District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company **ConocoPhillips Company** | Contact **Lisa Hunter** |
| Address **3401 East 30th Street, Farmington, NM 87402** | Telephone No. **505-326-9786** |
| Facility Name **San Juan 28-7 Unit 131** | Facility Type |

| | | |
|---|---|---|
| Surface Owner **BLM** | Mineral Owner **Federal** | **API No. 3003920587**<br>**SF-078496** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **L** | **34** | **28N** | **7W** | **1680'** | **South** | **870'** | **West** | **Rio Arriba** |

**Latitude 36.615165 Longitude -107.56628**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release **Unknown** | Volume of Release **180 yds** | Volume Recovered **180 yds** |
| Source of Release **Production Tank** | Date and Hour of Occurrence **Unknown** | Date and Hour of Discovery **January 2, 2012** |
| Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required | If YES, To Whom? | RCVD MAR 18 '13 |
| By Whom? | Date and Hour | OIL CONS. DIV. |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | DIST. 3 |

If a Watercourse was Impacted, Describe Fully.*
**N/A**

Describe Cause of Problem and Remedial Action Taken.* **Historic contamination found near Production Tank**

Describe Area Affected and Cleanup Action Taken.*
**Historical hydrocarbon impacted soil was found near Production Tank. The excavation was 20' x 20' x 6' in depth and 180 yds of soil was transported to IEI land farm and 180 yds of clean soil was transported from Leo Pacheco (landowner) and placed in the excavation site. The soil sampling report is attached for review.**

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: | OIL CONSERVATION DIVISION |
| Printed Name: **Lisa Hunter** | Approved by Environmental Specialist: |
| Title: **Field Environmental Specialist** | Approval Date: 4/01/2013 Expiration Date: |
| E-mail Address: **Lisa.Hunter@cop.com** | Conditions of Approval: Attached ☐ |
| Date: **03-14-13** Phone: **505-326-9786** | |

* Attach Additional Sheets If Necessary

nJK1309157411

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

March 22, 2013

Lisa Hunter
ConocoPhillips
San Juan Business Unit
Office 214-4
5525 Hwy 64
Farmington, New Mexico 87401

**RE: Initial Release Assessment and Final Excavation Report**
**San Juan 28-7 #131**
**Rio Arriba County, New Mexico**



Dear Ms. Hunter:

On January 3 and February 12, 2013, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) San Juan 28-7 #131, located in Rio Arriba County, New Mexico. The historical release was discovered near the location of a former production tank during a facility reset. The initial release assessment was completed AES on January 3, 2013. The final excavation was also completed by contractors prior to AES' arrival to the location on February 12, 2013.

## 1.0 Site Information

### *1.1 Location*

Location - NW¼ SW¼, Section 34, T28N, R7W, Rio Arriba County, New Mexico
Well Head Latitude/Longitude - N36.61518 and W107.56690, respectively
Release Location Latitude/Longitude – N36.61505 and W107.56702, respectively
Land Jurisdiction – Bureau of Land Management (BLM)
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, January 2013

### *1.2 NMOCD Ranking*

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a production pit closure report dated November 1999 for the San Juan 28-7 #131 reported the depth to groundwater as greater than 100 feet below ground surface (bgs). The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location. Additionally, Google Earth and the New

Mexico Tech Petroleum Recovery Research Center online mapping tool (http://ford.nmt.edu/react/project.html) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet bgs. An unnamed wash is located approximately 180 feet southeast of the location and discharges to Carrizo Creek. Based on this information, the location was assessed a ranking score of 20 per the NMOCD *Guidelines for Leaks, Spills, and Releases* (1993).

### *1.3 Assessments*

AES was initially contacted by Danny Rudder, CoP representative, on January 2, 2013, and on January 3, 2013, Heather Woods and Zachary Trujillo of AES completed the release assessment field work. The assessment included collection and field screening of 18 soil samples from seven test holes (TH-1 through TH-7). Based on the field screening and laboratory analytical results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On February 12, 2013, AES returned to the location to collect confirmation soil samples of the excavation. The field screening activities included collection of five confirmation soil samples (SC-1 through SC-5) of the walls and base of the excavation. The final excavation was approximately 18 feet by 18 feet by 6 feet in depth. A competent sandstone layer was encountered at a depth of 6 feet bgs. Sample locations and final excavation extents are presented on Figure 4.

## 2.0 Soil Sampling

A total of 18 soil samples from seven test holes (TH-1 through TH-7) and five composite samples (SC-1 through SC-5) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Three of the soil samples (TH-1 at 5 ft, TH-1 at 7.5 ft, and TH-4) collected during the initial assessment and two composite soil samples (SC-1 and SC-5) collected during the excavation were submitted for confirmation laboratory analysis.

## *2.1 Field Screening*

### 2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

### 2.1.2 Total Petroleum Hydrocarbons

Field TPH samples were analyzed per USEPA Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

## *2.2 Laboratory Analyses*

The soil samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. All soil samples were laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B; and
- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

Soil sample SC-1 was laboratory analyzed for BTEX only per USEPA 8021B.

## *2.3 Field Screening and Laboratory Analytical Results*

On January 3, 2013, initial assessment field screening readings for VOCs via OVM ranged from 1.0 ppm in TH-7 up to 1,649 ppm in TH-1. Field TPH concentrations ranged from less than 20.0 mg/kg in TH-2, TH-3, TH-5, and TH-7 up to greater than 2,500 mg/kg in TH-1.

On February 12, 2013, final excavation field screening results for VOCs via OVM showed concentrations ranged from 7.9 ppm in SC-3 to greater than 10,000 ppm in SC-5. Field TPH concentrations ranging from less than 20.0 mg/kg in SC-1 through SC-3 up to 27.1 mg/kg in SC-4. Results are included below in Table 1 and on Figures 3 and 4. The AES Field Screening Reports are attached.

Table 1. Soil Field Screening VOCs and TPH Results
San Juan 28-7 #131 Release Assessment and Final Excavation
January and February 2013

| Sample ID | Date Sampled | Sample Depth (ft bgs) | VOCs via OVM (ppm) | Field TPH (mg/kg) |
|---|---|---|---|---|
| *NMOCD Action Level** | | | *100* | *100* |
| TH-1 | 1/3/13 | 5 | **581** | **556** |
| | | 7.5 | **1,649** | **>2,500** |
| TH-2 | 1/3/13 | 7 | 13.3 | <20.0 |
| | | 7.5 | 6.9 | <20.0 |
| TH-3 | 1/3/13 | 3.5 | 16.3 | <20.0 |
| | | 6 | **180** | 49.4 |
| TH-4 | 1/3/13 | 2 | 12.3 | NA |
| | | 4.5 | **1,346** | **2,340** |
| | | 7 | **1,363** | **819** |
| TH-5 | 1/3/13 | 3 | 31.7 | 28.0 |
| | | 6 | 2.8 | NA |
| | | 9 | 3.9 | <20.0 |
| TH-6 | 1/3/13 | 3.5 | 1.9 | NA |
| | | 5 | 1.5 | 26.8 |
| TH-7 | 1/3/13 | 3 | 1.4 | NA |
| | | 5.5 | 1.4 | NA |
| | | 7.5 | 1.1 | 24.4 |
| | | 10 | 1.0 | <20.0 |
| SC-1 | 2/12/13 | 1 to 6 | **126** | <20.0 |
| SC-2 | 2/12/13 | 1 to 6 | 75.5 | <20.0 |
| SC-3 | 2/12/13 | 1 to 6 | 7.9 | <20.0 |
| SC-4 | 2/12/13 | 1 to 6 | 11.8 | 27.1 |
| SC-5 | 2/12/13 | 6 | **>10,000** | NA |

NA – Not Analyzed

*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

Laboratory analyses for TH-1 (5 ft and 7.5 ft) and TH-4 were used to confirm field screening results from the initial assessment. Benzene concentrations ranged from less than 0.12 mg/kg up to 0.17 mg/kg, and total BTEX concentrations ranged from 1.7 mg/kg in TH-1 at 5 ft up to 95 mg/kg in TH-4. TPH concentrations (as GRO/DRO) ranged from 320 mg/kg in TH-1 at 5 ft up to 2,320 mg/kg in TH-4.

Laboratory analytical results for SC-1 and SC-5 were used to confirm field screening results during excavation activities. Benzene concentrations were below the laboratory detection limits of 0.050 mg/kg in SC-1 and 0.50 mg/kg in SC-5. Total BTEX concentrations were reported below the laboratory detection limit of 0.25 mg/kg in SC-1 and at 51 mg/kg in SC-5. TPH concentrations (as GRO/DRO) in SC-5 were reported at 1,720 mg/kg. Results are presented in Table 2 and on Figures 3 and 4. Laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH
San Juan 28-7 #131 Release Assessment and Final Excavation
January and February 2013

| *Sample ID* | *Date Sampled* | *Sample Depth (ft bgs)* | *Benzene (mg/kg)* | *Total BTEX (mg/kg)* | *GRO (mg/kg)* | *DRO (mg/kg)* |
|---|---|---|---|---|---|---|
| ***NMOCD Action Level**** | | | ***10*** | ***50*** | ***100*** | |
| TH-1 | 1/3/13 | 5 | <0.12 | 1.7 | **140** | **180** |
| TH-1 | 1/3/13 | 7.5 | <1.0 | **64** | **1,300** | **300** |
| TH-4 | 1/3/13 | 4.5 | 0.17 | **95** | **2,000** | **320** |
| SC-1 | 2/12/13 | 1 to 6 | <0.050 | <0.25 | NA | NA |
| SC-5 | 2/12/13 | 6 | <0.50 | **51** | **1,300** | **420** |

NA – Not Analyzed
*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

## 3.0 Conclusions and Recommendations

On January 3, 2013, AES conducted an initial assessment associated with a historical release from the former production tank at the San Juan 28-7 #131. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a ranking of 20. Field screening results above the NMOCD action level of 100 ppm VOCs were reported in TH-1, TH-3, and TH-4, with the highest VOC concentration reported in TH-1 with 1,649 ppm. Field screening TPH results above the NMOCD action level of 100 mg/kg were reported

in TH-1 and TH-4. The highest TPH concentration was reported in TH-1 with a concentration greater than 2,500 mg/kg.

Laboratory analytical results from January 3, 2013, reported benzene concentrations below the NMOCD action level of 10 mg/kg in each of the samples. Total BTEX concentrations exceeded NMOCD action levels of 50 mg/kg in TH-1@ 7.5 ft and TH-4 with 64 mg/kg and 95 mg/kg, respectively. TPH concentrations as GRO/DRO exceeded the NMOCD action level in TH-1 at 5 ft (320 mg/kg), TH-1 at 7.5 ft (1,600 mg/kg), and TH-4 (2,320 mg/kg).

On February 12, 2013, final assessment of the excavation area was completed. Field screening results of the excavation showed that VOC concentrations exceeded the NMOCD action level of 100 ppm in SC-1 (North Wall) and SC-5 (base). Field TPH concentrations were reported below the NMOCD action level of 100 mg/kg in each of the final four walls of the excavation. Laboratory analytical results from February 12, 2013, showed that benzene and total BTEX concentrations were below applicable NMOCD action levels in SC-1. However, laboratory analytical results for SC-5 (taken from the base of the excavation, which was terminated at sandstone) showed that total BTEX and TPH (as GRO/DRO) concentrations were above the applicable NMOCD thresholds, with reported concentrations of 51 mg/kg and 1,720 mg/kg, respectively.

Based on the final field screening and laboratory analytical results of the excavation of petroleum contaminated soils at the San Juan 28-7 #131, VOCs, benzene, total BTEX, and TPH concentrations were below applicable NMOCD action levels for each of the final side walls of the excavation. However, the base of the excavation exceeded applicable NMOCD action levels for total BTEX and TPH. CoP consulted with Mark Kelly of BLM and Brandon Powell of NMOCD on February 15, 2013, and was granted approval to backfill the excavation following application of potassium permanganate to the base of the excavation. Per Ashley Maxwell of CoP, potassium permanganate was applied to the base of the excavation on February 18, 2013, and the open excavation was backfilled the following day. No further work is recommended for the San Juan 28-7 #131.

If you have any questions about this report or site conditions, please do not hesitate to contact Deborah Watson at (505) 564-2281.

Sincerely,

Landrea R. Cupps

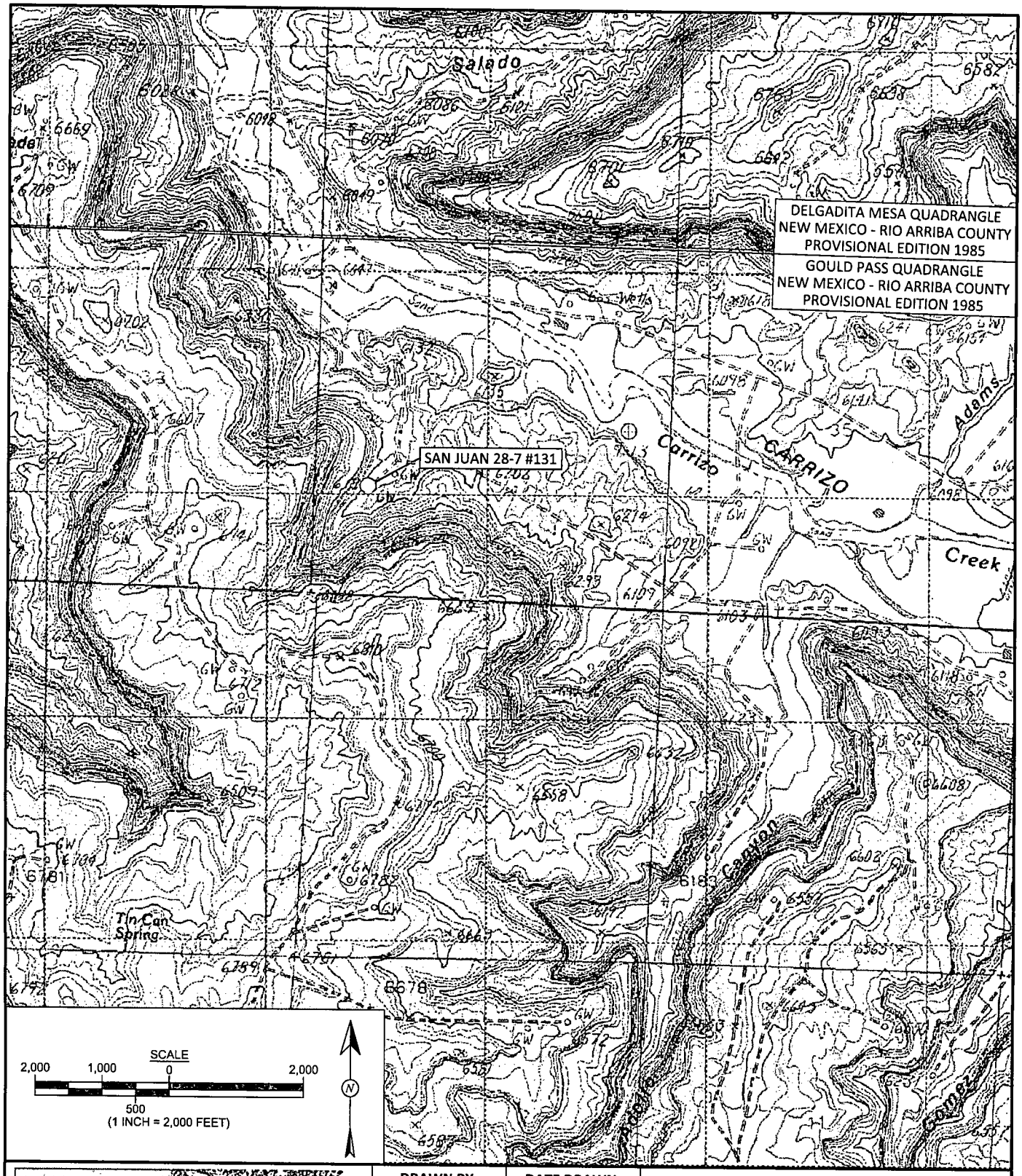
Landrea Cupps
Environmental Scientist

Elizabeth McNally, PE

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, January 2013
Figure 3. Initial Assessment Sample Locations and Results, January 2013
Figure 4. Final Excavation Sample Locations and Results, February 2013
AES Field Screening Report 010313
AES Field Screening Report 021213
Hall Laboratory Analytical Reports (1301097 and 1302427)

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\SJ 28-7 #131\San Juan 28-7 #131 Release and Final Excavation Report 032213.docx




| | | | |
|---|---|---|---|
| AES Animas Environmental Services, LLC | **DRAWN BY:** C. Lameman | **DATE DRAWN:** January 7, 2013 | **FIGURE 1** |
| | **REVISIONS BY:** C. Lameman | **DATE REVISED:** January 7, 2013 | **TOPOGRAPHIC SITE LOCATION MAP** ConocoPhillips SAN JUAN 28-7 #131 RIO ARRIBA COUNTY, NEW MEXICO NW¼ SW¼, SECTION 34, T28N, R7W N36.61518, W107.56690 |
| | **CHECKED BY:** D. Watson | **DATE CHECKED:** January 7, 2013 | |
| | **APPROVED BY:** E. McNally | **DATE APPROVED:** January 7, 2013 | |


Animas Environmental Services, LLC

| | |
|---|---|
| **DRAWN BY:** C. Lameman | **DATE DRAWN:** January 7, 2013 |
| **REVISIONS BY:** C. Lameman | **DATE REVISED:** January 7, 2013 |
| **CHECKED BY:** D. Watson | **DATE CHECKED:** January 7, 2013 |
| **APPROVED BY:** E. McNally | **DATE APPROVED:** January 7, 2013 |

# FIGURE 2

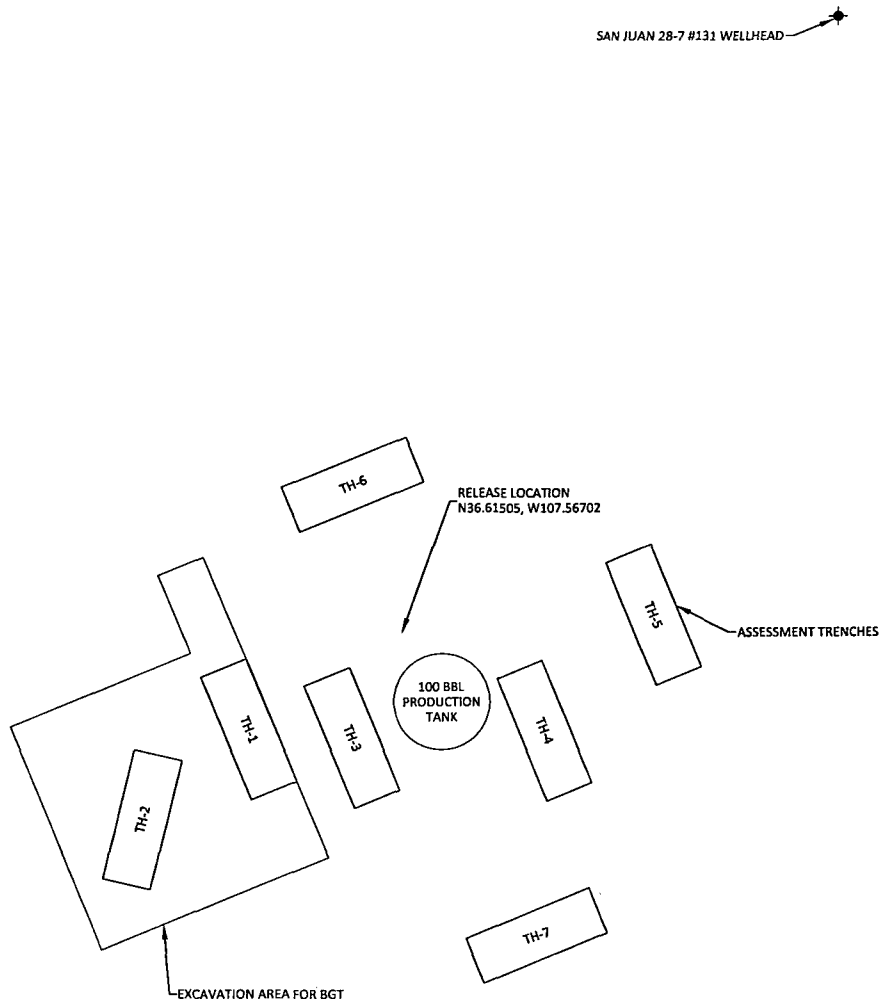
**AERIAL SITE MAP**
**JANUARY 2013**
ConocoPhillips
SAN JUAN 28-7 #131
RIO ARRIBA COUNTY, NEW MEXICO
NW¼ SW¼, SECTION 34, T28N, R7W
N36.61518, W107.56690

# FIGURE 3

**INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS**
**JANUARY 2013**
ConocoPhillips
SAN JUAN 28-7 #131
RIO ARRIBA COUNTY, NEW MEXICO
NW¼ SW¼, SECTION 34, T28N, R7W
N36.61518, W107.56690

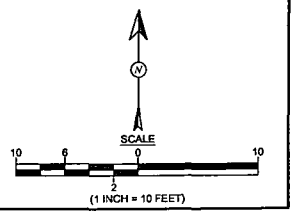
Animas Environmental Services, LLC

| DRAWN BY: | DATE DRAWN: |
|---|---|
| C. Lameman | January 7, 2013 |
| **REVISIONS BY:** | **DATE REVISED:** |
| C. Lameman | January 7, 2013 |
| **CHECKED BY:** | **DATE CHECKED:** |
| D. Watson | January 7, 2013 |
| **APPROVED BY:** | **DATE APPROVED:** |
| E. McNally | January 7, 2013 |




| Field Screening Results | | | | |
|---|---|---|---|---|
| **Sample ID** | **Date** | **Depth (ft)** | **OVM-PID (ppm)** | **TPH (mg/kg)** |
| **NMOCD ACTION LEVEL** | | | **100** | **100** |
| TH-1 | 1/3/13 | 5 | 581 | 556 |
| | 1/3/13 | 7.5 | 1,649 | >2,500 |
| TH-2 | 1/3/13 | 7 | 13.3 | <20.0 |
| | 1/3/13 | 7.5 | 6.9 | <20.0 |
| TH-3 | 1/3/13 | 3.5 | 16.3 | <20.0 |
| | 1/3/13 | 6 | 180 | 49.4 |
| TH-4 | 1/3/13 | 2 | 12.3 | NA |
| | 1/3/13 | 4.5 | 1,346 | 2,340 |
| | 1/3/13 | 7 | 1,363 | 819 |
| TH-5 | 1/3/13 | 3 | 31.7 | 28.0 |
| | 1/3/13 | 6 | 2.8 | NA |
| | 1/3/13 | 9 | 3.9 | <20.0 |
| TH-6 | 1/3/13 | 3.5 | 1.9 | NA |
| | 1/3/13 | 5 | 1.5 | 26.8 |
| TH-7 | 1/3/13 | 3 | 1.4 | NA |
| | 1/3/13 | 5.5 | 1.4 | NA |
| | 1/3/13 | 7.5 | 1.1 | 24.4 |
| | 1/3/13 | 10 | 1.0 | <20.0 |
| NA - NOT ANALYZED | | | | |

| Laboratory Analytical Results | | | | | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Date** | **Depth (ft)** | **Benzene (mg/kg)** | **Total BTEX (mg/kg)** | **TPH - GRO (mg/kg)** | **TPH - DRO (mg/kg)** |
| **NMOCD ACTION LEVEL** | | | **10** | **50** | **100** | |
| TH-1 | 1/3/13 | 5 | <0.12 | 1.7 | 140 | 180 |
| | 1/3/13 | 7.5 | <1.0 | 63.7 | 1,300 | 300 |
| TH-4 | 1/3/13 | 4.5 | 0.17 | 94.8 | 2,000 | 320 |
| ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND 8015B. | | | | | | |

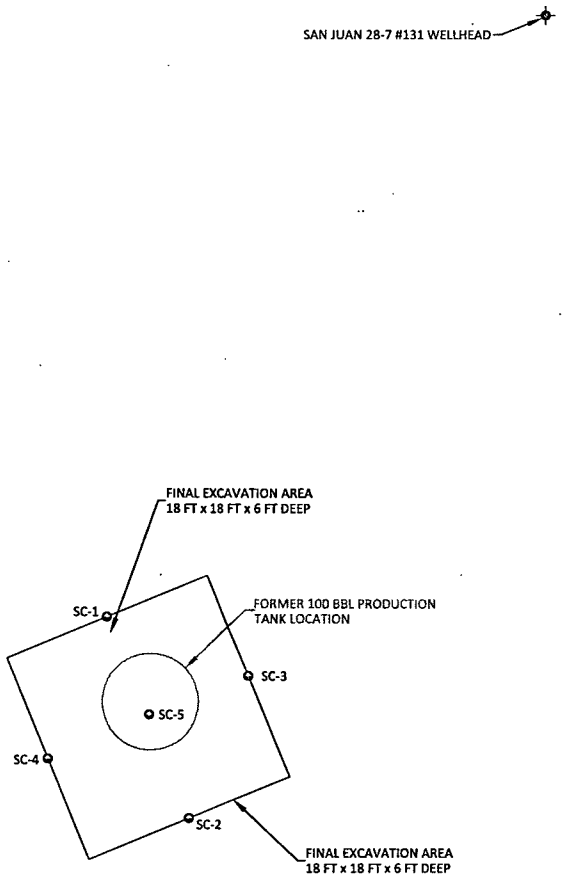


# FIGURE 4

**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS**
**FEBRUARY 2013**
ConocoPhillips
SAN JUAN 28-7 #131
RIO ARRIBA COUNTY, NEW MEXICO
NW¼ SW¼, SECTION 34, T28N, R7W
N36.61518, W107.56690

Animas Environmental Services, LLC

| DRAWN BY: | DATE DRAWN: |
|---|---|
| C. Lameman | February 13, 2013 |
| **REVISIONS BY:** | **DATE REVISED:** |
| C. Lameman | February 13, 2013 |
| **CHECKED BY:** | **DATE CHECKED:** |
| D. Watson | February 13, 2013 |
| **APPROVED BY:** | **DATE APPROVED:** |
| E. McNally | February 13, 2013 |




| Field Screening Results | | | | |
|---|---|---|---|---|
| *Sample ID* | *Date* | *Depth (ft)* | *OVM-PID (ppm)* | *TPH (mg/kg)* |
| *NMOCD ACTION LEVEL* | | | *100* | *100* |
| SC-1 | 2/12/13 | 1 to 6 | 126 | <20.0 |
| SC-2 | 2/12/13 | 1 to 6 | 75.5 | <20.0 |
| SC-3 | 2/12/13 | 1 to 6 | 7.9 | <20.0 |
| SC-4 | 2/12/13 | 1 to 6 | 11.8 | <20.0 |
| SC-5 | 2/12/13 | 6 | >10,000 | *NA* |
| ALL SAMPLES ARE COMPOSITE SAMPLES.<br>NA - NOT ANALYZED | | | | |

| Laboratory Analytical Results | | | | | | |
|---|---|---|---|---|---|---|
| *Sample ID* | *Date* | *Depth (ft)* | *Benzene (mg/kg)* | *Total BTEX (mg/kg)* | *TPH - GRO (mg/kg)* | *TPH - DRO (mg/kg)* |
| *NMOCD ACTION LEVEL* | | | *10* | *50* | *100* | |
| SC-1 | 2/12/13 | 1 to 6 | <0.050 | <0.25 | *NA* | *NA* |
| SC-5 | 2/12/13 | 6 | <0.50 | 51 | 1,300 | 420 |
| ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND 8015B. | | | | | | |

**LEGEND**

SAMPLE LOCATIONS

N

SCALE
10 6 0 10
2
(1 INCH = 10 FEET)

# AES Field Screening Report

Animas Environmental Services, LL
www.animasenvironmental.com
624 E. Comanch
Farmington, NM 8740
505-564-228
Durango, Colorad
970-403-308

Client: ConocoPhillips

Project Location: San Juan 28-7 #131

Date: 1/3/2013

Matrix: Soil

| Sample ID | Collection Date | Time of Sample Collection | OVM (ppm) | Field TPH Analysis Time | Field TPH* (mg/kg) | TPH PQL (mg/kg) | DF | TPH Analysts Initials |
|---|---|---|---|---|---|---|---|---|
| TH-1 @ 5' | 1/3/2013 | 10:55 | 581 | 12:30 | 556 | 20.0 | 1 | HW |
| TH-1 @ 7.5' | 1/3/2013 | 10:57 | 1,649 | 12:34 | >2,500 | 20.0 | 1 | HW |
| TH-2 @ 7' | 1/3/2013 | 10:59 | 13.3 | 13:20 | <20.0 | 20.0 | 1 | HW |
| TH-2 @ 7.5' | 1/3/2013 | 11:02 | 6.9 | 12:36 | <20.0 | 20.0 | 1 | HW |
| TH-3 @ 3.5' | 1/3/2013 | 11:07 | 16.3 | 13:22 | <20.0 | 20.0 | 1 | HW |
| TH-3 @ 6' | 1/3/2013 | 11:10 | 180 | 12:39 | 49.4 | 20.0 | 1 | HW |
| TH-4 @ 2' | 1/3/2013 | 11:18 | 12.3 | *Not Analyzed for TPH.* | | | | |
| TH-4 @ 4.5' | 1/3/2013 | 11:20 | 1,346 | 13:25 | 2,340 | 20.0 | 1 | HW |
| TH-4 @ 7' | 1/3/2013 | 11:22 | 1,363 | 12:41 | 819 | 20.0 | 1 | HW |
| TH-5 @ 3' | 1/3/2013 | 11:31 | 31.7 | 13:27 | 28.0 | 20.0 | 1 | HW |
| TH-5 @ 6' | 1/3/2013 | 11:33 | 2.8 | *Not Analyzed for TPH.* | | | | |
| TH-5 @ 9' | 1/3/2013 | 11:36 | 3.9 | 12:44 | <20.0 | 20.0 | 1 | HW |
| TH-6 @ 3.5' | 1/3/2013 | 11:46 | 1.9 | *Not Analyzed for TPH.* | | | | |
| TH-6 @ 5' | 1/3/2013 | 11:48 | 1.5 | 13:29 | 26.8 | 20.0 | 1 | HW |
| TH-7 @ 3' | 1/3/2013 | 11:54 | 1.4 | *Not Analyzed for TPH.* | | | | |
| TH-7 @ 5.5' | 1/3/2013 | 11:57 | 1.4 | *Not Analyzed for TPH.* | | | | |
| TH-7 @ 7.5' | 1/3/2013 | 11:58 | 1.1 | 13:31 | 24.4 | 20.0 | 1 | HW |
| TH-7 @ 10' | 1/3/2013 | 12:01 | 1.0 | 13:33 | <20.0 | 20.0 | 1 | HW |

| | | |
|---|---|---|
| PQL | Practical Quantitation Limit | Total Petroleum Hydrocarbons - USEPA 418.1 |
| ND | Not Detected at the Reporting Limit | |
| NA | Not Analyzed | |
| DF | Dilution Factor | Analyst: Heather M. Woods |

**Field TPH concentrations recorded may be below PQL.*


Report Finalized: 01/03/13

# AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

Client: ConocoPhillips

Project Location: San Juan 28-7 #131

Date: 2/12/2013

Matrix: Soil

| Sample ID | Collection Date | Time of Sample Collection | Sample Location | OVM (ppm) | Field Chloride (mg/kg) | Field TPH Analysis Time | Field TPH* (mg/kg) | TPH PQL (mg/kg) | DF | TPH Analysts Initials |
|---|---|---|---|---|---|---|---|---|---|---|
| SC-1 | 2/12/2013 | 13:20 | North Wall | 126 | NA | 13:56 | <20.0 | 20.0 | 1 | DAW |
| SC-2 | 2/12/2013 | 13:22 | South Wall | 75.5 | NA | 13:58 | <20.0 | 20.0 | 1 | DAW |
| SC-3 | 2/12/2013 | 13:25 | East Wall | 7.9 | NA | 14:04 | <20.0 | 20.0 | 1 | DAW |
| SC-4 | 2/12/2013 | 13:28 | West Wall | 11.8 | NA | 14:07 | 27.1 | 20.0 | 1 | DAW |
| SC-5 | 2/12/2013 | 13:30 | Base | >10,000 | NA | *Not Analyzed for TPH.* | | | | |

PQL Practical Quantitation Limit
ND Not Detected at the Reporting Limit
NA Not Analyzed
DF Dilution Factor

Total Petroleum Hydrocarbons - USEPA 418.1
**Field TPH concentrations recorded may be below PQL.*

Analyst: Deborah Watson


Report Finalized: 02/12/13

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

January 09, 2013

Debbie Watson
Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: CoP San Juan 28-7 #131 OrderNo.: 1301097

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/4/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1301097**
Date Reported: **1/9/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services
**Project:** CoP San Juan 28-7 #131
**Lab ID:** 1301097-001 **Matrix:** MEOH (SOIL)

**Client Sample ID:** TH-1 @ 5
**Collection Date:** 1/3/2013 10:55:00 AM
**Received Date:** 1/4/2013 9:47:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | 180 | 9.8 | | mg/Kg | 1 | 1/4/2013 11:36:50 AM |
| Surr: DNOP | 101 | 72.4-120 | | %REC | 1 | 1/4/2013 11:36:50 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 140 | 25 | | mg/Kg | 5 | 1/4/2013 2:19:21 PM |
| Surr: BFB | 293 | 84-116 | S | %REC | 5 | 1/4/2013 2:19:21 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.12 | | mg/Kg | 5 | 1/4/2013 2:19:21 PM |
| Toluene | ND | 0.25 | | mg/Kg | 5 | 1/4/2013 2:19:21 PM |
| Ethylbenzene | ND | 0.25 | | mg/Kg | 5 | 1/4/2013 2:19:21 PM |
| Xylenes, Total | 1.7 | 0.50 | | mg/Kg | 5 | 1/4/2013 2:19:21 PM |
| Surr: 4-Bromofluorobenzene | 115 | 80-120 | | %REC | 5 | 1/4/2013 2:19:21 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services
**Client Sample ID:** TH-1 @ 7.5
**Project:** CoP San Juan 28-7 #131
**Collection Date:** 1/3/2013 10:57:00 AM
**Lab ID:** 1301097-002
**Matrix:** MEOH (SOIL)
**Received Date:** 1/4/2013 9:47:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | 300 | 9.8 | | mg/Kg | 1 | 1/4/2013 12:41:45 PM |
| Surr: DNOP | 104 | 72.4-120 | | %REC | 1 | 1/4/2013 12:41:45 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 1300 | 200 | | mg/Kg | 40 | 1/5/2013 3:44:07 AM |
| Surr: BFB | 279 | 84-116 | S | %REC | 40 | 1/5/2013 3:44:07 AM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 1.0 | | mg/Kg | 40 | 1/5/2013 3:44:07 AM |
| Toluene | ND | 1.0 | | mg/Kg | 40 | 1/5/2013 3:44:07 AM |
| Ethylbenzene | 3.7 | 2.0 | | mg/Kg | 40 | 1/5/2013 3:44:07 AM |
| Xylenes, Total | 60 | 4.0 | | mg/Kg | 40 | 1/5/2013 3:44:07 AM |
| Surr: 4-Bromofluorobenzene | 116 | 80-120 | | %REC | 40 | 1/5/2013 3:44:07 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services
**Client Sample ID:** TH-4 @ 4.5
**Project:** CoP San Juan 28-7 #131
**Collection Date:** 1/3/2013 11:20:00 AM
**Lab ID:** 1301097-003
**Matrix:** MEOH (SOIL)
**Received Date:** 1/4/2013 9:47:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | 320 | 10 | | mg/Kg | 1 | 1/4/2013 1:03:13 PM |
| Surr: DNOP | 101 | 72.4-120 | | %REC | 1 | 1/4/2013 1:03:13 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 2000 | 250 | | mg/Kg | 50 | 1/4/2013 7:07:00 PM |
| Surr: BFB | 302 | 84-116 | S | %REC | 50 | 1/4/2013 7:07:00 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | 0.17 | 0.12 | | mg/Kg | 5 | 1/5/2013 1:49:10 AM |
| Toluene | 3.3 | 0.25 | | mg/Kg | 5 | 1/5/2013 1:49:10 AM |
| Ethylbenzene | 7.3 | 0.25 | | mg/Kg | 5 | 1/5/2013 1:49:10 AM |
| Xylenes, Total | 84 | 5.0 | | mg/Kg | 50 | 1/4/2013 7:07:00 PM |
| Surr: 4-Bromofluorobenzene | 116 | 80-120 | | %REC | 50 | 1/4/2013 7:07:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1301097**

*09-Jan-13*

**Client:** Animas Environmental Services

**Project:** CoP San Juan 28-7 #131

| Sample ID **1301097-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **TH-1 @ 5** | Batch ID: **5530** | RunNo: **7841** |
| Prep Date: **1/4/2013** | Analysis Date: **1/4/2013** | SeqNo: **227816** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 230 | 9.9 | 49.31 | 178.1 | 102 | 12.6 | 148 | | | |
| Surr: DNOP | 4.1 | | 4.931 | | 82.2 | 72.4 | 120 | | | |

| Sample ID **1301097-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **TH-1 @ 5** | Batch ID: **5530** | RunNo: **7841** |
| Prep Date: **1/4/2013** | Analysis Date: **1/4/2013** | SeqNo: **227817** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 290 | 9.9 | 49.70 | 178.1 | 220 | 12.6 | 148 | 22.9 | 22.5 | SR |
| Surr: DNOP | 4.2 | | 4.970 | | 84.3 | 72.4 | 120 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: Animas Environmental — Work Order Number: 1301097

Received by/date: AG 01/04/13

Logged By: **Michelle Garcia** 1/4/2013 9:47:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 1/4/2013 10:00:01 AM Michelle Garcia

Reviewed By: JC 01/04/2013

## Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

## Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

## Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

18. Additional remarks:

19. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E. Comanche
Farmington, NM 87401

Phone #: (505) 564-2281

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush Same Day

Project Name: C.P San Juan 28-7 #131

Project #:

Project Manager:

Sampler: H. Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 6

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1301091 | BTEX + MTBE + TMB (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) (GRO/DRO) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F,Cl,NO3,NO2,PO4,SO4) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/3/13 | 1055 | Soil | TH-1@5 | MeOH Kit/4oz | MeOH/— | -001 | X | | X | | | | | | | | | |
| 1/3/13 | 1057 | Soil | TH-1@7.5 | MeOH Kit/4oz | MeOH/— | -002 | X | | X | | | | | | | | | |
| 1/3/13 | 1120 | Soil | TH-4@4.5 | MeOH Kit/4oz | MeOH/— | -003 | X | | X | | | | | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 1/3/13 | 1719 | Heather M. Woods | Christine Walters | 1/3/13 | 1719 |
| 1/3/13 | 1740 | Christine Walters | | 01/04/13 | 0947 |

Remarks: Bill to ConocoPhillips
WO: 10331152
Activity: T110
Supervisor: Sheldon Montoya Area: 23
USER ID: BENALE
Ordered by: Danny Rudder

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

February 14, 2013

Debbie Watson

Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: COP San Juan 28-7#131 OrderNo.: 1302427

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/13/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1302427**
Date Reported: **2/14/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services
**Client Sample ID:** SC-1
**Project:** COP San Juan 28-7#131
**Collection Date:** 2/12/2013 1:20:00 PM
**Lab ID:** 1302427-001
**Matrix:** MEOH (SOIL)
**Received Date:** 2/13/2013 9:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 2/13/2013 11:10:49 AM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 2/13/2013 11:10:49 AM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 2/13/2013 11:10:49 AM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 2/13/2013 11:10:49 AM |
| Surr: 4-Bromofluorobenzene | 107 | 80-120 | | %REC | 1 | 2/13/2013 11:10:49 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services
**Client Sample ID:** SC-5
**Project:** COP San Juan 28-7#131
**Collection Date:** 2/12/2013 1:30:00 PM
**Lab ID:** 1302427-002
**Matrix:** MEOH (SOIL)
**Received Date:** 2/13/2013 9:55:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | 420 | 10 | | mg/Kg | 1 | 2/13/2013 11:18:12 AM |
| Surr: DNOP | 120 | 72.4-120 | | %REC | 1 | 2/13/2013 11:18:12 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 1300 | 100 | | mg/Kg | 20 | 2/13/2013 12:37:04 PM |
| Surr: BFB | 418 | 84-116 | S | %REC | 20 | 2/13/2013 12:37:04 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.50 | | mg/Kg | 20 | 2/13/2013 12:37:04 PM |
| Toluene | 1.7 | 1.0 | | mg/Kg | 20 | 2/13/2013 12:37:04 PM |
| Ethylbenzene | ND | 1.0 | | mg/Kg | 20 | 2/13/2013 12:37:04 PM |
| Xylenes, Total | 49 | 2.0 | | mg/Kg | 20 | 2/13/2013 12:37:04 PM |
| Surr: 4-Bromofluorobenzene | 117 | 80-120 | | %REC | 20 | 2/13/2013 12:37:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302427**

*14-Feb-13*

**Client:** Animas Environmental Services

**Project:** COP San Juan 28-7#131

| Sample ID **MB-6102** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6102** | RunNo: **8618** |
| Prep Date: **2/13/2013** | Analysis Date: **2/13/2013** | SeqNo: **247865** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 9.8 | | 10.00 | | 98.5 | 72.4 | 120 | | | |

| Sample ID **LCS-6102** | SampType: **LCS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6102** | RunNo: **8618** |
| Prep Date: **2/13/2013** | Analysis Date: **2/13/2013** | SeqNo: **247867** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 47 | 10 | 50.00 | 0 | 93.8 | 47.4 | 122 | | | |
| Surr: DNOP | 4.9 | | 5.000 | | 98.3 | 72.4 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302427**

*14-Feb-13*

**Client:** Animas Environmental Services

**Project:** COP San Juan 28-7#131

| Sample ID **5ML RB** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **R8624** | RunNo: **8624** |
| Prep Date: | Analysis Date: **2/13/2013** | SeqNo: **248365** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1000 | | 1000 | | 105 | 84 | 116 | | | |

| Sample ID **2.5UG GRO LCS** | SampType: **LCS** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **R8624** | RunNo: **8624** |
| Prep Date: | Analysis Date: **2/13/2013** | SeqNo: **248377** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 29 | 5.0 | 25.00 | 0 | 115 | 62.6 | 136 | | | |
| Surr: BFB | 1100 | | 1000 | | 115 | 84 | 116 | | | |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302427**

*14-Feb-13*

**Client:** Animas Environmental Services

**Project:** COP San Juan 28-7#131

| Sample ID **5ML RB** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **R8624** | RunNo: **8624** |
| Prep Date: | Analysis Date: **2/13/2013** | SeqNo: **248420** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.050 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 106 | 80 | 120 | | | |

| Sample ID **100NG BTEX LCS** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **R8624** | RunNo: **8624** |
| Prep Date: | Analysis Date: **2/13/2013** | SeqNo: **248421** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.95 | 0.050 | 1.000 | 0 | 94.8 | 80 | 120 | | | |
| Toluene | 0.94 | 0.050 | 1.000 | 0 | 94.3 | 80 | 120 | | | |
| Ethylbenzene | 0.93 | 0.050 | 1.000 | 0 | 92.7 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 93.8 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 106 | 80 | 120 | | | |

| Sample ID **1302427-001AMS** | SampType: **MS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **SC-1** | Batch ID: **R8624** | RunNo: **8624** |
| Prep Date: | Analysis Date: **2/13/2013** | SeqNo: **248423** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.71 | 0.050 | 0.7346 | 0 | 96.5 | 67.2 | 113 | | | |
| Toluene | 0.70 | 0.050 | 0.7346 | 0 | 95.4 | 62.1 | 116 | | | |
| Ethylbenzene | 0.71 | 0.050 | 0.7346 | 0 | 96.2 | 67.9 | 127 | | | |
| Xylenes, Total | 2.1 | 0.10 | 2.204 | 0 | 97.2 | 60.6 | 134 | | | |
| Surr: 4-Bromofluorobenzene | 0.79 | | 0.7346 | | 108 | 80 | 120 | | | |

| Sample ID **1302427-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **SC-1** | Batch ID: **R8624** | RunNo: **8624** |
| Prep Date: | Analysis Date: **2/13/2013** | SeqNo: **248424** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.69 | 0.050 | 0.7346 | 0 | 93.8 | 67.2 | 113 | 2.85 | 14.3 | |
| Toluene | 0.69 | 0.050 | 0.7346 | 0 | 93.5 | 62.1 | 116 | 2.02 | 15.9 | |
| Ethylbenzene | 0.69 | 0.050 | 0.7346 | 0 | 93.5 | 67.9 | 127 | 2.82 | 14.4 | |
| Xylenes, Total | 2.1 | 0.10 | 2.204 | 0 | 95.2 | 60.6 | 134 | 2.09 | 12.6 | |
| Surr: 4-Bromofluorobenzene | 0.80 | | 0.7346 | | 109 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: Animas Environmental — Work Order Number: 1302427

Received by/date: NG 02/13/13

Logged By: Lindsay Mangin 2/13/2013 9:55:00 AM

Completed By: Lindsay Mangin 2/13/2013 9:57:19 AM

Reviewed By: IO 02/13/2013

## Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

## Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.7 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Animas Environmental Services LLC

Mailing Address: 624 E Comanche, Farmington NM 87401

Phone #: 505 564 2281

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush Same day

Project Name: CoP San Juan 28-7 #131

Project #:

Project Manager: D Watson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.7

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1302127 | BTEX + ~~MTBE~~ + ~~TMB's~~ (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / ~~MRO~~) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-12-13 | 1320 | Soil | SC-1 | MeoH kit 4oz | MeoH | -001 | X | | | | | | | | | | | | | | | |
| 2-12-13 | 1330 | Soil | SC-5 | 1 | 1 | -002 | X | | X | | | | | | | | | | | | | |

Remarks: Bill to ConocoPhillips

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 2/12/13 | 1710 | Debra Watson | Christine Walker | 2/12/13 | 1710 |
| 2/12/13 | 1740 | Christine Walker | | 02/13/13 | 0955 |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.