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

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 in 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 Street, Farmington, NM 87402**	Telephone No. **505-326-9786**
Facility Name **San Juan 28-7 Unit 51**	Facility Type

Surface Owner **BLM**	Mineral Owner **Federal**	**API No. 3003907383** **SF-079290A**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	**24**	**28N**	**7W**	**990'**	**North**	**1850'**	**East**	**Rio Arriba**

Latitude 36.651168 Longitude -107.52149

NATURE OF RELEASE

Type of Release **Unknown**	Volume of Release **Unknown**	Volume Recovered **270 yds**
Source of Release **Below Grade Tank**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **December 6, 2012**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

RCVD MAR 11 '13
OIL CONS. DIV.
DIST. 3

Describe Cause of Problem and Remedial Action Taken.*

Below Grade Tank Closure Activities

Describe Area Affected and Cleanup Action Taken.*

Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 30' x 30' x 7' in depth and 270 yds of soil was transported to IEI land farm and 270 yds of clean soil was transported from Aztec Machine Company and placed in the excavation site. The soil sampling report is attached for review.

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

Signature:	OIL CONSERVATION DIVISION Approved by Environmental Specialist:
Printed Name: **Lisa Hunter**	
Title: **Field Environmental Specialist**	Approval Date: 4/17/2013 Expiration Date:
E-mail Address: **Lisa.Hunter@ConocoPhillips.com**	Conditions of Approval: Attached ☐
Date: **03-04-13** Phone: **505-326-9786**	

* Attach Additional Sheets If Necessary

nJK1310755955

23

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

February 22, 2013

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
San Juan 28-7 #51
Rio Arriba County, New Mexico

Dear Ms. Maxwell:

On December 7, 2012, and February 1, 2013, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) San Juan 28-7 #51, located in Rio Arriba County, New Mexico. The historical release was discovered during a facility reset at the location. The initial release assessment was completed by AES on December 7, 2012. The final excavation was completed by CoP contractors prior to AES's arrival on the location on February 1, 2013.

1.0 Site Information

1.1 Location

Location – NW¼ NE¼, Section 24, T28N, R7W, Rio Arriba County, New Mexico
Well Head Latitude/Longitude – N36.65133 and W107.55213, respectively
Release Location Latitude/Longitude – N36.65155 and W107.52217, respectively
Land Jurisdiction – Bureau of Land Management (BLM)
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, December 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a Cathodic Protection Report form dated February 2004 for the San Juan 28-7 #259F well located approximately 1,575 feet southwest of the release area reported the depth to groundwater as 130 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 greater than 100 feet bgs. An unnamed wash is located approximately 110 feet northeast of the location and drains to the wash in Adams Canyon. Based on this information, the location was assessed a ranking score of 20 per the NMOCD *Guidelines for Leaks, Spills, and Releases* (1993).

1.3 Assessments

AES was initially contacted by Steve Welch of CoP on December 6, 2012, and on December 7, 2012, Heather Woods and Kelsey Christiansen of AES completed the release assessment field work. The assessment included collection and field screening of 21 soil samples from 10 test holes (TH-1 through TH-10). Based on the field screening and laboratory analytical results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On February 1, 2013, AES returned to the location to collect confirmation soil samples of the excavation. The field screening activities included collection of five confirmation soil samples (SC-1 through SC-5) of the walls and base of the excavation. The final excavation was approximately 28 feet by 27 feet by 7.5 feet in depth. Note that sandstone was encountered at 7.5 feet bgs, and the excavation could not be continued. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

A total of 21 soil samples from 10 test holes (TH-1 through TH-10) and 5 composite samples (SC-1 through SC-5) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Three of the soil samples (TH-2, TH-3, and TH-9) collected during the initial assessment were submitted for confirmation 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:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B; and
- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

2.3 Field Screening and Laboratory Analytical Results

On December 7, 2012, initial assessment field screening readings for VOCs via OVM ranged from 0.5 ppm in TH-7 up to 8,386 ppm in TH-10. Field TPH concentrations ranged from 42.5 mg/kg in TH-8 to greater than 2,500 mg/kg in TH-1 and TH-9.

On February 1, 2013, final excavation field screening results for VOCs via OVM showed concentrations ranging from 8.2 ppm in SC-1 to 7,905 ppm in SC-5. Field TPH concentrations ranged from less than 20 mg/kg in SC-1 through SC-4 to 3,160 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
San Juan 28-7 #51 Release Assessment and Final Excavation
December 2012 and February 2013

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
	*NMOCD Action Level**		*100*	*100*
TH-1	12/7/12	4	**5,490**	NA
		6	**4,502**	**>2,500**
TH-2	12/7/12	4	**324**	NA
		6	**3,466**	**254**
TH-3	12/7/12	5.5	10.5	NA
		6.5	**398**	NA
		7.5	5.8	68.9
TH-4	12/7/12	6	9.8	66.5
TH-5	12/7/12	4.5	74.8	NA
		7	**2,130**	**1,450**
TH-6	12/7/12	5	23.9	NA
		7.5	3.8	50.9
TH-7	12/7/12	6	0.5	NA
		7	0.5	47.3
TH-8	12/7/12	5	5.6	NA
		7	8.5	42.5
TH-9	12/7/12	5	**1,184**	NA
		7	141	NA
		7.25	**4,888**	**>2,500**
TH-10	12/7/12	6	**8,386**	NA
		6.5	**4,382**	**734**
SC-1	2/1/13	1 to 7.5	8.2	<20.0
SC-2	2/1/13	1 to 7.5	91.5	<20.0

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
	*NMOCD Action Level**		*100*	*100*
SC-3	2/1/13	1 to 7.5	10.3	<20.0
SC-4	2/1/13	1 to 7.5	11.9	<20.0
SC-5	2/1/13	7.5	**7,905**	**3,160**

NA – not analyzed

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

Laboratory analyses of samples from TH-2, TH-3, and TH-9 were used to confirm field screening results from the initial assessment. Benzene concentrations in each sample were below the laboratory detection limit ranging from less than 0.050 mg/kg to 0.50 mg/kg. Total BTEX concentrations ranged from less than 0.25 mg/kg in TH-3 up to 125 mg/kg in TH-9. TPH concentrations (as GRO/DRO) ranged from less than 15 mg/kg in TH-3 up to 2,200 mg/kg in TH-9. Results are presented in Table 2 and on Figure 3. Laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH
San Juan 28-7 #51 Release Assessment, December 2012

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)
*NMOCD Action Level**			*10*	*50*	*100*	
TH-2	12/7/12	6	<0.050	7.9	**150**	**44**
TH-3	12/7/12	6.5	<0.050	<0.25	<5.0	<9.7
TH-9	12/7/12	7.25	<0.50	**125**	**1,900**	**300**

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

3.0 Conclusions and Recommendations

On December 7, 2012, AES conducted an initial assessment associated with a historical release discovered during a facility reset at the San Juan 28-7 #51. 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 20. Field

screening results above the NMOCD action levels of 100 ppm VOCs were reported in TH-1, TH-2, TH-3, TH-5, TH-9, and TH-10, with the highest VOC reported in TH-10 with 8,386 ppm. Field screening TPH results above the NMOCD action level of 100 mg/kg were reported in TH-1, TH-2, TH-5, TH-9, and TH-10. The highest TPH concentrations were reported in TH-1 and TH-9 with concentrations greater than 2,500 mg/kg.

Laboratory analytical results from December 7, 2012, reported total BTEX concentrations above the NMOCD action level of 50 mg/kg in TH-9 with 125 mg/kg. TPH concentrations as GRO/DRO also exceeded the NMOCD action level of 100 mg/kg in TH-2 (194 mg/kg) and TH-9 (2,200 mg/kg). Based on field screening and laboratory results, excavation of the release area was recommended.

On February 1, 2013, a final assessment of the excavation area was completed. Field screening results of the excavation extents showed that VOC and TPH concentrations were below applicable NMOCD action levels for the final four walls of the excavation. However, field screening results for the base of the excavation (SC-5) showed that VOC and TPH concentrations exceeded applicable NMOCD action levels with 7,905 ppm and 3,160 mg/kg, respectively. The excavation was terminated at sandstone.

CoP consulted with Brandon Powell of NMOCD and Mark Kelly of BLM on February 4, 2013, and was granted approval to backfill the excavation following application of potassium permanganate to the base of the excavation. Per Ashley Maxwell of CoP, potassium permanganate was applied to the base of the excavation on February 5, 2013, and the open excavation was backfilled on February 6, 2013. No further work is recommended for the San Juan 28-7 #51.

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

Heather M. Woods
Staff Geologist

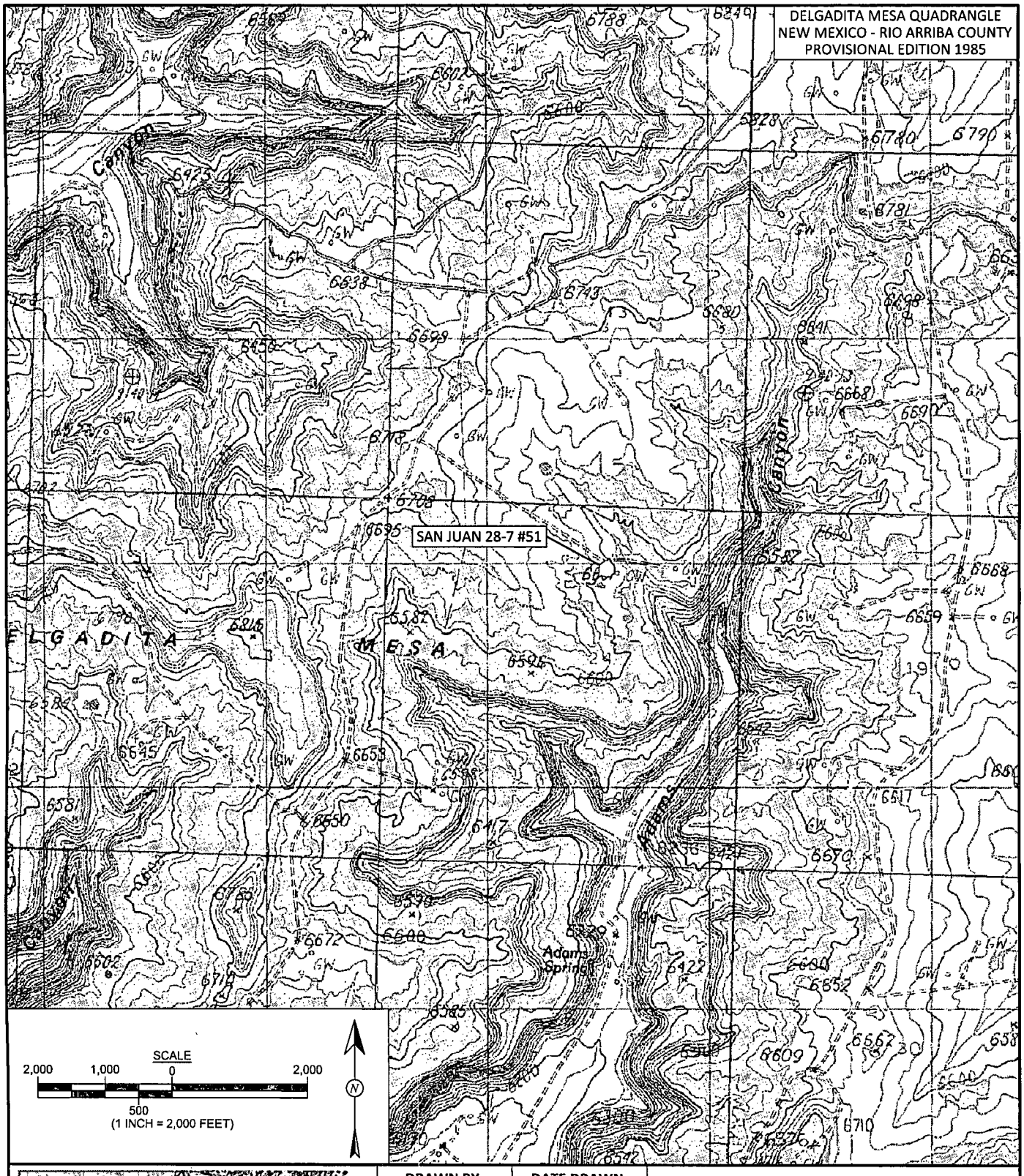
Elizabeth McNally

Elizabeth McNally, PE

Attachments:

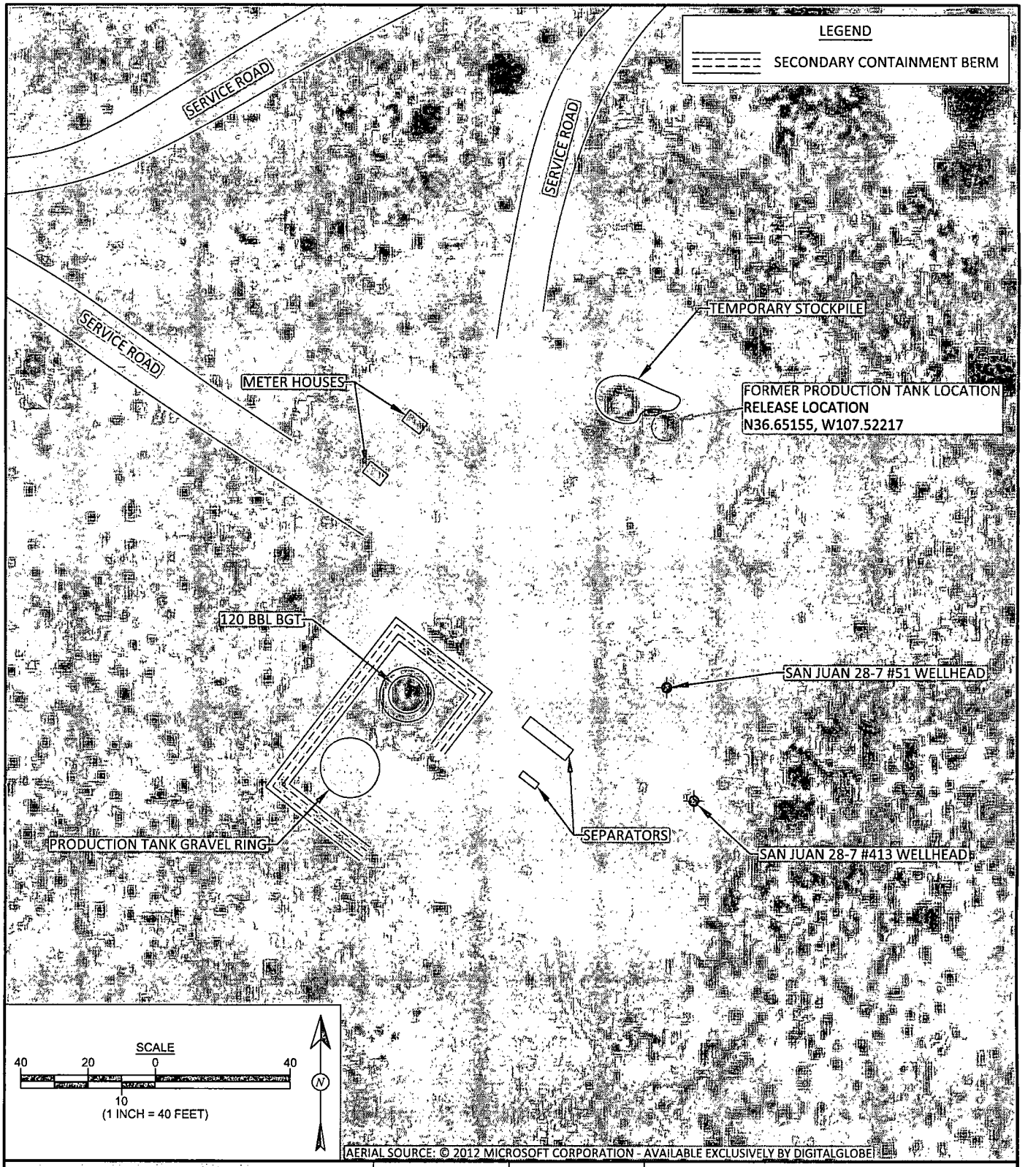
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, December 2012
Figure 3. Initial Assessment Soil Sample Locations and Results, December 2012
Figure 4. Final Excavation Soil Sample Locations and Results, February 2013
AES Field Screening Report 120712
AES Field Screening Report 020113
Hall Laboratory Analytical Report 1212376

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\SJ 28-7 #51\SJ 28-7 #51 Initial Release Assessment and Final Excavation Report 022213.docx



DRAWN BY: C. Lameman	**DATE DRAWN:** February 4, 2013	**FIGURE 1**
REVISIONS BY: C. Lameman	**DATE REVISED:** February 4, 2013	**TOPOGRAPHIC SITE LOCATION MAP**
CHECKED BY: D. Watson	**DATE CHECKED:** February 4, 2013	ConocoPhillips SAN JUAN 28-7 #51 RIO ARRIBA COUNTY, NEW MEXICO NW¼ NE¼, SECTION 24, T28N, R7W N36.65133, W107.55213
APPROVED BY: E. McNally	**DATE APPROVED:** February 4, 2013	

Animas Environmental Services, LLC



Animas Environmental Services, LLC

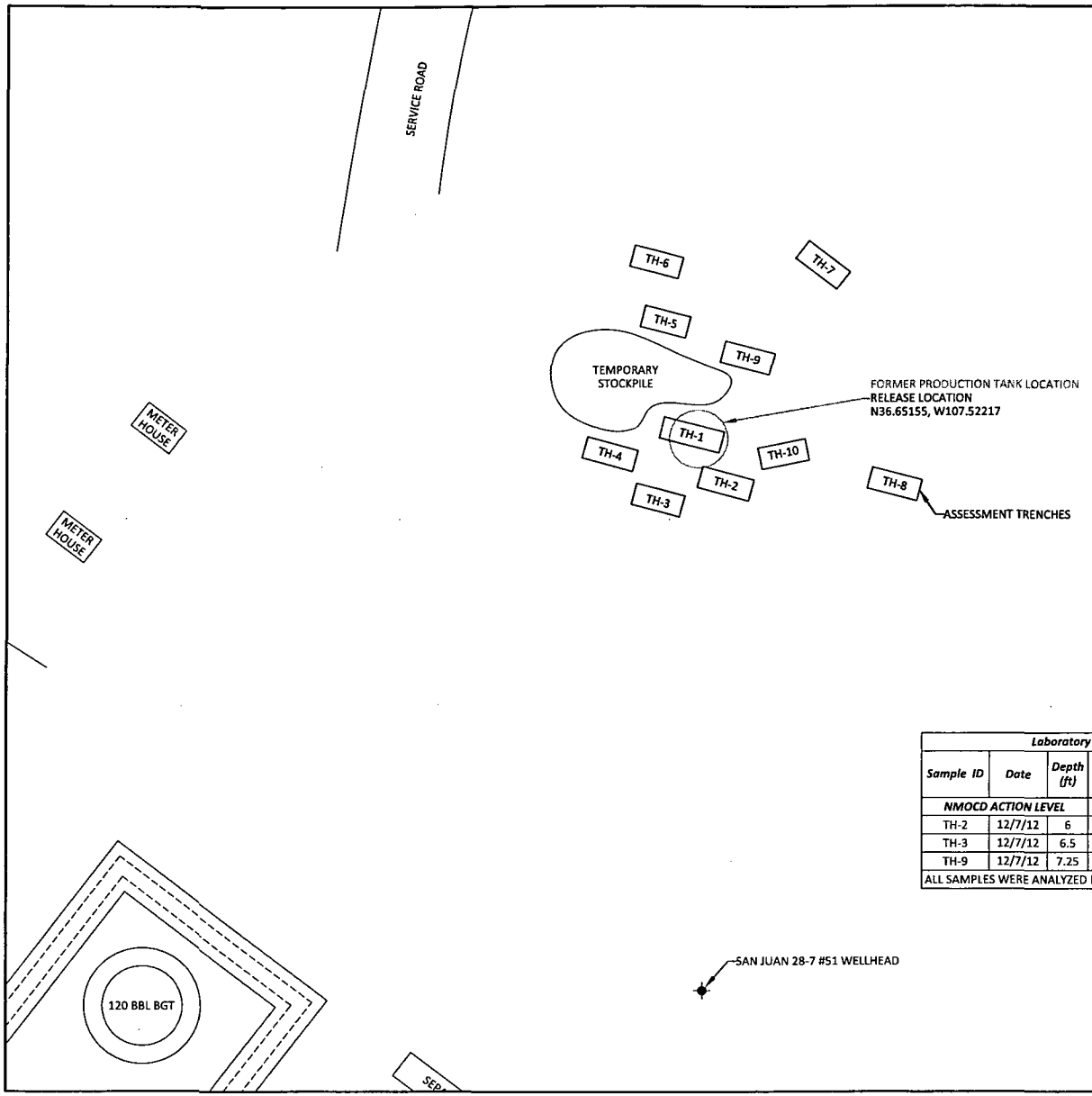
DRAWN BY: C. Lameman	**DATE DRAWN:** February 4, 2013
REVISIONS BY: C. Lameman	**DATE REVISED:** February 4, 2013
CHECKED BY: D. Watson	**DATE CHECKED:** February 4, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** February 4, 2013

FIGURE 2

AERIAL SITE MAP
DECEMBER 2012
ConocoPhillips
SAN JUAN 28-7 #51
RIO ARRIBA COUNTY, NEW MEXICO
NW¼ NE¼, SECTION 24, T28N, R7W
N36.65133, W107.55213

FIGURE 3

INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS
DECEMBER 2012
ConocoPhillips
SAN JUAN 28-7 #51
RIO ARRIBA COUNTY, NEW MEXICO
NW¼ NE¼, SECTION 24, T28N, R7W
N36.65133, W107.55213



Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	100
TH-1	12/7/12	4	5,490	NA
		6	4,502	>2,500
TH-2	12/7/12	4	324	NA
		6	3,466	254
TH-3	12/7/12	5.5	10.5	NA
		6.5	398	NA
		7.5	5.8	68.9
TH-4	12/7/12	6	9.8	66.5
TH-5	12/7/12	4.5	74.8	NA
		7	2,130	1,450
TH-6	12/7/12	5	23.9	NA
		7.5	3.8	50.9
TH-7	12/7/12	6	0.5	NA
		7	0.5	47.3
TH-8	12/7/12	5	5.6	NA
		7	8.5	42.5
TH-9	12/7/12	5	1,184	NA
		7	141	NA
		7.25	4,888	>2,500
TH-10	12/7/12	6	8,386	NA
		6.5	4,382	734
NA - NOT ANALYZED				

Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NMOCD ACTION LEVEL			10	50	100	
TH-2	12/7/12	6	<0.050	7.9	150	44
TH-3	12/7/12	6.5	<0.050	<0.25	<5.0	<9.7
TH-9	12/7/12	7.25	<0.50	125	1,900	300
ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND 8015B.						

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: December 11, 2012
REVISIONS BY: C. Lameman	DATE REVISED: December 11, 2012
CHECKED BY: D. Watson	DATE CHECKED: December 11, 2012
APPROVED BY: E. McNally	DATE APPROVED: December 11, 2012

LEGEND

SECONDARY CONTAINMENT BERM

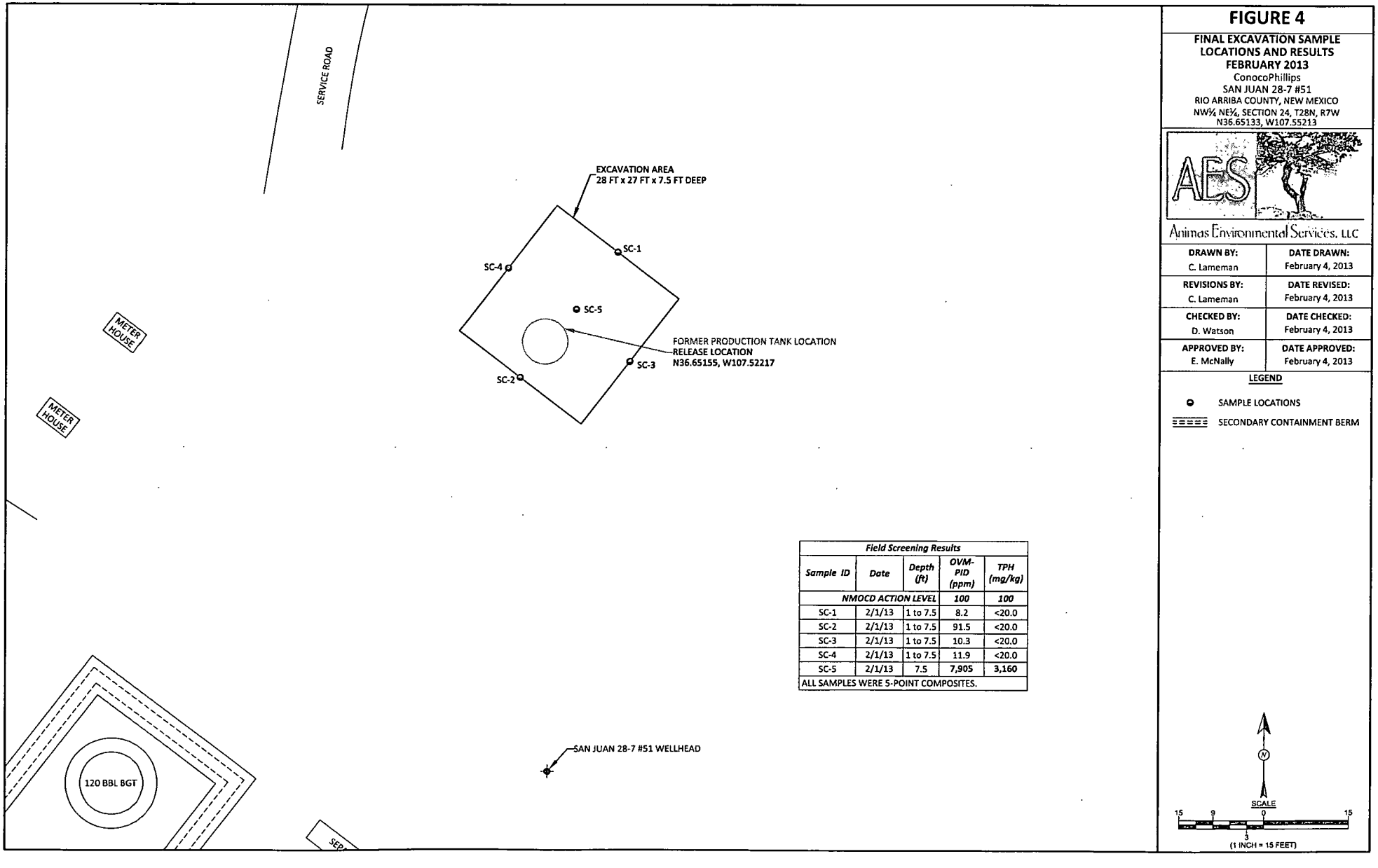
N

SCALE
15 9 0 15
3
(1 INCH = 15 FEET)

FIGURE 4

FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS FEBRUARY 2013

ConocoPhillips
SAN JUAN 28-7 #51
RIO ARRIBA COUNTY, NEW MEXICO
NW¼ NE¼, SECTION 24, T28N, R7W
N36.65133, W107.55213



Field Screening Results				
Sample ID	*Date*	*Depth (ft)*	*OVM-PID (ppm)*	*TPH (mg/kg)*
NMOCD ACTION LEVEL			*100*	*100*
SC-1	2/1/13	1 to 7.5	8.2	<20.0
SC-2	2/1/13	1 to 7.5	91.5	<20.0
SC-3	2/1/13	1 to 7.5	10.3	<20.0
SC-4	2/1/13	1 to 7.5	11.9	<20.0
SC-5	2/1/13	7.5	**7,905**	**3,160**
ALL SAMPLES WERE 5-POINT COMPOSITES.				

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** February 4, 2013
REVISIONS BY: C. Lameman	**DATE REVISED:** February 4, 2013
CHECKED BY: D. Watson	**DATE CHECKED:** February 4, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** February 4, 2013

LEGEND

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM

N

SCALE
15 9 0 15
3
(1 INCH = 15 FEET)

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

Client: ConocoPhillips

Project Location: San Juan 28-7 #51

Date: 12/7/2012

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
TH-1 @ 4'	12/7/2012	10:38	5,490	*Not Analyzed for TPH*				
TH-1 @ 6'	12/7/2012	10:41	4,502	11:18	>2,500	20.0	1	HMW
TH-2 @ 4'	12/7/2012	10:45	324	*Not Analyzed for TPH*				
TH-2 @ 6'	12/7/2012	10:47	3,466	11:21	254	20.0	1	HMW
TH-3 @ 5.5'	12/7/2012	10:50	10.5	*Not Analyzed for TPH*				
TH-3 @ 6.5'	12/7/2012	10:53	398	*Not Analyzed for TPH*				
TH-3 @ 7.5'	12/7/2012	10:54	5.8	12:26	68.9	20.0	1	HMW
TH-4 @ 6'	12/7/2012	11:00	9.8	12:30	66.5	20.0	1	HMW
TH-5 @ 4.5'	12/7/2012	11:04	74.8	*Not Analyzed for TPH*				
TH-5 @ 7'	12/7/2012	11:06	2,130	12:33	1,450	40.0	1	HMW
TH-6 @ 5;	12/7/2012	11:10	23.9	*Not Analyzed for TPH*				
TH-6 @ 7.5'	12/7/2012	11:13	3.8	12:35	50.9	20.0	1	HMW
TH-7 @6'	12/7/2012	11:18	0.5	*Not Analyzed for TPH*				
TH-7 @7'	12/7/2012	11:19	0.5	12:40	47.3	20.0	1	HMW
TH-8 @ 5'	12/7/2012	11:23	5.6	*Not Analyzed for TPH*				
TH-8 @ 7'	12/7/2012	11:25	8.5	12:43	42.5	20.0	1	HMW
TH-9 @ 5'	12/7/2012	11:31	1,184	*Not Analyzed for TPH*				
TH-9 @ 7'	12/7/2012	11:34	141	*Not Analyzed for TPH*				
TH-9 @ 7.25'	12/7/2012	11:35	4,888	12:45	>2,500	20.0	1	HMW
TH-10 @ 6'	12/7/2012	11:40	8,386	*Not Analyzed for TPH*				
TH-10 @ 6.5'	12/7/2012	11:42	4,382	12:50	734	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
970-403-3084

Client: ConocoPhillips

Project Location: San Juan 28-7 #51

Date: 2/1/2013

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	2/1/2013	9:57	North Wall	8.2	10:28	<20.0	20.0	1	HMW
SC-2	2/1/2013	9:59	South Wall	91.5	10:30	<20.0	20.0	1	HMW
SC-3	2/1/2013	10:02	East Wall	10.3	10:32	<20.0	20.0	1	HMW
SC-4	2/1/2013	10:05	West Wall	11.9	10:34	<20.0	20.0	1	HMW
SC-5	2/1/2013	10:07	Base	7,905	10:39	3,160	200	10	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

Report Finalized: 02/01/13

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 13, 2012

Debbie Watson

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

RE: COP San Juan 28-7 #51 OrderNo.: 1212376

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/8/2012 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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1212376**
Date Reported: **12/13/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP San Juan 28-7 #51
Lab ID: 1212376-001 **Matrix:** SOIL

Client Sample ID: TH-2 @ 6'
Collection Date: 12/7/2012 10:47:00 AM
Received Date: 12/8/2012 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	44	9.9		mg/Kg	1	12/10/2012 2:22:59 PM
Surr: DNOP	97.2	72.4-120		%REC	1	12/10/2012 2:22:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	150	50		mg/Kg	10	12/10/2012 2:10:25 PM
Surr: BFB	157	84-116	S	%REC	10	12/10/2012 2:10:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/10/2012 3:08:04 PM
Toluene	0.78	0.050		mg/Kg	1	12/10/2012 3:08:04 PM
Ethylbenzene	0.76	0.050		mg/Kg	1	12/10/2012 3:08:04 PM
Xylenes, Total	6.4	1.0		mg/Kg	10	12/10/2012 2:10:25 PM
Surr: 4-Bromofluorobenzene	98.0	80-120		%REC	10	12/10/2012 2:10:25 PM

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP San Juan 28-7 #51
Lab ID: 1212376-002 **Matrix:** SOIL

Client Sample ID: TH-3 @ 6.5'
Collection Date: 12/7/2012 10:53:00 AM
Received Date: 12/8/2012 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/10/2012 2:49:25 PM
Surr: DNOP	108	72.4-120		%REC	1	12/10/2012 2:49:25 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/10/2012 1:41:32 PM
Surr: BFB	89.7	84-116		%REC	1	12/10/2012 1:41:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/10/2012 1:41:32 PM
Toluene	ND	0.050		mg/Kg	1	12/10/2012 1:41:32 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/10/2012 1:41:32 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/10/2012 1:41:32 PM
Surr: 4-Bromofluorobenzene	94.9	80-120		%REC	1	12/10/2012 1:41:32 PM

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP San Juan 28-7 #51
Lab ID: 1212376-003 **Matrix:** SOIL

Client Sample ID: TH-9 @ 7.25'
Collection Date: 12/7/2012 11:35:00 AM
Received Date: 12/8/2012 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	300	10		mg/Kg	1	12/10/2012 3:11:15 PM
Surr: DNOP	97.1	72.4-120		%REC	1	12/10/2012 3:11:15 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	1900	100		mg/Kg	20	12/10/2012 2:39:14 PM
Surr: BFB	453	84-116	S	%REC	20	12/10/2012 2:39:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.50		mg/Kg	20	12/10/2012 2:39:14 PM
Toluene	18	1.0		mg/Kg	20	12/10/2012 2:39:14 PM
Ethylbenzene	8.4	1.0		mg/Kg	20	12/10/2012 2:39:14 PM
Xylenes, Total	99	2.0		mg/Kg	20	12/10/2012 2:39:14 PM
Surr: 4-Bromofluorobenzene	121	80-120	S	%REC	20	12/10/2012 2:39:14 PM

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
P	Sample pH greater than 2	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#: **1212376**

13-Dec-12

Client: Animas Environmental Services

Project: COP San Juan 28-7 #51

Sample ID **MB-5212**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **5212**	RunNo: **7421**
Prep Date: **12/11/2012**	Analysis Date: **12/11/2012**	SeqNo: **215171** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.2	72.4	120			

Sample ID **LCS-5212**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **5212**	RunNo: **7421**
Prep Date: **12/11/2012**	Analysis Date: **12/11/2012**	SeqNo: **215172** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.1	72.4	120			

Sample ID **1212385-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **5190**	RunNo: **7421**
Prep Date: **12/10/2012**	Analysis Date: **12/11/2012**	SeqNo: **215202** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	10	50.25	0	234	12.6	148	94.3	22.5	SR
Surr: DNOP	4.7		5.025		92.7	72.4	120	0	0	

Sample ID **1212385-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **5190**	RunNo: **7421**
Prep Date: **12/10/2012**	Analysis Date: **12/11/2012**	SeqNo: **215203** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	49.95	0	84.7	12.6	148			
Surr: DNOP	4.2		4.995		84.4	72.4	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212376**

13-Dec-12

Client: Animas Environmental Services

Project: COP San Juan 28-7 #51

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBS**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214862** 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	880		1000		88.5	84	116			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214864** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	74	117			
Surr: BFB	920		1000		92.4	84	116			

Sample ID **1212376-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **TH-3 @ 6.5'**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214865** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	5.0	16.65	0	103	70	130			
Surr: BFB	670		666.1		100	84	116			

Sample ID **1212376-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **TH-3 @ 6.5'**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214872** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	5.0	16.65	0	110	70	130	5.67	22.1	
Surr: BFB	660		666.1		99.6	84	116	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1212376**

13-Dec-12

Client: Animas Environmental Services

Project: COP San Juan 28-7 #51

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214884** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.5	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214885** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	76.3	117			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	77	116			
Xylenes, Total	3.1	0.10	3.000	0	103	76.7	117			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	80	120			

Sample ID **1212377-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214886** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.050	0.8038	0	102	67.2	113			
Toluene	0.83	0.050	0.8038	0	103	62.1	116			
Ethylbenzene	0.83	0.050	0.8038	0	104	67.9	127			
Xylenes, Total	2.5	0.10	2.411	0	103	60.6	134			
Surr: 4-Bromofluorobenzene	0.81		0.8038		101	80	120			

Sample ID **1212377-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R7406**	RunNo: **7406**
Prep Date:	Analysis Date: **12/10/2012**	SeqNo: **214887** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.050	0.8038	0	99.3	67.2	113	2.29	14.3	
Toluene	0.81	0.050	0.8038	0	100	62.1	116	2.41	15.9	
Ethylbenzene	0.82	0.050	0.8038	0	102	67.9	127	1.66	14.4	
Xylenes, Total	2.4	0.10	2.411	0	102	60.6	134	1.50	12.6	
Surr: 4-Bromofluorobenzene	0.80		0.8038		100	80	120	0	0	

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
- P Sample pH greater than 2
- R RPD outside accepted recovery limits

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: 1212376

Received by/date: AT 12/08/12

Logged By: Anne Thorne 12/8/2012 11:00:00 AM Anne Thorne

Completed By: Anne Thorne 12/8/2012 Anne Thorne

Reviewed By: AT 12/08/12

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? Courier

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 ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. 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)

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	1.3	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:
Col San Juan 28-7 #51

Project #:

Project Manager:
D. Watson

Sampler: K. Christiansen / H. Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.3

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. 1212376	BTEX + [redacted] (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel) GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
12/7/12	10:47	Soil	TH-2@6'	MeOH Kit 4oz jar	MeOH	-001	X		X									
12/7/12	10:53	Soil	TH-3@6.5'	MeOH Kit 4 oz jar	MeOH	-002	X		X									
12/7/12	10:35	Soil	TH-9@7.25	MeOH Kit 4oz jar	MeOH	-003	X		X									

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/7/12	1631			12/7/12	1631
12/7/12	1705			12/08/12	1100

Remarks:
Bill To
Conoco Phillips

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