

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., 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 in  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company <b>ConocoPhillips Company</b>	Contact <b>Ashley Maxwell</b>
Address <b>3401 E. 30th St., Farmington, NM 87402</b>	Telephone No. <b>505-324-5169</b>
Facility Name <b>Chacon Hill #2</b>	Facility Type <b>Gas Well</b>
Surface Owner <b>Federal</b>	Mineral Owner <b>Federal</b>
API No. <b>3003922136</b> <b>SF-079456</b>	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>G</b>	<b>20</b>	<b>024N</b>	<b>003W</b>	<b>1850'</b>	<b>North</b>	<b>1850'</b>	<b>East</b>	<b>Rio Arriba</b>

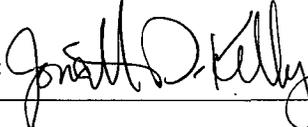
Latitude 36.297988 Longitude -107.17658

**NATURE OF RELEASE**

Type of Release <b>Production Fluids</b>	Volume of Release <b>Unknown</b>	Volume Recovered <b>492 yds<sup>3</sup></b>
Source of Release <b>Below Grade Tank</b>	Date and Hour of Occurrence <b>9/10/2012</b>	Date and Hour of Discovery
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	<b>RCVD JAN 8 '13</b>
By Whom?	Date and Hour	<b>OIL CONS. DIV.</b>
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	<b>DIST. 3</b>

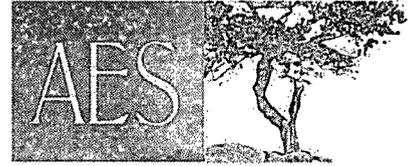
If a Watercourse was Impacted, Describe Fully.\*  
Describe Cause of Problem and Remedial Action Taken.\* Below Grade Tank Closure Activities  
Describe Area Affected and Cleanup Action Taken.\*  
**Excavation was required based on NMOCD Guidelines for Remediation of Leaks, Spills and Releases. The excavation was 30'X40'X11' and 492 yds<sup>3</sup> of soil was transported to a third party land farm. Excavation and confirmation sampling occurred. Analytical results were below the regulatory standards set forth by NMOCD action levels; therefore no further action is needed.**

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>Ashley Maxwell</b>	Approved by Environmental Specialist: 	
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>1/30/2013</b>	Expiration Date:
E-mail Address: <b>ashley.p.wethington@conocophillips.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date <b>January 4, 2013</b>	Phone: <b>505-324-5169</b>	

\* Attach Additional Sheets If Necessary

n JK1303055280



Animas Environmental Services, LLC

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

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3274

December 28, 2012

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

**RE: Initial Release Assessment and Final Excavation Report  
Chacon Hill #2  
Rio Arriba County, New Mexico**

Dear Ms. Maxwell:

On August 7 and September 11, 2012, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) Chacon Hill #2, located in Rio Arriba County, New Mexico. The historical release was associated with the below grade tank (BGT) at the location. The initial release assessment was completed by AES on August 7, 2012. The final excavation was completed by contractors while AES was on location on September 11, 2012.

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## 1.0 Site Information

### 1.1 Location

Location – SW¼ NE¼, Section 20, T24N, R3W, Rio Arriba County, New Mexico  
Well Head Latitude/Longitude – N36.29802 and W107.17717, respectively  
Release Location Latitude/Longitude – N36.29794 and W107.17682, respectively  
Land Jurisdiction – Private

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, August 2012

### 1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a Pit Site Assessment form dated April 1996 for the Chacon Hill #2 reported the depth to groundwater at less than 50 feet below ground surface (bgs). The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location. Additionally, Google Earth and the New Mexico Tech Petroleum

Recovery Research Center online mapping tool (<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was less than 50 feet bgs. The wash in Medio Canyon is located approximately 530 feet southwest of the release location. Based on this information, the location was assessed a ranking score of 30 per the *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993).

### 1.3 Assessment

AES was initially contacted by Ashley Maxwell of CoP on August 1, 2012, and on August 7, 2012, Heather Woods and Zachary Trujillo of AES completed the release assessment field work. The assessment included collection and field screening of 44 soil samples (SB-1 through SB-11) from 11 soil borings in and around the release area. Based on the field screening results, AES recommended an area of excavation. Sample locations are shown on Figure 3.

On September 11, 2012, AES returned to the location to collect confirmation soil samples of the excavation. The field screening activities included collection of seven confirmation soil samples (SC-1 through SC-7) of the walls and base of the excavation. The area of the final excavation was approximately 880 ft<sup>2</sup> by 12 feet in depth. Sample locations and final excavation extents are shown on Figure 4.

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## 2.0 Soil Sampling

A total of 44 soil samples from 11 soil borings (SB-1 through SB-11) and 7 composite samples (SC-1 through SC-7) were collected during the release assessments. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Two composite samples (SC-6 and SC-7) collected during the excavation clearance were submitted for laboratory analysis.

### 2.1 Field Screening

#### 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 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. Soil samples were laboratory analyzed for:

- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

## **2.3 Field Screening and Laboratory Analytical Results**

On August 7, 2012, initial assessment field screening results for VOCs via OVM showed concentrations ranging from 1.5 ppm in SB-3 up to 4,110 ppm in SB-1. Field TPH concentrations ranged from 94.6 mg/kg in SB-2 up to greater than 2,500 mg/kg in SB-4.

On September 11, 2012, final excavation field screening results for VOCs via OVM showed concentrations ranging from 1.9 ppm in SC-3 to 38.0 ppm in SC-6. Field TPH concentrations ranged from 65.5 mg/kg in SC-3 up to 618 mg/kg in SC-5. Results are included below in Table 1 and on Figures 3 and 4. The AES field screening reports are attached.

Table 1. Soil Field Screening VOCs and TPH Results  
 Chacon Hill #2 Initial Release Assessment and Final Excavation  
 August and September 2012

<b>Sample ID</b>	<b>Date Sampled</b>	<b>Sample Depth (ft bgs)</b>	<b>VOCs via OVM (ppm)</b>	<b>Field TPH (mg/kg)</b>
		<i>NMOCD Action Level*</i>		100
		7	4,110	NA
		10	1,411	NA
SB-1	8/7/12	11	113	1,030
		14	136	266
		16	44.1	117
		6	24.5	NA
		8	349	NA
SB-2	8/7/12	11	20.2	1,230
		14	13.6	94.6
		6	1.5	NA
		10	3.9	NA
SB-3	8/7/12	12	4.1	108
		6	3.5	NA
		8	3.2	NA
SB-4	8/7/12	10	18.1	>2,500
		12	6.0	118
		6	6.0	NA
		8	13.3	NA
SB-5	8/7/12	12	11.5	127
		4	747	NA
		6	3,859	NA
SB-6	8/7/12	8	556	NA
		10	247	NA
		12	564	1,220
		2	7.9	NA
		4	10.8	NA
SB-7	8/7/12	7	10.0	NA

<b>Sample ID</b>	<b>Date Sampled</b>	<b>Sample Depth (ft bgs)</b>	<b>VOCs via OVM (ppm)</b>	<b>Field TPH (mg/kg)</b>
		NMOCD Action Level*	100	100
SB-7	8/7/12	10	6.0	98.5
SB-8	8/7/12	3	5.7	NA
		6	6.2	136
SB-9	8/7/12	2	7.2	NA
		4	8.3	NA
SB-10	8/7/12	2	7.4	NA
		4	8.9	NA
		6	9.9	NA
		8	8.2	NA
		10	6.9	117
		12	7.2	NA
SB-11	8/7/12	2	2.5	NA
		4	3.8	NA
		6	5.3	NA
		8	3.5	NA
		10	5.2	NA
		12	3.4	135
SC-1	9/11/12	1 to 12	22.4	242
SC-2	9/11/12	12	6.3	85.2
SC-3	9/11/12	1 to 12	1.9	65.5
SC-4	9/11/12	1 to 12	33.9	90.1
SC-5	9/11/12	1 to 12	5.8	618
SC-6	9/11/12	1 to 12	38.0	122
SC-7	9/11/12	1 to 12	30.0	158

NA – Not Analyzed

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

Laboratory analyses for SC-6 and SC-7 were used to confirm field screening results during excavation activities. TPH concentrations as GRO/DRO were reported at 25

mg/kg in SC-6 and less than 14.9 mg/kg in SC-7. Results are presented in Table 2 and on Figure 4. The laboratory analytical report is attached.

Table 2. Laboratory Analytical Results –TPH  
Chacon Hill #2 Final Excavation, September 2012

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>GRO (mg/kg)</i>	<i>DRO (mg/kg)</i>
<b>NMOCD Action Level*</b>				<b>100</b>
SC-6	9/11/12	1 to 12	<5.0	25
SC-7	9/11/12	1 to 12	<5.0	<9.9

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

### 3.0 Conclusions and Recommendations

On August 7, 2012, AES conducted an initial assessment of the excavation associated with a historical release at the Chacon Hill #2. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a ranking of 30. Field screening results above the NMOCD action level of 100 ppm VOCs were reported in SB-1, SB-2, and SB-6. The highest VOC concentration was reported in SB-1 with 4,110 ppm. Field screening results also showed TPH concentrations above the NMOCD action level of 100 mg/kg in SB-1 through SB-6, SB-8, SB-10, and SB-11. The highest TPH concentration was reported in SB-4 with greater than 2,500 mg/kg.

On September 11, 2012, final assessment of the excavation area was completed. Field screening results of the excavation extents showed that VOC concentrations were below the NMOCD action level for all of the final four walls and base of the excavation. Field TPH concentrations above the applicable NMOCD action level of 100 mg/kg were reported in SC-6 (122 mg/kg) and SC-7 (158 mg/kg). However, laboratory analytical results for SC-6 and SC-7 from September 11, 2012, reported TPH concentrations as GRO/DRO below the applicable NMOCD action level of 100 mg/kg.

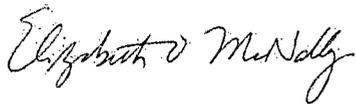
Based on the final field screening results of the excavation of petroleum contaminated soils at the Chacon Hill #2, VOC and TPH concentrations were below applicable NMOCD action levels for each of the sidewalls and the base of the excavation. No further work is recommended.

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

Sincerely,



Heather M. Woods  
Staff Geologist



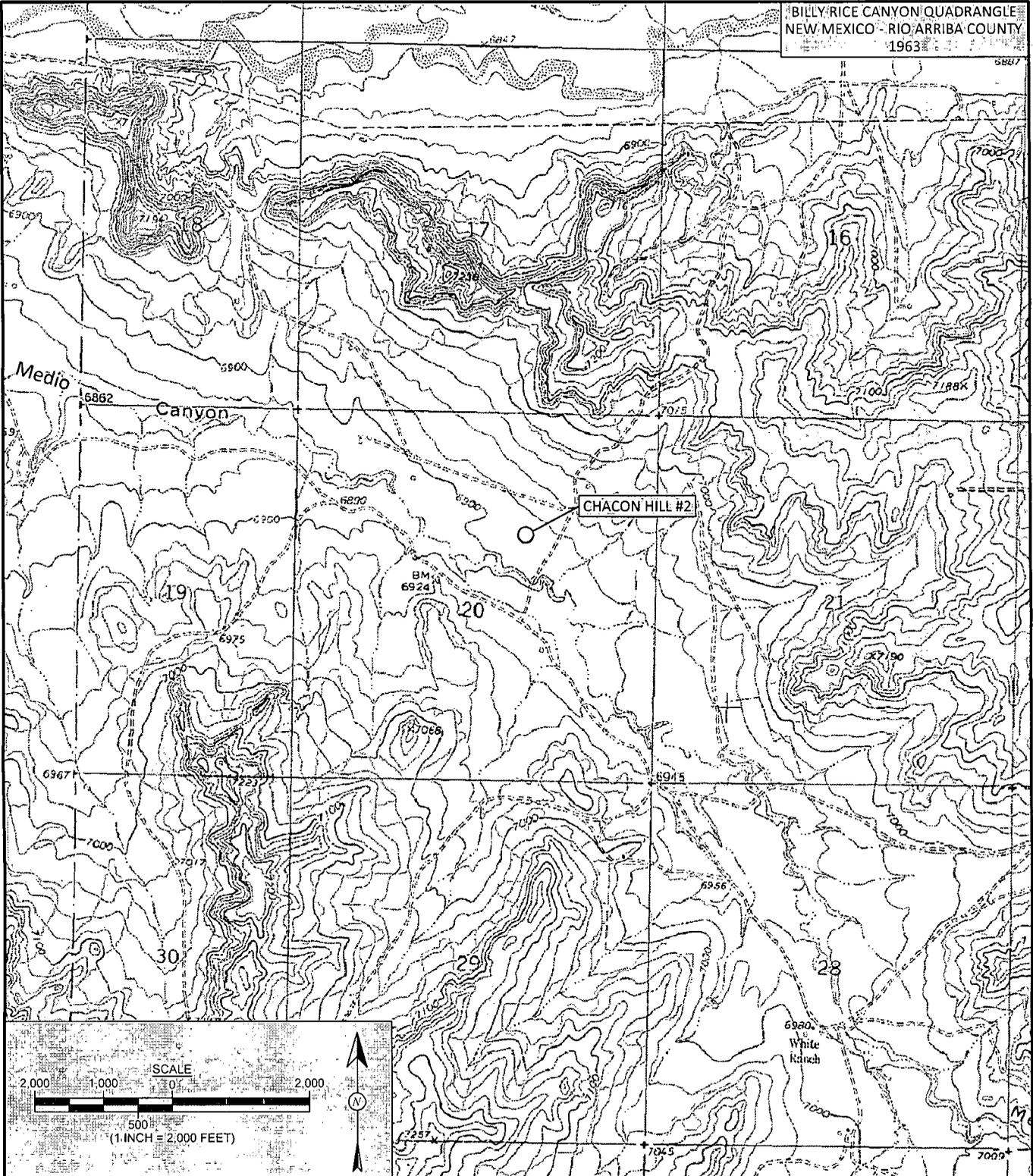
Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, August 2012
- Figure 3. Initial Assessment Soil Sample Locations and Results, August 2012
- Figure 4. Final Excavation Soil Sample Locations and Results, September 2012
- AES Field Screening Report 080712
- AES Field Screening Report 091112
- Hall Laboratory Analytical Report 1209445

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BILLY RICE CANYON QUADRANGLE  
 NEW MEXICO - RIO ARRIBA COUNTY  
 1963

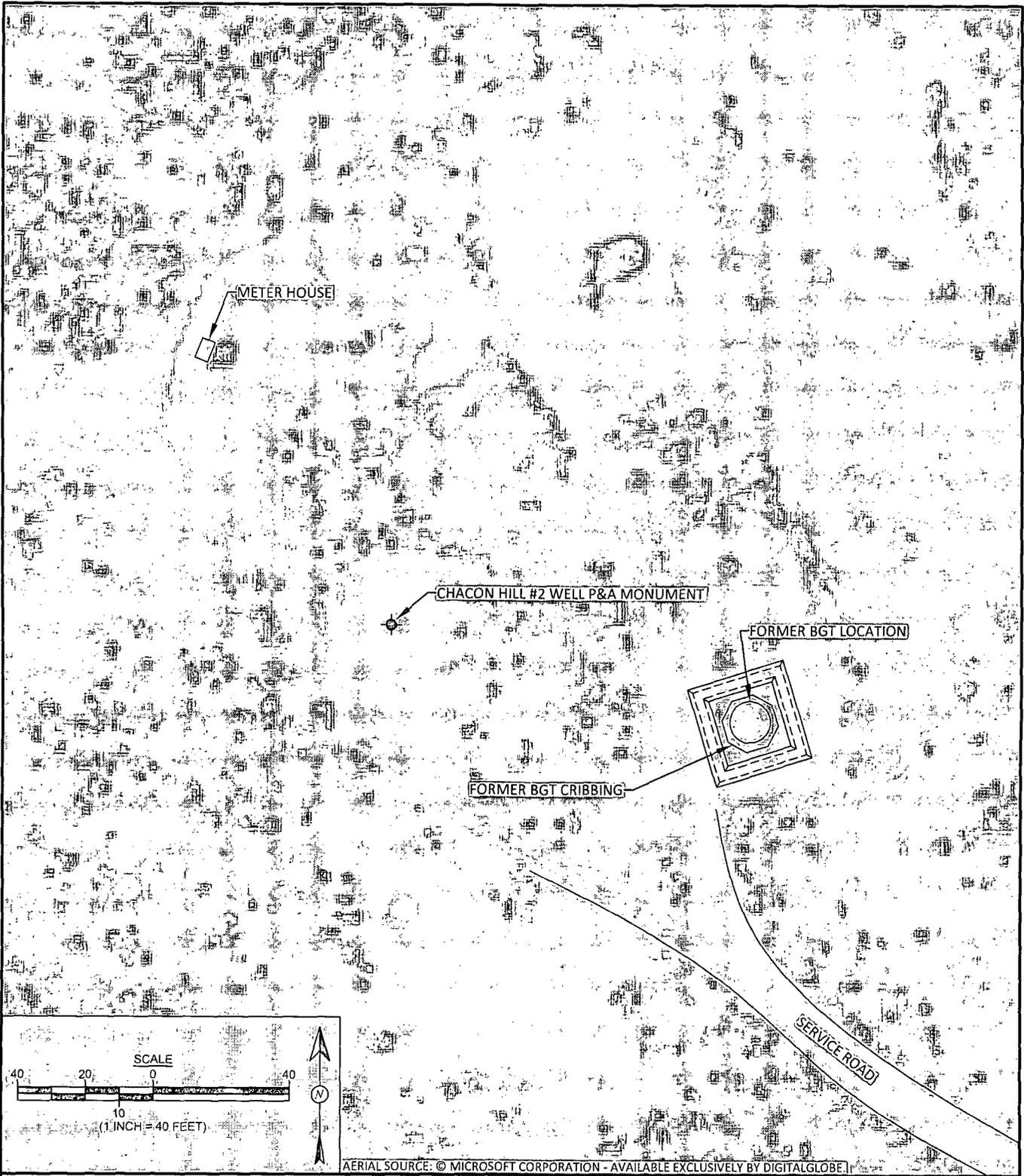


Animas Environmental Services: LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> August 9, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> August 9, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> August 9, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> August 9, 2012

**FIGURE 1**

**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 CHACON HILL #2  
 RIO ARRIBA COUNTY, NEW MEXICO  
 SW¼ NE¼, SECTION 20, T24N, R3W  
 N36.29802, W107.17717

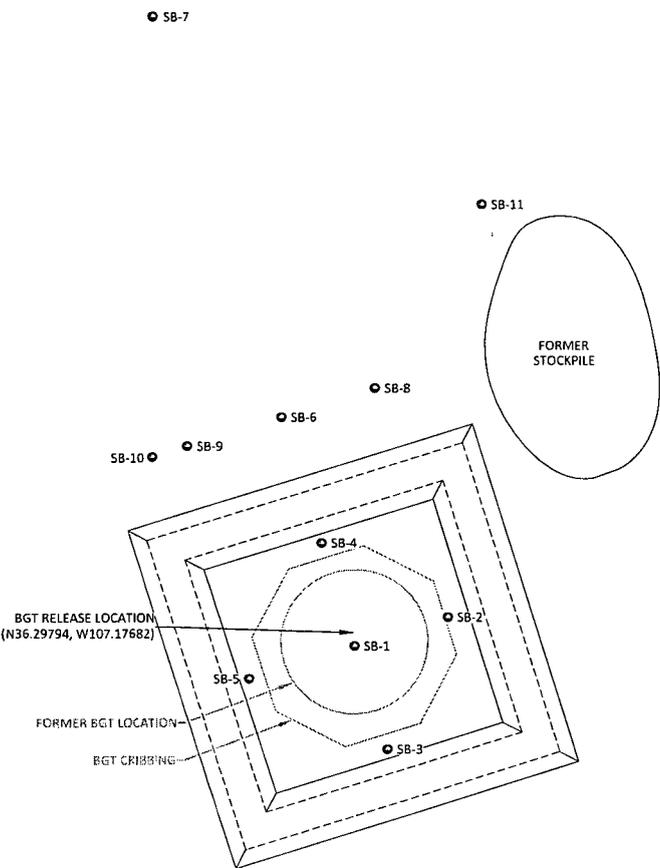


<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> August 9, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> August 9, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> August 9, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> August 9, 2012

**FIGURE 2**

**AERIAL SITE MAP  
AUGUST 2012**

ConocoPhillips  
CHACON HILL #2  
RIO ARRIBA COUNTY, NEW MEXICO  
SW¼ NE¼, SECTION 20, T24N, R3W  
N36.29802, W107.17717



Field Screening Results				
Sample ID	Date	Depth (ft)	OVN-PID (ppm)	TPH (mg/kg)
<b>NMOC ACTION LEVEL</b>				
			100	100
SB-1	8/7/12	7	4,110	NA
		10	1,411	NA
		11	113	1,030
		14	136	266
		16	44.1	117
SB-2	8/7/12	6	24.5	NA
		8	349	NA
		11	20.2	1,230
		14	13.6	94.6
SB-3	8/7/12	6	1.5	NA
		10	3.9	NA
		12	4.1	108
SB-4	8/7/12	6	3.5	NA
		8	3.2	NA
		10	18.1	>2,500
		12	6.0	118
SB-5	8/7/12	6	6.0	NA
		8	13.3	NA
		12	11.5	127
SB-6	8/7/12	4	747	NA
		6	3,859	NA
		8	556	NA
		10	247	NA
		12	564	1,220
SB-7	8/7/12	2	7.9	NA
		4	10.8	NA
		7	10.0	NA
		10	6.0	98.5
SB-8	8/7/12	3	5.7	NA
		6	6.2	136
SB-9	8/7/12	2	7.2	NA
		4	8.3	NA
SB-10	8/7/12	2	7.4	NA
		4	8.9	NA
		6	9.9	NA
		8	8.2	NA
		10	6.9	117
		12	7.2	NA
SB-11	8/7/12	2	2.5	NA
		4	3.8	NA
		6	5.3	NA
		8	3.5	NA
		10	5.2	NA
		12	3.4	135

NA - NOT ANALYZED

**FIGURE 3**

**INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS AUGUST 2012**  
 ConocoPhillips  
 CHACON HILL #2  
 RIO ARriba COUNTY, NEW MEXICO  
 SW¼ NE¼, SECTION 20, T24N, R3W  
 N36.29802, W107.17717

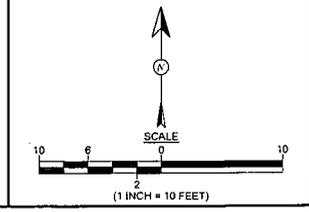


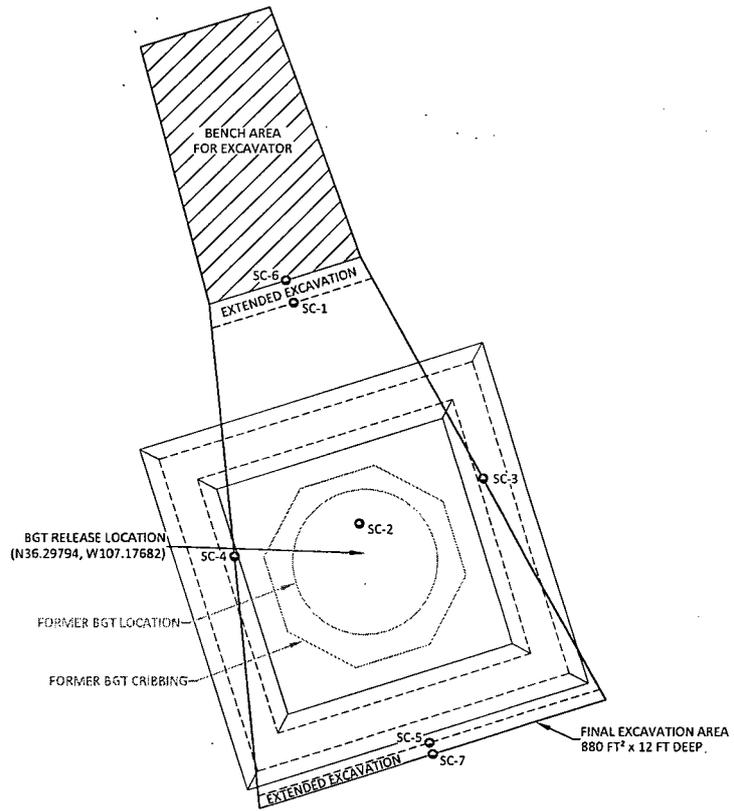
Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> August 9, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISION:</b> August 9, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> August 14, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> August 14, 2012

**LEGEND**

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM





**Field Screening Results**

Sample ID	Date	Depth (ft)	OVN-PID (ppm)	TPH (mg/kg)
<b>NMOC ACTION LEVEL</b>			<b>100</b>	<b>100</b>
SC-1	9/11/12	1 to 12	22.4	242
SC-2	9/11/12	12	6.3	85.2
SC-3	9/11/12	1 to 12	1.9	65.5
SC-4	9/11/12	1 to 12	33.9	90.4
SC-5	9/11/12	1 to 12	5.8	618
SC-6	9/11/12	1 to 12	38.0	122
SC-7	9/11/12	1 to 12	30.0	158

NA - NOT ANALYZED

**Laboratory Analytical Results**

Sample ID	Date	Depth (ft)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
<b>NMOC ACTION LEVEL</b>			<b>100</b>	
SC-6	9/11/12	1 to 12	<5.0	25
SC-7	9/11/12	1 to 12	<5.0	<9.9

ALL SAMPLES WERE ANALYZED PER EPA METHOD 8015B.

**FIGURE 4**

**FINAL EXCAVATION SOIL  
SAMPLE LOCATIONS AND RESULTS  
SEPTEMBER 2012**  
 ConocoPhillips  
 CHACON HILL #2  
 RIO ARRIBA COUNTY, NEW MEXICO  
 SW¼ NE¼, SECTION 20, T24N, R3W  
 N36.29802, W107.17717

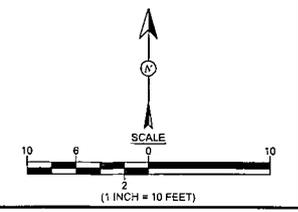


Animas Environmental Services, LLC

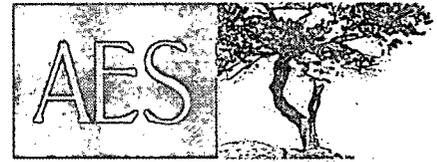
<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> September 13, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> September 13, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> September 13, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> September 13, 2012

**LEGEND**

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM



# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: ConocoPhillips

Project Location: Chacon Hill #2

Date: 8/7/2012

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3274

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 7'	8/7/2012	10:20	4,110	Not Analyzed for TPH				
SB-1 @ 10'	8/7/2012	10:34	1,411	Not Analyzed for TPH				
SB-1 @ 11'	8/7/2012	10:40	113	11:16	1,030	20.0	1	HMW
SB-1 @ 14'	8/7/2012	11:25	136	12:03	266	20.0	1	HMW
SB-1 @ 16'	8/7/2012	11:54	44.1	12:19	117	20.0	1	HMW
SB-2 @ 6'	8/7/2012	10:52	24.5	Not Analyzed for TPH				
SB-2 @ 8'	8/7/2012	11:04	349	Not Analyzed for TPH				
SB-2 @ 11'	8/7/2012	11:19	20.2	11:52	1,230	20.0	1	HMW
SB-2 @ 14'	8/7/2012	12:11	13.6	12:28	94.6	20.0	1	HMW
SB-3 @ 6'	8/7/2012	12:20	1.5	Not Analyzed for TPH				
SB-3 @ 10'	8/7/2012	12:33	3.9	Not Analyzed for TPH				
SB-3 @ 12'	8/7/2012	12:40	4.1	13:01	108	20.0	1	HMW
SB-4 @ 6'	8/7/2012	12:56	3.5	Not Analyzed for TPH				
SB-4 @ 8'	8/7/2012	13:08	3.2	Not Analyzed for TPH				
SB-4 @ 10'	8/7/2012	13:17	18.1	14:14	>2,500	20.0	1	HMW
SB-4 @ 12'	8/7/2012	13:24	6.0	13:46	118	20.0	1	HMW
SB-5 @ 6'	8/7/2012	13:35	6.0	Not Analyzed for TPH				
SB-5 @ 8'	8/7/2012	13:40	13.3	Not Analyzed for TPH				
SB-5 @ 12'	8/7/2012	13:51	11.5	14:31	127	20.0	1	HMW
SB-6 @ 4'	8/7/2012	14:27	747	Not Analyzed for TPH				
SB-6 @ 6'	8/7/2012	14:34	3,859	Not Analyzed for TPH				
SB-6 @ 8'	8/7/2012	14:47	556	Not Analyzed for TPH				

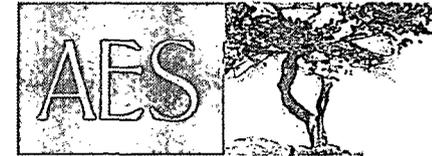
Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-6 @ 10'	8/7/2012	14:55	247	Not Analyzed for TPH				
SB-6 @ 12'	8/7/2012	15:02	564	15:36	1,220	20.0	1	HMW
SB-7 @ 2'	8/7/2012	15:14	7.9	Not Analyzed for TPH				
SB-7 @ 4'	8/7/2012	15:19	10.8	Not Analyzed for TPH				
SB-7 @ 7'	8/7/2012	15:27	10.0	Not Analyzed for TPH				
SB-7 @ 10'	8/7/2012	15:38	6.0	15:53	98.5	20.0	1	HMW
SB-8 @ 3'	8/7/2012	15:36	5.7	Not Analyzed for TPH				
SB-8 @ 6'	8/7/2012	15:56	6.2	16:28	136	20.0	1	HMW
SB-9 @ 2'	8/7/2012	16:01	7.2	Not Analyzed for TPH				
SB-9 @ 4'	8/7/2012	16:06	8.3	Not Analyzed for TPH				
SB-10 @ 2'	8/7/2012	16:18	7.4	Not Analyzed for TPH				
SB-10 @ 4'	8/7/2012	16:23	8.9	Not Analyzed for TPH				
SB-10 @ 6'	8/7/2012	16:32	9.9	Not Analyzed for TPH				
SB-10 @ 8'	8/7/2012	16:37	8.2	Not Analyzed for TPH				
SB-10 @ 10'	8/7/2012	16:45	6.9	17:03	117	20.0	1	HMW
SB-10 @ 12'	8/7/2012	16:54	7.2	Not Analyzed for TPH				
SB-11 @ 2'	8/7/2012	17:00	2.5	Not Analyzed for TPH				
SB-11 @ 4'	8/7/2012	17:04	3.8	Not Analyzed for TPH				
SB-11 @ 6'	8/7/2012	17:10	5.3	Not Analyzed for TPH				
SB-11 @ 8'	8/7/2012	17:15	3.5	Not Analyzed for TPH				
SB-11 @ 10'	8/7/2012	17:21	5.2	Not Analyzed for TPH				
SB-11 @ 12'	8/7/2012	17:27	3.4	17:43	135	20.0	1	HMW

Total Petroleum Hydrocarbons - USEPA 418.1

PQL Practical Quantitation Limit  
 ND Not Detected at the Reporting Limit  
 DF Dilution Factor  
 NA Not Analyzed

Analyst: *Heather M. Woods*

# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3274

Client: ConocoPhillips

Project Location: Chacon Hill #2

Date: 9/11/2012

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	9/11/2012	12:10	North Wall	22.4	13:03	242	20.0	1	HMW
SC-2	9/11/2012	12:13	Base	6.3	13:07	85.2	20.0	1	HMW
SC-3	9/11/2012	12:14	East Wall	1.9	13:10	65.5	20.0	1	HMW
SC-4	9/11/2012	12:16	West Wall	33.9	13:14	90.1	20.0	1	HMW
SC-5	9/11/2012	12:20	South Wall	5.8	13:18	618	20.0	1	HMW
SC-6	9/11/2012	13:30	North Wall	38.0	13:47	122	20.0	1	HMW
SC-7	9/11/2012	13:33	South Wall	30.0	13:43	158	20.0	1	HMW

Total Petroleum Hydrocarbons - USEPA 418.1

PQL Practical Quantitation Limit  
 ND Not Detected at the Reporting Limit  
 DF Dilution Factor  
 NA Not Analyzed

Analyst: *Heather M. Woods*



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)

September 17, 2012

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

RE: COP Chacon Hill #2

OrderNo.: 1209445

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/12/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental Services  
**Project:** COP Chacon Hill #2  
**Lab ID:** 1209445-001

**Client Sample ID:** SC-7  
**Collection Date:** 9/11/2012 1:33:00 PM  
**Received Date:** 9/12/2012 10:05:00 AM

**Matrix:** MEOH (SOIL)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/12/2012 12:16:37 PM
Surr: DNOP	116	77.6-140		%REC	1	9/12/2012 12:16:37 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/12/2012 2:29:38 PM
Surr: BFB	109	84-116		%REC	1	9/12/2012 2:29:38 PM

Analyst: **JMP**

Analyst: **NSB**

**Qualifiers:**

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1209445

17-Sep-12

Client: Animas Environmental Services

Project: COP Chacon Hill #2

Sample ID	<b>MB-3724</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015B: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>3724</b>	RunNo:	<b>5450</b>					
Prep Date:	<b>9/12/2012</b>	Analysis Date:	<b>9/12/2012</b>	SeqNo:	<b>156055</b>	Units:	<b>mg/Kg</b>			
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	11		10.00		113	77.6	140			

Sample ID	<b>LCS-3724</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015B: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>3724</b>	RunNo:	<b>5450</b>					
Prep Date:	<b>9/12/2012</b>	Analysis Date:	<b>9/12/2012</b>	SeqNo:	<b>156114</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	75.9	52.6	130			
Surr: DNOP	4.3		5.000		86.4	77.6	140			

Sample ID	<b>1209366-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015B: Diesel Range Organics</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>3724</b>	RunNo:	<b>5485</b>					
Prep Date:	<b>9/12/2012</b>	Analysis Date:	<b>9/13/2012</b>	SeqNo:	<b>156858</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	9.8	48.97	0	75.0	57.2	146			
Surr: DNOP	4.7		4.897		95.9	77.6	140			

Sample ID	<b>1209366-002AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015B: Diesel Range Organics</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>3724</b>	RunNo:	<b>5485</b>					
Prep Date:	<b>9/12/2012</b>	Analysis Date:	<b>9/13/2012</b>	SeqNo:	<b>156967</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	10	50.51	0	71.3	57.2	146	1.98	24.5	
Surr: DNOP	4.6		5.051		90.8	77.6	140	0	0	

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1209445  
 17-Sep-12

**Client:** Animas Environmental Services  
**Project:** COP Chacon Hill #2

Sample ID <b>MB-3710</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015B: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156930</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		98.1	84	116			

Sample ID <b>LCS-3710</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015B: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156932</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	74	117			
Surr: BFB	1000		1000		102	84	116			

Sample ID <b>1209344-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015B: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156934</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	5.0	24.80	0	134	70	130			S
Surr: BFB	1100		992.1		107	84	116			

Sample ID <b>1209344-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015B: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156935</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	5.0	24.80	0	132	70	130	1.29	22.1	S
Surr: BFB	1100		992.1		108	84	116	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1209445  
 17-Sep-12

**Client:** Animas Environmental Services  
**Project:** COP Chacon Hill #2

Sample ID <b>MB-3710</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156943</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID <b>LCS-3710</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156944</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID <b>1209366-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156948</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		0.9766		105	80	120			

Sample ID <b>1209366-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>3710</b>		RunNo: <b>5469</b>							
Prep Date: <b>9/11/2012</b>	Analysis Date: <b>9/12/2012</b>		SeqNo: <b>156949</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		0.9737		105	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
 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: **1209445**

Received by/date: *[Signature]*

*09/12/12*

Logged By: **Ashley Gallegos**

9/12/2012 10:05:00 AM

*[Signature]*

Completed By: **Ashley Gallegos**

9/12/2012 10:25:24 AM

*[Signature]*

Reviewed By: *[Signature]*

*09/12/12*

**Chain of Custody**

- 1. Were seals intact? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Client

**Log In**

- 4. Coolers are present? (see 19. for cooler specific information) Yes  No  NA
- 5. Was an attempt made to cool the samples? Yes  No  NA
- 6. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 7. Sample(s) in proper container(s)? Yes  No
- 8. Sufficient sample volume for indicated test(s)? Yes  No
- 9. Are samples (except VOA and ONG) properly preserved? Yes  No
- 10. Was preservative added to bottles? Yes  No  NA
- 11. VOA vials have zero headspace? Yes  No  No VOA Vials
- 12. Were any sample containers received broken? Yes  No
- 13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes  No  # of preserved bottles checked for pH:
- 14. Are matrices correctly identified on Chain of Custody? Yes  No  (<2 or >12 unless noted)
- 15. Is it clear what analyses were requested? Yes  No  Adjusted?
- 16. Were all holding times able to be met? (if no, notify customer for authorization.) Yes  No  Checked by:

**Special Handling (if applicable)**

- 17. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

18. Additional remarks:

**19. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

# Chain-of-Custody Record

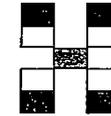
Client: Animas Environmental Services

Mailing Address: 624 E. Comanche  
Farmington, NM 87401  
 Phone #: 505-564-2281

email or Fax#: \_\_\_\_\_  
 QA/QC Package:  
 Standard       Level 4 (Full Validation)  
 Accreditation  
 NELAP       Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 Standard       Rush Same Day  
 Project Name:  
CoP Chacon Hill #2  
 Project #:  
 \_\_\_\_\_

Project Manager:  
D. Watson  
 Sampler: H. Woods  
 On Ice:  Yes       No  
 Sample Temperature: 10



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
9/11/12	1333	Soil	SC-7	Meat kit / 4oz jar	Meat / NA	-001			X										
9/11/12	1330	Soil	SC-8	Meat kit / 4oz jar	Meat / NA	-002			X										
			put @ Watson 09/12/12																

Date: 9/11/12 Time: 1706 Relinquished by: Heather M. Woods  
 Date: 9/11/12 Time: 1706 Received by: Christie Wells  
 Date: 9/11/12 Time: 1721 Relinquished by: Christie Wells  
 Date: 09/12/12 Time: 10:05 Received by: [Signature]

Remarks: Bill to ConocoPhillips

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 noted on the analytical report.