OIL CONS. DIV DIST. 3

SEP 02 2015

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 **Lisa Hunter**
Address **3401 East 30th St, Farmington, NM**	Telephone No. **(505) 326-9786**
Facility Name: **Jicarilla 8**	Facility Type: **Gas Well**

Surface Owner **Jicarilla**	Mineral Owner **Jicarilla Contract # 120**	API No. **3003920143**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	**32**	**26N**	**04W**	**1750**	**South**	**790**	**West**	**Rio Arriba**

Latitude 36.44078 Longitude -107.28120

NATURE OF RELEASE

Type of Release **Produced Water/Hydrocarbon**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **Below Grade Tank (BGT)**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **August 6, 2012**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? **N/A**	
By Whom? **N/A**	Date and Hour **N/A**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **N/A**	

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

Describe Cause of Problem and Remedial Action Taken.*
Below-Grade Tank Closure activities with samples taken resulting in constituents exceeded standards outlined by 19.15.17.13 NMAC.

Describe Area Affected and Cleanup Action Taken.*
NMOCD action levels for releases are specified in NMOCD's Guidelines for Leaks, Spills and Releases and the release was assigned a ranking score of 10. Samples were collected and analytical results are below applicable NMOCD action levels. No further work will be performed. The final 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 Approved by Environmental Specialist:	
Printed Name: **Lisa Hunter**		
Title: **Field Environmental Specialist**	Approval Date: 9/4/15	Expiration Date:
E-mail Address: **Lisa.Hunter@cop.com**	Conditions of Approval:	Attached ☐
Date: **August 28, 2015** Phone: **(505) 326-9786**		

* Attach Additional Sheets If Necessary

#NCS 1524739419

17

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

September 18, 2012

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

RE: Below Grade Tank Closure Report
Jicarilla #8
Rio Arriba County, New Mexico

Dear Ms. Maxwell:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure at ConocoPhillips (CoP) Jicarilla #8, located in Rio Arriba County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location.

1.0 Site Information

1.1 Location

Site Name – Jicarilla #8
Legal Description - NW¼ SW¼, Section 32, T26N, R4W, Rio Arriba County, New Mexico
Well Latitude/Longitude - N36.44061 and W107.28124, respectively
BGT Latitude/Longitude - N36.44078 and W107.28120, respectively
Land Jurisdiction – Jicarilla Apache Nation
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, August 2012

1.2 NMOCD Ranking

The location is not eligible for New Mexico Oil Conservation Division (NMOCD) ranking evaluation since the location is on Jicarilla Apache Nation lands. The thresholds set by Jicarilla Apache Nation Oil and Gas Administration (JANOGA) reflect a NMOCD site ranking of 20 for all locations.

1.3 BGT Closure Assessment

AES was initially contacted by Jess Henson, CoP representative, on August 6, 2012, and on August 8, 2012, Deborah Watson and Kelsey Christiansen of AES met with a CoP representative at the location.

AES personnel collected six soil samples from the below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, one sample was collected from the center of the BGT footprint, and one sample was composited from the four perimeter samples and one center sample.

2.0 Soil Sampling

On August 8, 2012, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) and one 5-point composite (SC-1) from below the BGT. Soil samples were collected from approximately 0.5 feet below the former BGT liner for field screening of volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH), and chlorides. Soil sample SC-1 was submitted for confirmation laboratory analysis. Soil sample locations are included on Figure 2.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

A portion of each sample was utilized for field screening of VOC vapors 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

Soil samples were also analyzed in the field for TPH 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 composite soil sample SC-1 collected for laboratory analysis was placed into a new, clean, laboratory-supplied container, which was then labeled, placed on ice, and logged onto a sample chain of custody record. The sample was maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil sample SC-1 was laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- Total petroleum hydrocarbons (TPH) for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B;
- Chloride per USEPA Method 300.0.

2.3 *Field and Laboratory Analytical Results*

Field screening for VOCs via OVM showed readings ranged from 1.4 ppm in S-5 up to 2.4 in SC-1. Field TPH concentrations ranged from 70.6 mg/kg in S-2 up to 185 mg/kg in S-1. The field chloride concentration was 80 mg/kg in SC-1. Field screening results are summarized in Table 1 and presented on Figure 2. The AES Field Screening Report is attached.

Table 1. Soil Field Screening VOCs, TPH, and Chloride Results
Jicarilla #8 BGT Closure, August 2012

Sample ID	*Date Sampled*	*Depth below BGT (ft)*	*VOCs OVM Reading (ppm)*	*Field TPH (mg/kg)*	*Field Chlorides (mg/kg)*
JANOGA Action Level			*--*	***100***	***250***
S-1	8/8/12	0.5	1.7	**185**	NA
S-2	8/8/12	0.5	1.9	70.6	NA
S-3	8/8/12	0.5	2.3	78.0	NA
S-4	8/8/12	0.5	2.2	97.7	NA
S-5	8/8/12	0.5	1.4	76.8	NA
SC-1	8/8/12	0.5	2.4	NA	80

NA = not analyzed

Laboratory analytical results showed that the benzene and total BTEX concentrations in SC-1 were less than 0.050 mg/kg and less than 0.25 mg/kg, respectively. TPH concentrations were reported at less than 5.0 mg/kg GRO and less than 9.7 mg/kg DRO. The laboratory chloride concentration was below the laboratory detection limit of 30

mg/kg. Laboratory analytical results are summarized in Table 2 and included on Figure 2. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results, Jicarilla #8 BGT Closure, August 2012

Sample ID	*Date Sampled*	*Depth (ft)*	*Benzene (mg/kg)*	*BTEX (mg/kg)*	*TPH-GRO (mg/kg)*	*TPH-DRO (mg/kg)*	*Chlorides (mg/kg)*
	JANOGA Action Level		***0.2***	***50***	***100***		***250***
SC-1	8/8/12	0.5	<0.050	<0.25	<5.0	<9.7	<30

3.0 Conclusions and Recommendations

Action levels for BGT closures on Jicarilla lands have been set by the JANOGA and reflect a NMOCD ranking of 20 for all locations. Benzene and total BTEX concentrations in SC-1 were below the laboratory detection limits and below the JANOGA action levels. Field TPH concentrations were below the JANOGA action level of 100 mg/kg in all samples, except S-1 with 185 mg/kg. However, laboratory analytica results for TPH as GRO/DRO were reported below the JANOGA threshold of 100 mg/kg. Field and laboratory chloride concentrations for SC-1 were below the JANOGA action level of 250 mg/kg. Based on field screening and laboratory analytical results for benzene, total BTEX, TPH, and chlorides, no further work is recommended.

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

Sincerely,

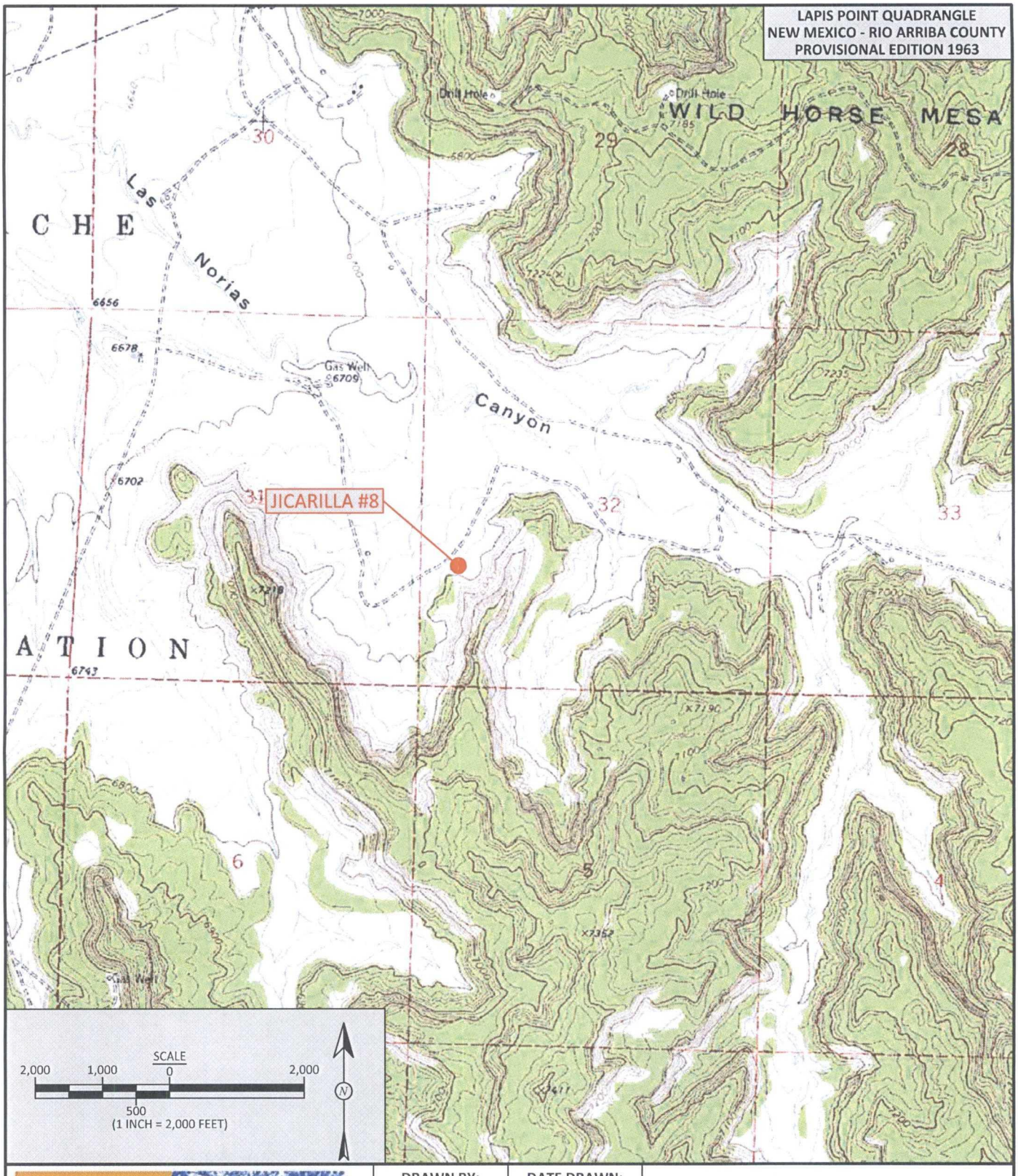
Corwin Lameman, Geologist Intern

Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, August 2012
AES Field Screening Report 080812
Hall Analytical Report 1208392

R:\Animas 2000\2012 Projects\Conoco Phillips\Jicarilla #8\Jicarilla #8 BGT Assessment Report 091812.docx



Animas Environmental Services, LLC	**DRAWN BY:** N. Willis	**DATE DRAWN:** August 9, 2012	**FIGURE 1**
	REVISIONS BY: C. Lameman	**DATE REVISED:** August 9, 2012	**TOPOGRAPHIC SITE LOCATION MAP** ConocoPhillips JICARILLA #8 RIO ARRIBA COUNTY, NEW MEXICO NW¼ SW¼, SECTION 32, T26N, R4W N36.44061, W107.28124
	CHECKED BY: D. Watson	**DATE CHECKED:** August 31, 2012	
	APPROVED BY: E. McNally	**DATE APPROVED:** September 18, 2012	

Field Screening Results

Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
JANOGA ACTION LEVEL		NE	100	250
S-1	8/8/12	1.7	**185**	NA
S-2	8/8/12	1.9	70.6	NA
S-3	8/8/12	2.3	78.0	NA
S-4	8/8/12	2.2	97.7	NA
S-5	8/8/12	1.4	76.8	NA
SC-1	8/8/12	2.4	NA	80

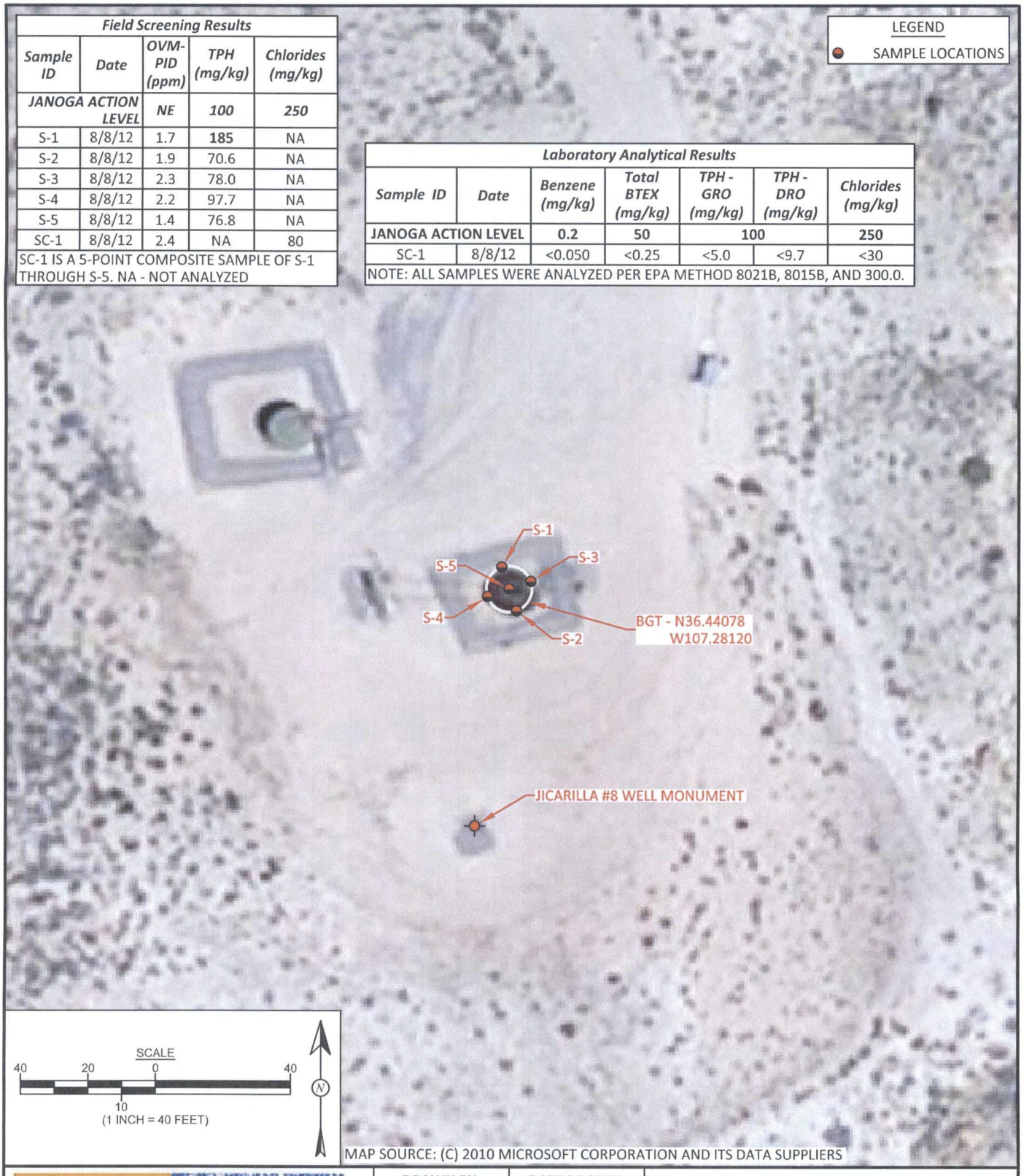
SC-1 IS A 5-POINT COMPOSITE SAMPLE OF S-1 THROUGH S-5. NA - NOT ANALYZED

Laboratory Analytical Results

Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
JANOGA ACTION LEVEL		0.2	50	100		250
SC-1	8/8/12	<0.050	<0.25	<5.0	<9.7	<30

NOTE: ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B, 8015B, AND 300.0.

LEGEND
SAMPLE LOCATIONS



MAP SOURCE: (C) 2010 MICROSOFT CORPORATION AND ITS DATA SUPPLIERS

Animas Environmental Services, LLC

DRAWN BY: N. Willis	**DATE DRAWN:** August 9, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** September 18, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** September 18, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** September 18, 2012

FIGURE 2

AERIAL SITE MAP
BELOW GRADE TANK CLOSURE
AUGUST 2012
ConocoPhillips
JICARILLA #8
RIO ARRIBA COUNTY, NEW MEXICO
NW¼ SW¼, SECTION 32, T26N, R4W
N36.44061, W107.28124

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 #8

Date: 8/8/2012

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
S-1	8/8/2012	10:16	North	1.7	NA	11:19	185	20.0	1	DAW
S-2	8/8/2012	10:18	South	1.9	NA	11:25	70.6	20.0	1	DAW
S-3	8/8/2012	10:20	East	2.3	NA	11:28	78.0	20.0	1	DAW
S-4	8/8/2012	10:21	West	2.2	NA	11:32	97.7	20.0	1	DAW
S-5	8/8/2012	10:22	Center	1.4	NA	11:35	76.8	20.0	1	DAW
SC-1	8/8/2012	10:27	Composite	2.4	80	*Sent for laboratory analysis of BTEX and TPH.*				

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

NA Not Analyzed

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

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Deborah Watson

Report Finalized:08/08/12

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

August 22, 2012

Debbie Watson

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

RE: CoP Jicarilla #8 OrderNo.: 1208392

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/9/2012 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. 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 **1208392**
Date Reported: **8/22/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: SC-1
Project: CoP Jicarilla #8
Collection Date: 8/8/2012 10:27:00 AM
Lab ID: 1208392-001
Matrix: MEOH (SOIL)
Received Date: 8/9/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JMP**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/9/2012 11:50:22 AM
Surr: DNOP	104	77.6-140		%REC	1	8/9/2012 11:50:22 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/9/2012 12:51:47 PM
Surr: BFB	87.6	84-116		%REC	1	8/9/2012 12:51:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.050		mg/Kg	1	8/9/2012 12:51:47 PM
Toluene	ND	0.050		mg/Kg	1	8/9/2012 12:51:47 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/9/2012 12:51:47 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/9/2012 12:51:47 PM
Surr: 4-Bromofluorobenzene	96.1	80-120		%REC	1	8/9/2012 12:51:47 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Chloride	ND	30		mg/Kg	20	8/9/2012 12:01:23 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208392**

22-Aug-12

Client: Animas Environmental Services
Project: CoP Jicarilla #8

Sample ID	MB-3257	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	3257		RunNo:	4778				
Prep Date:	8/9/2012	Analysis Date:	8/9/2012		SeqNo:	134703	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-3257	SampType:	LCS		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS	Batch ID:	3257		RunNo:	4778				
Prep Date:	8/9/2012	Analysis Date:	8/9/2012		SeqNo:	134704	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Sample ID	1208392-001BMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	SC-1	Batch ID:	3257		RunNo:	4778				
Prep Date:	8/9/2012	Analysis Date:	8/9/2012		SeqNo:	134706	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	43	30	15.00	28.29	97.4	64.4	117			

Sample ID	1208392-001BMSD	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	SC-1	Batch ID:	3257		RunNo:	4778				
Prep Date:	8/9/2012	Analysis Date:	8/9/2012		SeqNo:	134707	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	39	30	15.00	28.29	73.8	64.4	117			

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#: **1208392**

22-Aug-12

Client: Animas Environmental Services

Project: CoP Jicarilla #8

Sample ID **MB-3256**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **3256**	RunNo: **4749**
Prep Date: **8/9/2012**	Analysis Date: **8/9/2012**	SeqNo: **133973** 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	9.4		10.00		94.3	77.6	140			

Sample ID **LCS-3256**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **3256**	RunNo: **4749**
Prep Date: **8/9/2012**	Analysis Date: **8/9/2012**	SeqNo: **133997** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	73.9	52.6	130			
Surr: DNOP	3.9		5.000		78.2	77.6	140			

Sample ID **1208318-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **3256**	RunNo: **4774**
Prep Date: **8/9/2012**	Analysis Date: **8/10/2012**	SeqNo: **135098** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	170	10	50.35	154.9	23.3	57.2	146			S
Surr: DNOP	4.6		5.035		90.6	77.6	140			

Sample ID **1208318-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **3256**	RunNo: **4774**
Prep Date: **8/9/2012**	Analysis Date: **8/10/2012**	SeqNo: **135105** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	320	9.7	48.45	154.9	335	57.2	146	62.2	24.5	SR
Surr: DNOP	4.6		4.845		95.5	77.6	140	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#: **1208392**

22-Aug-12

Client: Animas Environmental Services
Project: CoP Jicarilla #8

Sample ID **MB-3247**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBS**	Batch ID: **3247**	RunNo: **4759**
Prep Date: **8/8/2012**	Analysis Date: **8/9/2012**	SeqNo: **134496** 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		101	84	116			

Sample ID **LCS-3247**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSS**	Batch ID: **3247**	RunNo: **4759**
Prep Date: **8/8/2012**	Analysis Date: **8/9/2012**	SeqNo: **134503** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	90.0	85	115			
Surr: BFB	1100		1000		109	84	116			

Sample ID **1208318-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **3247**	RunNo: **4759**
Prep Date: **8/8/2012**	Analysis Date: **8/9/2012**	SeqNo: **134512** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.68	1.496	108	70	130			
Surr: BFB	1100		987.2		111	84	116			

Sample ID **1208318-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **3247**	RunNo: **4759**
Prep Date: **8/8/2012**	Analysis Date: **8/9/2012**	SeqNo: **134521** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	24.75	1.496	107	70	130	1.22	22.1	
Surr: BFB	980		990.1		98.7	84	116	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#: **1208392**

22-Aug-12

Client: Animas Environmental Services

Project: CoP Jicarilla #8

Sample ID **MB-3247**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **3247**	RunNo: **4759**
Prep Date: **8/8/2012**	Analysis Date: **8/9/2012**	SeqNo: **134626** 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		109	80	120			

Sample ID **1208392-001A MS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SC-1**	Batch ID: **3247**	RunNo: **4759**
Prep Date:	Analysis Date: **8/9/2012**	SeqNo: **134672** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.050	0.7423	0	90.9	67.2	113			
Toluene	0.70	0.050	0.7423	0.007497	92.7	62.1	116			
Ethylbenzene	0.71	0.050	0.7423	0.008536	94.2	67.9	127			
Xylenes, Total	2.2	0.10	2.227	0.01937	95.8	60.6	134			
Surr: 4-Bromofluorobenzene	0.82		0.7423		110	80	120			

Sample ID **1208392-001A MSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SC-1**	Batch ID: **3247**	RunNo: **4759**
Prep Date:	Analysis Date: **8/9/2012**	SeqNo: **134679** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.050	0.7423	0	89.6	67.2	113	1.44	14.3	
Toluene	0.68	0.050	0.7423	0.007497	91.2	62.1	116	1.60	15.9	
Ethylbenzene	0.69	0.050	0.7423	0.008536	91.9	67.9	127	2.44	14.4	
Xylenes, Total	2.1	0.10	2.227	0.01937	94.6	60.6	134	1.20	12.6	
Surr: 4-Bromofluorobenzene	0.75		0.7423		102	80	120	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

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: **1208392**

Received by/date: 08/09/12

Logged By: **Lindsay Mangin** 8/9/2012 10:00:00 AM

Completed By: **Lindsay Mangin** 8/9/2012 10:15:30 AM

Reviewed By: 08/09/12

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?	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	# 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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	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 Jicarilla #8

Project #:

Project Manager: D Watson

Sampler: K. Christianson

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.3

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. 1206392	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.0 Chlorides				Air Bubbles (Y or N)
5-8-12	1021	soil	SC-1	4oz ~~mason jar~~	~~none~~	-007	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/8/12	1707	Kelsey Christianson	Christine Walker	5/8/12	1707
5/8/12	1737	Christine Walker		05/09/12	1000

Remarks: Bill to ConocoPhillips
WO: 10336170
act code: C200
Supervisor: Harry Dee
Area: 26
User ID: KAITLW
ordered by: Jess Henson

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.