

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, a Wholly Owned Subsidiary of ConocoPhillips Company	Contact Lisa Hunter
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 258-1607
Facility Name: San Juan 28-7 220M	Facility Type: Gas well

Surface Owner BLM	Mineral Owner FED	API No. 3003925398
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LOCATION OF RELEASE

Unit Letter F	Section 22	Township 28	Range 7	Feet from the 1490	North/South Line North	Feet from the 1800	East/West Line West	County Rio Arriba
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Latitude **36.64959** Longitude **-107.56384**

NATURE OF RELEASE

Type of Release Hydrocarbon	Volume of Release Unknown	Volume Recovered 700 c/yds
Source of Release BGT	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 12-07-2016

Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A
------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------

By Whom? N/A	Date and Hour N/A
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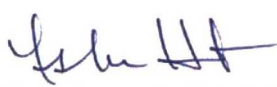

Was a Watercourse Reached? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A
----------------------------------------------------------------------------------------	---------------------------------------------------------

If a Watercourse was Impacted, Describe Fully.* N/A	OIL CONS. DIV DIST. 3 JUN 15 2017
---------------------------------------------------------------	----------------------------------------------------

Describe Cause of Problem and Remedial Action Taken.* Historic contamination was encountered after soil sample was taken on December 7, 2016 during a BGT Resample Project.

Describe Area Affected and Cleanup Action Taken.* Delineation of the BGT area on 12-7-16 indicates a 12'x18' x 5' area that will be excavated to at or below action levels. Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 36' x 50' x 12' in depth and 700c/yds of soil was transported to IEI land farm. Analytical results were below the regulatory standards on the walls and TPH 945ppm on the base. NMOCD approved request to spray potassium permanganate and back fill – no further action required. The soil sampling report is attached for review. Risk Rank: 10

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Lisa Hunter	Approved by Environmental Specialist: 	
Title: Field Environmental Specialist	Approval Date: 6/22/2017	Expiration Date:
E-mail Address: Lisa.Hunter@cop.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 06-14-17 Phone: 505-258-1607		

* Attach Additional Sheets If Necessary

NF 1702340326

Fields, Vanessa, EMNRD

From: Spearman, Bobby E <Robert.E.Spearman@conocophillips.com>
Sent: Thursday, June 1, 2017 10:17 AM
To: Fields, Vanessa, EMNRD
Subject: Re: [EXTERNAL]RE: [EXTERNAL]Preliminary Laboratory Analytical Results for San Juan 28-7 Unit 220M

Thank you Vanessa

Bobby

From: Fields, Vanessa, EMNRD <vanessa.fields@state.nm.us>
Sent: Thursday, June 1, 2017 10:09 AM
Subject: [EXTERNAL]RE: [EXTERNAL]Preliminary Laboratory Analytical Results for San Juan 28-7 Unit 220M
To: Spearman, Bobby E <robert.e.spearman@conocophillips.com>

Good morning Bobby,

Based on the sitting criteria and a review of groundwater the OCD grants approval to close at the following levels.
Benzene of 10 mg/kg, BTEX of 50 mg/kg, and TPH of 1,000 mg/kg. Please apply potassium to the base of the excavation.

Please include this e-mail in your final C-141.

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

From: Spearman, Bobby E [<mailto:Robert.E.Spearman@conocophillips.com>]
Sent: Thursday, June 1, 2017 8:37 AM
To: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Subject: Re: [EXTERNAL]Preliminary Laboratory Analytical Results for San Juan 28-7 Unit 220M

Vanessa

Even though the BGT scheduled to be closed to the strictest standard I would like to request that COP be allowed to spray the bottom of the excavation with promagante and close the excavation based on a site ranking of 10 and Action

levels for Benzene iof 10 mg/kg, BTEX iof 50 mg/kg, and TPH of 1,000 mg/kg. Coupled with hard sandstone making excavation extremely dangerous difficult

Thanks

Bobby

From: Spearman, Bobby E <robert.e.spearman@conocophillips.com>

Sent: Thursday, June 1, 2017 7:05 AM

Subject: Fwd: [EXTERNAL]Preliminary Laboratory Analytical Results for San Juan 28-7 Unit 220M

To: Vanessa Fields <vanessa.fields@state.nm.us>

Vanessa

Attached are the lab results from the 28-7 220M.

It came out clean on the walls but the base is still a little high but we are at about 10' down. And have run into hard sandstone. I like to request that we be able to spray the bottom w promagenate and close the pit.

Please let me know.

Thanks

Bobby

320-3045

From: Corwin Lameman <clameman@animasenvironmental.com>

Sent: Wednesday, May 31, 2017 2:24:00 PM

To: Spearman, Bobby E

Cc: Elizabeth McNally

Subject: [EXTERNAL]Preliminary Laboratory Analytical Results for San Juan 28-7 Unit 220M

Afternoon Bobby,

Please find attached the rush laboratory analytical results for the San Juan 28-7 Unit 220M excavation clearance. The results are for the all soil composite samples from May 30, 2017. All samples reported benzene and total BTEX concentrations below the NMOCD action levels of 10 mg/kg and 50 mg/kg. Laboratory analytical results reported all TPH concentrations of below the NMOCD action level of 100 mg/kg, except SC-5. The TPH concentrations for SC-5 is 945 mg/kg, above the NMOCD action level. If you have any questions please let us know.

Corwin Lameman

Staff Geologist/ Draft Technician

(Cell) 505.486.4062

Animas Environmental Services, LLC.

www.animasenvrionmental.com

604 W Pinon St, Farmington NM (Tel) 505.564.2281

1911 N Main St, Ste 206, Durango CO (Tel) 970.403.3084



June 5, 2017

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
San Juan 28-7 Unit 220M
Rio Arriba County, New Mexico**

Dear Ms. Hunter and Mr. Spearman:

On October 24 and December 7, 2016, and May 30, 2017, 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 (COP) San Juan 28-7 Unit 220M located in Rio Arriba County, New Mexico. An initial release assessment was completed on December 7, 2016, and the final excavation was completed by COP contractors prior to AES' arrival on location on May 30, 2017.

1.0 Site Information

1.1 Location

Site Name – San Juan 28-7 Unit 220M

Legal Description – SE¼ NW¼, Section 22, T28N, R7W, Rio Arriba County, New Mexico

Well Latitude/Longitude – N36.64989 and W107.56391, respectively

BGT Latitude/Longitude – N36.64959 and W107.56384, respectively

Land Jurisdiction – Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, 2016 and 2017

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

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

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) and New Mexico Office of the State Engineer (NMOSE) databases were reviewed, and a site-specific hydrogeology report dated December 2008 reported the depth to groundwater at 320 feet below ground surface (bgs). However, at the request of the NMOCD, the most stringent sample result criteria were applied to this BGT. Note these criteria normally apply to sites with a depth to groundwater of 0 to 50 feet.

1.3 Assessment

AES was initially contacted by Robert Spearman of COP on October 12, 2016, and on October 24, 2016, Corwin Lameman of AES traveled to the location. Soil sampling consisted of collection of one 5-point soil sample (BGT S-1) composited from four perimeter locations and one center location from below the BGT liner at the BGT footprint. Soil sample results for BGT S-1 were above the action levels, and a release was confirmed.

On December 7, 2016, AES personnel returned to the location to complete the release assessment field work. The assessment included collection and field sampling of eight soil samples from seven soil borings (SB-1 through SB-7). Based on field sampling results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On May 30, 2017, AES returned to the location to collect confirmation soil samples of the excavation extents. The field sampling activities included collection of five confirmation soil samples (SC-1 through SC-5) from the walls and base of the excavation. The area of the final excavation measured approximately 36 feet by 50 feet by 12 feet in depth. Note that the depth of the excavation was limited due to a confining sandstone unit around 12 feet bgs. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

2.1 Field Sampling

2.1.1 Volatile Organic Compounds

Field screening for volatile organic compound (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 total petroleum hydrocarbons (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' *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.1.3 Chlorides

Soil sample BGT S-1 was 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 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. Soil sample BGT S-1 was laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per USEPA Method 8021B;
- TPH per USEPA Method 418.1;
- TPH as gasoline range, diesel range, and motor oil range organics (GRO/DRO/MRO) per USEPA Method 8015; and
- Chlorides per USEPA Method 300.0.

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

- BTEX per USEPA Method 8021B; and
- TPH as gasoline range, diesel range, and motor oil range organics (GRO/DRO/MRO) per USEPA Method 8015.

2.3 Field and Laboratory Analytical Results

Field sampling results and laboratory analytical results are summarized in Tables 1 and 2, respectively, and on Figures 3 and 4. The AES Field Sampling Reports and laboratory analytical reports are attached.

Table 1. Soil Field VOCs and TPH Results
San Juan 28-7 Unit 220M Release Assessment and Final Excavation
December 2016 and May 2017

Sample ID	Date Sampled	Depth below BGT (ft)	VOCs OVM Reading (ppm)	Field TPH (418.1) (mg/kg)
<i>NMOCD Action Level</i>			--*	100*
SB-1	12/7/16	2.75	26.1	<20.0
SB-2	12/7/16	3.0	0.1	<20.0
SB-3	12/7/16	3.5	3.4	539
		5.5	198	470
SB-4	12/7/16	3.75	2.7	<20.0
SB-5	12/7/16	3.5	578	11,120
SB-6	12/7/16	3.0	0.2	<20.0
SB-7	12/7/16	2.75	1,278	24,900
SC-1	5/30/17	0 to 12	204	121
SC-2	5/30/17	0 to 12	51.2	107
SC-3	5/30/17	0 to 12	0.8	58.4
SC-4	5/30/17	0 to 12	30.1	145
SC-5	5/30/17	12	869	1,190

*Action level determined by NMAC 19.15.17.13 Table 1

Table 2. Soil Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides
San Juan 28-7 Unit 220M BGT Closure, Release Assessment and Final Excavation
October 2016 through May 2017

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH 418.1 (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	Chlorides (mg/kg)
		<i>NMOCD Action Level</i>	10*	50*	100*		100*		600*
BGT S-1	10/24/16	3	<0.048	0.28	9,800	130	4,200	2,500	<30
SB-3	12/7/16	5.5	<0.025	<0.225	1,100	43	370	290	75
SC-1	5/30/17	0 to 12	<0.017	<0.150	NA	<3.3	20	<48	NA
SC-2	5/30/17	0 to 12	<0.016	<0.144	NA	<3.2	11	<49	NA
SC-3	5/30/17	0 to 12	<0.016	<0.144	NA	<3.2	<9.5	<47	NA
SC-4	5/30/17	0 to 12	<0.076	<0.686	NA	<15	63	<50	NA
SC-5	5/30/17	12	<0.081	1.6	NA	55	670	220	NA

NA – not analyzed

*Action level determined by *NMAC 19.15.17.13 Table 1*

3.0 Conclusions and Recommendations

3.1 BGT Closure

On October 24, 2016, AES conducted BGT closure sampling at the location. NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13 Table 1, and for this location the most stringent action levels were utilized per NMOCD. BGT closure sampling laboratory analytical results were below the NMOCD action levels of 10 mg/kg for benzene and 50 mg/kg for total BTEX. In contrast, results exceeded the NMOCD action level of 100 mg/kg for TPH, with BGT S-1 reporting laboratory concentrations of 9,800 mg/kg (TPH 418.1) and 6,830 mg/kg (TPH as GRO/DRO/MRO). Chloride concentrations in S BGT SC-1 were reported below the NMOCD action level of 600 mg/kg, with less than 30 mg/kg. Based on laboratory concentrations, a release was confirmed at the former BGT at the San Juan 28-7 Unit 220M location.

3.2 Release Assessment

On December 7, 2016, AES completed a release assessment at the location. Release assessment field sampling results above the NMOCD action level of 100 mg/kg TPH were reported in SB-3, SB-5, and SB-7. The highest field TPH concentration was reported in SB-7, with a concentration of 24,900 mg/kg TPH.

Release assessment sampling laboratory analytical results for SB-3 were below the NMOCD action levels for benzene and total BTEX. However, results exceeded the NMOCD action level for TPH, with SB-3 reporting laboratory concentrations of 1,100 mg/kg (TPH 418.1) and 703 mg/kg (TPH as GRO/DRO/MRO). Chloride concentrations in SB-3 were reported below the NMOCD action level of 600 mg/kg, at 75 mg/kg. Excavation of the release area was recommended.

3.3 *Excavation Clearance*

On May 30, 2017, final clearance of the excavation area was completed. Field sampling results of the excavation extents showed field TPH concentrations exceeded the applicable NMOCD action level of 100 mg/kg for SC-1 (north wall), SC-2 (south wall), SC-4 (west wall), and SC-5 (base). The highest field TPH concentration was reported in SC-5, with a concentration of 1,190 mg/kg TPH. Laboratory analytical results reported TPH concentrations (as GRO/DRO/MRO) in all samples as below NMOCD action levels except in SC-5 (945 mg/kg). Additionally, laboratory analytical results reported benzene and total BTEX concentrations in all samples as below NMOCD action levels.

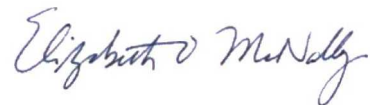
Based on the final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the San Juan 28-7 Unit 220M, benzene and total BTEX were below the applicable NMOCD action levels for the final base and sidewalls. However, TPH exceeded the NMOCD action level at SC-5, and NMOCD granted approval to spray a potassium permanganate solution and then backfill the excavation. 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 J. Reese
Environmental Scientist



Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, 2016 and 2017
- Figure 3. BGT Closure and Release Assessment Sample Locations and Results,
October and December 2016
- Figure 4. Final Excavation Sample Locations and Results, May 2017
- AES Field Sampling Report 120716
- AES Field Sampling Report 053017
- Hall Laboratory Analytical Report 1610C13
- Hall Laboratory Analytical Report 1612431
- Hall Laboratory Analytical Report 1705E88

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Projects\ConocoPhillips\SJ 28-7 Unit 220M\San Juan 28-7 Unit 220M BGT Closure, Release and Excavation
Report 060517.docx

Figures



SAN JUAN 28-7 UNIT 220M

2,000 1,000 0 2,000
500
SCALE
(1 INCH = 2,000 FEET)



FIGURE 1



**animas
environmental
services**

Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY:

S. Glasses

DATE DRAWN:

December 16, 2016

REVISIONS BY:

C. Lameman

DATE REVISED:

June 1, 2017

CHECKED BY:

D. Reese

DATE CHECKED:

June 1, 2017

APPROVED BY:

E. McNally

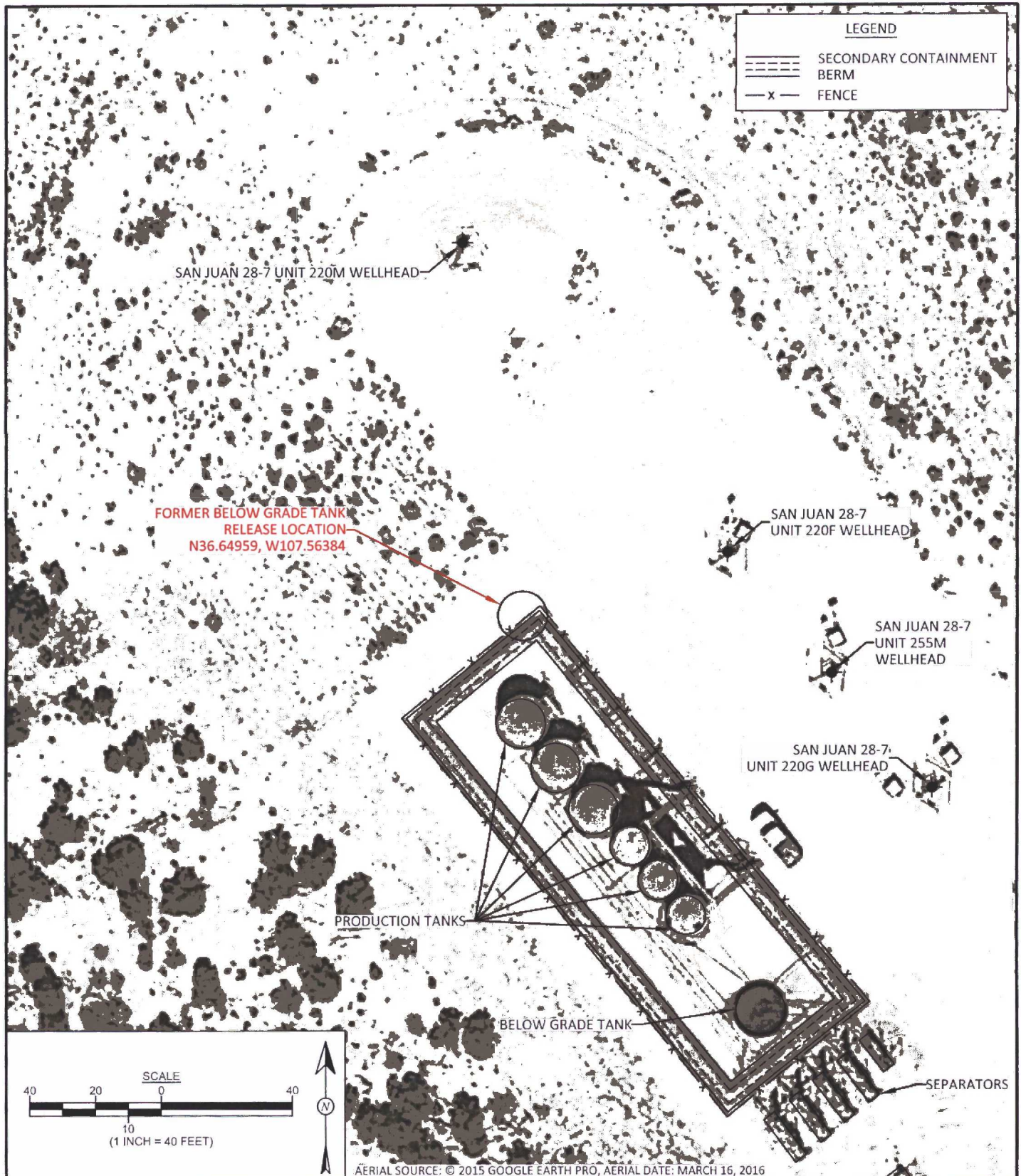
DATE APPROVED:

June 1, 2017

TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips
SAN JUAN 28-7 UNIT 220M
SE¼ NW¼, SECTION 22, T28N, R7W
RIO ARriba COUNTY, NEW MEXICO
N36.64989, W107.56391

LEGEND	
	SECONDARY CONTAINMENT BERM
	FENCE



AERIAL SOURCE: © 2015 GOOGLE EARTH PRO, AERIAL DATE: MARCH 16, 2016

FIGURE 2

AERIAL SITE MAP 2016 AND 2017

ConocoPhillips
SAN JUAN 28-7 UNIT 220M
SE¼ NW¼, SECTION 22, T28N, R7W
RIO ARriba COUNTY, NEW MEXICO
N36.64989, W107.56391



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DRAWN BY:

S. Glasses

DATE DRAWN:

December 16, 2016

REVISIONS BY:

C. Lameman

DATE REVISED:

June 1, 2017

CHECKED BY:

D. Reese

DATE CHECKED:

June 1, 2017

APPROVED BY:

E. McNally

DATE APPROVED:

June 1, 2017

Field Sampling Results				
Sample ID	Date	Depth (ft)	PID-OVM (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL				100
SB-1	12/7/16	2.75	26.1	<20.0
SB-2	12/7/16	3.0	0.1	<20.0
SB-3	12/7/16	3.5	3.4	539
SB-4	12/7/16	5.5	198	470
SB-5	12/7/16	3.75	2.7	<20.0
SB-6	12/7/16	3.5	578	11,190
SB-7	12/7/16	3.0	0.2	<20.0
SB-8	12/7/16	2.75	1,278	24,900

Laboratory Analytical Results									
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH 418.1 (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	TPH - MRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL			10	50	100	100	100	600	
BGT S-1	10/24/16	3	<0.048	0.28	9,800	130	4,200	2,500	<30
SB-3	12/7/16	5.5	<0.025	<0.225	1,100	43	370	290	75

ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B, 418.1, 8015D AND 300.0

FIGURE 3

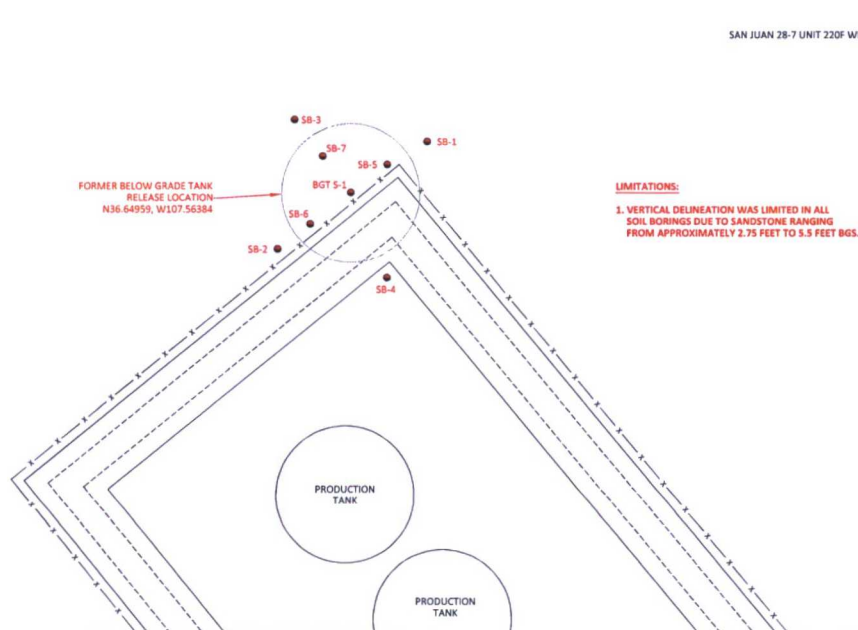
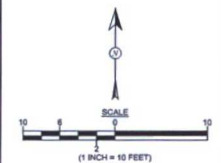
**BGT CLOSURE AND RELEASE
ASSESSMENT SAMPLE
LOCATIONS AND RESULTS
OCTOBER AND DECEMBER 2016**
ConocoPhillips
SAN JUAN 28-7 UNIT 220M
SE¼ NW¼, SECTION 22, T28N, R7W
RIO ARriba COUNTY, NEW MEXICO
N36.64989, W107.56391



DRAWN BY: S. Glasses	DATE DRAWN: December 16, 2016
REVISIONS BY: C. Lameman	DATE REVISED: May 31, 2017
CHECKED BY: D. Reese	DATE CHECKED: May 31, 2017
APPROVED BY: E. McNally	DATE APPROVED: May 31, 2017

LEGEND

- SOIL BORING LOCATIONS
- SECONDARY CONTAINMENT BERM
- x — FENCE



Field Sampling Results				
Sample ID	Date	Depth (ft)	PID-OVM (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			--	100
SC-1	5/30/17	0 to 12	204	121
SC-2	5/30/17	0 to 12	51.2	107
SC-3	5/30/17	0 to 12	0.8	58.4
SC-4	5/30/17	0 to 12	30.1	145
SC-5	5/30/17	12	869	1,190

ALL SAMPLES WERE COMPOSITE SAMPLES.

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)
NMOCD ACTION LEVEL			10	50	300		
SC-1	5/30/17	0 to 12	<0.017	<0.150	<3.3	20	<48
SC-2	5/30/17	0 to 12	<0.016	<0.144	<3.2	11	<49
SC-3	5/30/17	0 to 12	<0.016	<0.144	<3.2	<9.5	<47
SC-4	5/30/17	0 to 12	<0.076	<0.686	<15	63	<50
SC-5	5/30/17	12	<0.081	1.6	55	670	220

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

FINAL EXCAVATION AREA
36 FT x 50 FT x 12 FT DEEP ON SANDSTONE

SC-1

SC-3

SAN JUAN 28-7 UNIT 220F WELLHEAD

SC-5

SC-4

FORMER BELOW GRADE TANK
RELEASE LOCATION—
N36 64959, W107 56384

PRODUCTION TANK

PRODUCTION TANK

NOTES

1. NMOCD APPROVED APPLICATION OF POTASSIUM PERMANGANATE SOLUTION AND BACKFILL OF EXCAVATION.

FIGURE 4

FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS MAY 2017

ConocoPhillips
SAN JUAN 28-7 UNIT 220F
SE1/4 NW1/4, SECTION 22, T28N, R7W
RIO ARriba COUNTY, NEW MEXICO
N36 64989, W107 56391

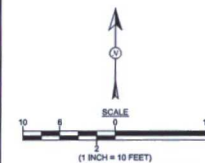


animas environmental services
Farrington, NM • Durango, CO
animasenvironmental.com

DRAWN BY: C. Lammeman	DATE DRAWN: May 31, 2017
REVISIONS BY: C. Lammeman	DATE REVISED: June 1, 2017
CHECKED BY: D. Reese	DATE CHECKED: June 1, 2017
APPROVED BY: E. McNally	DATE APPROVED: June 1, 2017

LEGEND

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- x — FENCE



Sampling Reports

Field Screening Release Assessment Field Report

Date: 12-6-16

Client: Conoco Phillips AES Personnel: S. Glasses
 Well or Lease Name: San Juan 28-7 Unit 220H C. Lamenan
 CoP Onsite Supervisor: C. Lamenan Beginning mileage: 52799
 Site Arrival Time: 1010 Ending Mileage: 52911
 Site Departure Time: 1535 Release Source: Historic BGT
 Well Head (GPS): _____
 Land Jurisdiction: BLM Release Location (GPS): 36.04959, -107.56384
 County/State: Rio Arriba / NM
 Site Rank: 10

Billing Info: _____
 WO #: _____
 Supervisor: _____
 USER: _____
 Area: _____
 Activity Code: _____
 Ordered by: _____

Equipment in place: 6 Production Tanks, 1 BGT, 5 Separators
4 Meter Runs, 5 Well heads
 Photos taken: _____

Buck Machine #	1		
Concentration	50 mg/kg	100 mg/kg	500 mg/kg
Calibration ABS Values	0.078	0.136	0.673

Project Details: BGT Regulatory Closure Sampling when into a release assessment.

Site Sketch (DOES NOT REPLACE SITE MAP) and Current Excavation Dimensions:

Initial Recommendations:

Horizontal (Cross-Section View):

See Attached Page

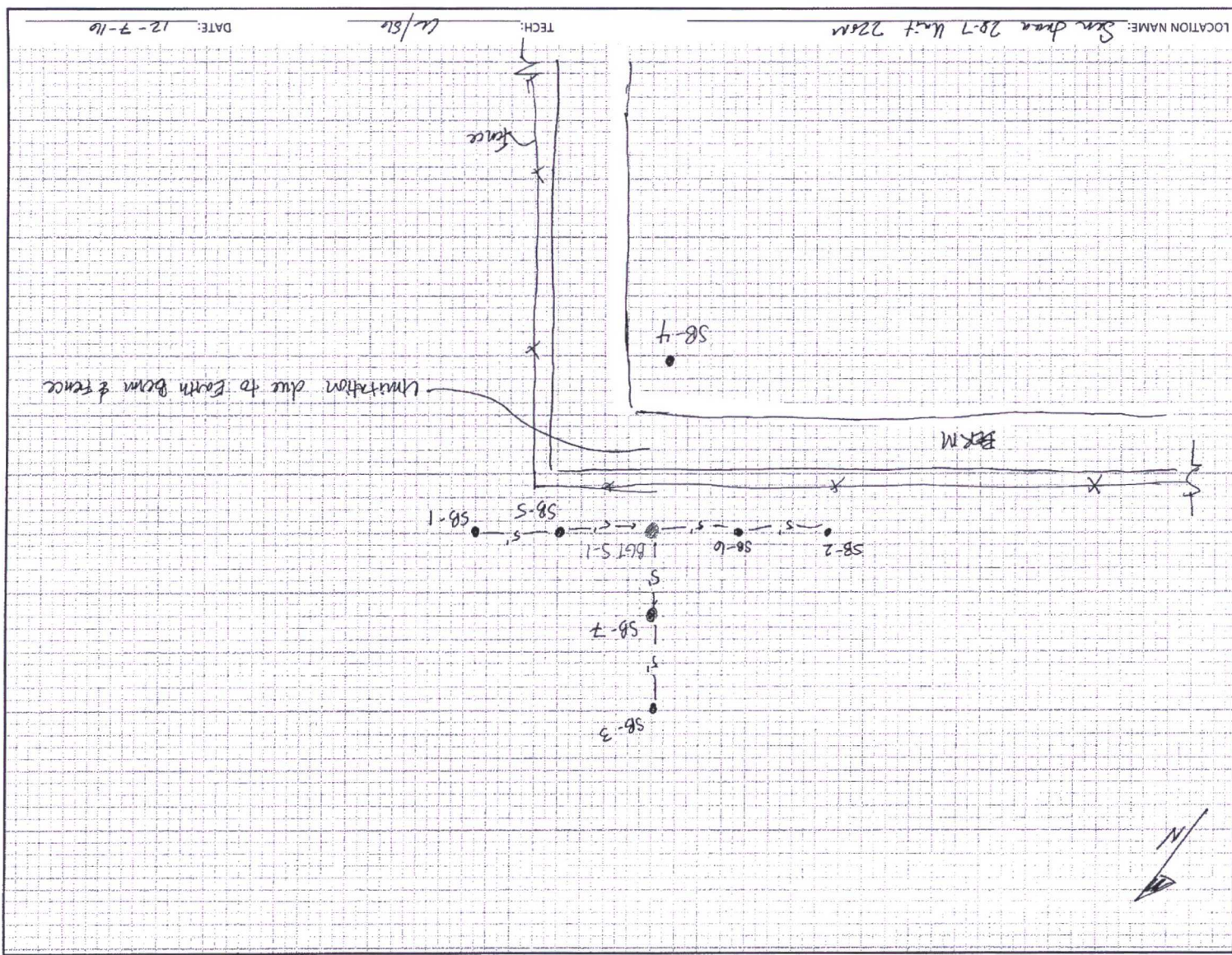
Limitations: Sandstone & Shale ranging from 2.75 to 5.5'

Vertical (Plan View):

Release Assessment Field Form 060215.xlsx

LOCATION NAME: San Juan 28-7 Unit 225M

TECH: CL/SU DATE: 12-7-16



100 ft



AES personnel: C. Lameau

1/43 - Called Bobby w/ results. Sent to
Send in all labs - same day TAT

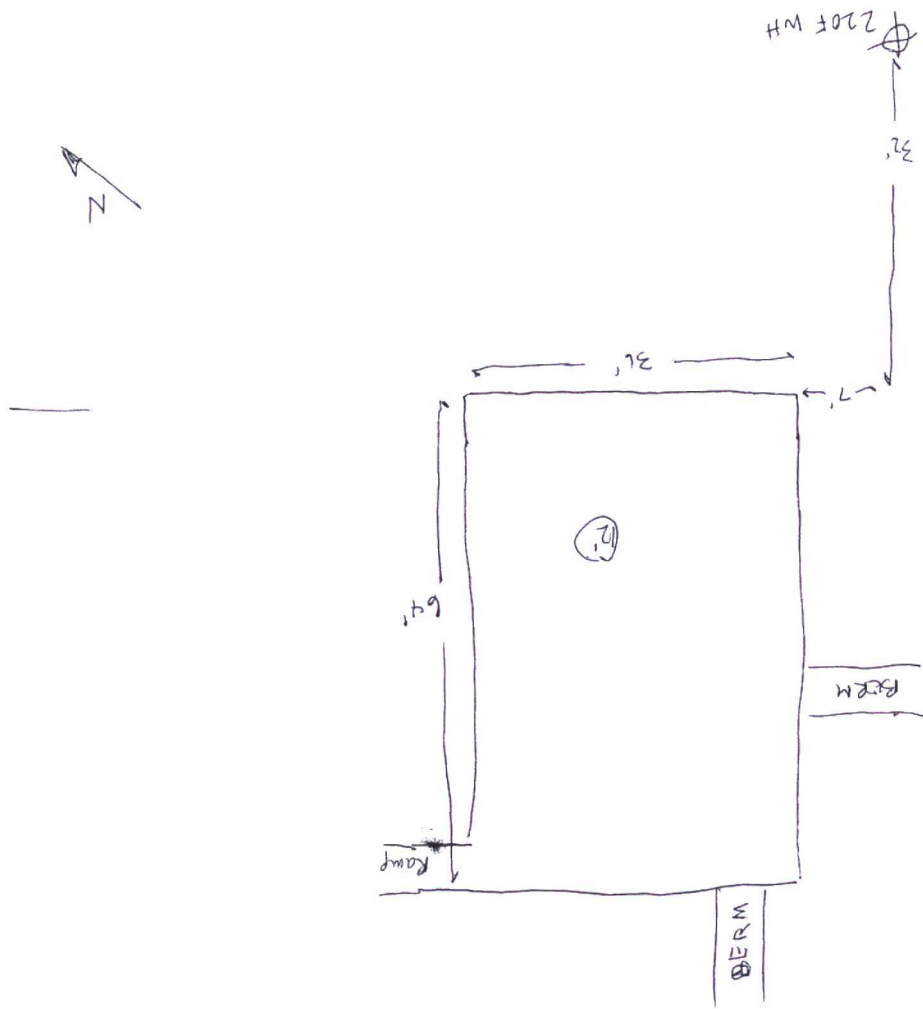
[illegible]

*Include Benzene readings in the notes section initially and transfer to Limitations if Benzene is a problem on the location.

Animas Environmental Services, LLC
604 W Pinon St. Farmington, NM 87401 office # 505-564-2281
1911 N Main, Ste 280, Durango, CO 81301

3 of 3

Release Assessment Field Form 112114



Analytical Reports



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

November 03, 2016

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

RE: COPC San Juan 28-7 UNIT 220M

OrderNo.: 1610C13

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/25/2016 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1610C13

Date Reported: 11/3/2016

CLIENT: Animas Environmental

Client Sample ID: BGT S-1

Project: COPC San Juan 28-7 UNIT 220M

Collection Date: 10/24/2016 12:40:00 PM

Lab ID: 1610C13-001

Matrix: SOIL

Received Date: 10/25/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: MAB
Petroleum Hydrocarbons, TR	9800	200		mg/Kg	10	11/1/2016 12:00:00 PM	28370
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	10/31/2016 3:02:26 PM	28379
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	4200	98		mg/Kg	10	10/31/2016 11:34:14 AM	28349
Motor Oil Range Organics (MRO)	2500	490		mg/Kg	10	10/31/2016 11:34:14 AM	28349
Surr: DNOP	0	70-130	S	%Rec	10	10/31/2016 11:34:14 AM	28349
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	130	9.7		mg/Kg	2	10/27/2016 12:24:29 PM	28292
Surr: BFB	636	68.3-144	S	%Rec	2	10/27/2016 12:24:29 PM	28292
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	2	10/27/2016 12:24:29 PM	28292
Toluene	ND	0.097		mg/Kg	2	10/27/2016 12:24:29 PM	28292
Ethylbenzene	ND	0.097		mg/Kg	2	10/27/2016 12:24:29 PM	28292
Xylenes, Total	0.28	0.19		mg/Kg	2	10/27/2016 12:24:29 PM	28292
Surr: 4-Bromofluorobenzene	135	80-120	S	%Rec	2	10/27/2016 12:24:29 PM	28292

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#: 1610C13

03-Nov-16

Client: Animas Environmental
Project: COPC San Juan 28-7 UNIT 220M

Sample ID	MB-28379	SampType	MBLK	TestCode	EPA Method 300.0: Anions					
Client ID	PBS	Batch ID	28379	RunNo	38358					
Prep Date	10/31/2016	Analysis Date	10/31/2016	SeqNo	1197670	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-28379	SampType	LCS	TestCode	EPA Method 300.0: Anions					
Client ID	LCSS	Batch ID	28379	RunNo	38358					
Prep Date	10/31/2016	Analysis Date	10/31/2016	SeqNo	1197671	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.1	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#: 1610C13

03-Nov-16

Client: Animas Environmental
Project: COPC San Juan 28-7 UNIT 220M

Sample ID	MB-28370	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	28370	RunNo:	38368					
Prep Date:	10/31/2016	Analysis Date:	11/1/2016	SeqNo:	1197897	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-28370	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	28370	RunNo:	38368					
Prep Date:	10/31/2016	Analysis Date:	11/1/2016	SeqNo:	1197898	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	105	80.7	121			

Sample ID	LCSD-28370	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	28370	RunNo:	38368					
Prep Date:	10/31/2016	Analysis Date:	11/1/2016	SeqNo:	1197899	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	107	80.7	121	1.28	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#: 1610C13

03-Nov-16

Client: Animas Environmental
Project: COPC San Juan 28-7 UNIT 220M

Sample ID	MB-28349	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	28349	RunNo:	38327					
Prep Date:	10/28/2016	Analysis Date:	10/31/2016	SeqNo:	1196387	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	8.5		10.00		85.2	70	130			

Sample ID	LCS-28349	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	28349	RunNo:	38327					
Prep Date:	10/28/2016	Analysis Date:	10/31/2016	SeqNo:	1196504	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	112	62.6	124			
Surr: DNOP	4.6		5.000		91.5	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#: 1610C13

03-Nov-16

Client: Animas Environmental
Project: COPC San Juan 28-7 UNIT 220M

Sample ID	MB-28292		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	28292		RunNo:	38265				
Prep Date:	10/26/2016		Analysis Date:	10/27/2016		SeqNo:	1194716		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	870		1000		86.7	68.3	144				

Sample ID	LCS-28292		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 28292		RunNo: 38265					
Prep Date:	10/26/2016		Analysis Date: 10/27/2016		SeqNo: 1194717		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	111	74.6	123			
Surr: BFB	930		1000		92.8	68.3	144			

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#: 1610C13

03-Nov-16

Client: Animas Environmental
Project: COPC San Juan 28-7 UNIT 220M

Sample ID	MB-28292		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 28292		RunNo: 38265					
Prep Date:	10/26/2016		Analysis Date: 10/27/2016		SeqNo: 1194736		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	1.0		1.000		102	80	120			

Sample ID	LCS-28292		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 28292		RunNo: 38265					
Prep Date:	10/26/2016		Analysis Date: 10/27/2016		SeqNo: 1194737		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.025	1.000	0	75.5	75.2	115			
Toluene	0.88	0.050	1.000	0	87.5	80.7	112			
Ethylbenzene	0.96	0.050	1.000	0	96.4	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	96.5	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	1610C13-001AMS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	BGT S-1		Batch ID: 28292		RunNo: 38265					
Prep Date:	10/26/2016		Analysis Date: 10/27/2016		SeqNo: 1194741		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.048	0.9690	0	98.3	71.5	122			
Toluene	0.98	0.097	0.9690	0	101	71.2	123			
Ethylbenzene	1.1	0.097	0.9690	0	112	75.2	130			
Xylenes, Total	3.2	0.19	2.907	0.2808	100	72.4	131			
Surr: 4-Bromofluorobenzene	2.6		1.938		134	80	120			S

Sample ID	1610C13-001AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles					
Client ID:	BGT S-1		Batch ID: 28292		RunNo: 38265					
Prep Date:	10/26/2016		Analysis Date: 10/27/2016		SeqNo: 1194742		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.049	0.9785	0	112	71.5	122	13.9	20	
Toluene	1.1	0.098	0.9785	0	115	71.2	123	13.6	20	
Ethylbenzene	1.2	0.098	0.9785	0	127	75.2	130	13.5	20	
Xylenes, Total	3.7	0.20	2.935	0.2808	115	72.4	131	13.5	20	
Surr: 4-Bromofluorobenzene	2.8		1.957		141	80	120	0	0	S

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



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: 1610C13

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

10/25/2016 8:30:00 AM

Completed By: Lindsay Mangin

10/25/2016 1:58:40 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 ☐
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	5.0	Good	Yes			

Client: Animas Environmental Services, LLC

☒ Standard ☐ Rush

www.hallenvironmental.com

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

Analysis Request

Project Name:

COPC SAN JUAN 28-7 Unit 220M

Farmington, NM 87401

Project #:

Phone #: 505-564-2281

Email or Fax#: eskyles@animasenvironmental.com

Project Manager:

QA/QC Package:

E. Skyles

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

Sampler: CL/SG

☐ NELAP ☐ OtherOn Ice: ☒ Yes ☐ No☐ EDD (Type)

Sample Temperature 50

[illegible]

Date:	Time:	Relinquished by:
-------	-------	------------------

$$\begin{array}{r} 10 \\ \hline 24 \end{array}$$

1812

Relinquished by:

Received by:

Date	Time
------	------

10/24/16 281

Remarks: Bill to Conoco Phillips

WO # 21739273

Supervisor: Schaaphok

USERID: KAITLW

Area: 7

Ordered by: Bobby Spearman

Call w/ questions

Date:	Time:	Relinquished by:
-------	-------	------------------

$$\begin{array}{r} 10 \overline{) 124} \\ \underline{100} \\ 24 \\ \underline{20} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

1942

Relinquished by:

Received by:

Date	Time
------	------

10/25/16 08

Area: 7
Orders:

Ordered by: Bobby Spearman

Call w/ questions

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

December 16, 2016

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

RE: COPC San Juan 28-7 Unit 220M

OrderNo.: 1612431

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/8/2016 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", with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612431

Date Reported: 12/16/2016

CLIENT: Animas Environmental

Client Sample ID: SB-3

Project: COPC San Juan 28-7 Unit 220M

Collection Date: 12/7/2016 11:35:00 AM

Lab ID: 1612431-001

Matrix: SOIL

Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: MAB
Petroleum Hydrocarbons, TR	1100	190		mg/Kg	10	12/13/2016	29123
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	75	30		mg/Kg	20	12/13/2016 5:31:29 PM	29153
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	370	10		mg/Kg	1	12/14/2016 7:56:28 PM	29134
Motor Oil Range Organics (MRO)	290	50		mg/Kg	1	12/14/2016 7:56:28 PM	29134
Surr: DNOP	87.7	70-130		%Rec	1	12/14/2016 7:56:28 PM	29134
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	43	5.0		mg/Kg	1	12/12/2016 1:22:41 PM	29099
Surr: BFB	357	68.3-144	S	%Rec	1	12/12/2016 1:22:41 PM	29099
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/12/2016 1:22:41 PM	29099
Toluene	ND	0.050		mg/Kg	1	12/12/2016 1:22:41 PM	29099
Ethylbenzene	ND	0.050		mg/Kg	1	12/12/2016 1:22:41 PM	29099
Xylenes, Total	ND	0.10		mg/Kg	1	12/12/2016 1:22:41 PM	29099
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	12/12/2016 1:22:41 PM	29099

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#: 1612431

16-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 Unit 220M

Sample ID	MB-29153	SampType	MBLK	TestCode	EPA Method 300.0: Anions					
Client ID	PBS	Batch ID	29153	RunNo	39371					
Prep Date	12/13/2016	Analysis Date	12/13/2016	SeqNo	1232526	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29153	SampType	LCS	TestCode	EPA Method 300.0: Anions					
Client ID	LCSS	Batch ID	29153	RunNo	39371					
Prep Date	12/13/2016	Analysis Date	12/13/2016	SeqNo	1232527	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	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#: 1612431

16-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 Unit 220M

Sample ID	MB-29123	SampType	MBLK	TestCode	EPA Method 418.1: TPH					
Client ID	PBS	Batch ID	29123	RunNo	39347					
Prep Date	12/12/2016	Analysis Date	12/13/2016	SeqNo	1231723	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-29123	SampType	LCS	TestCode	EPA Method 418.1: TPH					
Client ID	LCSS	Batch ID	29123	RunNo	39347					
Prep Date	12/12/2016	Analysis Date	12/13/2016	SeqNo	1231724	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	120	20	100.0	0	120	80.7	121			

Sample ID	LCSD-29123	SampType	LCSD	TestCode	EPA Method 418.1: TPH					
Client ID	LCSS02	Batch ID	29123	RunNo	39347					
Prep Date	12/12/2016	Analysis Date	12/13/2016	SeqNo	1231725	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	120	20	100.0	0	121	80.7	121	1.09	20	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 |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612431

16-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 Unit 220M

Sample ID	LCS-29134		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 29134		RunNo: 39356					
Prep Date:	12/12/2016		Analysis Date: 12/13/2016		SeqNo: 1231856		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	89.0	63.8	116			
Surr: DNOP	4.2		5.000		84.4	70	130			

Sample ID	MB-29134		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 29134		RunNo: 39356					
Prep Date:	12/12/2016		Analysis Date: 12/13/2016		SeqNo: 1231857		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	7.8		10.00		78.0	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#: 1612431

16-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 Unit 220M

Sample ID	MB-29099		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 29099		RunNo: 39314					
Prep Date:	12/9/2016		Analysis Date: 12/12/2016		SeqNo: 1230865		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		1000		86.2	68.3	144			

Sample ID	LCS-29099		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 29099		RunNo: 39314					
Prep Date:	12/9/2016		Analysis Date: 12/12/2016		SeqNo: 1230866		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.0	74.6	123			
Surr: BFB	940		1000		94.2	68.3	144			

Sample ID	1612431-001AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	SB-3		Batch ID: 29099		RunNo: 39314					
Prep Date:	12/9/2016		Analysis Date: 12/12/2016		SeqNo: 1230869		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	61	5.0	24.98	43.28	70.4	61.3	150			
Surr: BFB	2900		999.0		295	68.3	144			S

Sample ID	1612431-001AMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	SB-3		Batch ID: 29099		RunNo: 39314					
Prep Date:	12/9/2016		Analysis Date: 12/12/2016		SeqNo: 1230870		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	77	4.7	23.56	43.28	141	61.3	150	22.8	20	R
Surr: BFB	3400		942.5		362	68.3	144	0	0	S

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#: 1612431

16-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 Unit 220M

Sample ID	MB-29099	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	29099	RunNo:	39314					
Prep Date:	12/9/2016	Analysis Date:	12/12/2016	SeqNo:	1230878	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		95.4	80	120			

Sample ID	LCS-29099	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	29099	RunNo:	39314					
Prep Date:	12/9/2016	Analysis Date:	12/12/2016	SeqNo:	1230879	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	75.2	115			
Toluene	1.0	0.050	1.000	0	103	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	99.9	78.9	117			
Xylenes, Total	3.0	0.10	3.000	0	99.4	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

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: 1612431

RcptNo: 1

Received by/date:

LM

12/08/16

Logged By: Andy Jansson

12/8/2016 8:10:00 AM

Completed By:

Andy Jansson

12/08/16

Reviewed By:

[Signature]

12/09/16

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	1.1	Good	Yes			

ent: Armas Environmental Services

mailing Address: 604 W. Pison St
Farmington NM 87401
phone #: 505-524-2281

Mail or Fax#: clayman@animasenvironmental.com

/QC Package:

☐ Level 4 (Full Validation)

creditation

NELAP ☐ Other

EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

COPC San Juan 28-7 Unit 220M

Project #:

Project Manager:

C. Laneman

Sampler: CL/SB

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
1-16	1135	Soil	SB-3	2-42 jars	Coal	1612431 -001

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

X	BTEX + MTBE + ² JMB's (802.1)
	BTEX + MTBE + TPH (Gas only)
X	TPH 8015B (GRO / DRO / MRO)
X	TPH (Method 418.1)
	EDB (Method 504.1)
	PAH's (8310 or 8270 SIMS)
	RCRA 8 Metals
	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
	8081 Pesticides / 8082 PCB's
	8260B (VOA)
	8270 (Semi-VOA)
X	Chlorides (300.0)
	Air Bubbles (Y or N)

ite:	Time:	Relinquished by:
7/16	1641	C. J. [Signature]

ite:	Time:	Relinquished by:
1/7/10	1910	Martin Hobbs

Received by:	Date	Time
Mrs. W. G. G. G.	12/7/16	1641

Received by:  Date: 12/08/16 Time: 08:10

Remarks: Bill to Conco Phillips.
WOF: 21739273
Supervisor: Schaaphok
Usid: KATLW
Aren: 7

Ordered by: Bobby Spearman
Call w/ Questions

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

June 01, 2017

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

RE: COPC SAN JUAN 28-7 UNIT 220M

OrderNo.: 1705E88

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/31/2017 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 1705E88

Date Reported: 6/1/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental**Client Sample ID:** SC-1**Project:** COPC SAN JUAN 28-7 UNIT 220M**Collection Date:** 5/30/2017 10:12:00 AM**Lab ID:** 1705E88-001**Matrix:** SOIL**Received Date:** 5/31/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	20	9.6		mg/Kg	1	5/31/2017 11:57:59 AM	32035
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/31/2017 11:57:59 AM	32035
Surr: DNOP	96.4	70-130		%Rec	1	5/31/2017 11:57:59 AM	32035
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	5/31/2017 9:49:30 AM	R43151
Surr: BFB	140	54-150		%Rec	1	5/31/2017 9:49:30 AM	R43151
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.017		mg/Kg	1	5/31/2017 9:49:30 AM	B43151
Toluene	ND	0.033		mg/Kg	1	5/31/2017 9:49:30 AM	B43151
Ethylbenzene	ND	0.033		mg/Kg	1	5/31/2017 9:49:30 AM	B43151
Xylenes, Total	ND	0.067		mg/Kg	1	5/31/2017 9:49:30 AM	B43151
Surr: 4-Bromofluorobenzene	115	66.6-132		%Rec	1	5/31/2017 9:49:30 AM	B43151

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1705E88

Date Reported: 6/1/2017

CLIENT: Animas Environmental**Client Sample ID:** SC-2**Project:** COPC SAN JUAN 28-7 UNIT 220M**Collection Date:** 5/30/2017 10:02:00 AM**Lab ID:** 1705E88-002**Matrix:** SOIL**Received Date:** 5/31/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	5/31/2017 12:20:00 PM	32035
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/31/2017 12:20:00 PM	32035
Surr: DNOP	96.1	70-130		%Rec	1	5/31/2017 12:20:00 PM	32035
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	5/31/2017 10:13:24 AM	R43151
Surr: BFB	98.5	54-150		%Rec	1	5/31/2017 10:13:24 AM	R43151
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.016		mg/Kg	1	5/31/2017 10:13:24 AM	B43151
Toluene	ND	0.032		mg/Kg	1	5/31/2017 10:13:24 AM	B43151
Ethylbenzene	ND	0.032		mg/Kg	1	5/31/2017 10:13:24 AM	B43151
Xylenes, Total	ND	0.064		mg/Kg	1	5/31/2017 10:13:24 AM	B43151
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	1	5/31/2017 10:13:24 AM	B43151

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	Page 2 of 8
	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, Inc.**Analytical Report**

Lab Order 1705E88

Date Reported: 6/1/2017

CLIENT: Animas Environmental**Client Sample ID:** SC-3**Project:** COPC SAN JUAN 28-7 UNIT 220M**Collection Date:** 5/30/2017 10:43:00 AM**Lab ID:** 1705E88-003**Matrix:** SOIL**Received Date:** 5/31/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/31/2017 12:42:03 PM	32035
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2017 12:42:03 PM	32035
Surr: DNOP	98.5	70-130		%Rec	1	5/31/2017 12:42:03 PM	32035
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	5/31/2017 10:37:11 AM	R43151
Surr: BFB	95.1	54-150		%Rec	1	5/31/2017 10:37:11 AM	R43151
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.016		mg/Kg	1	5/31/2017 10:37:11 AM	B43151
Toluene	ND	0.032		mg/Kg	1	5/31/2017 10:37:11 AM	B43151
Ethylbenzene	ND	0.032		mg/Kg	1	5/31/2017 10:37:11 AM	B43151
Xylenes, Total	ND	0.064		mg/Kg	1	5/31/2017 10:37:11 AM	B43151
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	1	5/31/2017 10:37:11 AM	B43151

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E88

Date Reported: 6/1/2017

CLIENT: Animas Environmental

Client Sample ID: SC-4

Project: COPC SAN JUAN 28-7 UNIT 220M

Collection Date: 5/30/2017 10:36:00 AM

Lab ID: 1705E88-004

Matrix: SOIL

Received Date: 5/31/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	63	10		mg/Kg	1	5/31/2017 1:04:14 PM	32035
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/31/2017 1:04:14 PM	32035
Surr: DNOP	101	70-130		%Rec	1	5/31/2017 1:04:14 PM	32035
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	15		mg/Kg	5	5/31/2017 11:01:05 AM	R43151
Surr: BFB	94.1	54-150		%Rec	5	5/31/2017 11:01:05 AM	R43151
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.076		mg/Kg	5	5/31/2017 11:01:05 AM	B43151
Toluene	ND	0.15		mg/Kg	5	5/31/2017 11:01:05 AM	B43151
Ethylbenzene	ND	0.15		mg/Kg	5	5/31/2017 11:01:05 AM	B43151
Xylenes, Total	ND	0.31		mg/Kg	5	5/31/2017 11:01:05 AM	B43151
Surr: 4-Bromofluorobenzene	115	66.6-132		%Rec	5	5/31/2017 11:01:05 AM	B43151

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1705E88

Date Reported: 6/1/2017

CLIENT: Animas Environmental**Client Sample ID:** SC-5**Project:** COPC SAN JUAN 28-7 UNIT 220M**Collection Date:** 5/30/2017 10:26:00 AM**Lab ID:** 1705E88-005**Matrix:** SOIL**Received Date:** 5/31/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	670	9.8		mg/Kg	1	5/31/2017 1:26:16 PM	32035
Motor Oil Range Organics (MRO)	220	49		mg/Kg	1	5/31/2017 1:26:16 PM	32035
Surr: DNOP	109	70-130		%Rec	1	5/31/2017 1:26:16 PM	32035
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	55	16		mg/Kg	5	5/31/2017 11:24:57 AM	R43151
Surr: BFB	229	54-150	S	%Rec	5	5/31/2017 11:24:57 AM	R43151
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.081		mg/Kg	5	5/31/2017 11:24:57 AM	B43151
Toluene	ND	0.16		mg/Kg	5	5/31/2017 11:24:57 AM	B43151
Ethylbenzene	ND	0.16		mg/Kg	5	5/31/2017 11:24:57 AM	B43151
Xylenes, Total	1.6	0.32		mg/Kg	5	5/31/2017 11:24:57 AM	B43151
Surr: 4-Bromofluorobenzene	123	66.6-132		%Rec	5	5/31/2017 11:24:57 AM	B43151

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#: 1705E88

01-Jun-17

Client: Animas Environmental
Project: COPC SAN JUAN 28-7 UNIT 220M

Sample ID	LCS-32035		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 32035		RunNo: 43153					
Prep Date:	5/31/2017		Analysis Date: 5/31/2017		SeqNo: 1358341		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.2	73.2	114			
Surr: DNOP	4.2		5.000		85.0	70	130			

Sample ID	MB-32035	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	32035		RunNo:	43153				
Prep Date:	5/31/2017	Analysis Date:	5/31/2017		SeqNo:	1358342		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	9.1		10.00		91.1	70	130			

Sample ID	1705E88-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-1		Batch ID: 32035		RunNo: 43153					
Prep Date:	5/31/2017		Analysis Date: 5/31/2017		SeqNo: 1358729		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	75	9.3	46.30	20.31	118	55.8	122			
Surr: DNOP	4.4		4.630		96.1	70	130			

Sample ID	1705E88-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	SC-1		Batch ID:	32035		RunNo:	43153				
Prep Date:	5/31/2017		Analysis Date:	5/31/2017		SeqNo:	1358730		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	68	10	51.02	20.31	94.2	55.8	122	9.14	20		
Surr: DNOP	5.0		5.102		97.5	70	130	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 |
| 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#: 1705E88

01-Jun-17

Client: Animas Environmental
Project: COPC SAN JUAN 28-7 UNIT 220M

Sample ID	1705E88-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-1	Batch ID:	R43151	RunNo:	43151					
Prep Date:		Analysis Date:	5/31/2017	SeqNo:	1359036	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	3.3	16.71	2.901	95.2	77.8	128			
Surr: BFB	1000		668.4		149	54	150			

Sample ID	1705E88-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-1	Batch ID:	R43151	RunNo:	43151					
Prep Date:		Analysis Date:	5/31/2017	SeqNo:	1359037	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	3.3	16.71	2.901	94.4	77.8	128	0.678	20	
Surr: BFB	1000		668.4		153	54	150	0	0	S

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R43151	RunNo:	43151					
Prep Date:		Analysis Date:	5/31/2017	SeqNo:	1359038	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	95.0	76.4	125			
Surr: BFB	1100		1000		107	54	150			

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R43151	RunNo:	43151					
Prep Date:		Analysis Date:	5/31/2017	SeqNo:	1359039	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	920		1000		92.2	54	150			

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#: 1705E88

01-Jun-17

Client: Animas Environmental
Project: COPC SAN JUAN 28-7 UNIT 220M

Sample ID	100NG BTEX LCS	SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID: B43151			RunNo: 43151					
Prep Date:		Analysis Date: 5/31/2017			SeqNo: 1359043		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	105	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		114	66.6	132			

Sample ID	1705E88-002AMS	SampType: MS			TestCode: EPA Method 8021B: Volatiles					
Client ID:	SC-2	Batch ID: B43151			RunNo: 43151					
Prep Date:		Analysis Date: 5/31/2017			SeqNo: 1359044		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.64	0.016	0.6390	0	99.6	61.5	138			
Toluene	0.65	0.032	0.6390	0.005432	101	71.4	127			
Ethylbenzene	0.65	0.032	0.6390	0	102	70.9	132			
Xylenes, Total	2.0	0.064	1.917	0.01719	103	76.2	123			
Surr: 4-Bromofluorobenzene	0.79		0.6390		124	66.6	132			

Sample ID	1705E88-002AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	SC-2	Batch ID:	B43151	RunNo:	43151					
Prep Date:		Analysis Date:	5/31/2017	SeqNo:	1359045	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.63	0.016	0.6390	0	98.1	61.5	138	1.56	20	
Toluene	0.64	0.032	0.6390	0.005432	98.5	71.4	127	2.85	20	
Ethylbenzene	0.64	0.032	0.6390	0	99.9	70.9	132	1.93	20	
Xylenes, Total	2.0	0.064	1.917	0.01719	101	76.2	123	1.49	20	
Surr: 4-Bromofluorobenzene	0.75		0.6390		117	66.6	132	0	0	

Sample ID	RB	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: B43151			RunNo: 43151					
Prep Date:		Analysis Date: 5/31/2017			SeqNo: 1359046		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		112	66.6	132			

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: 1705E88

RcptNo: 1

Received By: Anne Thorne

5/31/2017 7:15:00 AM

Anne Thorne

Completed By: Anne Thorne

5/31/2017 7:35:03 AM

Anne Thorne

Reviewed By:

[Signature]

5/31/17

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	1.0	Good	Yes			

Client: **Animas Environmental Services, LLC**

☐ Standard ☒ Rush **SAME DAY**

Mailing Address: 604 W Pinon St.
Farmington, NM 87401

Project Name: COPC SAN JUAN 28-7 UNIT 220M

Phone #: 505-564-2281

Project #:

Email or Fax#: clameman@animasenvironmental.com

Project Manager:

QA/QC Package:

C. Lameman/ E. McNally


☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

Sampler: CL☐ NELAP ☐ OtherOn Ice: ☒ Yes ☐ No☐ EDD (Type) _____

Sample Temperature: 16.0

[illegible]

Date:	Time:	Relinquished by:
5-30-17	1620	

Received by: [Signature] Date 05/31/17 Time 0715

Remarks: Bill to Conoco Phillips
WO # 10398924
Supervisor:
USERID: KAITLW
Area: 7
Ordered by: Lisa Hunter/Robert Spearman

Date:	Time:	Relinquished by:
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Received by:	Date	Time
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