - 120                      | 2010-01-22       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0929                 | 93                          | 80 - 120                      | 2010-01-22       |
| Xylene       |      | mg/Kg | 0.300                 | 0.281                  | 94                          | 80 - 120                      | 2010-01-22       |

## Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

OF:

ANALYSIS REQUEST  
(Circle or Specify Method No.)

**TETRA TECH**

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