

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	Burlington Resources Oil & Gas Co.	Contact	Bobby Spearman
Address	3401 East 30 th St, Farmington, NM	Telephone No.	(505)-320-3045
Facility Name	Johnston A 15	Facility Type	Gas well
Surface Owner	State	Mineral Owner	Fed
		API No.	3003920538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	36	26N	6W	1460	South	800	East	Rio Arriba

Latitude 36.439970 Longitude -107.41253

NATURE OF RELEASE

Type of Release	Hydrocarbon	Volume of Release	Unknown	Volume Recovered	None
Source of Release	BGT	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	Unknown
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.			

If a Watercourse was Impacted, Describe Fully.*

OIL CONS. DIV DIST. 3

Describe Cause of Problem and Remedial Action Taken.*

Historic contamination was encountered after a soil sample was taken on 3-18-16

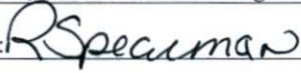

NOV 28 2016

Describe Area Affected and Cleanup Action Taken.

Historical hydrocarbon impacted soil was found during the BGT closure for the subject well.

September 12, 2016 Excavation was 11' x 11' x 5.5 in depth and 25 yds of soil was transported to Envirotech land farm and 25 yds of clean soil was transported and placed in the excavation site. Analytical results were below the regulatory standards – no further action required. 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: Bobby Spearman	Approved by Environmental Specialist 	
Title: Field Environmental Specialist	Approval Date: 12/9/2016	Expiration Date:
E-mail Address: Robert.E.Spearman@conocophillips.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 11-22-16	Phone: (505) 320-3045	NVF 1618248307

* Attach Additional Sheets If Necessary

33



November 14, 2016

Lisa Hunter and Robert Spearman
ConocoPhillips
San Juan Business Unit
(505) 326-9786, (505) 320-3045

Via electronic mail to:

SJBUE-Team@ConocoPhillips.com

**RE: Below Grade Tank Closure, Release Assessment, and Final Excavation Report
Johnston A 15
Rio Arriba County, New Mexico**

Dear Ms. Hunter and Mr. Spearman:

On March 18, April 19 and September 12, 2016, Animas Environmental Services, LLC (AES) completed below grade tank (BGT) closure sampling, a release assessment, and environmental clearance of the final excavation limits at the ConocoPhillips (COPC) Johnston A 15 located in Rio Arriba County, New Mexico. At the request of the New Mexico Oil Conservation Division (NMOCD), resampling of the location below the former BGT was required to meet all required closure criteria listed in New Mexico Administrative Code (NMAC) 19.15.17.13E. The historic release at the BGT consisted of an unknown quantity of produced water and hydrocarbons. After obtaining the results of the March 2016 sampling event, an initial release assessment was completed on April 19, 2016. The final excavation was completed by COPC contractors while AES was on location on September 19, 2016.

1.0 Site Information

1.1 Location

Site Name – Johnston A 15

Location – NE¼ SE¼, Section 36, T26N, R6W, Rio Arriba County, New Mexico

Well Head Latitude/Longitude – N36.44002, W107.41254

BGT/Release Latitude/Longitude – N36.43997, W107.41248

Land Jurisdiction – Bureau of Land Management

Figure 1. Topographic Site Location Map

604 W. Piñon St.
Farmington, NM 87401
505-564-2281

1911 Main, Ste 206
Durango, CO 81301
970-403-3084

Figure 2. Aerial Site Map, April 2016

1.2 NMOCD Ranking

In accordance with NMOCD release protocols, action levels were established per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to site work. The release was given a ranking score of 30 based on the following factors:

- **Depth to Groundwater:** Based on elevation, topographic interpretation and visual reconnaissance, depth to groundwater is interpreted to be less than 50 feet below ground surface (bgs). (20 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** Tapicito Creek is approximately 500 feet northwest of the site. (10 points)

1.3 Assessment

AES was initially contacted by Robert Spearman, COPC representative, on March 1, 2016. At the request of the NMOCD, resampling of the location below the former BGT was required to meet all required closure criteria listed in NMAC 19.15.17.13E. On March 18, 2016, Corwin Lameman and Delilah Dougi of AES traveled to the location. Soil sampling consisted of collection of one discrete soil sample from below the former BGT. The sample location is presented on Figure 2.

On April 19, 2016, AES personnel completed the release assessment field work. The assessment included collection and field sampling of 20 soil samples from 4 soil borings (SB-1 through SB-4). Based on field sampling results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On September 12, 2016, AES returned to the location to collect confirmation soil samples of the excavation. The field sampling activities included collection of five confirmation soil samples (SC-1 through SC-5) of the walls and base of the excavation. The area of the final excavation measured approximately 11 feet by 11 feet by 5.5 feet in depth. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

A total of 21 soil samples (S-1 and SB-1 through SB-4) and 5 composite samples (SC-1 through SC-5) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were analyzed for total petroleum hydrocarbon (TPH). One discrete sample (S-1) and all composite

samples (SC-1 through SC-5) collected were submitted for confirmation laboratory analysis.

2.1 Field Sampling

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

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

2.2 Laboratory Analyses

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

S-1 was laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per USEPA Method 8021B;
- TPH per USEPA Method 418.1; and
- Chlorides per USEPA Method 300.0.

SC-1 through SC-5 were laboratory analyzed for:

- BTEX per USEPA Method 8021B; and
- TPH as Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Motor Oil Range Organics (MRO) and per USEPA Method 8015.

2.3 Field and Laboratory Analytical Results

On April 19, 2016, initial assessment field screening readings for VOCs via OVM were all measured at 0.0 ppm in SB-1 through SB-4. Field TPH concentrations ranged from less than 20.0 mg/kg in SB-1 through SB-4 to 26.8 mg/kg in SB-1.

On September 12, 2016, final excavation field screening results for VOCs via OVM ranged from 0.0 ppm in SC-1, SC-2 and SC-4, up to 10.4 ppm in SC-5. Field TPH concentrations ranged from 23.5 mg/kg in SC-3 up to 79.9 mg/kg in SC-2. Field screening VOC and TPH results are summarized in Table 1 and on Figure 3 and 4. The AES field sampling reports are attached.

Table 1. Soil Field VOCs, TPH, and Chloride Results
Johnston A 15 BGT Closure, Release Assessment and Final Excavation
March, April, and September 2016

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
NMOCD Action Level*			NE/100	100/100
S-1	3/18/16	4.5	NA	NA
SB-1	4/19/16	2	0.0	NA
		4	0.0	26.8
		6	0.0	<20.0
		8	0.0	25.2
		10	0.0	<20.0
		12	0.0	<20.0
SB-2	4/19/16	4	0.0	NA
		6	0.0	20.4
		8	0.0	NA
		10	0.0	NA
		12	0.0	<20.0
SB-3	4/19/16	4	0.0	NA
		8	0.0	<20.0
		10	0.0	NA
		12	0.0	<20.0
SB-4	4/19/16	4	0.0	NA
		6	0.0	<20.0
		8	0.0	NA
		10	0.0	NA
		12	0.0	<20.0
SC-1	9/12/16	0 to 5.5	0.0	31.3

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
NMOCD Action Level*			NE/100	100/100
SC-2	9/12/16	0 to 5.5	0.0	79.9
SC-3	9/12/16	0 to 5.5	0.1	23.5
SC-4	9/12/16	0 to 5.5	0.0	25.0
SC-5	9/12/16	5.5	10.4	78.4

NA – not analyzed

NE – not established

*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) and *NMAC 19.15.17.13E*.

Laboratory analysis of sample S-1 was used to determine the BTEX, TPH, and chloride concentrations for BGT closure sampling results. Total BTEX concentrations were reported at 477 mg/kg; TPH concentrations were 11,000 mg/kg; and the chloride concentration was less than 30 mg/kg.

Laboratory analyses for SC-1 through SC-5 were used to confirm field sampling results from the final excavation extents. Benzene, total BTEX and TPH-GRO concentrations were reported below laboratory detection limits in all samples (SC-1 through SC-5). Total TPH concentrations (as DRO and MRO) ranged from below the laboratory detection limit in SC-1 and SC-3 up to 224 mg/kg in SC-2. Results are summarized in Table 2 and included on Figure 4. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results
Benzene, Total BTEX, Total TPH (418.1), TPH (8015), and Chlorides
Johnston A 15 BGT Closure, Release Assessment, and Final Excavation
March and September 2016

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	Total TPH (418.1) (mg/kg)	TPH GRO (8015) (mg/kg)	TPH DRO (8015) (mg/kg)	TPH MRO (8015) (mg/kg)	Chlorides (mg/kg)
NMOCD Action Level*			0.2/10*	50	100/100*		100/100*		250/NE*
S-1	3/18/16	4.5	<2.4	477	11,000	NA	NA	NA	<30
SC-1	9/12/16	0 to 5.5	<0.024	<0.215	NA	<4.8	<10	<50	NA
SC-2	9/12/16	0 to 5.5	<0.023	<0.207	NA	<4.6	170	54	NA
SC-3	9/12/16	0 to 5.5	<0.023	<0.211	NA	<4.7	<9.6	<48	NA
SC-4	9/12/16	0 to 5.5	<0.024	<0.216	NA	<4.8	68	<48	NA

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	Total TPH (418.1) (mg/kg)	TPH GRO (8015) (mg/kg)	TPH DRO (8015) (mg/kg)	TPH MRO (8015) (mg/kg)	Chlorides (mg/kg)
NMOCD Action Level*			0.2/10*	50	100/100*		100/100*		250/NE*
SC-5	9/12/16	0 to 5.5	<0.024	<0.219	NA	<4.9	25	<50	NA

NA – not analyzed

NE – not established

*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) and NMAC 19.15.17.13E.

3.0 Conclusions and Recommendations

3.1 BGT Closure

On March 18, 2016, AES conducted a BGT closure and assessment of petroleum contaminated soils associated at the Johnston A 15. NMOCD action levels for BGT closures are specified in NMAC 19.15.17.13E. BGT closure sampling results for total BTEX and total TPH in March 2016 were above the NMOCD action levels, with S-1 at 477 mg/kg total BTEX and 11,000 mg/kg TPH. Laboratory results for chloride concentrations in S-1 were reported below the NMOCD action level of 250 mg/kg. Based on laboratory concentrations of total BTEX and total TPH, a release was confirmed at the Johnston A 15 location.

3.2 Release Confirmation

Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the site was assigned a rank of 30. In April 2016, release assessment field sampling results were all below the NMOCD action level of 100 ppm VOCs and 100 mg/kg TPH in SB-1 through SB-5. However, excavation of the release source area identified during the BGT assessment in March 2016 was recommended.

On September 12, 2016, final clearance of the excavation area was completed and measured approximately 11 feet by 11 feet by 5.5 feet in depth. Field sampling results of the excavation extents showed that VOC and field TPH concentrations were all below applicable NMOCD action levels for all four final walls and base of the excavation. Laboratory analytical results reported benzene, total BTEX and GRO concentrations in SC-1 through SC-5 as below NMOCD action levels. TPH concentrations as DRO and MRO were also reported below the applicable NMOCD action levels in all samples, except for SC-2, which had reported concentrations of 170 mg/kg DRO and 54 mg/kg MRO.

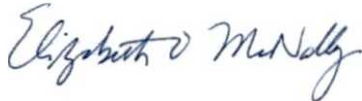
Based on the final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the Johnston A 15, VOCs, benzene, total BTEX, and TPH-GRO concentrations were below the applicable NMOCD action levels for the final sidewalls and base of the excavation, except for SC-2. However, since the residual concentrations in SC-2 are comprised of DRO and MRO components, which are less mobile in the subsurface, and the benzene, total BTEX, and TPH-GRO concentrations in SC-2 were all below laboratory detection limits, no further work is recommended.

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

Sincerely,



David Reese
Environmental Scientist

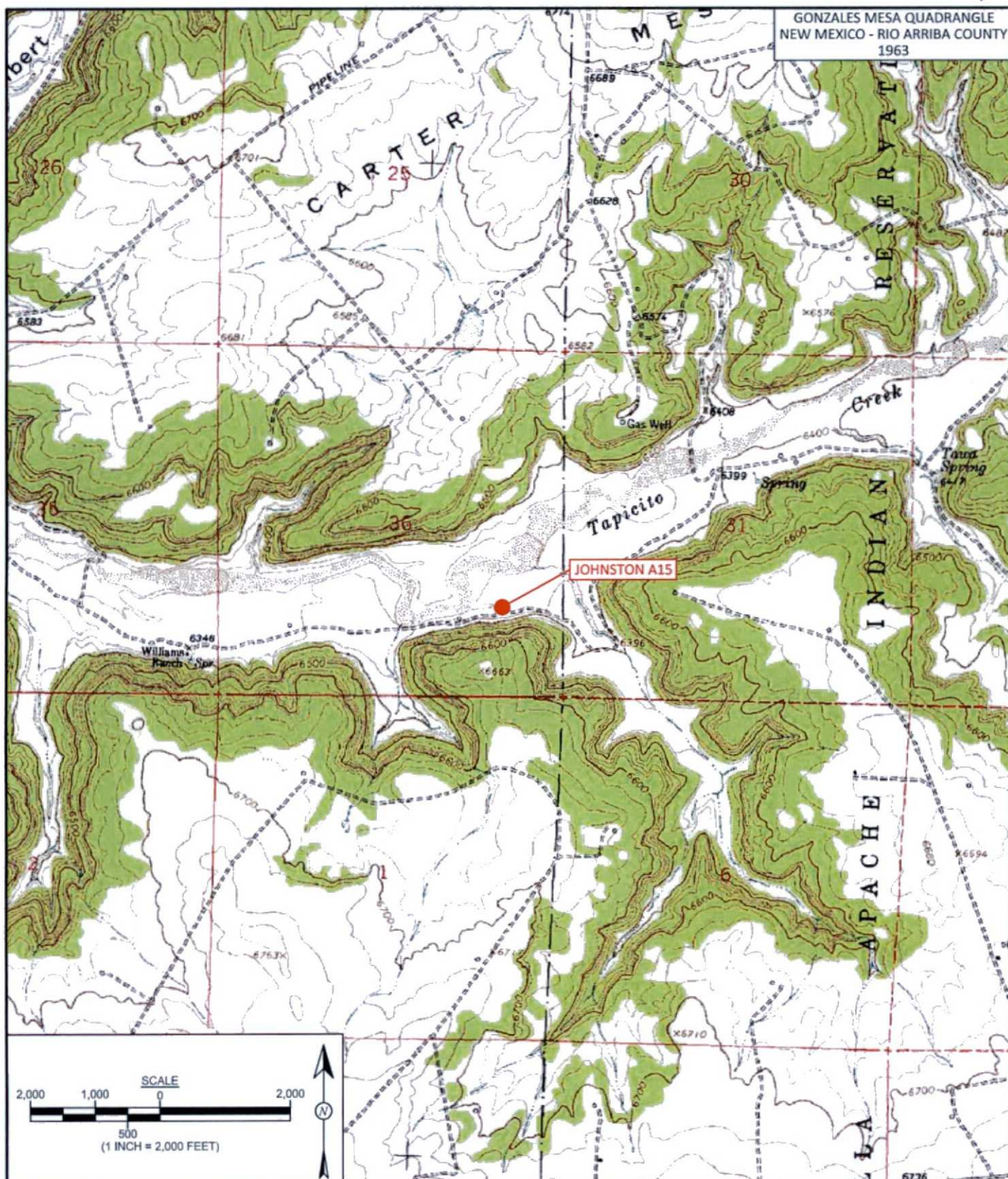


Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, BGT Assessment March 2016
- Figure 3. Release Assessment Sample Locations and Results, April 2016
- Figure 4. Final Excavation Sample Locations and Results, September 2016
- AES Field Sampling Report 041916
- AES Field Sampling Report 091216
- Hall Laboratory Analytical Report 1603A09
- Hall Laboratory Analytical Report 1609689

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DRAWN BY: C. Lameman	DATE DRAWN: April 28, 2016
REVISIONS BY: C. Lameman	DATE REVISED: April 28, 2016
CHECKED BY: E. Skyles	DATE CHECKED: April 28, 2016
APPROVED BY: E. McNally	DATE APPROVED: April 28, 2016

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips
JOHNSTON A15
NE¼ SE¼, SECTION 36, T26N, R6W
RIO ARriba COUNTY, NEW MEXICO
N36.44002, W107.41254

Laboratory Analytical Results					
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)
NMOCD ACTION LEVEL			10	50	100
S-1	3/18/16	4.5	<2.4	477	11,000
ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B AND 418.1.					



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DRAWN BY:
C. Lameman

DATE DRAWN:
April 28, 2016

REVISIONS BY:
S. Glasses

DATE REVISED:
November 21, 2016

CHECKED BY:
E. McNally

DATE CHECKED:
November 21, 2016

APPROVED BY:
E. McNally

DATE APPROVED:
November 21, 2016

FIGURE 2

**AERIAL SITE MAP
BGT ASSESSMENT MARCH 2016**
ConocoPhillips
JOHNSTON A15
NE¼ SE¼, SECTION 36, T26N, R6W
RIO ARriba COUNTY, NEW MEXICO
N36.44002, W107.41254

FIGURE 3

RELEASE ASSESSMENT SAMPLE LOCATIONS AND RESULTS APRIL 2016

ConocoPhillips
JOHNSTON A15
NE¼ SE¼, SECTION 36, T26N, R6W
RIO ARriba COUNTY, NEW MEXICO
N36.44002, W107.41254



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DRAWN BY:
C. Lameman

DATE DRAWN:
April 20, 2016

REVISIONS BY:
S. Glasses

DATE REVISED:
November 21, 2016

CHECKED BY:
E. McNally

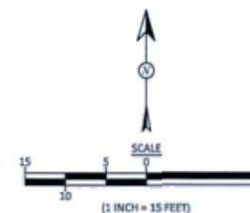
DATE CHECKED:
November 21, 2016

APPROVED BY:
E. McNally

DATE APPROVED:
November 21, 2016

LEGEND

● SOIL BORING LOCATIONS



Field Sampling Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
		NMOCD ACTION LEVEL	100	100
SB-1	4/19/16	2.0	0.0	NA
		4.0	0.0	26.8
		6.0	0.0	<20.0
		8.0	0.0	25.2
		10.0	0.0	<20.0
SB-2	4/19/16	12.0	0.0	<20.0
		4.0	0.0	NA
		6.0	0.0	20.4
		8.0	0.0	NA
SB-3	4/19/16	10.0	0.0	NA
		12.0	0.0	<20.0
		4.0	0.0	NA
		8.0	0.0	<20.0
SB-4	4/19/16	10.0	0.0	NA
		12.0	0.0	<20.0
		4.0	0.0	NA
		6.0	0.0	<20.0

NA - NOT ANALYZED

JOHNSTON A15 WELL MONUMENT

FORMER SEPARATOR

FORMER METER HOUSE

FORMER BELOW GRADE TANK
RELEASE LOCATION
N36.43997, W107.41248

SB-1

SB-3

SB-2

SB-4

ENTRANCE

ENTRANCE

FIGURE 4

**FINAL EXCAVATION SAMPLE
LOCATIONS AND RESULTS
SEPTEMBER 2016**
ConocoPhillips
JOHNSTON A15
NE¼ SE¼, SECTION 36, T26N, R6W
RIO ARriba COUNTY, NEW MEXICO
N36.44002, W107.41254



DRAWN BY: C. Lameman	DATE DRAWN: April 20, 2016
REVISIONS BY: S. Glasses	DATE REVISED: November 18, 2016
CHECKED BY: V. Giannola	DATE CHECKED: November 18, 2016
APPROVED BY: E. McNally	DATE APPROVED: November 18, 2016

LEGEND

● SOIL BORING LOCATIONS

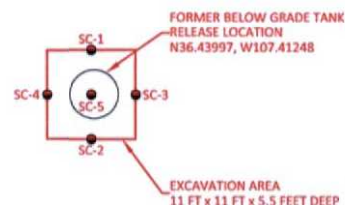
Field Sampling Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	100
SC-1	9/12/16	0 to 5.5	0.0	31.3
SC-2	9/12/16	0 to 5.5	0.0	79.9
SC-3	9/12/16	0 to 5.5	0.1	23.5
SC-4	9/12/16	0 to 5.5	0.0	25.0
SC-5	9/12/16	5.5	10.4	78.4

ALL SAMPLES WERE COMPOSITE SAMPLES.

JOHNSTON A15 WELL MONUMENT

FORMER SEPARATOR

FORMER METER HOUSE

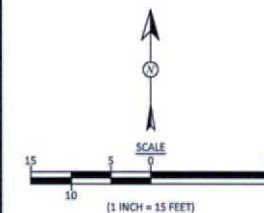


Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-MRO (mg/kg)
NMOCD ACTION LEVEL			10	50	100	
SC-1	9/12/16	0 to 5.5	<0.024	<0.215	<4.8	<10
SC-2	9/12/16	0 to 5.5	<0.023	<0.207	<4.6	170
SC-3	9/12/16	0 to 5.5	<0.023	<0.211	<4.7	<9.6
SC-4	9/12/16	0 to 5.5	<0.024	<0.216	<4.8	68
SC-5	9/12/16	5.5	<0.024	<0.219	<4.9	25

ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B AND 8015D.

ENTRANCE

ENTRANCE



AES Field Sampling Report

Animas Environmental Services, LLC



Client: ConocoPhillips

Project Location: Johnston A 15

Date: 4/19/2016

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 2'	4/19/2016	10:35	0.0	Not Analyzed for TPH				
SB-1 @ 4'	4/19/2016	10:41	0.0	26.8	12:37	20.0	1	CL
SB-1 @ 6'	4/19/2016	10:50	0.0	15.7	12:43	20.0	1	CL
SB-1 @ 8'	4/19/2016	10:55	0.0	25.2	12:48	20.0	1	CL
SB-1 @ 10'	4/19/2016	11:10	0.0	15.7	12:53	20.0	1	CL
SB-1 @ 12'	4/19/2016	11:19	0.0	10.9	12:58	20.0	1	CL
SB-2 @ 4'	4/19/2016	11:33	0.0	Not Analyzed for TPH				
SB-2 @ 6'	4/19/2016	11:38	0.0	20.4	13:55	20.0	1	CL
SB-2 @ 8'	4/19/2016	11:43	0.0	Not Analyzed for TPH				
SB-2 @ 10'	4/19/2016	11:49	0.0	Not Analyzed for TPH				
SB-2 @ 12'	4/19/2016	11:58	0.0	12.5	14:00	20.0	1	CL
SB-3 @ 4'	4/19/2016	12:20	0.0	Not Analyzed for TPH				
SB-3 @ 8'	4/19/2016	12:31	0.0	15.7	14:05	20.0	1	CL

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-3 @ 10'	4/19/2016	12:39	0.0	Not Analyzed for TPH				
SB-3 @ 12'	4/19/2016	12:44	0.0	12.5	14:09	20.0	1	CL
SB-4 @ 4'	4/19/2016	13:05	0.0	Not Analyzed for TPH				
SB-4 @ 6'	4/19/2016	13:10	0.0	14.1	14:14	20.0	1	CL
SB-4 @ 8'	4/19/2016	13:13	0.0	Not Analyzed for TPH				
SB-4 @ 10'	4/19/2016	13:20	0.0	Not Analyzed for TPH				
SB-4 @ 12'	4/19/2016	13:28	0.0	9.3	14:20	20.0	1	CL

DF Dilution Factor
 NA Not Analyzed
 PQL Practical Quantitation Limit
**Field TPH concentrations recorded may be below PQL.*

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:



AES Field Sampling Report

Animas Environmental Services, LLC



Client: ConocoPhillips

Project Location: Johnston A 15

Date: 9/12/2016

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	9/12/2016	12:32	North Wall	0.0	31.3	13:15	20.0	1	EMS
SC-2	9/12/2016	12:35	South Wall	0.0	79.9	13:18	20.0	1	EMS
SC-3	9/12/2016	12:29	East Wall	0.1	23.5	13:20	20.0	1	EMS
SC-4	9/12/2016	12:44	West Wall	0.0	25.0	13:22	20.0	1	EMS
SC-5	9/12/2016	12:41	Base	10.4	78.4	13:24	20.0	1	EMS

DF Dilution Factor

NA Not Analyzed

PQL Practical Quantitation Limit

*TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: *Smith Skyl*



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

March 30, 2016

Emilee Skyles
Animas Environmental
604 Pinon Street
Farmington, NM 87401
TEL: (505) 564-2281
FAX

RE: COPC JOHNSTON A 15

OrderNo.: 1603A09

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/19/2016 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. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1603A09

Date Reported: 3/30/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: S-1

Project: COPC JOHNSTON A 15

Collection Date: 3/18/2016 1:06:00 PM

Lab ID: 1603A09-001

Matrix: SOIL

Received Date: 3/19/2016 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	11000	1900		mg/Kg	100	3/23/2016	24342
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	ND	30		mg/Kg	20	3/26/2016 10:50:28 PM	24454
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	2.4		mg/Kg	100	3/22/2016 5:45:46 PM	24355
Toluene	20	4.7		mg/Kg	100	3/22/2016 5:45:46 PM	24355
Ethylbenzene	17	4.7		mg/Kg	100	3/22/2016 5:45:46 PM	24355
Xylenes, Total	440	9.5		mg/Kg	100	3/22/2016 5:45:46 PM	24355
Surr: 4-Bromofluorobenzene	126	80-120	S	%Rec	100	3/22/2016 5:45:46 PM	24355

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603A09

30-Mar-16

Client: Animas Environmental
Project: COPC JOHNSTON A 15

Sample ID	MB-24454	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	24454	RunNo:	33106					
Prep Date:	3/26/2016	Analysis Date:	3/26/2016	SeqNo:	1016110	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-24454	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	24454	RunNo:	33106					
Prep Date:	3/26/2016	Analysis Date:	3/26/2016	SeqNo:	1016111	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603A09

30-Mar-16

Client: Animas Environmental
Project: COPC JOHNSTON A 15

Sample ID	MB-24342	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	24342	RunNo:	32998					
Prep Date:	3/21/2016	Analysis Date:	3/23/2016	SeqNo:	1012149	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-24342	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	24342	RunNo:	32998					
Prep Date:	3/21/2016	Analysis Date:	3/23/2016	SeqNo:	1012150	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	109	83.4	127			

Sample ID	LCSD-24342	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	24342	RunNo:	32998					
Prep Date:	3/21/2016	Analysis Date:	3/23/2016	SeqNo:	1012151	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	105	83.4	127	3.98	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603A09

30-Mar-16

Client: Animas Environmental
Project: COPC JOHNSTON A 15

Sample ID	MB-24355		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	24355		RunNo:	32985			
Prep Date:	3/21/2016		Analysis Date:	3/22/2016		SeqNo:	1011677		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	LCS-24355		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	24355		RunNo:	32985			
Prep Date:	3/21/2016		Analysis Date:	3/22/2016		SeqNo:	1011678		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.9	75.3	123			
Toluene	0.89	0.050	1.000	0	88.8	80	124			
Ethylbenzene	0.92	0.050	1.000	0	91.7	82.8	121			
Xylenes, Total	2.7	0.10	3.000	0	90.6	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	1603A01-001AMS		SampType:	MS		TestCode:	EPA Method-8021B: Volatiles			
Client ID:	BatchQC		Batch ID:	24355		RunNo:	32985			
Prep Date:	3/21/2016		Analysis Date:	3/22/2016		SeqNo:	1011680		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.023	0.9381	0.01203	93.7	71.5	122			
Toluene	0.89	0.047	0.9381	0.01902	92.9	71.2	123			
Ethylbenzene	0.98	0.047	0.9381	0.04876	99.8	75.2	130			
Xylenes, Total	3.4	0.094	2.814	0.4616	106	72.4	131			
Surr: 4-Bromofluorobenzene	1.1		0.9381		120	80	120			S

Sample ID	1603A01-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	BatchQC		Batch ID:	24355		RunNo:	32985			
Prep Date:	3/21/2016		Analysis Date:	3/22/2016		SeqNo:	1011681		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9515	0.01203	93.4	71.5	122	1.07	20	
Toluene	0.91	0.048	0.9515	0.01902	93.7	71.2	123	2.25	20	
Ethylbenzene	0.99	0.048	0.9515	0.04876	99.3	75.2	130	0.854	20	
Xylenes, Total	3.4	0.095	2.854	0.4616	103	72.4	131	1.27	20	
Surr: 4-Bromofluorobenzene	1.2		0.9515		123	80	120	0	0	S

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



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: 1603A09

RcptNo: 1

Received by/date:

Logged By: Joe Archuleta

3/19/2016 11:00:00 AM

Completed By: Joe Archuleta

3/19/2016 12:08:38 PM

Reviewed By:

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted?
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by:

Special Handling (if applicable)

16. 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:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			



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

September 19, 2016

Emilee Skyles
Animas Environmental
604 Pinon Street
Farmington, NM 87401
TEL: (505) 564-2281
FAX

RE: COPC Johnston A 15

OrderNo.: 1609689

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/13/2016 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. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609689

Date Reported: 9/19/2016

CLIENT: Animas Environmental

Client Sample ID: SC-1

Project: COPC Johnston A 15

Collection Date: 9/12/2016 12:32:00 PM

Lab ID: 1609689-001

Matrix: SOIL

Received Date: 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/16/2016 3:33:59 PM	27519
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/16/2016 3:33:59 PM	27519
Surr: DNOP	112	70-130		%Rec	1	9/16/2016 3:33:59 PM	27519
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/15/2016 12:50:57 PM	27505
Surr: BFB	78.0	68.3-144		%Rec	1	9/15/2016 12:50:57 PM	27505
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/15/2016 12:50:57 PM	27505
Toluene	ND	0.048		mg/Kg	1	9/15/2016 12:50:57 PM	27505
Ethylbenzene	ND	0.048		mg/Kg	1	9/15/2016 12:50:57 PM	27505
Xylenes, Total	ND	0.095		mg/Kg	1	9/15/2016 12:50:57 PM	27505
Surr: 4-Bromofluorobenzene	90.5	80-120		%Rec	1	9/15/2016 12:50:57 PM	27505

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1609689

Date Reported: 9/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-2

Project: COPC Johnston A 15

Collection Date: 9/12/2016 12:35:00 PM

Lab ID: 1609689-002

Matrix: SOIL

Received Date: 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	170	9.7		mg/Kg	1	9/16/2016 3:55:34 PM	27519
Motor Oil Range Organics (MRO)	54	49		mg/Kg	1	9/16/2016 3:55:34 PM	27519
Surr: DNOP	111	70-130		%Rec	1	9/16/2016 3:55:34 PM	27519
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/15/2016 2:01:31 PM	27505
Surr: BFB	78.7	68.3-144		%Rec	1	9/15/2016 2:01:31 PM	27505
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	9/15/2016 2:01:31 PM	27505
Toluene	ND	0.046		mg/Kg	1	9/15/2016 2:01:31 PM	27505
Ethylbenzene	ND	0.046		mg/Kg	1	9/15/2016 2:01:31 PM	27505
Xylenes, Total	ND	0.092		mg/Kg	1	9/15/2016 2:01:31 PM	27505
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	9/15/2016 2:01:31 PM	27505

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1609689

Date Reported: 9/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-3

Project: COPC Johnston A 15

Collection Date: 9/12/2016 12:29:00 PM

Lab ID: 1609689-003

Matrix: SOIL

Received Date: 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/16/2016 4:17:11 PM	27519
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/16/2016 4:17:11 PM	27519
Surr: DNOP	111	70-130		%Rec	1	9/16/2016 4:17:11 PM	27519
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/15/2016 3:12:12 PM	27505
Surr: BFB	77.8	68.3-144		%Rec	1	9/15/2016 3:12:12 PM	27505
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	9/15/2016 3:12:12 PM	27505
Toluene	ND	0.047		mg/Kg	1	9/15/2016 3:12:12 PM	27505
Ethylbenzene	ND	0.047		mg/Kg	1	9/15/2016 3:12:12 PM	27505
Xylenes, Total	ND	0.094		mg/Kg	1	9/15/2016 3:12:12 PM	27505
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	9/15/2016 3:12:12 PM	27505

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1609689

Date Reported: 9/19/2016

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental**Client Sample ID:** SC-4**Project:** COPC Johnston A 15**Collection Date:** 9/12/2016 12:44:00 PM**Lab ID:** 1609689-004**Matrix:** SOIL**Received Date:** 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	68	9.6		mg/Kg	1	9/16/2016 4:38:48 PM	27519
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/16/2016 4:38:48 PM	27519
Surr: DNOP	114	70-130		%Rec	1	9/16/2016 4:38:48 PM	27519
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/15/2016 3:35:43 PM	27505
Surr: BFB	78.1	68.3-144		%Rec	1	9/15/2016 3:35:43 PM	27505
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/15/2016 3:35:43 PM	27505
Toluene	ND	0.048		mg/Kg	1	9/15/2016 3:35:43 PM	27505
Ethylbenzene	ND	0.048		mg/Kg	1	9/15/2016 3:35:43 PM	27505
Xylenes, Total	ND	0.096		mg/Kg	1	9/15/2016 3:35:43 PM	27505
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	9/15/2016 3:35:43 PM	27505

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1609689

Date Reported: 9/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-5

Project: COPC Johnston A 15

Collection Date: 9/12/2016 12:41:00 PM

Lab ID: 1609689-005

Matrix: SOIL

Received Date: 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	25	9.9		mg/Kg	1	9/16/2016 5:00:34 PM	27519
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/16/2016 5:00:34 PM	27519
Surr: DNOP	113	70-130		%Rec	1	9/16/2016 5:00:34 PM	27519
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/15/2016 3:59:12 PM	27505
Surr: BFB	77.8	68.3-144		%Rec	1	9/15/2016 3:59:12 PM	27505
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/15/2016 3:59:12 PM	27505
Toluene	ND	0.049		mg/Kg	1	9/15/2016 3:59:12 PM	27505
Ethylbenzene	ND	0.049		mg/Kg	1	9/15/2016 3:59:12 PM	27505
Xylenes, Total	ND	0.097		mg/Kg	1	9/15/2016 3:59:12 PM	27505
Surr: 4-Bromofluorobenzene	90.5	80-120		%Rec	1	9/15/2016 3:59:12 PM	27505

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609689

19-Sep-16

Client: Animas Environmental

Project: COPC Johnston A 15

Sample ID	LCS-27519	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	27519	RunNo:	37245					
Prep Date:	9/15/2016	Analysis Date:	9/16/2016	SeqNo:	1156026	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	62.6	124			
Surr: DNOP	5.1		5.000		101	70	130			

Sample ID	MB-27519	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	27519	RunNo:	37245					
Prep Date:	9/15/2016	Analysis Date:	9/16/2016	SeqNo:	1156027	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	10		10.00		102	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609689

19-Sep-16

Client: Animas Environmental

Project: COPC Johnston A 15

Sample ID	MB-27505	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	27505	RunNo:	37219					
Prep Date:	9/14/2016	Analysis Date:	9/15/2016	SeqNo:	1155555	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	800		1000		79.7	68.3	144			

Sample ID	LCS-27505	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	27505	RunNo:	37219					
Prep Date:	9/14/2016	Analysis Date:	9/15/2016	SeqNo:	1155556	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.7	80	120			
Surr: BFB	860		1000		86.2	68.3	144			

Sample ID	1609689-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-2	Batch ID:	27505	RunNo:	37219					
Prep Date:	9/14/2016	Analysis Date:	9/15/2016	SeqNo:	1155562	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	23.85	0	100	59.3	143			
Surr: BFB	870		954.2		91.6	68.3	144			

Sample ID	1609689-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-2	Batch ID:	27505	RunNo:	37219					
Prep Date:	9/14/2016	Analysis Date:	9/15/2016	SeqNo:	1155563	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.6	22.94	0	106	59.3	143	1.57	20	
Surr: BFB	820		917.4		89.7	68.3	144	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609689

19-Sep-16

Client: Animas Environmental

Project: COPC Johnston A 15

Sample ID	MB-27505		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 27505		RunNo: 37219					
Prep Date:	9/14/2016		Analysis Date: 9/15/2016		SeqNo: 1155569		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.0	80	120			

Sample ID	LCS-27505		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 27505		RunNo: 37219					
Prep Date:	9/14/2016		Analysis Date: 9/15/2016		SeqNo: 1155570		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.6	75.3	123			
Toluene	0.99	0.050	1.000	0	99.2	80	124			
Ethylbenzene	1.0	0.050	1.000	0	103	82.8	121			
Xylenes, Total	3.1	0.10	3.000	0	102	83.9	122			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.6	80	120			

Sample ID	1609689-001AMS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	SC-1		Batch ID: 27505		RunNo: 37219					
Prep Date:	9/14/2016		Analysis Date: 9/15/2016		SeqNo: 1155572		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9756	0	105	71.5	122			
Toluene	1.1	0.049	0.9756	0	109	71.2	123			
Ethylbenzene	1.1	0.049	0.9756	0	112	75.2	130			
Xylenes, Total	3.3	0.098	2.927	0	111	72.4	131			
Surr: 4-Bromofluorobenzene	0.94		0.9756		96.0	80	120			

Sample ID	1609689-001AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles					
Client ID:	SC-1		Batch ID: 27505		RunNo: 37219					
Prep Date:	9/14/2016		Analysis Date: 9/15/2016		SeqNo: 1155573		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9524	0	105	71.5	122	2.38	20	
Toluene	1.0	0.048	0.9524	0	108	71.2	123	3.53	20	
Ethylbenzene	1.1	0.048	0.9524	0	111	75.2	130	3.36	20	
Xylenes, Total	3.1	0.095	2.857	0	109	72.4	131	4.93	20	
Surr: 4-Bromofluorobenzene	0.91		0.9524		96.0	80	120	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
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| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



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: 1609689

RcptNo: 1

Received by/date:

AG 09/13/16

Logged By: Ashley Gallegos

9/13/2016 8:15:00 AM

AG

Completed By: Ashley Gallegos

9/13/2016 5:59:29 PM

AG

Reviewed By:

AG 09/14/16

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. 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)

16. 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: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Animas Environmental Services, LLC		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush
Mailing Address: 604 W Pinon St. Farmington, NM 87401		Project Name: COPC JOHNSTON A #15
Phone #: 505-564-2281		Project #:
Email or Fax#: eskyles@animasenvironmental.com		Project Manager: E. Skyles
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		Sampler: E. Skyles
Accreditation: <input type="checkbox"/> NELAP <input type="checkbox"/> Other		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> EDD (Type)		Sample Temperature: 3

☒ Standard ☐ Rush

Project Name:

Project Name: COPC JOHNSTON A#15

Project #:

Project Manager:

E. Skyles

Sampler: E. Skyles

On Ice ☒ Yes ☐ No

Sample Temperature: 30 °C

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks: Bill to Conoco Phillips WO # 21340555 Supervisor: Nelson USERID: MCINNSK Area: 9 Ordered by: Lisa Hunter
9/12/16	1152	Silsky L	Christine Wall	9/12/16	1152	
Date:	Time:	Relinquished by:	Received by:	Date	Time	
9/12/16	1848	Christine Wall	Concepcion Concha	09/13/16	0815	



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

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.