

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

Form C-141
Revised August 8, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company ConocoPhillips Company	Contact Lisa Hunter
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 258-1607
Facility Name: San Juan 28-7 Unit 145M	Facility Type: Gas Well
Surface Owner Federal	Mineral Owner Federal (SF 078972)
API No. 3003925823	

LOCATION OF RELEASE

Unit Letter D	Section 10	Township 27N	Range 07W	Feet from the 790	North/South Line North	Feet from the 880	East/West Line West	County Rio Arriba
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Latitude 36.59382 Longitude -107.56767

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 15bbl	Volume Recovered 12bbl
Source of Release Below Grade Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 11/16/16/ @ 2:00 pm
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	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

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

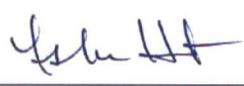
Describe Cause of Problem and Remedial Action Taken.*

Approximately 15 bbls of produced water released from Below Grade Tank into cribbing area, 12bbls recovered by water truck. Release remained on location. Well is shut in. Will vacuum collected and contaminated soil in cribbing area.

Describe Area Affected and Cleanup Action Taken.*

ConocoPhillips will assess the soil to determine a path forward for clean-up if necessary. Release assessment was completed by third-party environmental and Analytical results were below the NMOCD regulatory standards – no further action required. The soil sampling report is attached for review. No further remediation required.

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

Signature: 	OIL CONSERVATION DIVISION	
	Approved by Environmental Specialist: 	
Printed Name: Lisa Hunter	Approval Date: 2/21/2017	Expiration Date:
Title: Field Environmental Specialist	Conditions of Approval: NVF1632625720	
E-mail Address: Lisa.Hunter@cop.com	Attached <input type="checkbox"/>	
Date: December 30, 2016	Phone: (505) 258-1607	

* Attach Additional Sheets If Necessary

OIL CONS. DIV DIST. 3

JAN 03 2017

23



December 27, 2016

Lisa Hunter
ConocoPhillips
San Juan Business Unit
(505) 326-9786

OIL CONS. DIV DIST. 3
JAN 03 2017

Via electronic mail to:
SJBUE-Team@ConocoPhillips.com

**RE: Release Assessment Report
San Juan 28-7 Unit 145M
Rio Arriba County, New Mexico**

Dear Ms. Hunter:

On December 6, 2016, Animas Environmental Services, LLC (AES) completed a release assessment at the ConocoPhillips (COPC) San Juan 28-7 Unit 145M, located in Rio Arriba County, New Mexico. The release consisted of approximately 15 barrels (bbls) of produced water at the below grade tank (BGT).

1.0 Site Information

1.1 Location

Site Name – San Juan 28-7 Unit 145M

Location – NW¼ NW¼, Section 10, T27N, R7W, Rio Arriba County, New Mexico

Well Head Latitude/Longitude – N36.59377 and W107.56741, respectively

Release Location Latitude/Longitude – N36.59382 and W107.56767, respectively

Land Jurisdiction – Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, December 2016

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

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

1.2 NMOCD Ranking

In accordance with New Mexico Oil Conservation Division (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 10 based on the following factors:

- **Depth to Groundwater:** The location is approximately 510 feet higher than nearby Adolfo Canyon. Based on elevation, topographic interpretation and visual reconnaissance, depth to groundwater is interpreted to be greater than 100 feet below ground surface (bgs). (0 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** An unnamed wash which discharges to Adolfo Canyon is located approximately 900 feet northeast of the location. (10 points)

1.3 Assessment

AES was initially contacted by Lisa Hunter of COPC on November 29, 2016, and on December 6, 2016, Sam Glasses and Corwin Lameman of AES completed the release assessment field work. The assessment included collection and field sampling of four soil samples from four borings in and around the release area. Soil borings were terminated at depths of 5 feet. Sample locations are presented on Figure 3.

2.0 Soil Sampling

Four soil samples from four borings (SB-1 through SB-4) were collected during the assessment. All soil samples were field screened for volatile organic compounds (VOCs) and analyzed for total petroleum hydrocarbons (TPH). All samples were also 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

Field TPH samples were analyzed 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 a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. All soil samples were laboratory analyzed for:

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

2.3 Field and Laboratory Analytical Results

On December 6, 2016, release assessment field screening results for VOCs via OVM showed concentrations ranging from 0.3 ppm in SB-2 up to 2.6 ppm in SB-1. Field TPH concentrations ranged from less than 20.0 mg/kg in SB-1, SB-2 and SB-4 up to 253 mg/kg in SB-3. Results are included below in Table 1 and on Figure 3. The AES Field Sampling Report is attached.

Table 1. Soil Field VOCs and TPH Results
 San Juan 28-7 Unit 145M Release Assessment, December 2016

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>TPH 418.1 (mg/kg)</i>
<i>NMOCD Action Level*</i>			<i>100</i>	<i>1,000</i>
SB-1	12/6/16	5	2.6	<20.0
SB-2	12/6/16	5	0.3	<20.0
SB-3	12/6/16	5	2.2	253
SB-4	12/6/16	5	0.4	<20.0

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

Laboratory analyses for SB-1 through SB-4 were used to confirm field sampling results of the release assessment. Benzene and total BTEX concentrations were reported below laboratory detection limits in each sample. TPH concentrations were reported below laboratory detection limits in SB-1, SB-2, and SB-4, and were reported in SB-3 at 130 mg/kg

(as TPH 418.1) and 320 mg/kg (as GRO/DRO/MRO 8015D). Chlorides were detected in SB-2 and SB-3 at 74 mg/kg and 64 mg/kg, respectively. Results are presented in Table 2 and on Figure 3. The laboratory analytical report is attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides
 San Juan 28-7 Unit 145M Release Assessment, December 2016

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH	TPH	TPH	TPH (418.1) (mg/kg)	Chlorides (mg/kg)
					GRO (8015) (mg/kg)	DRO (8015) (mg/kg)	MRO (8015) (mg/kg)		
NMOCD Action Level*			10	50		1,000		1,000	NE
SB-1	12/6/16	5	<0.023	<0.208	<4.6	<9.3	<47	<18	<30
SB-2	12/6/16	5	<0.023	<0.208	<4.6	<9.1	<46	<20	74
SB-3	12/6/16	5	<0.025	<0.222	<4.9	220	100	130	64
SB-4	12/6/16	5	<0.024	<0.216	<4.8	<9.1	<46	<19	<30

*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993)
 NE – Not Established

3.0 Conclusions and Recommendations

On December 6, 2016, AES conducted a release assessment of petroleum contaminated soils associated with a release of produced water at the San Juan 28-7 Unit 145M. 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 10.

Release assessment field sampling results below the NMOCD action level of 100 ppm VOCs and 1,000 mg/kg TPH were reported in all samples. The highest VOC concentration was reported in SB-1 with 2.6 ppm, and the highest TPH concentration was reported in SB-3 with 253 mg/kg.

Laboratory analyses for SB-1 through SB-4 were used to confirm field sampling results. Benzene and total BTEX concentrations were reported below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively, in each sample. TPH concentrations were also below the NMOCD action level of 1,000 mg/kg, with the highest concentrations reported in SB-3 with 320 mg/kg (as GRO/DRO/MRO) and 130 mg/kg (as 418.1).

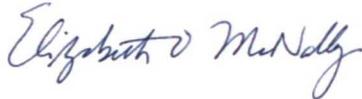
Based on final field sampling and laboratory analytical results of the release assessment at the San Juan 28-7 Unit 145M, VOC, benzene, total BTEX, and TPH concentrations were below applicable NMOCD action levels. No further work is recommended.

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

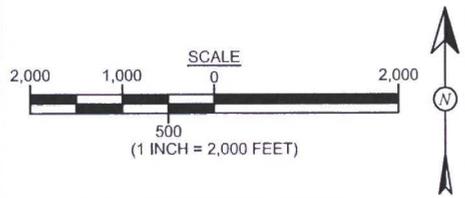
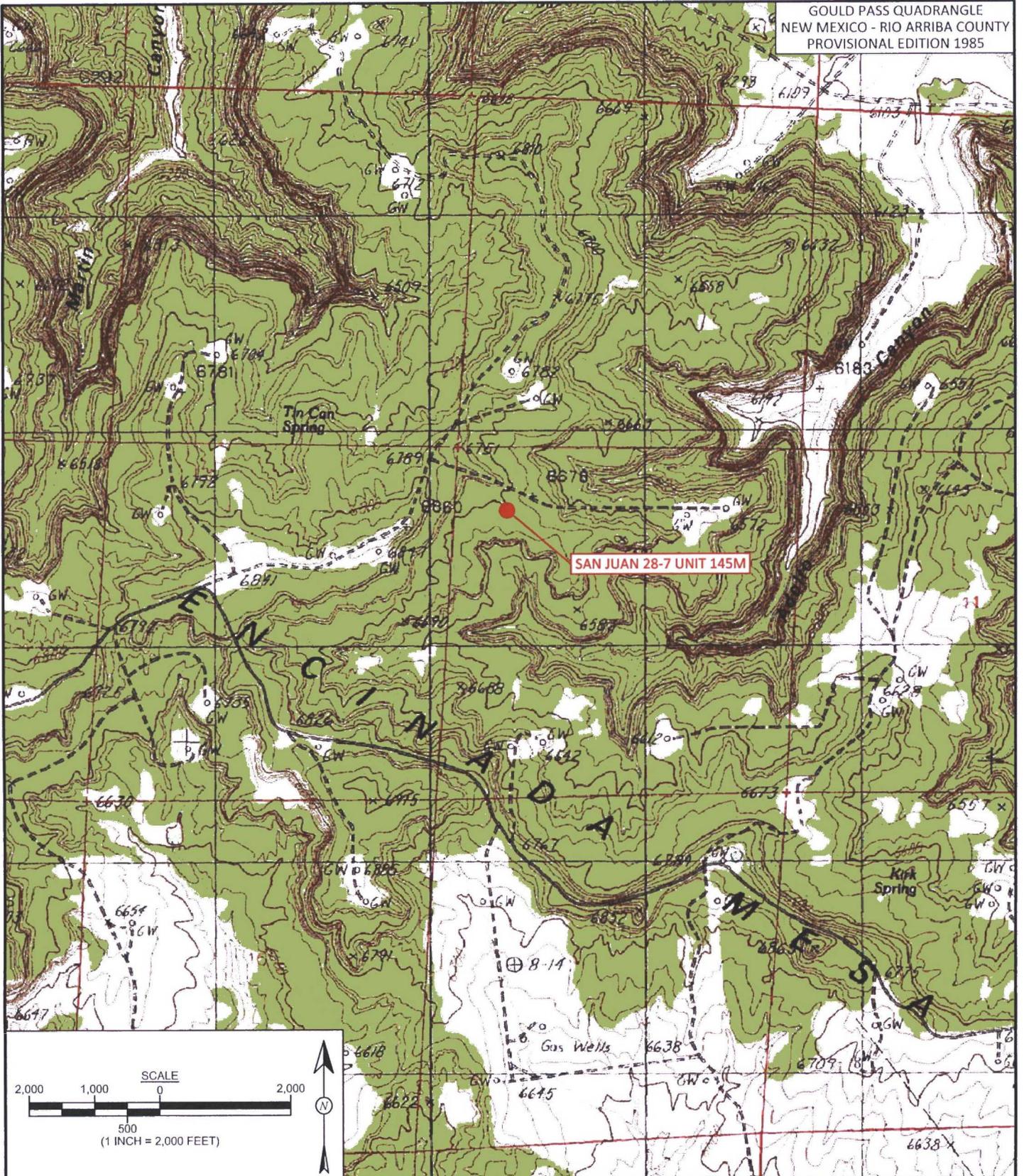


Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, December 2016
- Figure 3. Release Assessment Sample Locations and Results, December 2016
- AES Field Sampling Report 120616
- Hall Laboratory Analytical Report 1612433

C:\Users\emcnally\Dropbox (Animas Environmental)\0000 aes server client projects dropbox\2016 Client Projects\ConocoPhillips\SJ 28-7 145M\San Juan 28-7 Unit 145M Release Assessment Report 122716.docx



 <p>animas environmental services Farmington, NM • Durango, CO animasenvironmental.com</p>	<p>DRAWN BY: C. Lameman</p>	<p>DATE DRAWN: December 15, 2016</p>	<p>FIGURE 1</p> <p>TOPOGRAPHIC SITE LOCATION MAP ConocoPhillips SAN JUAN 28-7 UNIT 145M NW¼ NW¼, SECTION 10, T27N, R7W RIO ARRIBA COUNTY, NEW MEXICO N36.59377, W107.56741</p>
	<p>REVISIONS BY: C. Lameman</p>	<p>DATE REVISED: December 15, 2016</p>	
	<p>CHECKED BY: D. Reese</p>	<p>DATE CHECKED: December 15, 2016</p>	
	<p>APPROVED BY: E. McNally</p>	<p>DATE APPROVED: December 15, 2016</p>	

AES Field Sampling Report

Animas Environmental Services, LLC



Client: ConocoPhillips

Project Location: San Juan 28-7 Unit 145M

Date: 12/6/2016

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	12/6/2016	13:20	2.6	<20.0	14:08	20.0	1	CL
SB-2	12/6/2016	13:31	0.3	<20.0	14:11	20.0	1	CL
SB-3	12/6/2016	13:43	2.2	253	14:14	20.0	1	CL
SB-4	12/6/2016	13:50	0.4	<20.0	14:17	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:



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

DRAWN BY: C. Lameman	DATE DRAWN: December 15, 2016
REVISIONS BY: C. Lameman	DATE REVISED: December 15, 2016
CHECKED BY: D. Reese	DATE CHECKED: December 15, 2016
APPROVED BY: E. McNally	DATE APPROVED: December 15, 2016

FIGURE 2

AERIAL SITE MAP
DECEMBER 2016
ConocoPhillips
SAN JUAN 28-7 UNIT 145M
NW¼ NW¼, SECTION 10, T27N, R7W
RIO ARriba COUNTY, NEW MEXICO
N36.59377, W107.56741

FIGURE 3

RELEASE ASSESSMENT SAMPLE LOCATIONS AND RESULTS
DECEMBER 2016
 ConocoPhillips
 SAN JUAN 28-7 UNIT 145M
 NW¼ NW¼, SECTION 10, T27N, R7W
 RIO ARRIBA COUNTY, NEW MEXICO
 N36.59377, W107.56741

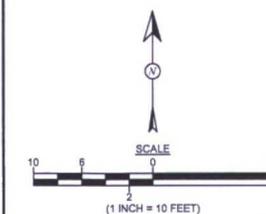


animas environmental services
 Farmington, NM • Durango, CO
 animasenvironmental.com

DRAWN BY: C. Lameman	DATE DRAWN: December 15, 2016
REVISIONS BY: C. Lameman	DATE REVISED: December 15, 2016
CHECKED BY: D. Reese	DATE CHECKED: December 15, 2016
APPROVED BY: E. McNally	DATE APPROVED: December 15, 2016

LEGEND

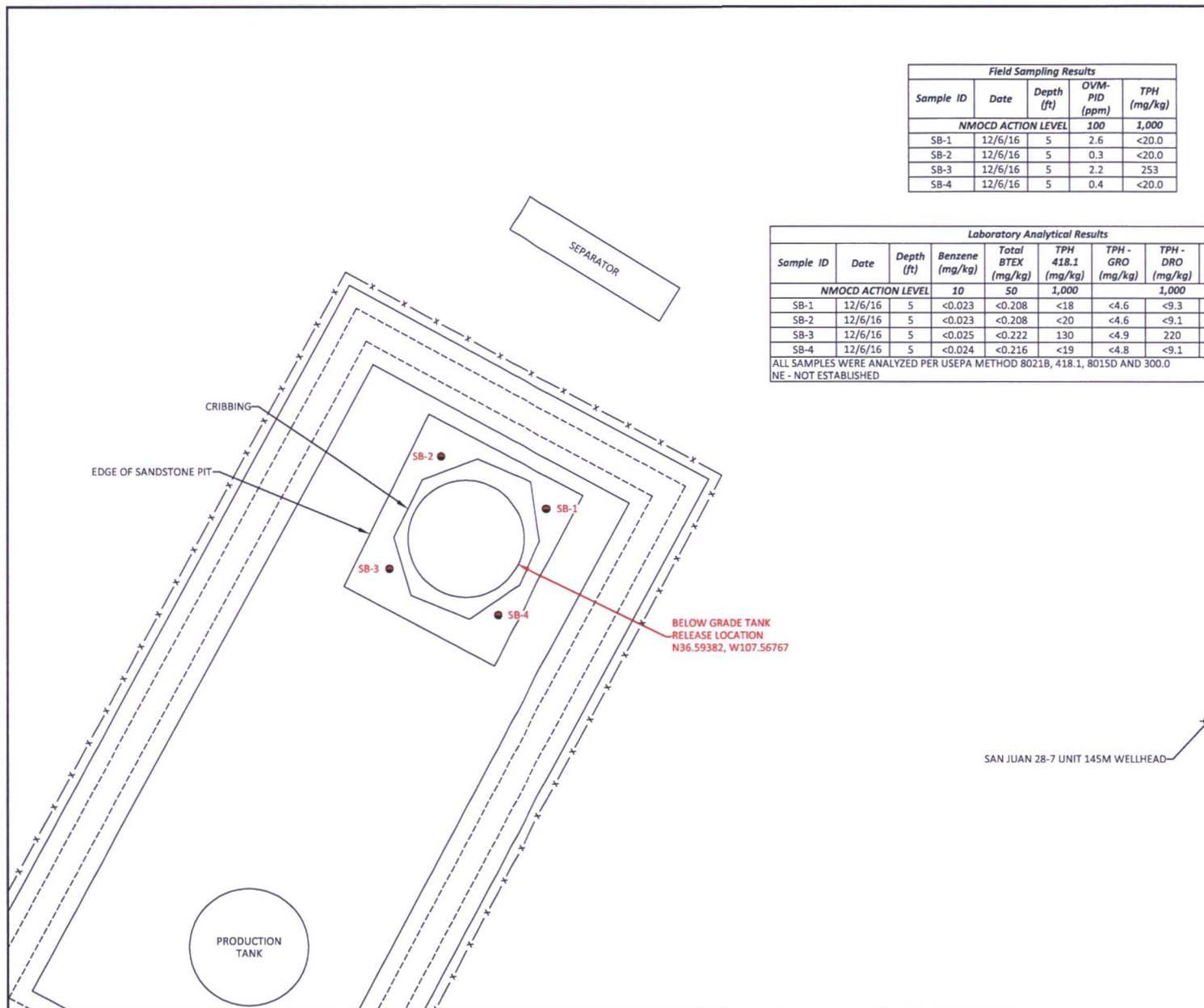
- SOIL BORING LOCATIONS
- ==== SECONDARY CONTAINMENT BERM
- x- FENCE



Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOC ACTION LEVEL				
SB-1	12/6/16	5	2.6	<20.0
SB-2	12/6/16	5	0.3	<20.0
SB-3	12/6/16	5	2.2	253
SB-4	12/6/16	5	0.4	<20.0

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)
NMOC ACTION LEVEL			10	50	1,000	1,000			NE
SB-1	12/6/16	5	<0.023	<0.208	<18	<4.6	<9.3	<47	<30
SB-2	12/6/16	5	<0.023	<0.208	<20	<4.6	<9.1	<46	74
SB-3	12/6/16	5	<0.025	<0.222	130	<4.9	220	100	64
SB-4	12/6/16	5	<0.024	<0.216	<19	<4.8	<9.1	<46	<30

ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B, 418.1, 8015D AND 300.0
 NE - NOT ESTABLISHED





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

December 14, 2016

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

RE: COPC San Juan 28-7 145M

OrderNo.: 1612433

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 4 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', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SB-1

Project: COPC San Juan 28-7 145M

Collection Date: 12/6/2016 1:20:00 PM

Lab ID: 1612433-001

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	ND	18		mg/Kg	1	12/13/2016	29123
EPA METHOD 300.0: ANIONS Analyst: LGT							
Chloride	ND	30		mg/Kg	20	12/13/2016 5:43:53 PM	29153
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM							
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/13/2016 5:18:20 PM	29134
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/13/2016 5:18:20 PM	29134
Surr: DNOP	84.4	70-130		%Rec	1	12/13/2016 5:18:20 PM	29134
EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB							
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/13/2016 11:05:35 AM	29099
Surr: BFB	89.9	68.3-144		%Rec	1	12/13/2016 11:05:35 AM	29099
EPA METHOD 8021B: VOLATILES Analyst: NSB							
Benzene	ND	0.023		mg/Kg	1	12/13/2016 11:05:35 AM	29099
Toluene	ND	0.046		mg/Kg	1	12/13/2016 11:05:35 AM	29099
Ethylbenzene	ND	0.046		mg/Kg	1	12/13/2016 11:05:35 AM	29099
Xylenes, Total	ND	0.093		mg/Kg	1	12/13/2016 11:05:35 AM	29099
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/13/2016 11:05:35 AM	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

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental**Client Sample ID:** SB-2**Project:** COPC San Juan 28-7 145M**Collection Date:** 12/6/2016 1:31:00 PM**Lab ID:** 1612433-002**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	ND	20		mg/Kg	1	12/13/2016	29123
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	74	30		mg/Kg	20	12/13/2016 5:56:17 PM	29153
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/13/2016 5:45:38 PM	29134
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/13/2016 5:45:38 PM	29134
Surr: DNOP	84.7	70-130		%Rec	1	12/13/2016 5:45:38 PM	29134
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/13/2016 11:54:46 AM	29099
Surr: BFB	90.3	68.3-144		%Rec	1	12/13/2016 11:54:46 AM	29099
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	12/13/2016 11:54:46 AM	29099
Toluene	ND	0.046		mg/Kg	1	12/13/2016 11:54:46 AM	29099
Ethylbenzene	ND	0.046		mg/Kg	1	12/13/2016 11:54:46 AM	29099
Xylenes, Total	ND	0.093		mg/Kg	1	12/13/2016 11:54:46 AM	29099
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	12/13/2016 11:54:46 AM	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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SB-3

Project: COPC San Juan 28-7 145M

Collection Date: 12/6/2016 1:43:00 PM

Lab ID: 1612433-003

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	130	19		mg/Kg	1	12/13/2016	29123
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	64	30		mg/Kg	20	12/13/2016 6:33:32 PM	29153
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	220	9.9		mg/Kg	1	12/13/2016 6:12:56 PM	29134
Motor Oil Range Organics (MRO)	100	49		mg/Kg	1	12/13/2016 6:12:56 PM	29134
Surr: DNOP	86.7	70-130		%Rec	1	12/13/2016 6:12:56 PM	29134
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/13/2016 12:19:21 PM	29099
Surr: BFB	90.6	68.3-144		%Rec	1	12/13/2016 12:19:21 PM	29099
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/13/2016 12:19:21 PM	29099
Toluene	ND	0.049		mg/Kg	1	12/13/2016 12:19:21 PM	29099
Ethylbenzene	ND	0.049		mg/Kg	1	12/13/2016 12:19:21 PM	29099
Xylenes, Total	ND	0.099		mg/Kg	1	12/13/2016 12:19:21 PM	29099
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	12/13/2016 12:19:21 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SB-4

Project: COPC San Juan 28-7 145M

Collection Date: 12/6/2016 1:50:00 PM

Lab ID: 1612433-004

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	ND	19		mg/Kg	1	12/13/2016	29123
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/13/2016 6:45:56 PM	29153
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/13/2016 6:39:57 PM	29134
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/13/2016 6:39:57 PM	29134
Surr: DNOP	88.9	70-130		%Rec	1	12/13/2016 6:39:57 PM	29134
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/13/2016 12:44:00 PM	29099
Surr: BFB	88.7	68.3-144		%Rec	1	12/13/2016 12:44:00 PM	29099
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/13/2016 12:44:00 PM	29099
Toluene	ND	0.048		mg/Kg	1	12/13/2016 12:44:00 PM	29099
Ethylbenzene	ND	0.048		mg/Kg	1	12/13/2016 12:44:00 PM	29099
Xylenes, Total	ND	0.096		mg/Kg	1	12/13/2016 12:44:00 PM	29099
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	12/13/2016 12:44:00 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#: 1612433

14-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 145M

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.
- 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#: 1612433

14-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 145M

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.
- 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#: 1612433

14-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 145M

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.
- 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#: 1612433

14-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 145M

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			

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#: 1612433

14-Dec-16

Client: Animas Environmental
Project: COPC San Juan 28-7 145M

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.
- 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: 1612433

Recd No. 1

Received by/date:

LM

12/08/16

Logged By: Andy Jansson

12/8/2016 8:10:00 AM

Andy Jansson

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° 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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

OR
505-947-9900

BP AMERICA PRODUCTION COMPANY
NEIL A 009R
API 3004523950 LEASE NMSF078051
830 FSL1085 FWL(M) SEC 4 T31N R11W
SAN JUAN COUNTY ELEV 6240
LAT 36° 55' 20.028"
LONG 108° 0' 2.916"

