# SITE CLOSURE REPORT



## SUNOCO KEMNITZ STATION

UNIT B, SECTION 24, TOWNSHIP 16 SOUTH, RANGE 33 EAST
WEST OF LOVINGTON
LEA COUNTY, NEW MEXICO

RECEIVED
OCT 05 2010
HOBBSOCD

Prepared for:

**Sunoco, Inc.**
401 Cypress, Ste 610
Abilene, Texas 79601

NOVA
safety and environmental

Prepared by:

**NOVA Safety and Environmental**
2057 Commerce Drive
Midland, Texas 79703

October 2010

Ronald K. Rounsaville
Senior Project Manager

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President

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NMOCD - Hobbs
11/05/10

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## 1.0 INTRODUCTION

NOVA Safety and Environmental (NOVA), is pleased to submit to Sunoco, Inc (Sunoco) this Site Closure Report (SCR) for the former tank battery site known as Sunoco Kemnitz Station. The Sunoco Kemnitz Station site is a former tank battery location and was decommissioned in 2001 with the removal of the tanks and all ancillary equipment. The former tank battery site is located in Unit B, Section 24, Township 16 South, Range 33 East, Lea County, New Mexico. A Site Location Map is provided as Figure 1.

## 2.0 NMOCD SITE CLASSIFICATION

Groundwater in the vicinity of this site occurs at approximately fifty (50) feet bgs. This depth to groundwater results in a score of 20 being assigned to this site based on the NMOCD ranking criteria. The distance to the nearest water source exceeds 1,000 feet, resulting in no points being assigned to the site on this ranking criterion. There is no surface water body located with 1,000 feet of the site, resulting in no points being assigned on this ranking criterion.

The NMOCD's *Guidelines for Remediation of Leaks, Spills and Releases* (NMOCD, 1993), indicates the Sunoco Kemnitz Station site has a ranking score of 20 points. The soil cleanup levels for a site with a ranking score greater than 19 require benzene concentrations below 10 parts per million (ppm), total BTEX concentrations below 50 ppm and TPH-GRO/DRO concentrations below 100 ppm.

## 3.0 SUMMARY OF FIELD ACTIVITIES

### 3.1 Impacted Soil Removal

In 2001, the Kemnitz Tank Battery was dismantled and all tanks and ancillary equipment were removed from the site. Following the removal of the battery equipment, the soils underlying the tanks, firewall berms and sidewalls were excavated to a depth of approximately two feet below ground surface (bgs). Impacted soils excavated from within the former battery were transported to the J&L Landfarm facility in Eunice, New Mexico for disposal. Clean, non-impacted material from a nearby source was used to backfill the excavation area.

On August 16, 2010, NOVA Safety and Environmental (NOVA) mobilized equipment to the site to over-excavate the former tank battery area and collect confirmation soil samples from the battery floor and side walls to determine that soil concentrations underneath the former battery were below NMOCD regulatory standards.

Based on visual and olfactory observations, excavation activities were suspended pending the analytical results of confirmation soil samples collected at locations within the excavation area. The final excavation measured approximately 45 feet in length by 25 feet in width and averaged approximately 2-½ feet in depth. Figure 2 is a Site Details and Confirmation Soil Sample Locations Map displaying the tank battery, excavation areas and other site details.

### 3.2 Excavated Soil Remediation

Impacted soil from the 2001 excavation activity was transported to the J&L Landfarm facility in Eunice, New Mexico for disposal. Clean, non-impacted material from a nearby source was used to backfill the excavation area.

### 3.3 Confirmation Soil Sampling and Analytical Results

On August 16, 2010, four excavation sidewall and two floor samples were collected from the tank battery excavation area. All samples were collected utilizing standard soil sampling protocol as stated in NMOCD guidelines. Laboratory submitted samples were placed in sterile glass containers, equipped with a Teflon-lined lid furnished by the laboratory. The samples were labeled, placed on ice, chilled to a temperature of approximately 4°C and transported to Trace Analysis, Inc in Midland, Texas for analysis of Benzene, Toluene, Ethyl-benzene and Xylenes (BTEX) by EPA method 8021B, Total Petroleum Hydrocarbons (TPH) by EPA method 8015 and Chlorides by EPA method SM 4500-C1B. Appropriate chain-of-custody documentation and shipping protocols were followed. The laboratory analytical reports are provided in Appendix A. For reference, Figure 2 displays the locations of the confirmation soil samples and Table 1 presents the analytical results for the laboratory analyzed soil samples.

Laboratory analytical results confirmed that the six soil samples obtained from the excavation floor and sidewalls exhibited BTEX and TPH concentrations below the regulatory clean up level of 50 mg/Kg and 100 mg/Kg. Analytical results for chlorides on the six soil samples exhibited concentrations below 200 mg/Kg.

### 3.4 Backfilling and Surface Restoration

The entire excavation area was backfilled following receipt of the confirmation analytical results and the site was restored to original grade. Caliche material from the driveway was removed and clean top soil was placed down and reseeded with a mixture required by the New Mexico State Land Office.

## 4.0 SUMMARY AND REQUEST FOR CLOSURE

Based on the analytical results of laboratory analyzed confirmation soil samples obtained from the excavation floor and side walls, the area below the former tank battery are below applicable NMOCD clean up levels. NOVA on behalf of Sunoco, Inc. respectfully requests that the NMOCD grant closure to the Sunoco Kemnitz Station site.

## 5.0 LIMITATIONS

NOVA has prepared this Site Closure Report to the best of its ability. No other warranty, expressed or implied, is made or intended. NOVA has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. NOVA has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information

provided in documents or statements is true and accurate. NOVA has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. NOVA also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Sunoco, Inc. The information contained in this report including all exhibits and attachments may not be used by any other party without the express written consent of NOVA and/or Sunoco, Inc.

## 6.0 DISTRIBUTION

Sunoco, Inc.
Kemnitz Station, Crude Oil Tank Battery
Site Closure Report

Copy 1, 2 & 3:
Craig Rutland
Sunoco, Inc
401 Cypress, Suite 610
Abilene, Texas 79601

Copy 4:
Geoffrey Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1625 French Drive
Hobbs, NM 88240

Copy 5:
NOVA Safety and Environmental
2057 Commerce Street
Midland, TX 79703
rrounsaville@novatraining.cc

# FIGURES

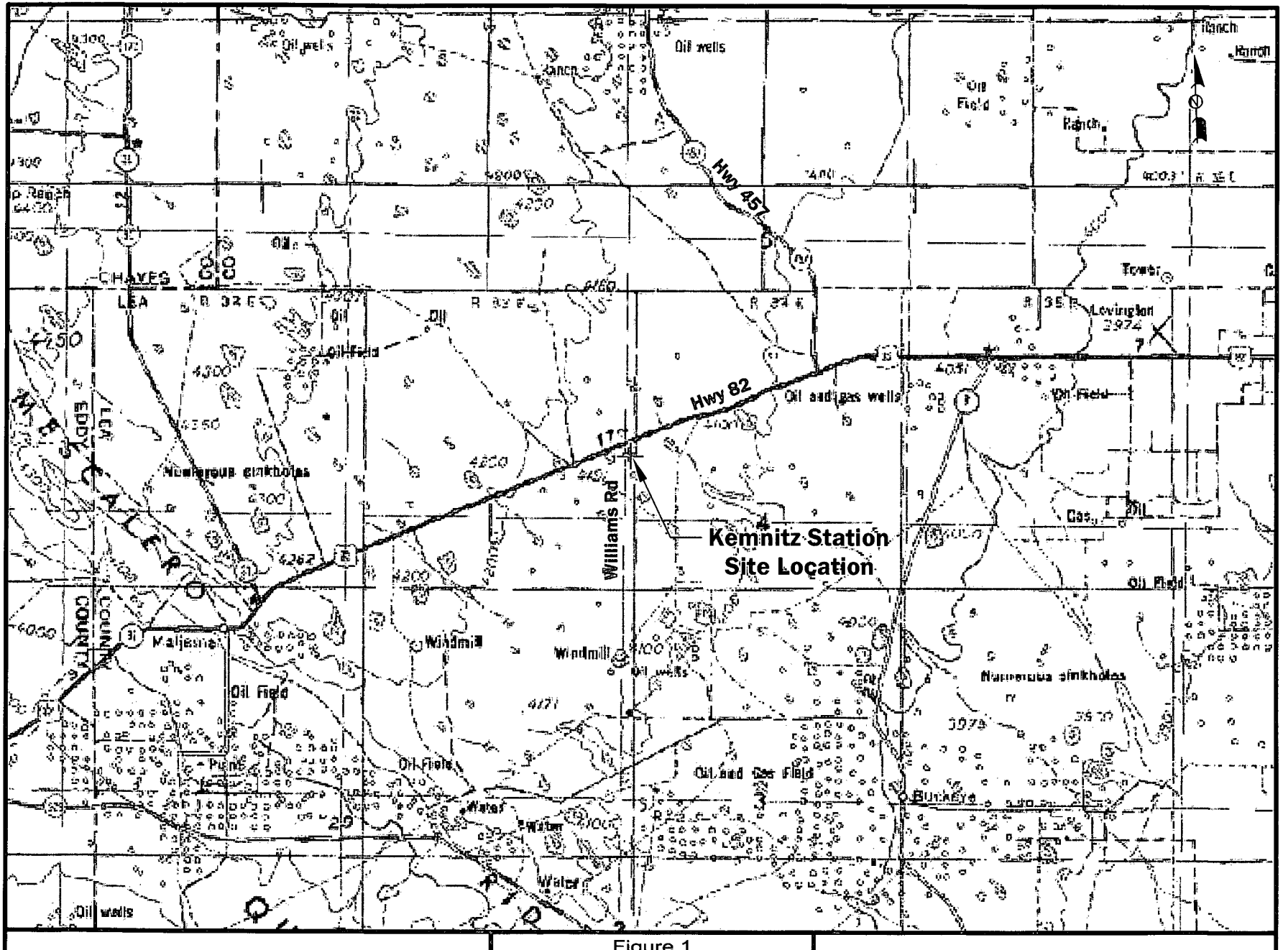
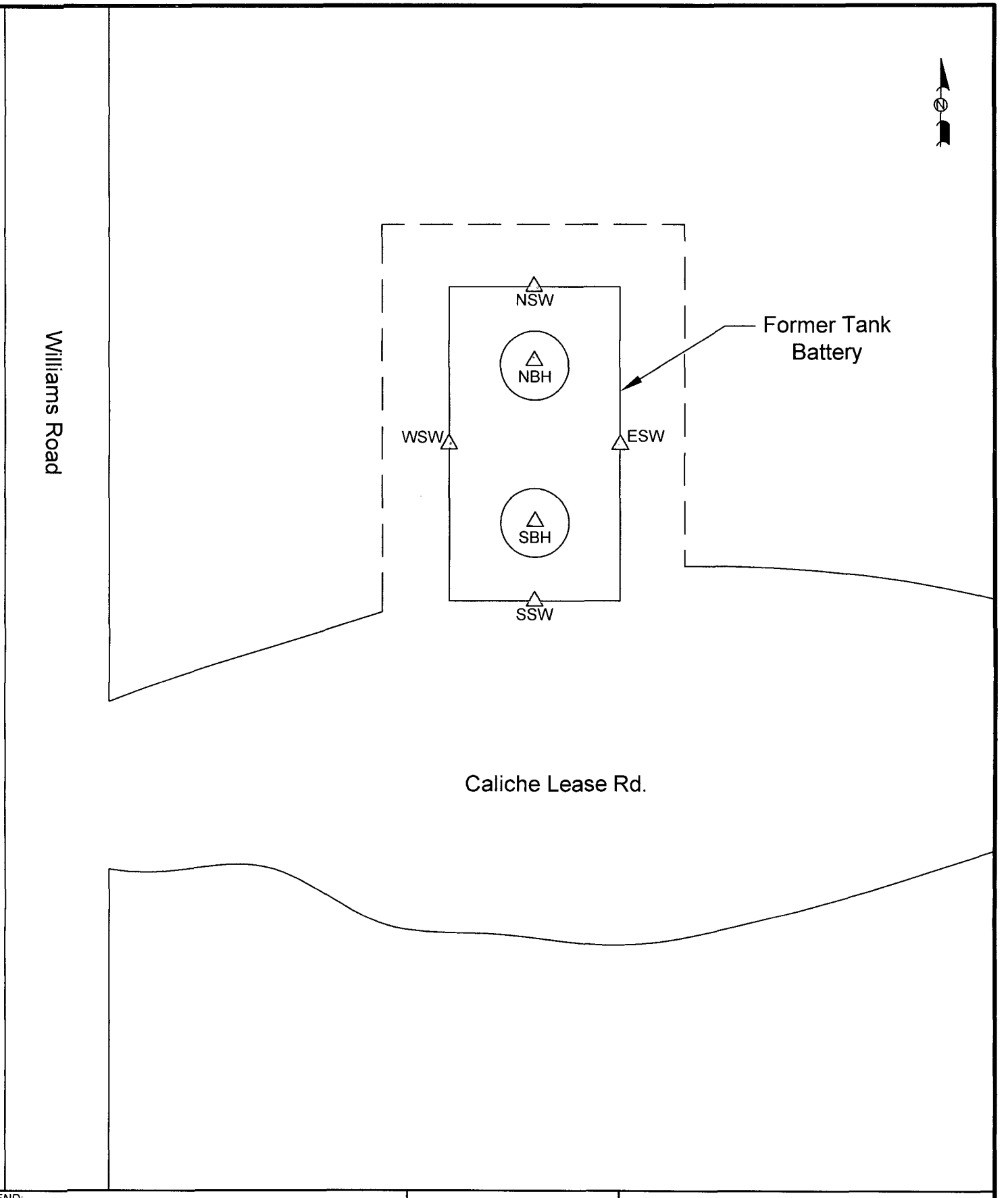



Figure 1
Site Location Map
Sunoco, Inc.
Kemnitz Station
Lea County, Nm

NOVA
safety and environmental

2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| | | |
|---|---|---|
| Scale: 1" = 21120' | Cad By: TA | Checked By: RR |
| August 25, 2010 | Location: NW1/4,NE1/4,Sect 24, T16S, R33E. N 32° 54.739', W 103° 36.488' | |




LEGEND:

△ Soil Sample Location

Figure 2
Site Details and Confirmation Soil Sample Locations
Sunoco, Inc.
Kemnitz Station
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

| | | |
|---|---|---|
| NW1/4 SE1/4 Sec 24 T16S R33E | | N 32° 54.739' W 103° 36.488' |
| Scale: NTS | CAD By: TA | Checked By: RKR |
| June 26, 2010 | | |

# TABLES

# TABLE 1

**Analytical Results - Confirmation Soil Samples**
**Sunoco Kemnitz Station**
**Lea County, New Mexico**
**Sunoco, Inc.**

| | | | | Laboratory Analyzed By Method 8015B | | | SW 846-8021B, 5030 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE DATE | SAMPLE IDENTIFICATION | SAMPLE DEPTH | SOIL STATUS | TPH (GRO) $C_6$-$C_{12}$ | TPH (DRO) >$C_{12}$-$C_{35}$ | TOTAL TPH $C_6$-$C_{35}$ | Benzene | Toluene | Ethyl-Benzene | Xylene | Total BTEX | Chlorides |
| 08/16/10 | North Side Wall | 2' | Excavated | <2.00 | <50.0 | <50.0 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <200 |
| 08/16/10 | South Side Wall | 2' | Excavated | <2.00 | <50.0 | <50.0 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <200 |
| 08/16/10 | East Side Wall | 2' | Excavated | <2.00 | <50.0 | <50.0 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <200 |
| 08/16/10 | West Side Wall | 2' | Excavated | <2.00 | <50.0 | <50.0 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <200 |
| 08/16/10 | North Bottom Hole | 3' | Excavated | <2.00 | <50.0 | <50.0 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <200 |
| 08/16/10 | South Bottom Hole | 3' | Excavated | <2.00 | <50.0 | <50.0 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <200 |

# APPENDICES

# APPENDIX A
# Laboratory Analytical Reports

TRACEANALYSIS, 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
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 LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

# Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: August 26, 2010

Work Order: 10081725

Project Location: Lea County, NM
Project Name: Sunoco Kemnitz Station
Project Number: BL-1427

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 |
|---|---|---|---|---|---|
| 241593 | North Side Wall | soil | 2010-08-16 | 11:35 | 2010-08-17 |
| 241594 | South Side Wall | soil | 2010-08-16 | 11:50 | 2010-08-17 |
| 241595 | East Side Wall | soil | 2010-08-16 | 11:45 | 2010-08-17 |
| 241596 | West Side Wall | soil | 2010-08-16 | 11:40 | 2010-08-17 |
| 241597 | North Bottom Hole | soil | 2010-08-16 | 11:55 | 2010-08-17 |
| 241598 | South Bottom Hole | soil | 2010-08-16 | 12:00 | 2010-08-17 |

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 22 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 Sunoco Kemnitz Station were received by TraceAnalysis, Inc. on 2010-08-17 and assigned to work order 10081725. Samples for work order 10081725 were received intact at a temperature of 3.9 C.

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

| Test | Method | Prep Batch | Prep Date | QC Batch | Analysis Date |
|---|---|---|---|---|---|
| BTEX | S 8021B | 62500 | 2010-08-23 at 16:00 | 72886 | 2010-08-23 at 19:09 |
| BTEX | S 8021B | 62544 | 2010-08-25 at 11:00 | 72948 | 2010-08-25 at 15:27 |
| TPH DRO - NEW | S 8015 D | 62429 | 2010-08-20 at 13:56 | 72814 | 2010-08-20 at 13:56 |
| TPH DRO - NEW | S 8015 D | 62430 | 2010-08-20 at 13:56 | 72816 | 2010-08-20 at 13:56 |
| TPH GRO | S 8015 D | 62423 | 2010-08-21 at 17:00 | 72815 | 2010-08-22 at 11:05 |
| TPH GRO | S 8015 D | 62500 | 2010-08-23 at 16:00 | 72887 | 2010-08-23 at 19:38 |

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 10081725 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.

# Analytical Report

**Sample: 241593 - North Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 72948 | Date Analyzed: | 2010-08-25 | Analyzed By: | AG |
| Prep Batch: | 62544 | Sample Preparation: | 2010-08-25 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| Benzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.24 | mg/Kg | 1 | 2.00 | 112 | 52.8 - 137 |
| 4-Bromofluorobenzene (4-BFB) | | 1.74 | mg/Kg | 1 | 2.00 | 87 | 38.4 - 157 |

**Sample: 241593 - North Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 72814 | Date Analyzed: | 2010-08-20 | Analyzed By: | kg |
| Prep Batch: | 62429 | Sample Preparation: | 2010-08-20 | Prepared By: | kg |

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

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

**Sample: 241593 - North Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 72815 | Date Analyzed: | 2010-08-22 | Analyzed By: | AG |
| Prep Batch: | 62423 | Sample Preparation: | 2010-08-21 | Prepared By: | AG |

*continued ...*

*sample 241593 continued ...*

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| GRO | | <2.00 | mg/Kg | 1 | 2.00 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 0.984 | mg/Kg | 1 | 2.00 | 49 | 48.5 - 152 |
| 4-Bromofluorobenzene (4-BFB) | | 0.850 | mg/Kg | 1 | 2.00 | 42 | 42 - 159 |

**Sample: 241594 - South Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 72886 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| Benzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.09 | mg/Kg | 1 | 2.00 | 104 | 52.8 - 137 |
| 4-Bromofluorobenzene (4-BFB) | | 1.82 | mg/Kg | 1 | 2.00 | 91 | 38.4 - 157 |

**Sample: 241594 - South Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 72816 | Date Analyzed: | 2010-08-20 | Analyzed By: | kg |
| Prep Batch: | 62430 | Sample Preparation: | 2010-08-20 | Prepared By: | kg |

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| n-Tricosane | | 114 | mg/Kg | 1 | 100 | 114 | 70 - 130 |

**Sample: 241594 - South Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 72887 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| GRO | | <2.00 | mg/Kg | 1 | 2.00 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.36 | mg/Kg | 1 | 2.00 | 118 | 48.5 - 152 |
| 4-Bromofluorobenzene (4-BFB) | | 1.96 | mg/Kg | 1 | 2.00 | 98 | 42 - 159 |

**Sample: 241595 - East Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 72886 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| Benzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.18 | mg/Kg | 1 | 2.00 | 109 | 52.8 - 137 |
| 4-Bromofluorobenzene (4-BFB) | | 1.86 | mg/Kg | 1 | 2.00 | 93 | 38.4 - 157 |

**Sample: 241595 - East Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 72816 | Date Analyzed: | 2010-08-20 | Analyzed By: | kg |
| Prep Batch: | 62430 | Sample Preparation: | 2010-08-20 | Prepared By: | kg |

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| n-Tricosane | | 103 | mg/Kg | 1 | 100 | 103 | 70 - 130 |

**Sample: 241595 - East Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 72887 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| GRO | | <2.00 | mg/Kg | 1 | 2.00 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.45 | mg/Kg | 1 | 2.00 | 122 | 48.5 - 152 |
| 4-Bromofluorobenzene (4-BFB) | | 1.98 | mg/Kg | 1 | 2.00 | 99 | 42 - 159 |

**Sample: 241596 - West Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 72886 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| Benzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 1.82 | mg/Kg | 1 | 2.00 | 91 | 52.8 - 137 |
| 4-Bromofluorobenzene (4-BFB) | | 1.53 | mg/Kg | 1 | 2.00 | 76 | 38.4 - 157 |

**Sample: 241596 - West Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 72816 | Date Analyzed: | 2010-08-20 | Analyzed By: | kg |
| Prep Batch: | 62430 | Sample Preparation: | 2010-08-20 | Prepared By: | kg |

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| n-Tricosane | | 106 | mg/Kg | 1 | 100 | 106 | 70 - 130 |

**Sample: 241596 - West Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 72887 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| GRO | | <2.00 | mg/Kg | 1 | 2.00 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.04 | mg/Kg | 1 | 2.00 | 102 | 48.5 - 152 |
| 4-Bromofluorobenzene (4-BFB) | | 1.65 | mg/Kg | 1 | 2.00 | 82 | 42 - 159 |

**Sample: 241597 - North Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 72886 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| Benzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 1.80 | mg/Kg | 1 | 2.00 | 90 | 52.8 - 137 |
| 4-Bromofluorobenzene (4-BFB) | | 1.48 | mg/Kg | 1 | 2.00 | 74 | 38.4 - 157 |

**Sample: 241597 - North Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 72816 | Date Analyzed: | 2010-08-20 | Analyzed By: | kg |
| Prep Batch: | 62430 | Sample Preparation: | 2010-08-20 | Prepared By: | kg |

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| n-Tricosane | | 104 | mg/Kg | 1 | 100 | 104 | 70 - 130 |

**Sample: 241597 - North Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 72887 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| GRO | | <2.00 | mg/Kg | 1 | 2.00 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.02 | mg/Kg | 1 | 2.00 | 101 | 48.5 - 152 |
| 4-Bromofluorobenzene (4-BFB) | | 1.60 | mg/Kg | 1 | 2.00 | 80 | 42 - 159 |

**Sample: 241598 - South Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 72886 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| Benzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.02 | mg/Kg | 1 | 2.00 | 101 | 52.8 - 137 |
| 4-Bromofluorobenzene (4-BFB) | | 1.66 | mg/Kg | 1 | 2.00 | 83 | 38.4 - 157 |

**Sample: 241598 - South Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 72816 | Date Analyzed: | 2010-08-20 | Analyzed By: | kg |
| Prep Batch: | 62430 | Sample Preparation: | 2010-08-20 | Prepared By: | kg |

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

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| n-Tricosane | | 110 | mg/Kg | 1 | 100 | 110 | 70 - 130 |

**Sample: 241598 - South Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 72887 | Date Analyzed: | 2010-08-23 | Analyzed By: | AG |
| Prep Batch: | 62500 | Sample Preparation: | 2010-08-23 | Prepared By: | AG |

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|
| GRO | | <2.00 | mg/Kg | 1 | 2.00 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.28 | mg/Kg | 1 | 2.00 | 114 | 48.5 - 152 |
| 4-Bromofluorobenzene (4-BFB) | | 1.77 | mg/Kg | 1 | 2.00 | 88 | 42 - 159 |

**Method Blank (1)** QC Batch: 72814

QC Batch: 72814 | Date Analyzed: 2010-08-20 | Analyzed By: kg
Prep Batch: 62429 | QC Preparation: 2010-08-20 | Prepared By: kg

| Parameter | Flag | MDL Result | Units | RL |
|---|---|---|---|---|
| DRO | | <14.5 | mg/Kg | 50 |

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

**Method Blank (1)** QC Batch: 72815

QC Batch: 72815 | Date Analyzed: 2010-08-22 | Analyzed By: AG
Prep Batch: 62423 | QC Preparation: 2010-08-21 | Prepared By: AG

| Parameter | Flag | MDL Result | Units | RL |
|---|---|---|---|---|
| GRO | | <1.65 | mg/Kg | 2 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.07 | mg/Kg | 1 | 2.00 | 104 | 67.6 - 150 |
| 4-Bromofluorobenzene (4-BFB) | | 1.43 | mg/Kg | 1 | 2.00 | 72 | 52.4 - 130 |

**Method Blank (1)** QC Batch: 72816

QC Batch: 72816 | Date Analyzed: 2010-08-20 | Analyzed By: kg
Prep Batch: 62430 | QC Preparation: 2010-08-20 | Prepared By: kg

| Parameter | Flag | MDL Result | Units | RL |
|---|---|---|---|---|
| DRO | | <14.5 | mg/Kg | 50 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| n-Tricosane | | 90.2 | mg/Kg | 1 | 100 | 90 | 70 - 130 |

**Method Blank (1)** QC Batch: 72886

QC Batch: 72886 | Date Analyzed: 2010-08-23 | Analyzed By: AG
Prep Batch: 62500 | QC Preparation: 2010-08-23 | Prepared By: AG

| Parameter | Flag | MDL Result | Units | RL |
|---|---|---|---|---|
| Benzene | | <0.0150 | mg/Kg | 0.02 |
| Toluene | | <0.00950 | mg/Kg | 0.02 |
| Ethylbenzene | | <0.0106 | mg/Kg | 0.02 |
| Xylene | | <0.00930 | mg/Kg | 0.02 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 1.87 | mg/Kg | 1 | 2.00 | 94 | 66.6 - 122 |
| 4-Bromofluorobenzene (4-BFB) | | 1.29 | mg/Kg | 1 | 2.00 | 64 | 55.4 - 132 |

**Method Blank (1)** QC Batch: 72887

QC Batch: 72887 | Date Analyzed: 2010-08-23 | Analyzed By: AG
Prep Batch: 62500 | QC Preparation: 2010-08-23 | Prepared By: AG

| Parameter | Flag | MDL Result | Units | RL |
|---|---|---|---|---|
| GRO | | <1.65 | mg/Kg | 2 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.17 | mg/Kg | 1 | 2.00 | 108 | 67.6 - 150 |
| 4-Bromofluorobenzene (4-BFB) | | 1.40 | mg/Kg | 1 | 2.00 | 70 | 52.4 - 130 |

**Method Blank (1)** QC Batch: 72948

QC Batch: 72948 | Date Analyzed: 2010-08-25 | Analyzed By: AG
Prep Batch: 62544 | QC Preparation: 2010-08-25 | Prepared By: AG

| Parameter | Flag | MDL Result | Units | RL |
|---|---|---|---|---|
| Benzene | | <0.0150 | mg/Kg | 0.02 |

*continued ...*

*method blank continued ...*

| Parameter | Flag | MDL Result | Units | RL |
|---|---|---|---|---|
| Toluene | | <0.00950 | mg/Kg | 0.02 |
| Ethylbenzene | | <0.0106 | mg/Kg | 0.02 |
| Xylene | | <0.00930 | mg/Kg | 0.02 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | 2.04 | mg/Kg | 1 | 2.00 | 102 | 66.6 - 122 |
| 4-Bromofluorobenzene (4-BFB) | | 1.23 | mg/Kg | 1 | 2.00 | 62 | 55.4 - 132 |

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

QC Batch: 72814 | Date Analyzed: 2010-08-20 | Analyzed By: kg
Prep Batch: 62429 | QC Preparation: 2010-08-20 | Prepared By: kg

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| DRO | 247 | mg/Kg | 1 | 250 | <14.5 | 99 | 57.4 - 133.4 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| DRO | 238 | mg/Kg | 1 | 250 | <14.5 | 95 | 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 Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | 118 | 115 | mg/Kg | 1 | 100 | 118 | 115 | 70 - 130 |

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

QC Batch: 72815 | Date Analyzed: 2010-08-22 | Analyzed By: AG
Prep Batch: 62423 | QC Preparation: 2010-08-21 | Prepared By: AG

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| GRO | 14.3 | mg/Kg | 1 | 20.0 | <1.65 | 72 | 69.9 - 95.4 |

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

*continued ...*

*control spikes continued ...*

| Param | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Param | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
| GRO | 14.2 | mg/Kg | 1 | 20.0 | <1.65 | 71 | 69.9 - 95.4 | 1 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 2.05 | 1.86 | mg/Kg | 1 | 2.00 | 102 | 93 | 61.9 - 142 |
| 4-Bromofluorobenzene (4-BFB) | 1.64 | 1.51 | mg/Kg | 1 | 2.00 | 82 | 76 | 68.2 - 132 |

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

QC Batch: 72816 | Date Analyzed: 2010-08-20 | Analyzed By: kg
Prep Batch: 62430 | QC Preparation: 2010-08-20 | Prepared By: kg

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| DRO | 244 | mg/Kg | 1 | 250 | <14.5 | 98 | 57.4 - 133.4 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| DRO | 236 | mg/Kg | 1 | 250 | <14.5 | 94 | 57.4 - 133.4 | 3 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | 110 | 108 | mg/Kg | 1 | 100 | 110 | 108 | 70 - 130 |

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

QC Batch: 72886 | Date Analyzed: 2010-08-23 | Analyzed By: AG
Prep Batch: 62500 | QC Preparation: 2010-08-23 | Prepared By: AG

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Benzene | 2.11 | mg/Kg | 1 | 2.00 | <0.0150 | 106 | 81.9 - 108 |
| Toluene | 2.01 | mg/Kg | 1 | 2.00 | <0.00950 | 100 | 81.9 - 107 |
| Ethylbenzene | 1.86 | mg/Kg | 1 | 2.00 | <0.0106 | 93 | 78.4 - 107 |
| Xylene | 5.58 | mg/Kg | 1 | 6.00 | <0.00930 | 93 | 79.1 - 107 |

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 | 2.08 | mg/Kg | 1 | 2.00 | <0.0150 | 104 | 81.9 - 108 | 1 | 20 |
| Toluene | 1.99 | mg/Kg | 1 | 2.00 | <0.00950 | 100 | 81.9 - 107 | 1 | 20 |
| Ethylbenzene | 1.81 | mg/Kg | 1 | 2.00 | <0.0106 | 90 | 78.4 - 107 | 3 | 20 |
| Xylene | 5.47 | mg/Kg | 1 | 6.00 | <0.00930 | 91 | 79.1 - 107 | 2 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 2.00 | 1.90 | mg/Kg | 1 | 2.00 | 100 | 95 | 70.2 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 1.71 | 1.67 | mg/Kg | 1 | 2.00 | 86 | 84 | 69.8 - 121 |

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

QC Batch: 72887 | Date Analyzed: 2010-08-23 | Analyzed By: AG
Prep Batch: 62500 | QC Preparation: 2010-08-23 | Prepared By: AG

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| GRO | 15.2 | mg/Kg | 1 | 20.0 | <1.65 | 76 | 69.9 - 95.4 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| GRO | 15.7 | mg/Kg | 1 | 20.0 | <1.65 | 78 | 69.9 - 95.4 | 3 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 2.21 | 2.25 | mg/Kg | 1 | 2.00 | 110 | 112 | 61.9 - 142 |
| 4-Bromofluorobenzene (4-BFB) | 1.67 | 1.71 | mg/Kg | 1 | 2.00 | 84 | 86 | 68.2 - 132 |

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

QC Batch: 72948 | Date Analyzed: 2010-08-25 | Analyzed By: AG
Prep Batch: 62544 | QC Preparation: 2010-08-25 | Prepared By: AG

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Benzene | 2.04 | mg/Kg | 1 | 2.00 | <0.0150 | 102 | 81.9 - 108 |
| Toluene | 1.93 | mg/Kg | 1 | 2.00 | <0.00950 | 96 | 81.9 - 107 |
| Ethylbenzene | 1.77 | mg/Kg | 1 | 2.00 | <0.0106 | 88 | 78.4 - 107 |
| Xylene | 5.25 | mg/Kg | 1 | 6.00 | <0.00930 | 88 | 79.1 - 107 |

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 | 2.07 | mg/Kg | 1 | 2.00 | <0.0150 | 104 | 81.9 - 108 | 1 | 20 |
| Toluene | 1.96 | mg/Kg | 1 | 2.00 | <0.00950 | 98 | 81.9 - 107 | 2 | 20 |
| Ethylbenzene | 1.81 | mg/Kg | 1 | 2.00 | <0.0106 | 90 | 78.4 - 107 | 2 | 20 |
| Xylene | 5.38 | mg/Kg | 1 | 6.00 | <0.00930 | 90 | 79.1 - 107 | 2 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 1.95 | 1.93 | mg/Kg | 1 | 2.00 | 98 | 96 | 70.2 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 1.53 | 1.51 | mg/Kg | 1 | 2.00 | 76 | 76 | 69.8 - 121 |

**Matrix Spike (MS-1)** Spiked Sample: 241593

QC Batch: 72814 | Date Analyzed: 2010-08-20 | Analyzed By: kg
Prep Batch: 62429 | QC Preparation: 2010-08-20 | Prepared By: kg

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| DRO | 237 | mg/Kg | 1 | 250 | <14.5 | 95 | 35.2 - 167.1 |

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

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| DRO | 255 | mg/Kg | 1 | 250 | <14.5 | 102 | 35.2 - 167.1 | 7 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | 115 | 117 | mg/Kg | 1 | 100 | 115 | 117 | 70 - 130 |

**Matrix Spike (MS-1)** Spiked Sample: 241593

QC Batch: 72815 | Date Analyzed: 2010-08-22 | Analyzed By: AG
Prep Batch: 62423 | QC Preparation: 2010-08-21 | Prepared By: AG

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| GRO | 16.6 | mg/Kg | 1 | 20.0 | <1.65 | 83 | 61.8 - 114 |

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

*continued ...*

*matrix spikes continued ...*

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
| GRO | 16.4 | mg/Kg | 1 | 20.0 | <1.65 | 82 | 61.8 - 114 | 1 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 1.70 | 2.03 | mg/Kg | 1 | 2 | 85 | 102 | 50 - 162 |
| 4-Bromofluorobenzene (4-BFB) | 1.54 | 1.80 | mg/Kg | 1 | 2 | 77 | 90 | 50 - 162 |

**Matrix Spike (MS-1)** Spiked Sample: 241849

QC Batch: 72816 | Date Analyzed: 2010-08-20 | Analyzed By: kg
Prep Batch: 62430 | QC Preparation: 2010-08-20 | Prepared By: kg

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| DRO | 247 | mg/Kg | 1 | 250 | <14.5 | 99 | 35.2 - 167.1 |

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

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| DRO | 247 | mg/Kg | 1 | 250 | <14.5 | 99 | 35.2 - 167.1 | 0 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | 105 | 103 | mg/Kg | 1 | 100 | 105 | 103 | 70 - 130 |

**Matrix Spike (MS-1)** Spiked Sample: 241987

QC Batch: 72886 | Date Analyzed: 2010-08-23 | Analyzed By: AG
Prep Batch: 62500 | QC Preparation: 2010-08-23 | Prepared By: AG

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Benzene | 2.22 | mg/Kg | 1 | 2.00 | <0.0150 | 111 | 80.5 - 112 |
| Toluene | 2.22 | mg/Kg | 1 | 2.00 | <0.00950 | 111 | 82.4 - 113 |
| Ethylbenzene | 2.29 | mg/Kg | 1 | 2.00 | <0.0106 | 114 | 83.9 - 114 |
| Xylene | 6.67 | mg/Kg | 1 | 6.00 | <0.00930 | 111 | 84 - 114 |

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

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 2.20 | mg/Kg | 1 | 2.00 | <0.0150 | 110 | 80.5 - 112 | 1 | 20 |
| Toluene | 2.21 | mg/Kg | 1 | 2.00 | <0.00950 | 110 | 82.4 - 113 | 0 | 20 |
| Ethylbenzene | 2.29 | mg/Kg | 1 | 2.00 | <0.0106 | 114 | 83.9 - 114 | 0 | 20 |
| Xylene | 6.63 | mg/Kg | 1 | 6.00 | <0.00930 | 110 | 84 - 114 | 1 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 2.33 | 2.09 | mg/Kg | 1 | 2 | 116 | 104 | 41.3 - 117 |
| 4-Bromofluorobenzene (4-BFB) | 2.09 | 1.91 | mg/Kg | 1 | 2 | 104 | 96 | 35.5 - 129 |

**Matrix Spike (MS-1)** Spiked Sample: 241595

QC Batch: 72887 | Date Analyzed: 2010-08-23 | Analyzed By: AG
Prep Batch: 62500 | QC Preparation: 2010-08-23 | Prepared By: AG

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| GRO | 16.6 | mg/Kg | 1 | 20.0 | <1.65 | 83 | 61.8 - 114 |

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

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| GRO | 15.1 | mg/Kg | 1 | 20.0 | <1.65 | 76 | 61.8 - 114 | 10 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 2.27 | 2.31 | mg/Kg | 1 | 2 | 114 | 116 | 50 - 162 |
| 4-Bromofluorobenzene (4-BFB) | 2.02 | 2.00 | mg/Kg | 1 | 2 | 101 | 100 | 50 - 162 |

**Matrix Spike (MS-1)** Spiked Sample: 242010

QC Batch: 72948 | Date Analyzed: 2010-08-25 | Analyzed By: AG
Prep Batch: 62544 | QC Preparation: 2010-08-25 | Prepared By: AG

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Benzene [1] | 2.31 | mg/Kg | 1 | 2.00 | <0.0150 | 116 | 80.5 - 112 |
| Toluene | 2.25 | mg/Kg | 1 | 2.00 | <0.00950 | 112 | 82.4 - 113 |
| Ethylbenzene | 2.18 | mg/Kg | 1 | 2.00 | <0.0106 | 109 | 83.9 - 114 |

*continued ...*

[1]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

*matrix spikes continued ...*

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Xylene | 6.44 | mg/Kg | 1 | 6.00 | <0.00930 | 107 | 84 - 114 |

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

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 2.18 | mg/Kg | 1 | 2.00 | <0.0150 | 109 | 80.5 - 112 | 6 | 20 |
| Toluene | 2.13 | mg/Kg | 1 | 2.00 | <0.00950 | 106 | 82.4 - 113 | 6 | 20 |
| Ethylbenzene | 2.08 | mg/Kg | 1 | 2.00 | <0.0106 | 104 | 83.9 - 114 | 5 | 20 |
| Xylene | 6.14 | mg/Kg | 1 | 6.00 | <0.00930 | 102 | 84 - 114 | 5 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 2.21 | 2.06 | mg/Kg | 1 | 2 | 110 | 103 | 41.3 - 117 |
| 4-Bromofluorobenzene (4-BFB) | 1.76 | 1.64 | mg/Kg | 1 | 2 | 88 | 82 | 35.5 - 129 |

**Standard (CCV-2)**

QC Batch: 72814 Date Analyzed: 2010-08-20 Analyzed By: kg

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| DRO | | mg/Kg | 250 | 244 | 98 | 80 - 120 | 2010-08-20 |

**Standard (CCV-3)**

QC Batch: 72814 Date Analyzed: 2010-08-20 Analyzed By: kg

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| DRO | | mg/Kg | 250 | 272 | 109 | 80 - 120 | 2010-08-20 |

**Standard (CCV-2)**

QC Batch: 72815 Date Analyzed: 2010-08-22 Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| GRO | | mg/Kg | 1.00 | 0.860 | 86 | 80 - 120 | 2010-08-22 |

**Standard (CCV-3)**

QC Batch: 72815 | Date Analyzed: 2010-08-22 | Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| GRO | | mg/Kg | 1.00 | 0.931 | 93 | 80 - 120 | 2010-08-22 |

**Standard (CCV-2)**

QC Batch: 72816 | Date Analyzed: 2010-08-20 | Analyzed By: kg

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| DRO | | mg/Kg | 250 | 268 | 107 | 80 - 120 | 2010-08-20 |

**Standard (CCV-3)**

QC Batch: 72816 | Date Analyzed: 2010-08-20 | Analyzed By: kg

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| DRO | | mg/Kg | 250 | 246 | 98 | 80 - 120 | 2010-08-20 |

**Standard (CCV-4)**

QC Batch: 72816 | Date Analyzed: 2010-08-20 | Analyzed By: kg

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| DRO | | mg/Kg | 250 | 212 | 85 | 80 - 120 | 2010-08-20 |

**Standard (CCV-1)**

QC Batch: 72886 | Date Analyzed: 2010-08-23 | Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzene | | mg/Kg | 0.100 | 0.106 | 106 | 80 - 120 | 2010-08-23 |
| Toluene | | mg/Kg | 0.100 | 0.101 | 101 | 80 - 120 | 2010-08-23 |

*continued ...*

*standard continued ...*

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Ethylbenzene | | mg/Kg | 0.100 | 0.0936 | 94 | 80 - 120 | 2010-08-23 |
| Xylene | | mg/Kg | 0.300 | 0.281 | 94 | 80 - 120 | 2010-08-23 |

**Standard (CCV-2)**

QC Batch: 72886 Date Analyzed: 2010-08-23 Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzene | | mg/Kg | 0.100 | 0.112 | 112 | 80 - 120 | 2010-08-23 |
| Toluene | | mg/Kg | 0.100 | 0.106 | 106 | 80 - 120 | 2010-08-23 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.0969 | 97 | 80 - 120 | 2010-08-23 |
| Xylene | | mg/Kg | 0.300 | 0.288 | 96 | 80 - 120 | 2010-08-23 |

**Standard (CCV-1)**

QC Batch: 72887 Date Analyzed: 2010-08-23 Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| GRO | | mg/Kg | 1.00 | 0.963 | 96 | 80 - 120 | 2010-08-23 |

**Standard (CCV-2)**

QC Batch: 72887 Date Analyzed: 2010-08-23 Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| GRO | | mg/Kg | 1.00 | 0.882 | 88 | 80 - 120 | 2010-08-23 |

**Standard (CCV-1)**

QC Batch: 72948 Date Analyzed: 2010-08-25 Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzene | | mg/Kg | 0.100 | 0.100 | 100 | 80 - 120 | 2010-08-25 |

*continued ...*

*standard continued ...*

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Toluene | | mg/Kg | 0.100 | 0.0945 | 94 | 80 - 120 | 2010-08-25 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.0846 | 85 | 80 - 120 | 2010-08-25 |
| Xylene | | mg/Kg | 0.300 | 0.254 | 85 | 80 - 120 | 2010-08-25 |

**Standard (CCV-2)**

QC Batch: 72948 Date Analyzed: 2010-08-25 Analyzed By: AG

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzene | | mg/Kg | 0.100 | 0.104 | 104 | 80 - 120 | 2010-08-25 |
| Toluene | | mg/Kg | 0.100 | 0.0988 | 99 | 80 - 120 | 2010-08-25 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.0906 | 91 | 80 - 120 | 2010-08-25 |
| Xylene | | mg/Kg | 0.300 | 0.266 | 89 | 80 - 120 | 2010-08-25 |

LAB Order ID # 10081725



# TraceAnalysis, Inc.

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Company Name: NOVA
Phone #:
Address: (Street, City, Zip)
Fax #:
Contact Person: Ron Rounsaville
E-mail:
Invoice to: (If different from above) NOVA
Project #: BL-1427
Project Name: Sunoco Kemnitz STATION
Project Location (including state): Lea Co. NM
Sampler Signature: Ron Rounsaville

## ANALYSIS REQUEST
(Circle or Specify Method No.)

| LAB # (LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume / Amount | MATRIX: WATER | SOIL | AIR | SLUDGE | PRESERVATIVE METHOD: HCl | $HNO_3$ | $H_2SO_4$ | NaOH | ICE | NONE | SAMPLING: DATE | TIME | MTBE 8021 / 602 / 8260 / 624 | BTEX 8021 / 602 / 8260 / 624 | TPH 418.1 / TX1005 / TX1005 Ext(C35) | TPH 8015 GRO / DRO / TVHC | PAH 8270 / 625 | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7 | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | TCLP Pesticides | RCI | GC/MS Vol. 8260 / 624 | GC/MS Semi. Vol. 8270 / 625 | PCB's 8082 / 608 | Pesticides 8081 / 608 | BOD, TSS, pH | Moisture Content | Cl, Fl, SO4, NO3, NO2, Alkalinity | Na, Ca, Mg, K, TDS, EC | | | | Turn Around Time if different from standard | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 241593 | NORTH Sidewall | 1 | 4oz | | X | | | | | | | X | | 8/16/10 | 1135 | | | | X | | | | | | | | | | | | | | | | | | | |
| 594 | South Sidewall | 1 | | | X | | | | | | | X | | | 1150 | | | | X | | | | | | | | | | | | | | | | | | | |
| 595 | EAST Sidewall | 1 | | | X | | | | | | | X | | | 1145 | | | | X | | | | | | | | | | | | | | | | | | | |
| 596 | WEST Sidewall | 1 | | | X | | | | | | | X | | | 1140 | | | | X | | | | | | | | | | | | | | | | | | | |
| 597 | North Bottom hole | 1 | | | X | | | | | | | X | | | 1155 | | | | X | | | | | | | | | | | | | | | | | | | |
| 598 | South Bottom hole | 1 | | | X | | | | | | | X | | | 1200 | | | | X | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | |
|---|---|---|---|---|---|---|---|---|
| Ron Rounsaville | | 8/17/10 | 1110 | | Trace | 8/17/10 | 11:10 | INST OBS 39 °C COR °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST OBS °C COR °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST OBS °C COR °C |

**LAB USE ONLY**
Intact Y / N
Headspace Y / N NA
Log-in-Review

**REMARKS:**
All tests - Midland

- Dry Weight Basis Required
- TRRP Report Required
- Check If Special Reporting Limits Are Needed

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

Carrier #

ORIGINAL COPY

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

## Certifications

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

## 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

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: September 14, 2010

Work Order: 10081725

Project Location: Lea County, NM
Project Name: Sunoco Kemnitz Station
Project Number: BL-1427

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 |
|---|---|---|---|---|---|
| 241593 | North Side Wall | soil | 2010-08-16 | 11:35 | 2010-08-17 |
| 241594 | South Side Wall | soil | 2010-08-16 | 11:50 | 2010-08-17 |
| 241595 | East Side Wall | soil | 2010-08-16 | 11:45 | 2010-08-17 |
| 241596 | West Side Wall | soil | 2010-08-16 | 11:40 | 2010-08-17 |
| 241597 | North Bottom Hole | soil | 2010-08-16 | 11:55 | 2010-08-17 |
| 241598 | South Bottom Hole | soil | 2010-08-16 | 12:00 | 2010-08-17 |

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 Sunoco Kemnitz Station were received by TraceAnalysis, Inc. on 2010-08-17 and assigned to work order 10081725. Samples for work order 10081725 were received intact at a temperature of 3.9 C.

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

| Test | Method | Prep Batch | Prep Date | QC Batch | Analysis Date |
|---|---|---|---|---|---|
| Chloride (Titration) | SM 4500-Cl B | 62931 | 2010-09-09 at 09:22 | 73396 | 2010-09-10 at 11:24 |
| Chloride (Titration) | SM 4500-Cl B | 62932 | 2010-09-09 at 09:23 | 73397 | 2010-09-10 at 11:25 |

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 10081725 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.

# Analytical Report

**Sample: 241593 - North Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | Chloride (Titration) | Analytical Method: | SM 4500-Cl B | Prep Method: | N/A |
| QC Batch: | 73396 | Date Analyzed: | 2010-09-10 | Analyzed By: | AR |
| Prep Batch: | 62931 | Sample Preparation: | 2010-09-09 | Prepared By: | AR |

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

**Sample: 241594 - South Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | Chloride (Titration) | Analytical Method: | SM 4500-Cl B | Prep Method: | N/A |
| QC Batch: | 73396 | Date Analyzed: | 2010-09-10 | Analyzed By: | AR |
| Prep Batch: | 62931 | Sample Preparation: | 2010-09-09 | Prepared By: | AR |

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

**Sample: 241595 - East Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | Chloride (Titration) | Analytical Method: | SM 4500-Cl B | Prep Method: | N/A |
| QC Batch: | 73396 | Date Analyzed: | 2010-09-10 | Analyzed By: | AR |
| Prep Batch: | 62931 | Sample Preparation: | 2010-09-09 | Prepared By: | AR |

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

**Sample: 241596 - West Side Wall**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | Chloride (Titration) | Analytical Method: | SM 4500-Cl B | Prep Method: | N/A |
| QC Batch: | 73396 | Date Analyzed: | 2010-09-10 | Analyzed By: | AR |
| Prep Batch: | 62931 | Sample Preparation: | 2010-09-09 | Prepared By: | AR |

*continued ...*

*sample 241596 continued ...*

| Parameter | Flag | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|

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

**Sample: 241597 - North Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | Chloride (Titration) | Analytical Method: | SM 4500-Cl B | Prep Method: | N/A |
| QC Batch: | 73397 | Date Analyzed: | 2010-09-10 | Analyzed By: | AR |
| Prep Batch: | 62932 | Sample Preparation: | 2010-09-09 | Prepared By: | AR |

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

**Sample: 241598 - South Bottom Hole**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | Chloride (Titration) | Analytical Method: | SM 4500-Cl B | Prep Method: | N/A |
| QC Batch: | 73397 | Date Analyzed: | 2010-09-10 | Analyzed By: | AR |
| Prep Batch: | 62932 | Sample Preparation: | 2010-09-09 | Prepared By: | AR |

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

**Method Blank (1)** QC Batch: 73396

| | | | | | |
|---|---|---|---|---|---|
| QC Batch: | 73396 | Date Analyzed: | 2010-09-10 | Analyzed By: | AR |
| Prep Batch: | 62931 | QC Preparation: | 2010-09-09 | Prepared By: | AR |

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

**Method Blank (1)** QC Batch: 73397

QC Batch: 73397 | Date Analyzed: 2010-09-10 | Analyzed By: AR
Prep Batch: 62932 | QC Preparation: 2010-09-09 | Prepared By: AR

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

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

QC Batch: 73396 | Date Analyzed: 2010-09-10 | Analyzed By: AR
Prep Batch: 62931 | QC Preparation: 2010-09-09 | Prepared By: AR

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Chloride | 96.0 | mg/Kg | 1 | 100 | <2.18 | 96 | 85 - 115 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 101 | mg/Kg | 1 | 100 | <2.18 | 101 | 85 - 115 | 5 | 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: 73397 | Date Analyzed: 2010-09-10 | Analyzed By: AR
Prep Batch: 62932 | QC Preparation: 2010-09-09 | Prepared By: AR

| Param | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Chloride | 96.0 | mg/Kg | 1 | 100 | <2.18 | 96 | 85 - 115 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 102 | mg/Kg | 1 | 100 | <2.18 | 102 | 85 - 115 | 6 | 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: 241596

QC Batch: 73396 | Date Analyzed: 2010-09-10 | Analyzed By: AR
Prep Batch: 62931 | QC Preparation: 2010-09-09 | Prepared By: AR

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Chloride | 9970 | mg/Kg | 100 | 10000 | <218 | 100 | 85 - 115 |

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

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10200 | mg/Kg | 100 | 10000 | <218 | 102 | 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: 243673

QC Batch: 73397 | Date Analyzed: 2010-09-10 | Analyzed By: AR
Prep Batch: 62932 | QC Preparation: 2010-09-09 | Prepared By: AR

| Param | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|
| Chloride | 10900 | mg/Kg | 100 | 10000 | 1130 | 98 | 85 - 115 |

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

| Param | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 11400 | mg/Kg | 100 | 10000 | 1130 | 103 | 85 - 115 | 4 | 20 |

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

**Standard (ICV-1)**

QC Batch: 73396 | Date Analyzed: 2010-09-10 | Analyzed By: AR

| Param | Flag | Units | ICVs True Conc. | ICVs Found Conc. | ICVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Chloride | | mg/Kg | 100 | 100 | 100 | 85 - 115 | 2010-09-10 |

**Standard (CCV-1)**

QC Batch: 73396 | Date Analyzed: 2010-09-10 | Analyzed By: AR

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Chloride | | mg/Kg | 100 | 99.7 | 100 | 85 - 115 | 2010-09-10 |

**Standard (ICV-1)**

QC Batch: 73397 | Date Analyzed: 2010-09-10 | Analyzed By: AR

| Param | Flag | Units | ICVs True Conc. | ICVs Found Conc. | ICVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Chloride | | mg/Kg | 100 | 99.5 | 100 | 85 - 115 | 2010-09-10 |

**Standard (CCV-1)**

QC Batch: 73397 | Date Analyzed: 2010-09-10 | Analyzed By: AR

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Chloride | | mg/Kg | 100 | 101 | 101 | 85 - 115 | 2010-09-10 |

LAB Order ID # 10081725

Page 1 of 1

# TraceAnalysis, Inc.

email: lab@traceanalysis.com


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

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750


**Company Name:** NOVA — **Phone #:**

**Address:** (Street, City, Zip) — **Fax #:**

**Contact Person:** Ron Rounsaville — **E-mail:**

**Invoice to:** (If different from above) NOVA

**Project #:** BL-1427 — **Project Name:** Sunoco Kemnitz STATION

**Project Location (including state):** Lea Co. NM — **Sampler Signature:** Ron Rounsaville

**ANALYSIS REQUEST**
(Circle or Specify Method No.)

| LAB # (LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume / Amount | MATRIX: WATER | SOIL | AIR | SLUDGE | PRESERVATIVE METHOD: HCl | $HNO_3$ | $H_2SO_4$ | NaOH | ICE | NONE | SAMPLING: DATE | TIME | MTBE 8021 / 602 / 8260 / 624 | BTEX 8021 / 602 / 8260 / 624 | TPH 418.1 / TX1005 / TX1005 Ext(C35) | TPH 8015 GRO / DRO / TVHC | PAH 8270 / 625 | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7 | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | TCLP Pesticides | RCI | GC/MS Vol. 8260 / 624 | GC/MS Semi. Vol. 8270 / 625 | PCB's 8082 / 608 | Pesticides 8081 / 608 | BOD, TSS, pH | Moisture Content | Cl, Fl, SO4, NO3, NO2, Alkalinity | Na, Ca, Mg, K, TDS, EC | | | Turn Around Time if different from standard | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 241593 | NORTH Sidewall | 1 | 4oz | | X | | | | | | | X | | 8/16/10 | 1135 | | | | X | | | | | | | | | | | | | | | | | | | |
| 594 | South Sidewall | 1 | | | X | | | | | | | X | | | 1150 | | | | X | | | | | | | | | | | | | | | | | | | |
| 595 | EAST Sidewall | 1 | | | X | | | | | | | X | | | 1145 | | | | X | | | | | | | | | | | | | | | | | | | |
| 596 | WEST Sidewall | 1 | | | X | | | | | | | X | | | 1140 | | | | X | | | | | | | | | | | | | | | | | | | |
| 597 | North Bottom hole | 1 | | | X | | | | | | | X | | | 1155 | | | | X | | | | | | | | | | | | | | | | | | | |
| 598 | South Bottom hole | 1 | | | X | | | | | | | X | | | 1200 | | | | X | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | |
|---|---|---|---|---|---|---|---|---|
| Ron Rounsaville | | 8/17/10 | 1110 | | Trace | 8/17/10 | 11:10 | INST OBS 3.9 °C COR °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST OBS °C COR °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST OBS °C COR °C |

**LAB USE ONLY**

Intact Y / N

Headspace Y / N (NA)

Log-In-Review

**REMARKS:**

All tests - Midland

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

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

Carrier # Courier

ORIGINAL COPY

# APPENDIX B
# Release Notification and Corrective Action
# (Form C-141)

RECEIVED

OCT 05 2010

HOBBSOCD

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

X Initial Report ☐ Final Report

| | |
|---|---|
| Name of Company Sunoco, Inc. | Contact JEFF GREEN |
| Address 401 Cypress Avenue, Abilene, Texas 79601 | Telephone No. 325-671-8050 |
| Facility Name Sunoco Kemnitz Station | Facility Type TANK BATTERY |

| Surface Owner | Mineral Owner | Lease No. |
|---|---|---|

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| B | 24 | 16 S | 33 E | | | | | Lea |

Latitude_____ Longitude_____

## NATURE OF RELEASE

| | |
|---|---|
| Type of Release Unknown | Volume of Release UNK / Volume Recovered UNK |
| Source of Release | Date and Hour of Occurrence HIST / Date and Hour of Discovery HIST |
| Was Immediate Notice Given? ☐ Yes X No ☐ Not Required | If YES, To Whom? |
| By Whom? | Date and Hour |
| Was a Watercourse Reached? ☐ Yes X No | If YES, Volume Impacting the Watercourse. |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

In 2001, The Kemnitz station equipment was dismantled and removed. The soils underneath the tanks, including the berm walls, were excavated and blended with clean soil and placed back within the excavation.

Describe Area Affected and Cleanup Action Taken.*

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: Jeff Green | OIL CONSERVATION DIVISION |
| Printed Name: Jeff Green | Approved by ~~District Supervisor~~ ENV. ENGINEER: Geoffrey Leking |
| Title: South Region MANAGER | Approval Date: 09/29/10 / Expiration Date: 11/29/10 |
| E-mail Address: jdgreen@sunocologistics.com | Conditions of Approval: DELINEATE TO CLEAN #1, SUBMIT FINAL C-141 BY 11/29/10. / Attached ☐ |
| Date: 09/20/2010 Phone: 325-671-8050 | IRP-10-9-2617 |

* Attach Additional Sheets If Necessary