

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 August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company ConocoPhillips Company	Contact Crystal Tafoya
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 326-9837
Facility Name: Jicarilla 18	Facility Type: Gas Well

Surface Owner Tribal	Mineral Owner Tribal (Contract 120)	API No. 30-039-22432
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LOCATION OF RELEASE

Unit Letter I	Section 32	Township 26N	Range 4W	Feet from the 2170	North/South Line South	Feet from the 920	East/West Line East	County Rio Arriba
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Latitude **36.441619** Longitude **107.26862**

NATURE OF RELEASE

Type of Release Produced Fluids	Volume of Release 120 yds	Volume Recovered
Source of Release Below Grade Tank	Date and Hour of Occurrence 4/17/2012	Date and Hour of Discovery
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

RCVD AUG 29 '12

OIL CONS. DIV.


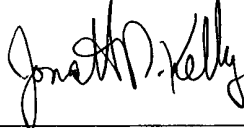
DIST. 3

Describe Cause of Problem and Remedial Action Taken.*
Below Grade Tank Closure Activities

Describe Area Affected and Cleanup Action Taken.*

Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 27'X27'X7' and 120yds of soil was transported to TNT landfarm and 216 yds of clean soil was transported from Aztec Machine and TNT and placed in the excavation site. There was an existing 18'X18'X6' excavation that needed to be backfilled as well. 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: Crystal Tafoya	Approved by Environmental Specialist: 	
Title: Field Environmental Specialist	Approval Date: 9/06/2012	Expiration Date:
E-mail Address: crystal.tafoya@conocophillips.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 8/28/12 Phone: (505) 326-9837		

* Attach Additional Sheets If Necessary

NJK 1225051058



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche
Farmington, NM 87401
505-564-2281

Durango, Colorado
970-403-3274

May 16, 2012

Ashley Maxwell
ConocoPhillips
San Juan Business Unit
Office 216-2
5525 Hwy 64
Farmington, NM 87401

**RE: Initial Release Assessment and Final Excavation Confirmation Sampling Report
Jicarilla #18
Rio Arriba County, New Mexico**

Dear Ms. Maxwell:

On March 22 and April 17, 2012, Animas Environmental Services, LLC (AES) completed an initial and final assessment of a release excavation at the Jicarilla #18 located in Rio Arriba County, New Mexico. The initial below grade tank (BGT) removal and associated release excavation was completed by CoP contractors prior to AES' arrival to the location on March 22, 2012. The final excavation was also completed by CoP contractors prior to AES' arrival to the location on April 17, 2012. The release was reported to be from the BGT that had previously been removed from the location.

1.0 Site Information

1.1 Location

Location - NE¼ SE¼, Section 32, T26N, R4W, Rio Arriba County, New Mexico
Well Head Latitude/Longitude – N36.44172 and W107.26915, respectively
BGT Location Latitude/Longitude – N36.44172 and W107.26949, respectively
Land Jurisdiction – Jicarilla Apache Tribal Land
Figure 1. Topographic Site Location Map
Figure 2. General Site Map

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, a Pit Remediation and Closure Report dated October 1996 reported NMOCD ranking of the location as zero. Additionally, the New Mexico Office of the State Engineer (NMOSE) database was reviewed, and no registered water wells are located within 1,000 feet of the location. Once on site, AES personnel 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 less than 50 feet below ground surface (bgs), and the location is not within a well-head protection area. The site is located immediately adjacent to and south of Las Norias Canyon arroyo. The site was assessed a NMOCD ranking of 30. However, since the location is located on the Jicarilla Apache Nation, the location is not eligible for NMOCD ranking criteria. The thresholds for Jicarilla Apache Nation Oil and Gas Administration (JANOGA) reflect a site ranking of 20 for all locations.

1.3 Initial Release Assessment

AES was initially contacted by Ashley Maxwell of CoP on March 21, 2012, and on March 22, 2012, Ross Kennemer and Tami Ross of AES completed the initial release assessment field work. The assessment included collection, field screening, and laboratory analyses of 5- point composite samples from each wall and the base of an existing BGT release excavation, for a total of five soil samples (EXC-1 through EXC-5). An additional soil sample was collected from a hand augered hole in the center of base of the excavation. Based on the field screening and laboratory analytical results, AES recommended further excavation of the release area. Sample locations and the initial excavation extents are shown on Figure 3.

On April 17, 2012, AES returned to the location to collect confirmation soil samples of the additional excavated area. Field screening included collecting composite soil samples from each wall and base of the excavation. The initial sample collected from the south wall (SC-1) was below the JANOGA action level for total petroleum hydrocarbons (TPH) of 100 mg/kg, consequently the excavation was extended approximately 2 feet further south. The final confirmation sample collected from the south wall did pass applicable JANOGA thresholds. The final excavation was approximately 30 feet by 30 feet by 10 feet in depth. A total of six composite soil samples (SC-1 through SC-6) were field analyzed, and the final five soil samples were submitted for confirmation laboratory analysis. Sample locations and final excavation extents are shown on Figure 4.

2.0 Soil Sampling

A total of 11 5-point composite soil samples were collected from the four walls and the base of the existing excavation during the assessments (EXC-1 through EXC-5 and SC-1 through SC-6). Additionally, on March 22, 2012, soil sample TH-1 was collected at 10 feet bgs from the base of the excavation with a hand auger. All soil samples were field screened for volatile organic compounds (VOCs), and SC-1 through SC-5 were field screened for TPH and chlorides. SC-6 was laboratory analyzed for chlorides. All soil samples collected, except SC-1, were also 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*.

2.1.3 Chlorides

Soil samples were field screened for chlorides using Chloride Drop Count Titration with silver nitrate. Sampling and analysis methods followed procedures provided by Hach Company.

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. Soil samples were laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- TPH as gasoline range organics (GRO), diesel range organics (DRO) per USEPA Method 8015B;
- TPH as motor oil range organics (MRO) per USEPA Method 8015B in EXC-1 through EXC-5 and TH-1;
- Chloride per USEPA Method 300.0.

2.3 Field Screening and Laboratory Analytical Results

On March 22, 2012, initial assessment field screening results for VOCs via OVM showed concentrations ranging from 1.8 ppm in TH-1 up to 2,253 ppm in EXC-3. Field TPH was not conducted on the samples collected.

On April 17, 2012, final excavation field screening readings for VOCs via OVM were all at non-detectable concentrations. Field TPH concentrations ranged from 47.0 mg/kg in SC-6 up to 152 mg/kg in SC-1. Chloride concentrations ranged from 40 mg/kg to 60 mg/kg. 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 Results
Jicarilla #18 Release Assessment and Final Excavation, March and April 2012

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (mg/kg)</i>	<i>Field Chlorides (mg/kg)</i>
JANOGA Action Level			-	100	250
EXC-1	3/22/12	1 to 6	166	NA	NA
EXC-2	3/22/12	1 to 6	1,743	NA	NA
EXC-3	3/22/12	1 to 6	2,253	NA	NA
EXC-4	3/22/12	1 to 6	438	NA	NA
EXC-5	3/22/12	6	222	NA	NA
TH-1	3/22/12	10	1.8	NA	NA
SC-1	4/17/12	1 to 10	0.0	152	60
SC-2	4/17/12	10	0.0	57.8	60
SC-3	4/17/12	1 to 10	0.0	48.3	60
SC-4	4/17/12	1 to 10	0.0	49.7	40
SC-5	4/17/12	1 to 10	0.0	51.0	60
SC-6	4/17/12	1 to 10	0.0	47.0	NA

NA – Not Analyzed

Initial release assessment laboratory analyses for EXC-1 through EXC-5 and TH-1 reported benzene concentrations to be below laboratory detection limits. Total BTEX concentrations were also below laboratory detection limits except for EXC-3 with 5.1 mg/kg. TPH concentrations ranged from less than laboratory detection limits in TH-1 up to 9,550 mg/kg in EXC-1. Chloride concentrations ranged from 140 mg/kg in EXC-3 up to 830 mg/kg in EXC-4. Final TPH results over the JANOGA action level of 100 mg/kg were used to provide recommendations for the area needing further excavation.

Final excavation confirmation samples collected on April 17, 2012, showed reported benzene, total BTEX, and TPH concentrations to all be below laboratory detection limits for all samples analyzed. Chloride concentrations ranged from below laboratory

detection limit in SC-4 up to 230 mg/kg in SC-6. Results are tabulated in Table 2 and on Figure 3 and 4. Laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results
 Jicarilla #18 Release Assessment and Final Excavation, March and April 2012

<i>Sample ID</i>	<i>Date</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>BTEX (mg/kg)</i>	<i>GRO (mg/kg)</i>	<i>DRO (mg/kg)</i>	<i>MRO (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
JANOGA Action Level			10	50		100		250
EXC-1	3/22/12	1 to 6	<0.05	<2.5	<50	6,500	3,000	700
EXC-2	3/22/12	1 to 6	<0.05	<2.5	<50	3,800	1,900	450
EXC-3	3/22/12	1 to 6	<0.05	5.1	310	2,900	850	140
EXC-4	3/22/12	1 to 6	<0.05	<2.5	<50	990	<500	830
EXC-5	3/22/12	6	<0.05	<2.5	<50	200	140	300
TH-1	3/22/12	10	<0.050	<0.25	<5.0	<10	<51	150
SC-2	4/17/12	10	<0.12	<1.1	<25	<10	NA	200
SC-3	4/17/12	1 to 10	<0.12	<1.1	<25	<10	NA	160
SC-4	4/17/12	1 to 10	<0.12	<1.1	<25	<10	NA	<30
SC-5	4/17/12	1 to 10	<0.12	<1.1	<25	<10	NA	75
SC-6	4/17/12	1 to 10	<0.12	<1.1	<25	<9.6	NA	230

NA – Not Analyzed

3.0 Conclusions and Recommendations

On March 22, 2012, AES conducted an initial assessment of an existing excavation associated with a release from the former BGT at the Jicarilla #18, located in Rio Arriba County, New Mexico. Laboratory analyses showed that TPH concentrations were above the applicable JANOGA thresholds in EXC-1 through EXC-5. The highest TPH concentration was reported in EXC-1 with 9,550 mg/kg. Chloride concentrations also exceeded the JANOGA threshold in EXC-1, EXC-2, EXC-4, and EXC-5. The highest chloride concentration was reported in EXC-4 with 830 mg/kg. Based on laboratory results, continued excavation was recommended for the location.

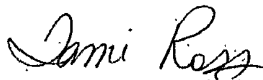
On April 17, 2012, a final assessment of the additional excavation area was completed. Field screening results of the excavation extents showed that benzene, total BTEX, TPH, and chloride concentrations were below applicable JANOGA action levels for all of the final four walls and the base of the excavation. Note that TPH concentrations in SC-1

were reported at 152 mg/kg. Based on this, an additional area of petroleum hydrocarbon impacted soil was removed, and the subsequent confirmation sample SC-6 showed a TPH concentration of 47.0 mg/kg. Soil samples were submitted for confirmation laboratory analysis, and all final four walls and the base of the excavation showed concentrations of benzene, total BTEX, TPH, and chlorides below applicable JANOGA action levels.

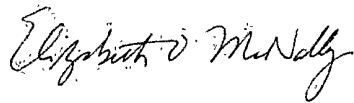
Based on the final field screening and laboratory results of the excavation of petroleum contaminated soils at the Jicarilla #18, final benzene, total BTEX, TPH, and chloride concentrations were below applicable JANOGA action levels. No further work is recommended.

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

Sincerely,



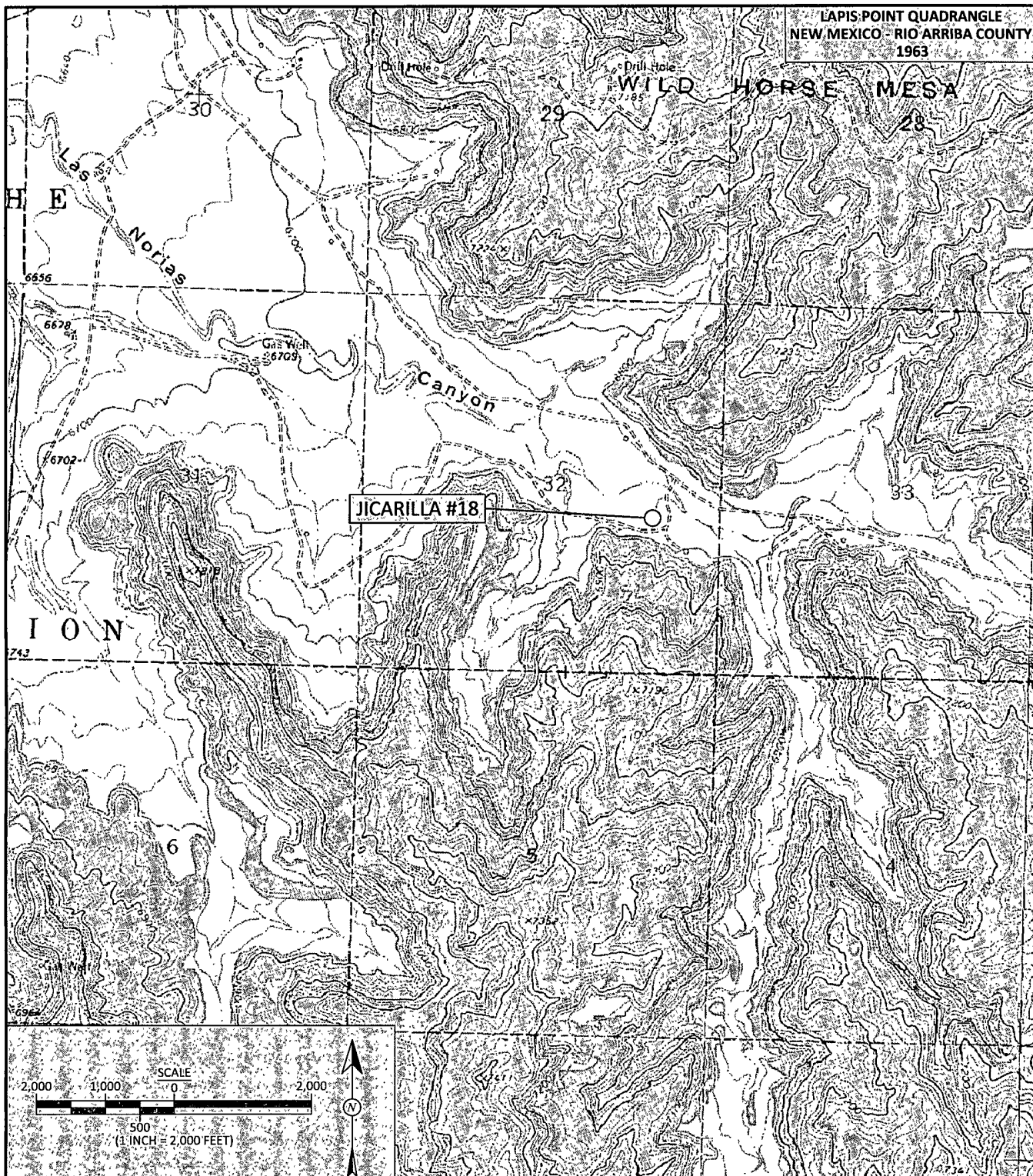
Tami C. Ross, CHMM
Project Manager



Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. General Site Map
- Figure 3. Initial Assessment Soil Sample Locations and Results, March 2012
- Figure 4. Final Excavation Soil Sample Locations and Results, April 2012
- AES Field Screening Report 041712
- Hall Laboratory Analytical Report 1203906
- Hall Laboratory Analytical Report 1204772



Animas Environmental Services, LLC

DRAWN BY:

C. Lameman

DATE DRAWN:

March 24, 2012

REVISIONS BY:

C. Lameman

DATE REVISED:

March 24, 2012

CHECKED BY:

T. Ross

DATE CHECKED:

March 24, 2012

APPROVED BY:

R. Kennemer

DATE APPROVED:

March 25, 2012

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips
JICARILLA #18
RIO ARRIBA COUNTY, NEW MEXICO
NE $\frac{1}{4}$, SE $\frac{1}{4}$, SECTION 32, T26N, R4W
N36.44172, W107.26915



AERIAL SOURCE: (c) 2012 MICROSOFT CORPORATION - AVAILABLE EXCLUSIVELY BY DIGITAL GLOBE



Animas Environmental Services, LLC

DRAWN BY:

C. Lameman

DATE DRAWN:

March 24, 2012

REVISIONS BY:

C. Lameman

DATE REVISED:

May 3, 2012

CHECKED BY:

T. Ross

DATE CHECKED:

May 3, 2012

APPROVED BY:

R. Kennemer

DATE APPROVED:

May 3, 2012

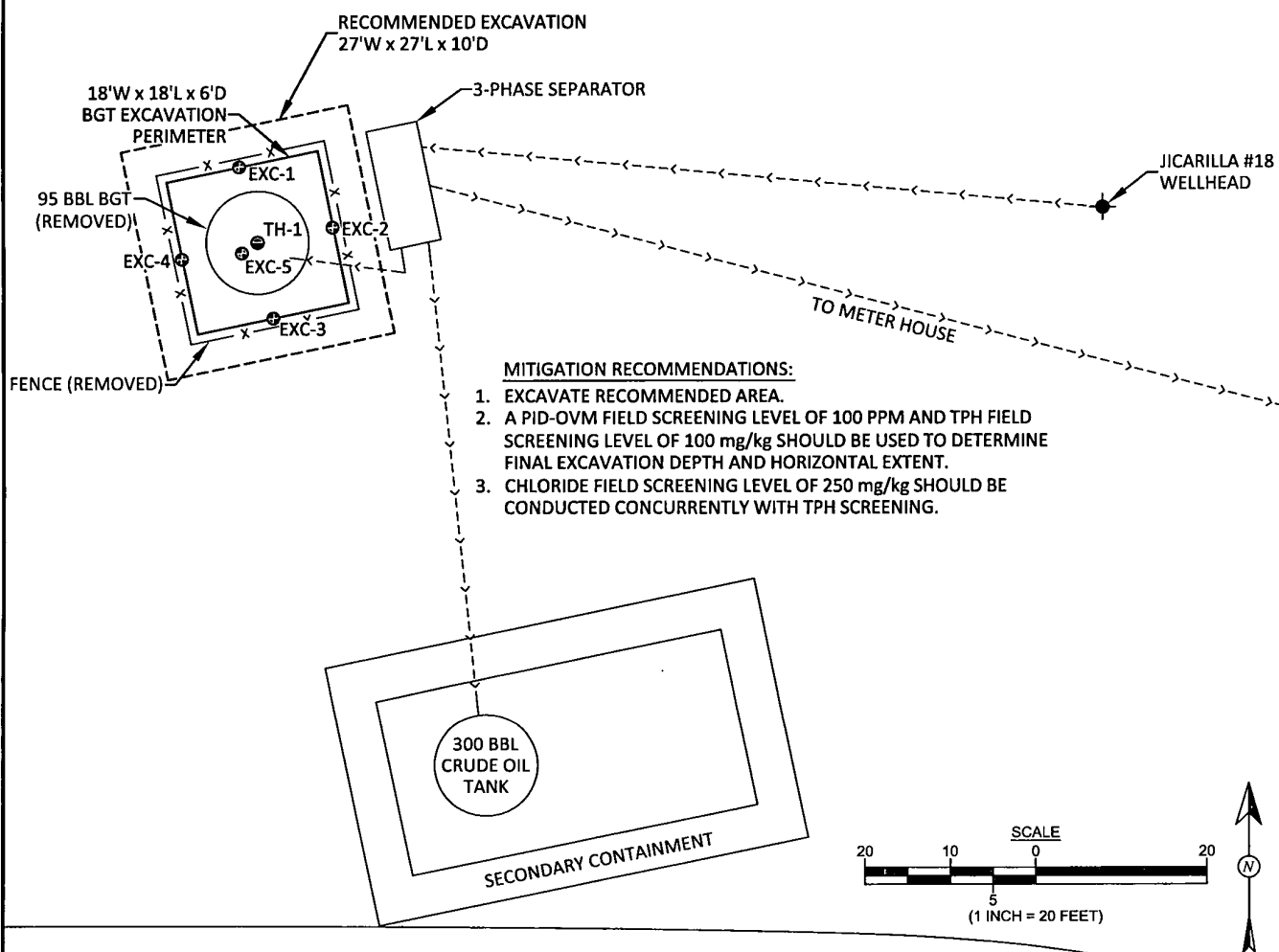
FIGURE 2

GENERAL SITE MAP

ConocoPhillips
JICARILLA #18
RIO ARriba COUNTY, NEW MEXICO
NE $\frac{1}{4}$, SE $\frac{1}{4}$, SECTION 32, T26N, R4W
N36.44172, W107.26915

Field Screening and Laboratory Analytical Results									
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	Chlorides (mg/kg)
JANOGA Action Levels			-			100			250
EXC-1	3/22/12	1 to 6	166	<0.50	<2.50	<50	6,500	3,000	700
EXC-2	3/22/12	1 to 6	1,743	<0.50	<2.50	<50	3,800	1,900	450
EXC-3	3/22/12	1 to 6	2,253	<0.50	5.1	310	2,900	850	140
EXC-4	3/22/12	1 to 6	438	<0.50	<2.50	<50	990	<500	830
EXC-5	3/22/12	6	222	<0.50	<2.50	<50	200	140	300
TH-1	3/22/12	10	1.8	<0.050	<0.250	<5.0	<10	<51	150

LEGEND	
●	TEST HOLE LOCATIONS
⊗	5-POINT COMPOSITE SAMPLE LOCATION



Animas Environmental Services, LLC

DRAWN BY:

C. Lameman

DATE DRAWN:

March 24, 2012

REVISIONS BY:

C. Lameman

DATE REVISED:

May 3, 2012

CHECKED BY:

T. Ross

DATE CHECKED:

May 3, 2012

APPROVED BY:

R. Kennemer

DATE APPROVED:

May 21, 2012

FIGURE 3

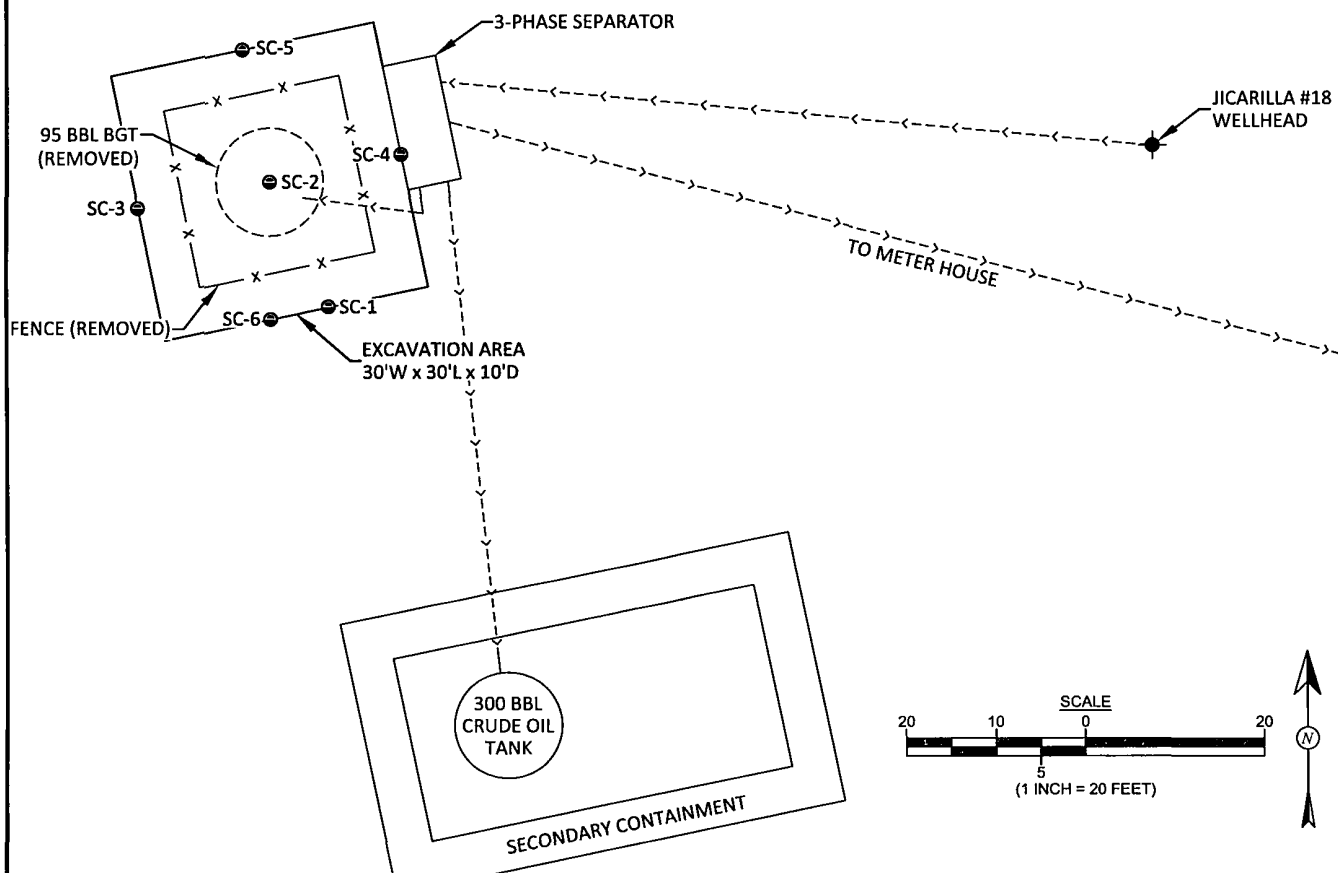
INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS, MARCH 2012

ConocoPhillips
JICARILLA #18
RIO ARriba COUNTY, NEW MEXICO
NE¼, SE¼, SECTION 32, T26N, R4W
N36.44172, W107.26915

Field Screening Results					
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
JANOGA Action Levels				100	250
SC-1	4/17/12	1 to 10	0.0	152	60
SC-2	4/17/12	10	0.0	57.8	60
SC-3	4/17/12	1 to 10	0.0	48.3	60
SC-4	4/17/12	1 to 10	0.0	49.7	40
SC-5	4/17/12	1 to 10	0.0	51.0	60
SC-6	4/17/12	1 to 10	0.0	47.0	NA
NA - Not Analyzed					

LEGEND	
●	5-POINT COMPOSITE SAMPLE LOCATIONS

Laboratory Analytical Results								
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	Chlorides (mg/kg)
JANOGA Action Levels			10	50	100			250
SC-2	4/17/12	10	<0.12	<1.1	<25	<10	NA	200
SC-3	4/17/12	1 to 10	<0.12	<1.1	<25	<10	NA	160
SC-4	4/17/12	1 to 10	<0.12	<1.1	<25	<10	NA	<30
SC-5	4/17/12	1 to 10	<0.12	<1.1	<25	<10	NA	75
SC-6	4/17/12	1 to 10	<0.12	<1.1	<25	<9.6	NA	230
NA - Not Analyzed								



Animas Environmental Services, LLC

DRAWN BY:

C. Lameman

DATE DRAWN:

March 24, 2012

REVISIONS BY:

C. Lameman

DATE REVISED:

May 3, 2012

CHECKED BY:

T. Ross

DATE CHECKED:

May 3, 2012

APPROVED BY:

R. Kennemer

DATE APPROVED:

May 3, 2012

FIGURE 4

FINAL ASSESSMENT SAMPLE LOCATIONS, AND RESULTS, APRIL 2012

ConocoPhillips
JICARILLA #18
RIO ARRIJA COUNTY, NEW MEXICO
NE¼, SE¼, SECTION 32, T26N, R4W
N36.44172, W107.26915

AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche
Farmington, NM 87401
505-564-2281

Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Jicarilla 18

Date: 4/17/2012

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field Chlorides (mg/kg)	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	4/17/2012	14:02	0.0	14:51	60	152	20.0	1	DAW
SC-2	4/17/2012	14:05	0.0	14:54	60	57.8	20.0	1	DAW
SC-3	4/17/2012	14:07	0.0	14:57	60	48.3	20.0	1	DAW
SC-4	4/17/2012	14:08	0.0	15:03	40	49.7	20.0	1	DAW
SC-5	4/17/2012	14:12	0.0	15:05	60	51.0	20.0	1	DAW
SC-6	4/17/2012	15:05	0.0	15:19	NA	47.0	20.0	1	DAW

Total Petroleum Hydrocarbons - USEPA 418.1

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

NA Not Analyzed

Analyst:

Debrah Wata



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

April 02, 2012

Ross Kennemer

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 564-2281

FAX (505) 324-2022

RE: COP Jicarilla #18

OrderNo.: 1203906

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/24/2012 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued March 27, 2012.

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.

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 1203906

Date Reported: 4/2/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** S-1**Project:** COP Jicarilla #18**Collection Date:** 3/22/2012 2:38:00 PM**Lab ID:** 1203906-001**Matrix:** SOIL**Received Date:** 3/24/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/25/2012 8:16:50 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	3/25/2012 8:16:50 PM
Surr: DNOP	90.0	77.4-131		%REC	1	3/25/2012 8:16:50 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/25/2012 1:56:06 PM
Surr: BFB	97.6	69.7-121		%REC	1	3/25/2012 1:56:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	3/25/2012 1:56:06 PM
Toluene	ND	0.050		mg/Kg	1	3/25/2012 1:56:06 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/25/2012 1:56:06 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/25/2012 1:56:06 PM
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	3/25/2012 1:56:06 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	150	30		mg/Kg	20	3/26/2012 9:58:09 AM

Qualifiers: * / X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical ReportLab Order **1203906**Date Reported: **4/2/2012****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-1**Project:** COP Jicarilla #18**Collection Date:** 3/22/2012 1:52:00 PM**Lab ID:** 1203906-002**Matrix:** SOIL**Received Date:** 3/24/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	6,500	99		mg/Kg	10	3/25/2012 8:38:32 PM
Motor Oil Range Organics (MRO)	3,000	490		mg/Kg	10	3/25/2012 8:38:32 PM
Surr: DNOP	0	77.4-131	S	%REC	10	3/25/2012 8:38:32 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	3/25/2012 3:56:56 PM
Surr: BFB	105	69.7-121		%REC	10	3/25/2012 3:56:56 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	3/25/2012 3:56:56 PM
Toluene	ND	0.50		mg/Kg	10	3/25/2012 3:56:56 PM
Ethylbenzene	ND	0.50		mg/Kg	10	3/25/2012 3:56:56 PM
Xylenes, Total	ND	1.0		mg/Kg	10	3/25/2012 3:56:56 PM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	10	3/25/2012 3:56:56 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	700	30		mg/Kg	20	3/26/2012 11:00:13 AM

Qualifiers: */X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1203906

Date Reported: 4/2/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-2**Project:** COP Jicarilla #18**Collection Date:** 3/22/2012 1:54:00 PM**Lab ID:** 1203906-003**Matrix:** SOIL**Received Date:** 3/24/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	3,800	100		mg/Kg	10	3/25/2012 9:43:03 PM
Motor Oil Range Organics (MRO)	1,900	510		mg/Kg	10	3/25/2012 9:43:03 PM
Surr: DNOP	0	77.4-131	S	%REC	10	3/25/2012 9:43:03 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	3/25/2012 5:29:20 PM
Surr: BFB	120	69.7-121		%REC	10	3/25/2012 5:29:20 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	3/25/2012 5:29:20 PM
Toluene	ND	0.50		mg/Kg	10	3/25/2012 5:29:20 PM
Ethylbenzene	ND	0.50		mg/Kg	10	3/25/2012 5:29:20 PM
Xylenes, Total	ND	1.0		mg/Kg	10	3/25/2012 5:29:20 PM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	10	3/25/2012 5:29:20 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	450	30		mg/Kg	20	3/26/2012 10:10:34 AM

Qualifiers: */X Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1203906

Date Reported: 4/2/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-3

Project: COP Jicarilla #18

Collection Date: 3/22/2012 1:56:00 PM

Lab ID: 1203906-004

Matrix: SOIL

Received Date: 3/24/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	2,900	100		mg/Kg	10	3/25/2012 10:04:33 PM
Motor Oil Range Organics (MRO)	850	500		mg/Kg	10	3/25/2012 10:04:33 PM
Surr: DNOP	0	77.4-131	S	%REC	10	3/25/2012 10:04:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	310	50		mg/Kg	10	3/25/2012 5:59:28 PM
Surr: BFB	269	69.7-121	S	%REC	10	3/25/2012 5:59:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	3/25/2012 5:59:28 PM
Toluene	ND	0.50		mg/Kg	10	3/25/2012 5:59:28 PM
Ethylbenzene	ND	0.50		mg/Kg	10	3/25/2012 5:59:28 PM
Xylenes, Total	5.1	1.0		mg/Kg	10	3/25/2012 5:59:28 PM
Surr: 4-Bromofluorobenzene	109	80-120		%REC	10	3/25/2012 5:59:28 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	140	30		mg/Kg	20	3/26/2012 10:22:59 AM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1203906

Date Reported: 4/2/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-4**Project:** COP Jicarilla #18**Collection Date:** 3/22/2012 1:58:00 PM**Lab ID:** 1203906-005**Matrix:** SOIL**Received Date:** 3/24/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	990	100		mg/Kg	10	3/25/2012 10:26:03 PM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	3/25/2012 10:26:03 PM
Surr: DNOP	0	77 4-131	S	%REC	10	3/25/2012 10:26:03 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	3/25/2012 6:29:43 PM
Surr: BFB	123	69.7-121	S	%REC	10	3/25/2012 6:29:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	3/25/2012 6:29:43 PM
Toluene	ND	0.50		mg/Kg	10	3/25/2012 6:29:43 PM
Ethylbenzene	ND	0.50		mg/Kg	10	3/25/2012 6:29:43 PM
Xylenes, Total	ND	1.0		mg/Kg	10	3/25/2012 6:29:43 PM
Surr: 4-Bromofluorobenzene	111	80-120		%REC	10	3/25/2012 6:29:43 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	830	30		mg/Kg	20	3/26/2012 10:35:23 AM

Qualifiers: * / X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1203906

Date Reported: 4/2/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-5**Project:** COP Jicarilla #18**Collection Date:** 3/22/2012 2:00:00 PM**Lab ID:** 1203906-006**Matrix:** SOIL**Received Date:** 3/24/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	200	9.8		mg/Kg	1	3/26/2012 7:35:38 AM
Motor Oil Range Organics (MRO)	140	49		mg/Kg	1	3/26/2012 7:35:38 AM
Surr. DNOP	102	77.4-131		%REC	1	3/26/2012 7:35:38 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	3/25/2012 6:59:57 PM
Surr. BFB	95.4	69.7-121		%REC	10	3/25/2012 6:59:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	3/25/2012 6:59:57 PM
Toluene	ND	0.50		mg/Kg	10	3/25/2012 6:59:57 PM
Ethylbenzene	ND	0.50		mg/Kg	10	3/25/2012 6:59:57 PM
Xylenes, Total	ND	1.0		mg/Kg	10	3/25/2012 6:59:57 PM
Surr. 4-Bromofluorobenzene	83.9	80-120		%REC	10	3/25/2012 6:59:57 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	300	30		mg/Kg	20	3/26/2012 10:47:48 AM

Qualifiers: * / X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1203906

02-Apr-12

Client: Animas Environmental Services

Project: COP Jicarilla #18

Sample ID	MB-1232	SampType	MBLK	TestCode	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	1232	RunNo:	1705					
Prep Date	3/26/2012	Analysis Date:	3/26/2012	SeqNo:	48046	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-1232	SampType	LCS	TestCode	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	1232	RunNo:	1705					
Prep Date:	3/26/2012	Analysis Date:	3/26/2012	SeqNo:	48047	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID	1203906-002BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	SC-1	Batch ID:	1232	RunNo:	1705					
Prep Date:	3/26/2012	Analysis Date:	3/26/2012	SeqNo:	48057	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	910	30	15.00	699.1	1,390	74.6	118			S

Sample ID	1203906-002BMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	SC-1	Batch ID:	1232	RunNo:	1705					
Prep Date:	3/26/2012	Analysis Date:	3/26/2012	SeqNo:	48058	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	930	30	15.00	699.1	1,560	74.6	118	2.83	20	S

Sample ID	1203754-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	1232	RunNo:	1705					
Prep Date	3/26/2012	Analysis Date:	3/26/2012	SeqNo:	48085	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	15	15.00	4.302	80.1	74.6	118			

Sample ID	1203754-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	1232	RunNo:	1705					
Prep Date:	3/26/2012	Analysis Date:	3/26/2012	SeqNo:	48091	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	15	15.00	4.302	80.3	74.6	118	0.253	20	

Qualifiers:

*X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1203906

02-Apr-12

Client: Animas Environmental Services

Project: COP Jicarilla #18

Sample ID	MB-1227	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	1227	RunNo:	1666					
Prep Date	3/24/2012	Analysis Date:	3/25/2012	SeqNo:	47119	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr DNOP	9.2		10.00		91.9	77.4	131			

Sample ID	LCS-1227	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	1227	RunNo:	1666					
Prep Date	3/24/2012	Analysis Date:	3/25/2012	SeqNo:	47120	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.2	62.7	139			
Surr DNOP	4.3		5.000		85.7	77.4	131			

Sample ID	1203865-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	1227	RunNo:	1666					
Prep Date:	3/24/2012	Analysis Date:	3/25/2012	SeqNo:	47122	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	83	9.9	49.26	36.48	94.5	57.2	146			
Surr DNOP	4.9		4.926		99.6	77.4	131			

Sample ID	1203865-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	1227	RunNo:	1666					
Prep Date:	3/24/2012	Analysis Date:	3/25/2012	SeqNo:	47123	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	70	9.9	49.50	36.48	68.6	57.2	146	16.4	26.7	
Surr DNOP	4.9		4.950		99.1	77.4	131	0	0	

Qualifiers:

* / X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1203906

02-Apr-12

Client: Animas Environmental Services

Project: COP Jicarilla #18

Sample ID	5ML RB	SampType	MBLK	TestCode	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	R1683	RunNo:	1683					
Prep Date:		Analysis Date:	3/25/2012	SeqNo:	47620	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	860		1,000		86.1	69.7	121			

Sample ID	2.5UG GRO LCS	SampType	LCS	TestCode	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	R1683	RunNo:	1683					
Prep Date:		Analysis Date:	3/25/2012	SeqNo:	47621	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	113	98.5	133			
Surr BFB	960		1,000		96.0	69.7	121			

Sample ID	1203906-001AMS	SampType	MS	TestCode	EPA Method 8015B: Gasoline Range					
Client ID:	S-1	Batch ID:	R1683	RunNo:	1683					
Prep Date:		Analysis Date:	3/25/2012	SeqNo:	47634	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	17.42	0	156	85.4	147			S
Surr BFB	730		696.7		104	69.7	121			

Sample ID	1203906-001AMSD	SampType	MSD	TestCode	EPA Method 8015B: Gasoline Range					
Client ID:	S-1	Batch ID:	R1683	RunNo:	1683					
Prep Date:		Analysis Date:	3/25/2012	SeqNo:	47635	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	17.42	0	141	85.4	147	10.0	19.2	
Surr BFB	720		696.7		104	69.7	121	0	0	

Qualifiers:

*X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1203906

02-Apr-12

Client: Animas Environmental Services

Project: COP Jicarilla #18

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R1684	RunNo:	1684					
Prep Date:		Analysis Date:	3/25/2012	SeqNo:	47638	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	0.91		1.000		91.0	80	120			

Sample ID	100NG BTEX LCS	SampType	LCS	TestCode	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R1684	RunNo:	1684					
Prep Date:		Analysis Date:	3/25/2012	SeqNo:	47639	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	1.1	0.050	1.000	0	106	83.3	107			
Toluene	1.1	0.050	1.000	0	113	74.3	115			
Ethylbenzene	1.1	0.050	1.000	0	113	80.9	122			
Xylenes, Total	3.4	0.10	3.000	0	114	85.2	123			
Surr. 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	1203906-002AMS	SampType:	MS	TestCode	EPA Method 8021B: Volatiles						
Client ID.	SC-1	Batch ID.	R1684	RunNo:	1684						
Prep Date:		Analysis Date:	3/25/2012	SeqNo.	47640	Units:	mg/Kg				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	10	0.50	10.00	0	103	67.2	113			
Toluene	11	0.50	10.00	0	110	62.1	116			
Ethylbenzene	11	0.50	10.00	0.05880	112	67.9	127			
Xylenes, Total	35	1.0	30.00	0.5921	114	60.6	134			
Surr. 4-Bromofluorobenzene	9.3		10.00		92.7	80	120			

Sample ID	1203906-002AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	SC-1	Batch ID:	R1684	RunNo:	1684					
Prep Date:		Analysis Date:	3/25/2012	SeqNo:	47641	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	10	0.50	10.00	0	102	67.2	113	0.547	14.3	
Toluene	11	0.50	10.00	0	113	62.1	116	3.24	15.9	
Ethylbenzene	12	0.50	10.00	0.05880	117	67.9	127	4.14	14.4	
Xylenes, Total	37	1.0	30.00	0.5921	121	60.6	134	5.26	12.6	
Surr. 4-Bromofluorobenzene	12		10.00		124	80	120	0	0	S

Qualifiers:

*X Value exceeds Maximum Contaminant Level
 E Value above quantitation range
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87105
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1203906

Received by/date: AT 03/24/12

Logged By: Anne Thorne 3/24/2012 11:30:00 AM

Completed By: Anne Thorne 3/24/2012

Reviewed By: mg 03/24/12

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? Greyhound

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 $>0^{\circ}\text{C}$ 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
Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#: 505-324-2022

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turnaround time:

☐ Standard ☒ Rush same day

Project Name:

CoP Jicarilla #18

Project #:

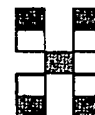
Project Manager:

R. Kennemer

Sampler: Tami Ross/D. Watson

On Site ☒ Yes ☐ No

Sample Temperature: _____



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8021 BTEX	8015 TPH DRO/GRO	300.0 Chlorides										Air Bubbles (Y or N)
3/22/2012	1438	soil	S-1	(1) 4 oz and MeOH kit	non/MeOH	-001	X	X	X										
3/22/2012	1352	soil	SC-1	(2) 4 oz and MeOH kit	non/MeOH	-002	X	X	X										
3/22/2012	1354	soil	SC-2	(2) 4 oz and MeOH kit	non/MeOH	-003	X	X	X										
3/22/2012	1356	soil	SC-3	(2) 4 oz and MeOH kit	non/MeOH	-004	X	X	X										
3/22/2012	1358	soil	SC-4	(2) 4 oz and MeOH kit	non/MeOH	-005	X	X	X										
3/22/2012	1400	soil	SC-5	(2) 4 oz and MeOH kit	non/MeOH	-006	X	X	X										

Date: 3-23-12 Time: 1345 Relinquished by: Deborah Watson

Received by: M. G. Pri Date: 3/24/12 Time: 11:30

Remarks: Bill to ConocoPhillips

Date: Time: Relinquished by:

Received by: Date: Time:

per Tami Ross on 3/26/12.
Run 8015 GRO/DRO/MRO
KMS. 3/26/12

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

April 20, 2012

Ross Kennemer

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 564-2281

FAX (505) 324-2022

RE: CoP Jicarilla 18

OrderNo.: 1204772

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/19/2012 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.

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 ReportLab Order **1204772**Date Reported: **4/20/2012****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-1**Project:** CoP Jicarilla 18**Collection Date:** 4/17/2012 3:05:00 PM**Lab ID:** 1204772-001**Matrix:** MEOH (SOIL)**Received Date:** 4/19/2012 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/19/2012 11:58:02 AM
Surr: DNOP	95.2	77.4-131		%REC	1	4/19/2012 11:58:02 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	4/19/2012 11:14:26 AM
Surr: BFB	97.1	69.7-121		%REC	5	4/19/2012 11:14:26 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	4/19/2012 11:14:26 AM
Toluene	ND	0.25		mg/Kg	5	4/19/2012 11:14:26 AM
Ethylbenzene	ND	0.25		mg/Kg	5	4/19/2012 11:14:26 AM
Xylenes, Total	ND	0.50		mg/Kg	5	4/19/2012 11:14:26 AM
Surr: 4-Bromofluorobenzene	89.2	80-120		%REC	5	4/19/2012 11:14:26 AM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	230	30		mg/Kg	20	4/19/2012 12:01:27 PM

Qualifiers: */X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1204772

Date Reported: 4/20/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-2**Project:** CoP Jicarilla 18**Collection Date:** 4/17/2012 2:05:00 PM**Lab ID:** 1204772-002**Matrix:** MEOH (SOIL)**Received Date:** 4/19/2012 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2012 12:19:42 PM
Surr. DNOP	98.0	77.4-131		%REC	1	4/19/2012 12:19:42 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	4/19/2012 10:16:02 PM
Surr. BFB	99.5	69.7-121		%REC	5	4/19/2012 10:16:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	4/19/2012 10:16:02 PM
Toluene	ND	0.25		mg/Kg	5	4/19/2012 10:16:02 PM
Ethylbenzene	ND	0.25		mg/Kg	5	4/19/2012 10:16:02 PM
Xylenes, Total	ND	0.50		mg/Kg	5	4/19/2012 10:16:02 PM
Surr. 4-Bromofluorobenzene	92.1	80-120		%REC	5	4/19/2012 10:16:02 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	200	30		mg/Kg	20	4/19/2012 12:13:52 PM

Qualifiers: */X Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1204772

Date Reported: 4/20/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-3**Project:** CoP Jicarilla 18**Collection Date:** 4/17/2012 2:07:00 PM**Lab ID:** 1204772-003**Matrix:** MEOH (SOIL)**Received Date:** 4/19/2012 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2012 12:41:23 PM
Surr. DNOP	96.7	77.4-131		%REC	1	4/19/2012 12:41:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	4/19/2012 12:12:05 PM
Surr: BFB	97.9	69.7-121		%REC	5	4/19/2012 12:12:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	4/19/2012 12:12:05 PM
Toluene	ND	0.25		mg/Kg	5	4/19/2012 12:12:05 PM
Ethylbenzene	ND	0.25		mg/Kg	5	4/19/2012 12:12:05 PM
Xylenes, Total	ND	0.50		mg/Kg	5	4/19/2012 12:12:05 PM
Surr 4-Bromofluorobenzene	91.4	80-120		%REC	5	4/19/2012 12:12:05 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	160	30		mg/Kg	20	4/19/2012 12:26:16 PM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical ReportLab Order **1204772**Date Reported: **4/20/2012****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-4**Project:** CoP Jicarilla 18**Collection Date:** 4/17/2012 2:08:00 PM**Lab ID:** 1204772-004**Matrix:** MEOH (SOIL)**Received Date:** 4/19/2012 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/19/2012 1:03:01 PM
Surr: DNOP	95.7	77.4-131		%REC	1	4/19/2012 1:03:01 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	4/19/2012 12:40:51 PM
Surr: BFB	97.8	69.7-121		%REC	5	4/19/2012 12:40:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	4/19/2012 12:40:51 PM
Toluene	ND	0.25		mg/Kg	5	4/19/2012 12:40:51 PM
Ethylbenzene	ND	0.25		mg/Kg	5	4/19/2012 12:40:51 PM
Xylenes, Total	ND	0.50		mg/Kg	5	4/19/2012 12:40:51 PM
Surr. 4-Bromofluorobenzene	91.1	80-120		%REC	5	4/19/2012 12:40:51 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	ND	30		mg/Kg	20	4/19/2012 12:38:41 PM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical ReportLab Order **1204772**

Date Reported: 4/20/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-5**Project:** CoP Jicarilla 18**Collection Date:** 4/17/2012 2:12:00 PM**Lab ID:** 1204772-005**Matrix:** MEOH (SOIL)**Received Date:** 4/19/2012 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2012 1:24:46 PM
Surr: DNOP	95.5	77.4-131		%REC	1	4/19/2012 1:24:46 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	4/19/2012 1:09:34 PM
Surr: BFB	97.9	69.7-121		%REC	5	4/19/2012 1:09:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	4/19/2012 1:09:34 PM
Toluene	ND	0.25		mg/Kg	5	4/19/2012 1:09:34 PM
Ethylbenzene	ND	0.25		mg/Kg	5	4/19/2012 1:09:34 PM
Xylenes, Total	ND	0.50		mg/Kg	5	4/19/2012 1:09:34 PM
Surr: 4-Bromofluorobenzene	91.3	80-120		%REC	5	4/19/2012 1:09:34 PM
EPA METHOD 300.0: ANIONS						Analyst: BRM
Chloride	75	30		mg/Kg	20	4/19/2012 12:51:06 PM

Qualifiers: */X Value exceeds Maximum Contaminant Level
 E Value above quantitation range
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204772

20-Apr-12

Client: Animas Environmental Services

Project: CoP Jicarilla 18

Sample ID	LCS-1607		SampType: LCS			TestCode: EPA Method 300.0: Anions				
Client ID	LCSS		Batch ID: 1607			RunNo: 2260				
Prep Date	4/19/2012		Analysis Date: 4/19/2012			SeqNo: 62502		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID	1204711-001AMS		SampType: MS			TestCode: EPA Method 300.0: Anions				
Client ID	BatchQC		Batch ID: 1607			RunNo: 2260				
Prep Date	4/19/2012		Analysis Date: 4/19/2012			SeqNo: 62504		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	7.5	15.00	6.129	83.1	74.6	118			

Sample ID	1204711-001AMSD		SampType: MSD			TestCode: EPA Method 300.0: Anions				
Client ID	BatchQC		Batch ID: 1607			RunNo: 2260				
Prep Date	4/19/2012		Analysis Date: 4/19/2012			SeqNo: 62505		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	7.5	15.00	6.129	83.4	74.6	118	0.263	20	

Qualifiers:

*X Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204772

20-Apr-12

Client: Animas Environmental Services

Project: CoP Jicarilla 18

Sample ID	MB-1608	SampType	MBLK	TestCode	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	1608	RunNo:	2224					
Prep Date	4/19/2012	Analysis Date:	4/19/2012	SeqNo:	61795	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	9.0		10.00		89.6	77.4	131			

Sample ID	LCS-1608	SampType	LCS	TestCode	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	1608	RunNo:	2224					
Prep Date	4/19/2012	Analysis Date:	4/19/2012	SeqNo:	62036	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	62.7	139			
Surr: DNOP	4.2		5.000		84.2	77.4	131			

Sample ID	1204733-001AMS	SampType	MS	TestCode	EPA Method 8015B: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	1608	RunNo:	2257					
Prep Date:	4/19/2012	Analysis Date:	4/20/2012	SeqNo:	62580	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	49.75	13 10	93.1	57.2	146			
Surr: DNOP	4.5		4.975		90.0	77.4	131			

Sample ID	1204733-001AMSD	SampType	MSD	TestCode	EPA Method 8015B: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	1608	RunNo:	2257					
Prep Date:	4/19/2012	Analysis Date:	4/20/2012	SeqNo:	62604	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.8	49.07	13.10	62.0	57.2	146	30.9	26.7	R
Surr: DNOP	4.5		4.907		91.5	77.4	131	0	0	

Qualifiers:

*X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204772

20-Apr-12

Client: Animas Environmental Services

Project: CoP Jicarilla 18

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62266	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	980		1,000		97.7	69.7	121			

Sample ID	1204772-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID	SC-1	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62624	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	130	25	125.0	0	106	85.4	147			
Surr. BFB	5,300		5,000		106	69.7	121			

Sample ID	1204772-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID	SC-1	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62625	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	130	25	125.0	0	106	85.4	147	0.565	19.2	
Surr. BFB	5,300		5,000		107	69.7	121	0	0	

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62864	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	98.5	133			
Surr. BFB	1,100		1,000		106	69.7	121			

Qualifiers:

*X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204772

20-Apr-12

Client: Animas Environmental Services

Project: CoP Jicarilla 18

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62275	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	0.91		1 000		90.6	80	120			

Sample ID	1204772-003AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	SC-3	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62639	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.7	0.25	5 000	0	94.2	67.2	113			
Toluene	4.9	0.25	5 000	0	97.3	62.1	116			
Ethylbenzene	4.7	0.25	5.000	0	94.9	67.9	127			
Xylenes, Total	14	0.50	15.00	0	95.3	60.6	134			
Surr. 4-Bromofluorobenzene	4.7		5.000		94.9	80	120			

Sample ID	1204772-003AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	SC-3	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62640	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.4	0.25	5.000	0	88.0	67.2	113	6.77	14.3	
Toluene	4.5	0.25	5.000	0	89.9	62.1	116	7.80	15.9	
Ethylbenzene	4.4	0.25	5.000	0	87.5	67.9	127	8.12	14.4	
Xylenes, Total	13	0.50	15.00	0	88.1	60.6	134	7.78	12.6	
Surr. 4-Bromofluorobenzene	4.8		5 000		96.4	80	120	0	0	

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R2242	RunNo:	2242					
Prep Date:		Analysis Date:	4/19/2012	SeqNo:	62854	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1 000	0	96.0	83.3	107			
Toluene	0.99	0.050	1.000	0	98.9	74.3	115			
Ethylbenzene	0.97	0.050	1.000	0	97.1	80.9	122			
Xylenes, Total	2.9	0.10	3.000	0	97.3	85.2	123			
Surr. 4-Bromofluorobenzene	0.94		1.000		94.2	80	120			

Qualifiers:

*X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87106
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1204772

Received by/date:

Logged By: Ashley Gallegos

4/19/2012 9:53:00 AM

Completed By: Ashley Gallegos

4/19/2012 10:04:00 AM

Reviewed By:

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? | <u>Courier</u> | | |

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 $>0^{\circ}\text{C}$ 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 | # of preserved bottles checked for pH |
| 14. Are matrices correctly identified on Chain of Custody? | Yes ✓ | No | (<2 or >12 unless noted) |
| 15. Is it clear what analyses were requested? | Yes ✓ | No | Adjusted? |
| 16. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes ✓ | No | 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

