

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 <b>Hilcorp Energy Company</b>	Contact <b>Lindsay Dumas</b>
Address <b>1111 Travis St. Houston, TX 77002</b>	Telephone No. <b>(281)794-9159</b>
Facility Name: <b>Medio Canyon 7</b>	Facility Type: <b>Oil Well</b>

Surface Owner <b>Jicarilla</b>	Mineral Owner <b>Jicarilla</b>	API No. <b>3003925089</b>
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**LOCATION OF RELEASE**

Unit Letter <b>E</b>	Section <b>35</b>	Township <b>24N</b>	Range <b>04W</b>	Feet from the <b>2310'</b>	North/South Line <b>North</b>	Feet from the <b>660</b>	East/West Line <b>West</b>	County <b>Rio Arriba</b>
-------------------------	----------------------	------------------------	---------------------	-------------------------------	----------------------------------	-----------------------------	-------------------------------	-----------------------------

Latitude 36.26764 Longitude -107.23267

**NATURE OF RELEASE**

Type of Release <b>Oil</b>	Volume of Release <b>3 bbls</b>	Volume Recovered <b>2 bbls</b>
Source of Release <b>Low side of separator</b>	Date and Hour of Occurrence <b>10/7/18 - 10/9/17</b>	Date and Hour of Discovery <b>10/9/17</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Jicarilla</b>	
By Whom? <b>Lisa Hunter</b>	Date and Hour <b>10/10/17</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>N/A</b>	

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

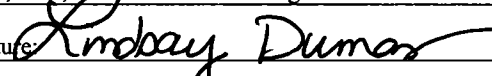
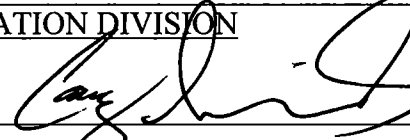

Describe Cause of Problem and Remedial Action Taken.\*

The release was from a hole in the fire tube on the low side of the separator. The heavy oil sprayed on location, covering a large surface area; 2 bbls of oil were recovered.

Describe Area Affected and Cleanup Action Taken.\*

Analytical results were below the regulatory standards – no further action required. Attached are sampling maps and analytical results for review.

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Lindsay Dumas</b>	Approved by Environmental Specialist: 	
Title: <b>Environmental Specialist</b>	Approval Date: <b>1/26/18</b>	Expiration Date:
E-mail Address: <b>Ldumas@hilcorp.com</b>	Conditions of Approval:	Attached <input type="checkbox"/> 
Date: <b>11/8/2017</b>	Phone: <b>(281)794-9159</b>	

\* Attach Additional Sheets If Necessary

#NCS 1731132012

NOV 13 2017  
OIL CONS. DIV DIST 3

29



November 1, 2017

Lindsay Dumas  
Hilcorp Energy Company  
[ldumas@hilcorp.com](mailto:ldumas@hilcorp.com)  
(832) 839-4585

**RE: Final Excavation Report  
Medio Canyon 7  
Rio Arriba County, New Mexico**

Dear Ms. Dumas:

On October 24, 2017, Animas Environmental Services, LLC (AES) completed an environmental clearance of the final shallow excavation limits at the Hilcorp Energy Company (Hilcorp) Medio Canyon 7, located in Rio Arriba County, New Mexico. The release was a result of a hole in a fire tube on the separator at the location, which resulted in condensate being sprayed on the ground surface to the north and east sides of the separator. The final excavation was completed by Hilcorp contractors prior to AES' arrival on location at the location on October 24, 2017.

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## 1.0 Site Information

### 1.1 Location

Site Name – Medio Canyon 7  
Legal Description – SW¼ NW¼, Section 35, T24N, R4W, Rio Arriba County, New Mexico  
Well Latitude/Longitude – N36.26775 and W107.23268, respectively  
Release Latitude/Longitude – N36.26765 and W107.23283, respectively  
Land Jurisdiction – Jicarilla Apache Nation  
Figure 1. Topographic Site Location Map  
Figure 2. Aerial Site Map, October 2017

### 1.2 JANOGA Action Levels

The Medio Canyon 7 release is located on Jicarilla Apache Nation lands, and soil remediation action levels are determined by the Jicarilla Apache Nation Oil and Gas Administration (JANOGA). JANOGA action levels for soils currently follow the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993). Per JANOGA, all

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Farmington, NM 87401  
505-564-2281

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

[www.animasenvironmental.com](http://www.animasenvironmental.com)

locations within Jicarilla Apache Nation lands receive a ranking score of 20. Action levels are:

- 10 mg/kg benzene and 50 mg/kg total benzene, toluene, ethylbenzene, and xylene (BTEX); and
- 100 mg/kg total petroleum hydrocarbons (TPH).

### **1.3 Assessment**

AES was initially contacted by Lindsay Dumas of Hilcorp on October 19, 2017, and on October 24, 2017, Corwin Lameman and Elizabeth McNally of AES completed the excavation field work. The field sampling activities included collection of seven confirmation soil samples (SC-1 through SC-7) from the shallow scraped and excavated areas (approximately 0.5 ft in depth) along the access road and wellpad. Sample locations and final shallow excavation extents are presented on Figure 3.

---

## **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*.

### **2.2 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. All soil samples were laboratory analyzed for:

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

### 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. The AES Field Sampling Report and laboratory analytical report are attached.

Table 1. Soil Field VOCs and TPH Results  
Medio Canyon 7 Final Excavation, October 2017

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (418.1) (mg/kg)</i>
<i>JANOGA Action Level*</i>			<i>100</i>	<i>100</i>
SC-1	10/24/17	0.5	0.0	115
SC-2	10/24/17	0.5	0.0	37.8
SC-3	10/24/17	0.5	0.0	98.4
SC-4	10/24/17	0.5	0.0	99.8
SC-5	10/24/17	0.5	2.7	86.0
SC-6	10/24/17	0.5	0.0	70.9
SC-7	10/24/17	0.5	0.0	48.9

*\*Action level determined by JANOGA (Ref. NMOCD ranking score of 20 per NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993) and NMAC 19.15*

Table 2. Soil Laboratory Analytical Results – Benzene, Total BTEX and TPH  
Medio Canyon 7 Final Excavation, October 2017

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH-GRO (mg/kg)</i>	<i>TPH-DRO (mg/kg)</i>	<i>TPH-MRO (mg/kg)</i>
<i>JANOGA Action Level*</i>			<i>10</i>	<i>50</i>		<i>100</i>	
SC-1	10/24/17	0.5	<0.017	<0.152	<3.4	10	<45
SC-2	10/24/17	0.5	<0.017	<0.156	<3.5	<10	<51
SC-3	10/24/17	0.5	<0.017	<0.153	<3.4	20	<49
SC-4	10/24/17	0.5	<0.016	<0.148	<3.3	14	<50

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)
JANOGA Action Level*			10	50		100	
SC-5	10/24/17	0.5	<0.016	<0.140	<3.1	<9.5	<48
SC-6	10/24/17	0.5	<0.016	<0.143	<3.2	24	<49
SC-7	10/24/17	0.5	<0.016	<0.144	<3.2	<9.9	<49

\*Action level determined by JANOGA (Ref. NMOCD ranking score of 20 per NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993) and NMAC 19.15).

### 3.0 Conclusions and Recommendations

On October 24, 2017, final clearance of the excavation area was completed. Action levels for releases are determined by JANOGA and currently reflect a site ranking of 20 per NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993). Field sampling results of the excavation extents showed field TPH concentrations were below the applicable NMOCD action level of 100 mg/kg for all samples except SC-1 (Road Edge) with 115 mg/kg. Field TPH concentrations analyzed on-site per USEPA Method 418.1 are believed to reflect the presence of pollen and other fine-grained plant material at near surface depths. Laboratory analytical results, however, reported benzene, total BTEX, and TPH concentrations (as GRO/DRO/MRO) in all samples as below NMOCD action levels.

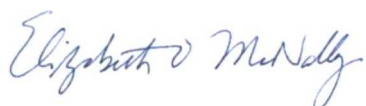
Based on the final field sampling and laboratory analytical results of the surface scraping and shallow excavation of petroleum contaminated soils at the Medio Canyon 7, benzene, total BTEX, and TPH concentrations were below the applicable JANOGA/NMOCD action levels for the base of the shallow excavation. 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, PE

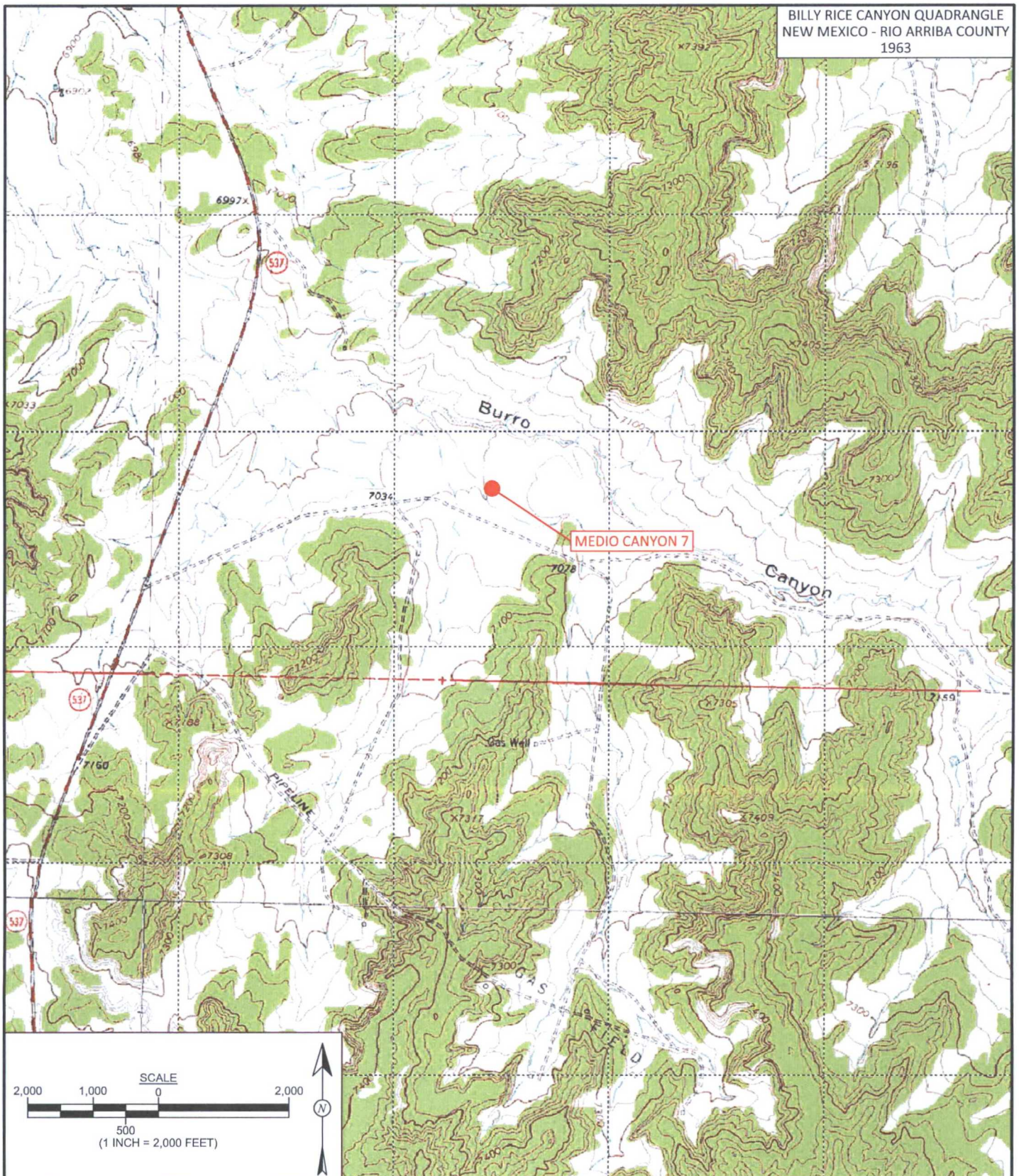
**Attachments:**

Figure 1. Topographic Site Location Map  
Figure 2. Aerial Site Map, October 2017  
Figure 3. Excavation Sample Locations and Results, October 2017  
AES Field Sampling Report 1062417  
Hall Laboratory Analytical Report 1710C99

R:\Animas 2000\Dropbox (Animas Environmental)\0000 AES Server Client Projects Dropbox\2017 Client Projects\Hilcorp\East Area\Medio Canyon 7\Medio Canyon 7 Final Excavation Report 110117 Final.docx

## Figures





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<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> October 31, 2017
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> October 31, 2017
<b>CHECKED BY:</b> E. McNally	<b>DATE CHECKED:</b> October 31, 2017
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> October 31, 2017

## FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
HILCROP ENERGY  
MEDIO CANYON 7  
SW1/4 NW1/4, SECTION 35, T24N, R4W  
RIO ARriba COUNTY, NEW MEXICO  
N36.26775, W107.23268





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<b>CHECKED BY:</b> E. McNally	<b>DATE CHECKED:</b> October 31, 2017
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> October 31, 2017

## FIGURE 2

**AERIAL SITE MAP**  
HILCROP ENERGY  
MEDIO CANYON 7  
SW1/4 NW1/4, SECTION 35, T24N, R4W  
RIO ARriba COUNTY, NEW MEXICO  
N36.26775, W107.23268



FIGURE 3

EXCAVATION SAMPLE LOCATIONS  
AND RESULTS, OCTOBER 2017  
HILCROP ENERGY  
MEDIO CANYON 7  
SW1/4 NW1/4, SECTION 35, T24N, R4W  
RIO ARRIBA COUNTY, NEW MEXICO  
N36.26775, W107.23268

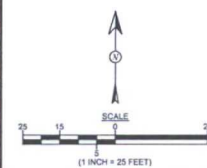


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CHECKED BY: E. McNally	DATE CHECKED: October 31, 2017
APPROVED BY: E. McNally	DATE APPROVED: October 31, 2017

## LEGEND

● SAMPLE LOCATIONS  
--- SECONDARY CONTAINMENT BERM  
--- FENCE



Field Screening Results				
Sample ID	Date	Depth (ft)	PID-OVM (ppm)	TPH (mg/kg)
JANOGA ACTION LEVEL			100	100
SC-1	10/24/17	0.5	0.0	115
SC-2	10/24/17	0.5	0.0	37.8
SC-3	10/24/17	0.5	0.0	98.4
SC-4	10/24/17	0.5	0.0	99.8
SC-5	10/24/17	0.5	2.7	86.0
SC-6	10/24/17	0.5	0.0	70.9
SC-7	10/24/17	0.5	0.0	48.9

ALL SOIL SAMPLES WERE 5-POINT COMPOSITE SAMPLES FROM NEAR SURFACE.

Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
JANOGA ACTION LEVEL			50	50	100	
SC-1	10/24/17	0.5	<0.017	<0.152	<3.4	<45
SC-2	10/24/17	0.5	<0.017	<0.156	<3.5	<51
SC-3	10/24/17	0.5	<0.017	<0.153	<3.4	<49
SC-4	10/24/17	0.5	<0.016	<0.148	<3.3	<50
SC-5	10/24/17	0.5	<0.016	<0.140	<3.1	<48
SC-6	10/24/17	0.5	<0.016	<0.143	<3.2	<49
SC-7	10/24/17	0.5	<0.016	<0.144	<3.2	<49

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

AERIAL SOURCE: © 2017 GOOGLE EARTH PRO, AERIAL DATE: JUNE 24, 2014

## Field Notes

# Oil and Gas Release Assessment Field Form

Name of Operator: <u>Hilcorp</u>	County and State: <u>Rio Arriba, NM</u>	Date: <u>10/24/17</u>
Facility or Pipeline Name: <u>Medio Canyon #7</u>	Land Jurisdiction: <u>J. Cavilla</u>	AES Personnel: <u>CL, EM</u>
Onsite Contact Person: <u>Lindsay Danner</u>	Site Rank: <u>30 - see ranking sheet</u>	Arrival Time: <u>0725</u>
Release Source: <u>3 Bbl Condensate</u>	<u>Struck pipe - 920' to SW</u>	Depart Time: <u>1145</u>
<u>from Separator fire tube</u>	<u>Burn Canyon Wash 740' to NE</u>	Begin Miles: <u>98628</u>
Release Lat/Long: <u>36.26765, -107.23283</u>		End Miles: <u>98801</u>
Wellhead Lat/Long: <u>36.26775, -107.23268</u>		
Groundwater Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Regulatory Representatives: <u>Hobson Sandoval - J. Cavilla</u>	
Surface Water present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Hilcorp people</u>	
Excavation prior to arrival? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Areas affected by release: <u>Surface on road/water road</u>		
Has the release been removed prior to arrival?: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Project Details:	SC-1 N36.26472; W107.23348°
	SC-2 N36.26748; W107.23341°
	SC-3 N36.26764°; W107.23331°
	SC-4 N36.26765°; W107.23288°
Site Limitations:	SC-5 <u>N36.26773; W107.23304 (trench in road) NO PICT.</u>
	SC-6 36.267.62; 107.23270
	SC-7 36.26765; 107.23257

Photos taken: ☐ Yes ☐ No



Facility or Pipeline Name: Mexico Canyon #7

Date: 10/24/17

AES personnel: CL, EM

Buck Machine # <u>2</u>			
Concentration	50 mg/kg	100 mg/kg	500 mg/kg
Calibration ABS Values	<u>0.070</u>	<u>0.143</u>	<u>0.724</u>

Sample ID	Collection Date	Time of Sample Collection	Sample Location	Sample Depth (ft)	Composite	PID-OVM (ppm)	PID-OVM Time	Field TPH (mg/kg)	Field TPH Analysis Time	ABS	NOTES (i.e. Soil Type, Color, Odor, Staining)
SC-1	<del>10/24</del> 10/24	0840	ROAD	0-0.5	X	0.0	1032	115	1110	0.081	3 DAY
SC-2	10/24/17	0850	ROAD-edge	0-0.5	X	0.0	1033	37.8	1113	0.025	3 DAY
SC-3	10/24/17	0903	ROAD-edge	0-0.5	X	0.0	1033	98.4	1042	0.069	- 3 DAY
SC-4	10/24/17	0915	PAD-edge	0-0.5	X	0.0	1034	99.8	1045	0.070	- 3 DAY
SC-5	10/24/17	0920	PAD SE	0-0.5	X	2.7	1034	86.0	1049	0.060	- 3 DAY
SC-6	10/24/17	0935	PAD	0-0.5	X	0.0	1035	70.9	1117	0.049	3 DAY
SC-7	10/24/17	0945	PAD	0-0.5	X	0.0	1035	48.9	1120	0.033	3 DAY

Type of Sample collection?:

Site sketch:

Date: 10/24/17

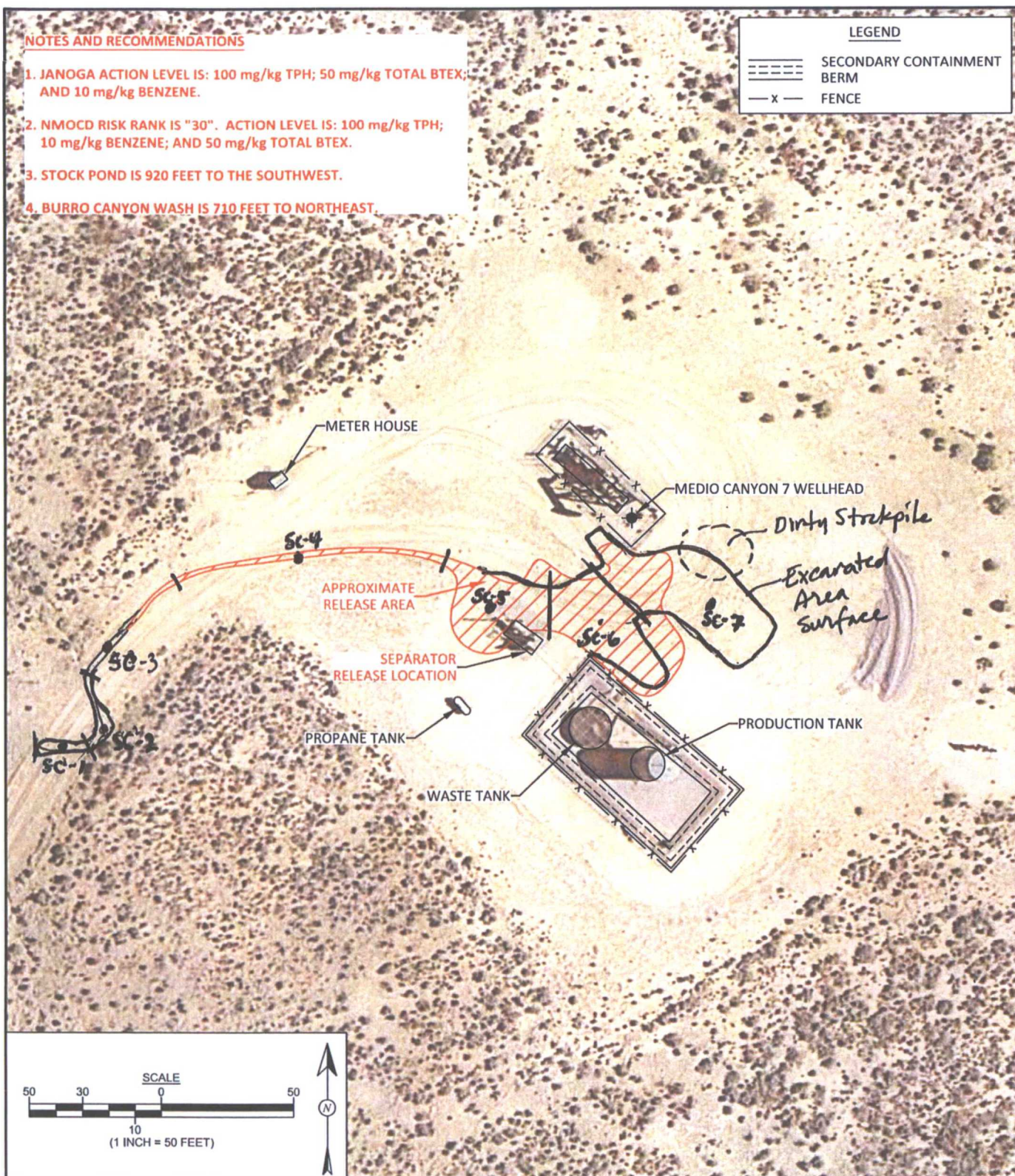
See Figure 2  
Aerial Site Map  
w/ field notes

# **NOTES AND RECOMMENDATIONS**

1. JANOGA ACTION LEVEL IS: 100 mg/kg TPH; 50 mg/kg TOTAL BTEX; AND 10 mg/kg BENZENE.
2. NMOCD RISK RANK IS "30". ACTION LEVEL IS: 100 mg/kg TPH; 10 mg/kg BENZENE; AND 50 mg/kg TOTAL BTEX.
3. STOCK POND IS 920 FEET TO THE SOUTHWEST.
4. BURRO CANYON WASH IS 710 FEET TO NORTHEAST.

## **LEGEND**

- SECONDARY CONTAINMENT BERM
- FENCE



SCALE  
50 30 0 50  
10  
(1 INCH = 50 FEET)



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DRAWN BY:  
C. Lameman

DATE DRAWN:  
October 23, 2017

REVISIONS BY:  
C. Lameman

DATE REVISED:  
October 23, 2017

CHECKED BY:  
E. McNally

DATE CHECKED:  
October 23, 2017

APPROVED BY:  
E. McNally

DATE APPROVED:  
October 23, 2017

## **FIGURE 2**

**AERIAL SITE MAP**  
HILCROP ENERGY  
MEDIO CANYON 7  
SW1/4 NW1/4, SECTION 35, T24N, R4W  
RIO ARriba COUNTY, NEW MEXICO  
N36.26754, W107.23196

## Analytical Reports





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

October 31, 2017

Corwin Lameman  
Animas Environmental Services  
604 Pinon Street  
Farmington, NM 87401  
TEL: (505) 564-2281  
FAX (505) 324-2022

RE: Hilcorp Medio Canyon 7

OrderNo.: 1710C99

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/25/2017 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](http://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 1710C99

Date Reported: 10/31/2017

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-1**Project:** Hilcorp Medio Canyon 7**Collection Date:** 10/24/2017 8:40:00 AM**Lab ID:** 1710C99-001**Matrix:** SOIL**Received Date:** 10/25/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	10	9.0		mg/Kg	1	10/26/2017 8:48:41 PM	34633
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/26/2017 8:48:41 PM	34633
Surr: DNOP	93.3	70-130		%Rec	1	10/26/2017 8:48:41 PM	34633
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	10/27/2017 7:24:08 PM	G46704
Surr: BFB	83.6	15-316		%Rec	1	10/27/2017 7:24:08 PM	G46704
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	10/27/2017 7:24:08 PM	B46704
Toluene	ND	0.034		mg/Kg	1	10/27/2017 7:24:08 PM	B46704
Ethylbenzene	ND	0.034		mg/Kg	1	10/27/2017 7:24:08 PM	B46704
Xylenes, Total	ND	0.067		mg/Kg	1	10/27/2017 7:24:08 PM	B46704
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	10/27/2017 7:24:08 PM	B46704

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order 1710C99

Date Reported: 10/31/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-2**Project:** Hilcorp Medio Canyon 7**Collection Date:** 10/24/2017 8:50:00 AM**Lab ID:** 1710C99-002**Matrix:** SOIL**Received Date:** 10/25/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/26/2017 9:13:18 PM	34633
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	10/26/2017 9:13:18 PM	34633
Surr: DNOP	95.1	70-130		%Rec	1	10/26/2017 9:13:18 PM	34633
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	10/27/2017 7:47:32 PM	G46704
Surr: BFB	81.8	15-316		%Rec	1	10/27/2017 7:47:32 PM	G46704
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	10/27/2017 7:47:32 PM	B46704
Toluene	ND	0.035		mg/Kg	1	10/27/2017 7:47:32 PM	B46704
Ethylbenzene	ND	0.035		mg/Kg	1	10/27/2017 7:47:32 PM	B46704
Xylenes, Total	ND	0.069		mg/Kg	1	10/27/2017 7:47:32 PM	B46704
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	10/27/2017 7:47:32 PM	B46704

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order 1710C99

Date Reported: 10/31/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-3**Project:** Hilcorp Medio Canyon 7**Collection Date:** 10/24/2017 9:03:00 AM**Lab ID:** 1710C99-003**Matrix:** SOIL**Received Date:** 10/25/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	10/26/2017 9:37:51 PM	34633
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/26/2017 9:37:51 PM	34633
Surr: DNOP	95.4	70-130		%Rec	1	10/26/2017 9:37:51 PM	34633
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	10/27/2017 8:10:46 PM	G46704
Surr: BFB	83.2	15-316		%Rec	1	10/27/2017 8:10:46 PM	G46704
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	10/27/2017 8:10:46 PM	B46704
Toluene	ND	0.034		mg/Kg	1	10/27/2017 8:10:46 PM	B46704
Ethylbenzene	ND	0.034		mg/Kg	1	10/27/2017 8:10:46 PM	B46704
Xylenes, Total	ND	0.068		mg/Kg	1	10/27/2017 8:10:46 PM	B46704
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	10/27/2017 8:10:46 PM	B46704

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative Limit	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 1710C99

Date Reported: 10/31/2017

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-4**Project:** Hilcorp Medio Canyon 7**Collection Date:** 10/24/2017 9:15:00 AM**Lab ID:** 1710C99-004**Matrix:** SOIL**Received Date:** 10/25/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	14	9.9		mg/Kg	1	10/26/2017 10:02:31 PM	34633
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/26/2017 10:02:31 PM	34633
Surr: DNOP	96.7	70-130		%Rec	1	10/26/2017 10:02:31 PM	34633
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	10/27/2017 8:34:04 PM	G46704
Surr: BFB	82.8	15-316		%Rec	1	10/27/2017 8:34:04 PM	G46704
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	10/27/2017 8:34:04 PM	B46704
Toluene	ND	0.033		mg/Kg	1	10/27/2017 8:34:04 PM	B46704
Ethylbenzene	ND	0.033		mg/Kg	1	10/27/2017 8:34:04 PM	B46704
Xylenes, Total	ND	0.066		mg/Kg	1	10/27/2017 8:34:04 PM	B46704
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	10/27/2017 8:34:04 PM	B46704

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order 1710C99

Date Reported: 10/31/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-5**Project:** Hilcorp Medio Canyon 7**Collection Date:** 10/24/2017 9:20:00 AM**Lab ID:** 1710C99-005**Matrix:** SOIL**Received Date:** 10/25/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/26/2017 10:27:06 PM	34633
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/26/2017 10:27:06 PM	34633
Surr: DNOP	98.3	70-130		%Rec	1	10/26/2017 10:27:06 PM	34633
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	10/27/2017 8:57:24 PM	G46704
Surr: BFB	84.4	15-316		%Rec	1	10/27/2017 8:57:24 PM	G46704
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	10/27/2017 8:57:24 PM	B46704
Toluene	ND	0.031		mg/Kg	1	10/27/2017 8:57:24 PM	B46704
Ethylbenzene	ND	0.031		mg/Kg	1	10/27/2017 8:57:24 PM	B46704
Xylenes, Total	ND	0.062		mg/Kg	1	10/27/2017 8:57:24 PM	B46704
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	10/27/2017 8:57:24 PM	B46704

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

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

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

Lab Order 1710C99

Date Reported: 10/31/2017

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-6**Project:** Hilcorp Medio Canyon 7**Collection Date:** 10/24/2017 9:35:00 AM**Lab ID:** 1710C99-006**Matrix:** SOIL**Received Date:** 10/25/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	24	9.7		mg/Kg	1	10/26/2017 10:51:46 PM	34633
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/26/2017 10:51:46 PM	34633
Surr: DNOP	97.6	70-130		%Rec	1	10/26/2017 10:51:46 PM	34633
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	10/27/2017 9:20:47 PM	G46704
Surr: BFB	81.9	15-316		%Rec	1	10/27/2017 9:20:47 PM	G46704
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	10/27/2017 9:20:47 PM	B46704
Toluene	ND	0.032		mg/Kg	1	10/27/2017 9:20:47 PM	B46704
Ethylbenzene	ND	0.032		mg/Kg	1	10/27/2017 9:20:47 PM	B46704
Xylenes, Total	ND	0.063		mg/Kg	1	10/27/2017 9:20:47 PM	B46704
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	10/27/2017 9:20:47 PM	B46704

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative Limit	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 1710C99

Date Reported: 10/31/2017

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-7**Project:** Hilcorp Medio Canyon 7**Collection Date:** 10/24/2017 9:45:00 AM**Lab ID:** 1710C99-007**Matrix:** SOIL**Received Date:** 10/25/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/26/2017 11:16:14 PM	34634
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/26/2017 11:16:14 PM	34634
Surr: DNOP	95.7	70-130		%Rec	1	10/26/2017 11:16:14 PM	34634
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	10/27/2017 9:44:13 PM	G46704
Surr: BFB	81.6	15-316		%Rec	1	10/27/2017 9:44:13 PM	G46704
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	10/27/2017 9:44:13 PM	B46704
Toluene	ND	0.032		mg/Kg	1	10/27/2017 9:44:13 PM	B46704
Ethylbenzene	ND	0.032		mg/Kg	1	10/27/2017 9:44:13 PM	B46704
Xylenes, Total	ND	0.064		mg/Kg	1	10/27/2017 9:44:13 PM	B46704
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	10/27/2017 9:44:13 PM	B46704

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative Limit	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#: 1710C99

31-Oct-17

Client: Animas Environmental Services

Project: Hilcorp Medio Canyon 7

Sample ID	LCS-34633	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	34633	RunNo:	46662					
Prep Date:	10/25/2017	Analysis Date:	10/26/2017	SeqNo:	1487179	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.3	73.2	114			
Surr: DNOP	4.9		5.000		97.4	70	130			

Sample ID	MB-34633	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	34633	RunNo:	46662					
Prep Date:	10/25/2017	Analysis Date:	10/26/2017	SeqNo:	1487180	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		100	70	130			

Sample ID	LCS-34634	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	34634	RunNo:	46661					
Prep Date:	10/25/2017	Analysis Date:	10/26/2017	SeqNo:	1487757	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.4	73.2	114			
Surr: DNOP	4.0		5.000		80.8	70	130			

Sample ID	MB-34634	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	34634	RunNo:	46661					
Prep Date:	10/25/2017	Analysis Date:	10/26/2017	SeqNo:	1487758	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	9.0		10.00		90.3	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                                    |
| PQL Practical Quantitative Limit                        | 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#: 1710C99

31-Oct-17

Client: Animas Environmental Services

Project: Hilcorp Medio Canyon 7

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G46704	RunNo:	46704					
Prep Date:		Analysis Date:	10/27/2017	SeqNo:	1488186	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	830		1000		83.3	15	316			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G46704	RunNo:	46704					
Prep Date:		Analysis Date:	10/27/2017	SeqNo:	1488187	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.8	75.9	131			
Surr: BFB	960		1000		96.1	15	316			

Sample ID	MB-34651	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	34651	RunNo:	46704					
Prep Date:	10/26/2017	Analysis Date:	10/27/2017	SeqNo:	1488208	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		87.2	15	316			

Sample ID	LCS-34651	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	34651	RunNo:	46704					
Prep Date:	10/26/2017	Analysis Date:	10/27/2017	SeqNo:	1488209	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		99.0	15	316			

## 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                                    |
| PQL Practical Quantitative Limit                        | 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#: 1710C99

31-Oct-17

Client: Animas Environmental Services

Project: Hilcorp Medio Canyon 7

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B46704	RunNo:	46704					
Prep Date:		Analysis Date:	10/27/2017	SeqNo:	1488226	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	0.98		1.000		98.1	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B46704	RunNo:	46704					
Prep Date:		Analysis Date:	10/27/2017	SeqNo:	1488227	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.3	77.3	128			
Toluene	0.94	0.050	1.000	0	94.4	79.2	125			
Ethylbenzene	0.93	0.050	1.000	0	93.3	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	93.8	81.6	129			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.5	80	120			

Sample ID	MB-34651	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	34651	RunNo:	46704					
Prep Date:	10/26/2017	Analysis Date:	10/27/2017	SeqNo:	1488248	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	80	120			

Sample ID	LCS-34651	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	34651	RunNo:	46704					
Prep Date:	10/26/2017	Analysis Date:	10/27/2017	SeqNo:	1488249	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		100	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
PQL Practical Quantitative Limit	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: 1710C99

RcptNo: 1

Received By: Sophia Campuzano

10/25/2017 8:00:00 AM

*Sophia Campuzano*

Completed By: Erin Melendrez

10/25/2017 8:44:55 AM

*Erin Melendrez*

Reviewed By: *EC*

10/25/17

### 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  $6.0^{\circ}\text{C}$ ? 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	1.2	Good	Yes			

