

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 ConocoPhillips Company	Contact Lindsay Dumas
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 599-4089
Facility Name: Charles et al 2E	Facility Type: Gas Well

Surface Owner: Navajo	Mineral Owner Navajo (1-149-IND-8465)	API No. 300452605
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LOCATION OF RELEASE

Unit Letter A	Section 12	Township 27N	Range 9W	Feet from the 800	North/South Line FNL	Feet from the 1100	East/West Line FEL	County San Juan
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Latitude **36.59474** Longitude **-107.73403**

RCVD SEP 19 '14
OIL CONS. DIV.
DIST. 3

NATURE OF RELEASE

Type of Release Historic Contamination	Volume of Release Unknown	Volume Recovered Unknown
Source of Release Production Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 12/17/2013
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The historic release was discovered during facility reset activities on location.

Describe Area Affected and Cleanup Action Taken.*
Excavation was 40' x 50' x 16' Deep. 520 c/yds of soil was transported to Envirotech Land Farm and 500 c/yds of clean soil was transported from Aztec Machine and placed in the excavation site. Analytical results were below the regulatory standards – no further action required. 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: <i>Lindsay Dumas</i>	OIL CONSERVATION DIVISION	
Printed Name: Lindsay Dumas	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Field Environmental Specialist	Approval Date: 9/25/14	Expiration Date:
E-mail Address: Lindsay.Dumas@conocophillips.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9/17/2014 Phone: (505) 599-4089		

* Attach Additional Sheets If Necessary

#NCS 142 68 35 272

25



Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado
970-403-3084

July 25, 2014

Lindsay Dumas
ConocoPhillips
San Juan Business Unit
Office 214-07
5525 Hwy 64
Farmington, New Mexico 87401

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

**RE: Final Excavation Report
Charles Et Al #2
San Juan County, New Mexico**

Dear Ms. Dumas:

During December 2013 and February 2014, Animas Environmental Services, LLC (AES) provided field sampling for excavation guidance and completed environmental clearance of the final excavation limits at the ConocoPhillips (CoP) Charles Et Al #2, located in San Juan County, New Mexico. The historic release was discovered during facility reset activities at the location. The final excavation was completed by CoP contractors prior to AES' arrival at the location on February 25, 2014.

1.0 Site Information

1.1 Location

Location – NE¼ NE¼, Section 12, T27N, R9W, San Juan County, New Mexico
Well Head Latitude/Longitude – N36.59501 and W107.73477, respectively
Release Location Latitude/Longitude – N36.59495 W107.73511, respectively
Land Jurisdiction – Navajo Allotment
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, December 2013

1.2 NMOCD Ranking

The Charles Et Al #2 is located within Navajo Nation boundaries. Navajo Nation Environmental Protection Agency (NNEPA) adheres to action levels for releases and spills as established by the New Mexico Oil Conservation Division (NMOCD).

In accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), the location was given a ranking score of 40 based on the following factors:

- **Depth to Groundwater:** Based on elevation, topographic interpretation and visual reconnaissance, depth to groundwater is interpreted to be less than 50 feet below ground surface (bgs). (20 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** Blanco Wash is located approximately 110 feet east of the location. (20 points)

1.3 Assessment

AES was initially contacted by Lindsay Dumas of CoP on December 17, 2013, and on the same day, Deborah Watson and Stephanie Lynn of AES began the excavation guidance field work. AES personnel returned to the location on December 18 and 19, 2013, and February 25, 2014, to continue excavation clearance field work. Field sampling activities included collection of seven confirmation composite soil samples (SC-1 through SC-7) from the walls and base of the excavation. The area of the final excavation measured approximately 45 feet by 45 feet by 5.5 feet in depth. Sample locations and final excavation extents are presented on Figure 3.

2.0 Soil Sampling

A total of seven composite samples (SC-1 through SC-7) were collected during the assessment. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Three composite samples (SC-4 through SC-6) collected during the final excavation were submitted for confirmation laboratory analysis.

2.1 Field Sampling

2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

2.1.2 Total Petroleum Hydrocarbons

Field TPH samples were analyzed per U.S. Environmental Protection Agency (USEPA) Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting

soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.2 Laboratory Analyses

The soil samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. Soil samples SC-4 and SC-5 were laboratory analyzed for:

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

Soil samples SC-4 and SC-6 were laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per USEPA Method 8021B.

2.3 Field and Laboratory Analytical Results

On December 18 and 19, 2013, and February 25, 2014, final excavation field screening results for VOCs via OVM ranged from 10.3 ppm in SC-1 up to 1,836 ppm in SC-2. Field TPH concentrations ranged from 24.9 mg/kg in SC-7 up to 843 mg/kg in SC-2. Results are included below in Table 1 and on Figure 3. The AES Field Sampling Reports are attached.

Table 1. Soil Field Sampling VOCs and TPH Results
Charles Et Al #2 Final Excavation
December 2013 and February 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>TPH 418.1 (mg/kg)</i>
<i>NMOCD Action Level*</i>			<i>100</i>	<i>100</i>
SC-1	12/18/13	5.5	10.3	97.4
SC-2	12/19/13	1 to 5.5	1,836	843
SC-3	12/19/13	1 to 5.5	10.8	27.4
SC-4	12/19/13	1 to 5.5	301	175
SC-5	12/19/13	1 to 5.5	15.5	133
SC-6	2/25/14	1 to 5.5	263	93.6
SC-7	2/25/14	1 to 5.5	13.3	24.9

NA – not analyzed

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

Laboratory analyses for SC-4 through SC-6 were used to confirm field sampling results from the final excavation. Benzene concentrations were reported as less than 0.076 mg/kg and 0.092 mg/kg in SC-4 and SC-6, respectively. Total BTEX concentrations were reported in SC-4 with 2.8 mg/kg and SC-6 with 3.1 mg/kg. In December 2013, TPH concentrations as GRO/DRO were reported at 114 mg/kg in SC-4 and 41 mg/kg in SC-5. Results are presented in Table 2 and on Figure 3. The laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH
Charles Et Al #2 Final Excavation, December 2013 and February 2014

<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>GRO (mg/kg)</i>	<i>DRO (mg/kg)</i>
<i>NMOCD Action Level*</i>			10	50	100	
SC-4	12/19/13	1 to 5.5	<0.076	2.8	69	45
SC-5	12/19/13	1 to 5.5	NA	NA	<3.6	41
SC-6	2/25/14	1 to 5.5	<0.092	3.1	NA	NA

NA – not analyzed

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

3.0 Conclusions and Recommendations

During December 2013 and February 2014, AES completed field work and the final clearance of the excavation area of petroleum contaminated soils associated with a historic release at the Charles Et Al #2. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the site was assigned a rank of 40.

Field sampling of the final excavation extents showed that VOC concentrations were below the applicable NMOCD action level of 100 ppm for the final sidewalls and base, except the north wall (SC-6) with 263 ppm (December 2013). Field TPH concentrations were reported below the NMOCD action level of 100 mg/kg in all final sidewalls and base of the excavation. However, laboratory analytical results from December 2013 showed that TPH (as GRO/DRO) concentrations were above 100 mg/kg, and further excavation was completed. Subsequent laboratory analytical results from February 25,

2014, reported benzene and total BTEX concentrations in SC-6 below NMOCD action levels.

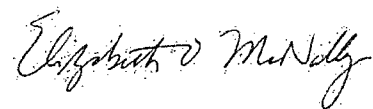
Based on final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the Charles Et Al #2, VOCs, benzene, total BTEX, and TPH concentrations were below applicable NMOCD action levels for each of the sidewalls and base of the excavation. No further work 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,



Emilee Skyles
Staff Geologist



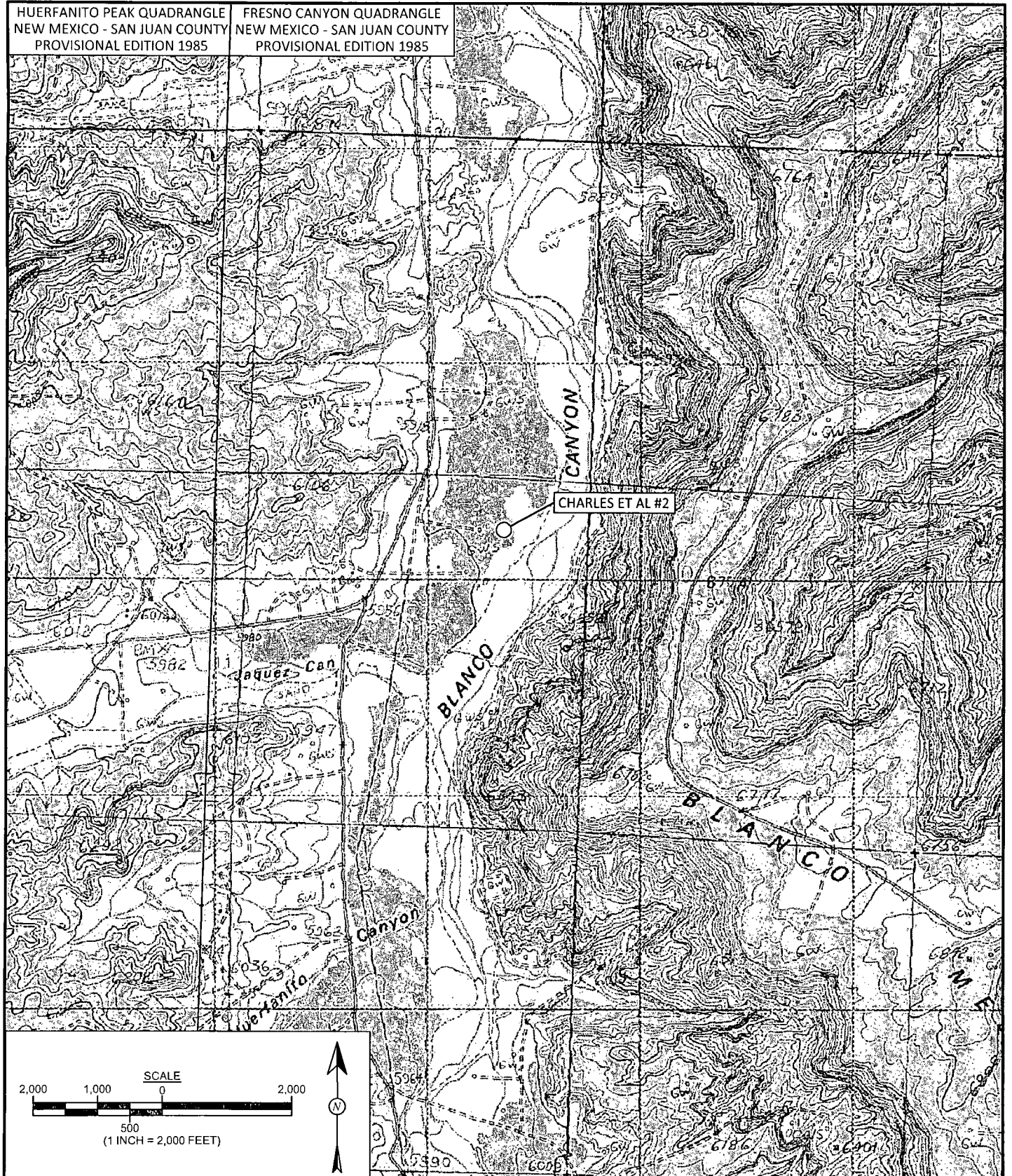
Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, December 2013
- Figure 3. Final Excavation Sample Locations and Results, December 2013 and February 2014
- AES Field Sampling Report 121813
- AES Field Sampling Report 121913
- AES Field Sampling Report 022514
- Hall Laboratory Analytical Report 1312986
- Hall Laboratory Analytical Report 1402988

HUERFANITO PEAK QUADRANGLE
NEW MEXICO - SAN JUAN COUNTY
PROVISIONAL EDITION 1985

FRESNO CANYON QUADRANGLE
NEW MEXICO - SAN JUAN COUNTY
PROVISIONAL EDITION 1985



Animas Environmental Services, LLC

DRAWN BY:
S. Glasses

DATE DRAWN:
March 7, 2014

REVISIONS BY:
C. Lameman

DATE REVISED:
April 21, 2014

CHECKED BY:
D. Watson

DATE CHECKED:
April 21, 2014

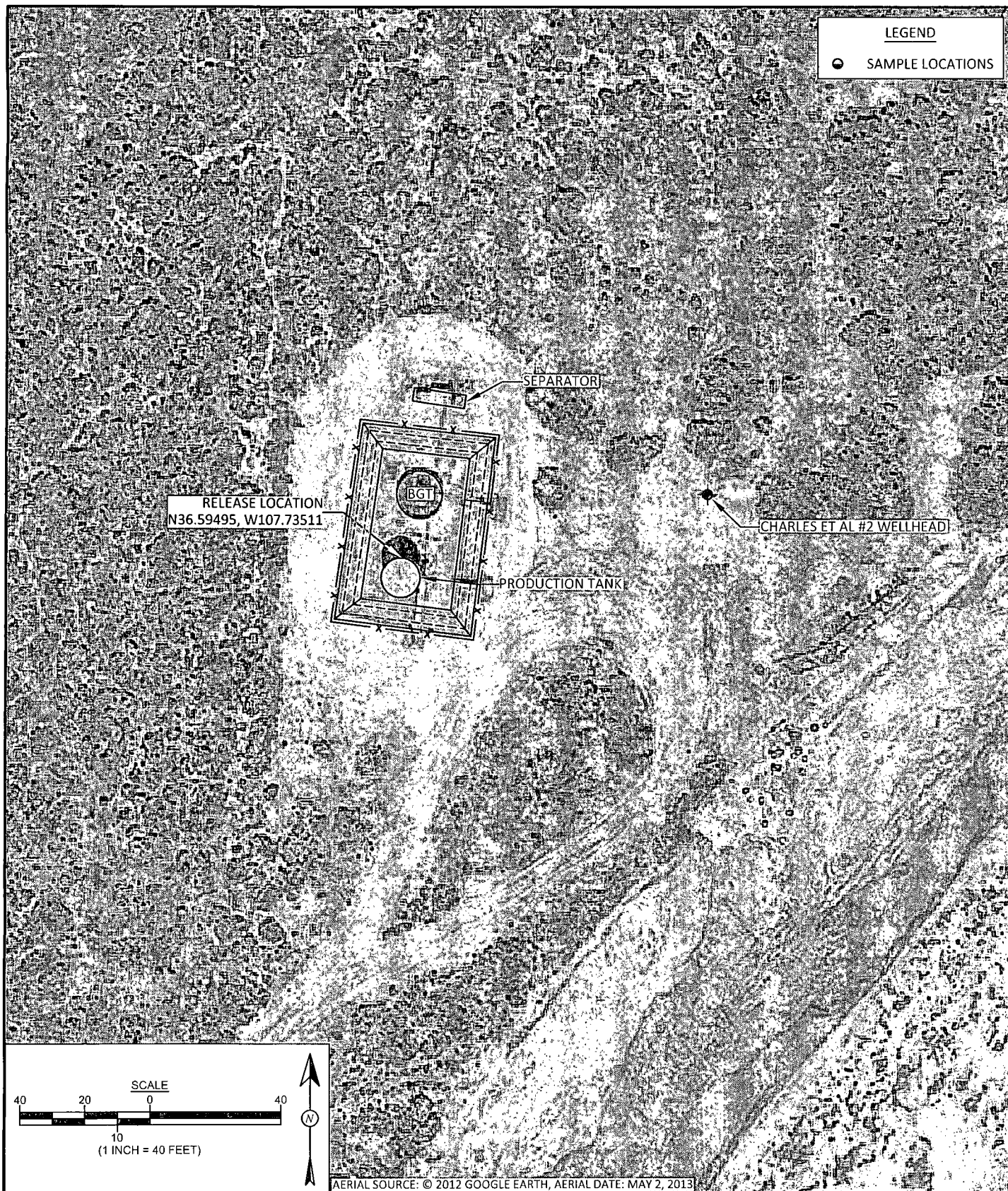
APPROVED BY:
E. McNally

DATE APPROVED:
April 21, 2014

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips
CHARLES ET AL #2
NE¼ NE¼, SECTION 12, T27N, R9W
SAN JUAN COUNTY, NEW MEXICO
N36.59501, W107.73477



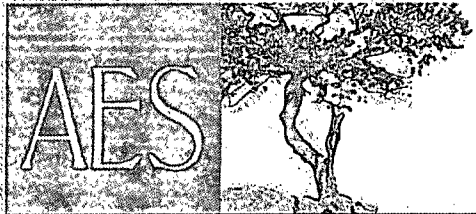
 Animas Environmental Services, LLC	DRAWN BY: S. Glasses	DATE DRAWN: March 7, 2014	FIGURE 2 AERIAL SITE MAP DECEMBER 2013 ConocoPhillips CHARLES ET AL #2 NE¼ NE¼, SECTION 12, T27N, R9W SAN JUAN COUNTY, NEW MEXICO N36.59501, W107.73477
	REVISIONS BY: C. Lameman	DATE REVISED: April 21, 2014	
	CHECKED BY: D. Watson	DATE CHECKED: April 21, 2014	
	APPROVED BY: E. McNally	DATE APPROVED: April 21, 2014	

FIGURE 3

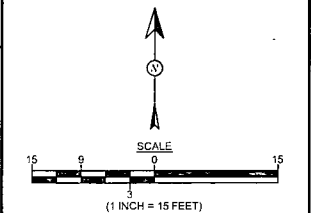
**FINAL EXCAVATION SAMPLE
LOCATIONS AND RESULTS
DECEMBER 2013 AND FEBRUARY 2014**
ConocoPhillips
CHARLES ET AL #2
NE¼, NE¼, SECTION 12, T27N, R9W
SAN JUAN COUNTY, NEW MEXICO
N36.59501, W107.73477



Animas Environmental Services, LLC

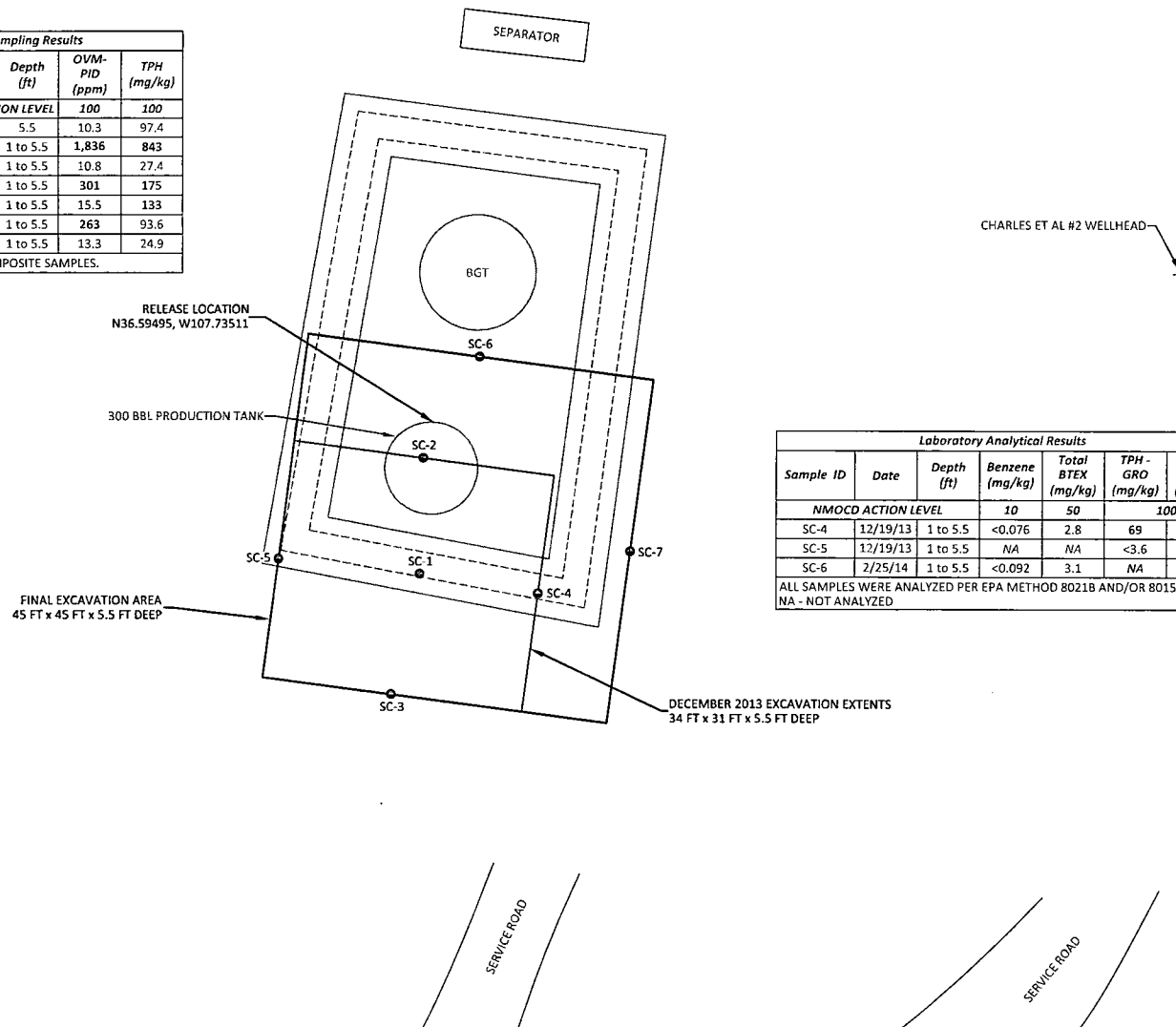
DRAWN BY: C. Lameman	DATE DRAWN: December 26, 2013
REVISIONS BY: C. Lameman	DATE REVISED: April 21, 2014
CHECKED BY: D. Watson	DATE CHECKED: April 21, 2014
APPROVED BY: E. McNally	DATE APPROVED: April 21, 2014

LEGEND
● SAMPLE LOCATIONS
===== SECONDARY CONTAINMENT BERM



Field Sampling Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
			NMOC ACTION LEVEL	100
SC-1	12/18/13	5.5	10.3	97.4
SC-2	12/19/13	1 to 5.5	1,836	843
SC-3	12/19/13	1 to 5.5	10.8	27.4
SC-4	12/19/13	1 to 5.5	301	175
SC-5	12/19/13	1 to 5.5	15.5	133
SC-6	2/25/14	1 to 5.5	263	93.6
SC-7	2/25/14	1 to 5.5	13.3	24.9

ALL SAMPLES WERE COMPOSITE SAMPLES.



Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
			NMOC ACTION LEVEL	10	50	100
SC-4	12/19/13	1 to 5.5	<0.076	2.8	69	45
SC-5	12/19/13	1 to 5.5	NA	NA	<3.6	41
SC-6	2/25/14	1 to 5.5	<0.092	3.1	NA	NA

ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND/OR 8015D.
NA - NOT ANALYZED

AES Field Sampling 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: Charles Et Al #2

Date: 12/18/2013

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	TPH* (mg/kg)	TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	12/18/2013	15:30	Base	10.3	97.4	16:18	20.0	1.0	DAW

DF Dilution Factor

NA Not Analyzed

ND Not Detected at the Reporting Limit

PQL Practical Quantitation Limit

**TPH concentrations recorded may be below PQL.*

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

Debrah Wata

AES Field Sampling 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: Charles Et Al #2

Date: 12/19/2013

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	TPH* (mg/kg)	TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-2	12/19/2013	10:34	North Wall	1,836	843	11:14	20.0	1	HMW
SC-3	12/19/2013	10:36	South Wall	10.8	27.4	11:16	20.0	1	HMW
SC-4	12/19/2013	10:38	East Wall	301	175	11:18	20.0	1	HMW
SC-5	12/19/2013	10:40	West Wall	15.5	133	11:20	20.0	1	HMW

DF Dilution Factor

NA Not Analyzed

ND Not Detected at the Reporting Limit

PQL Practical Quantitation Limit

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

Heather M Woods

*TPH concentrations recorded may be below PQL.

AES Field Sampling 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: Charles Et Al #2

Date: 2/25/2014

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	TPH* (mg/kg)	TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-6	2/25/2014	10:15	North Wall	263	93.6	10:43	20.0	1	DAW
SC-7	2/25/2014	10:20	East Wall	13.3	24.9	10:50	20.0	1	DAW

DF Dilution Factor

NA Not Analyzed

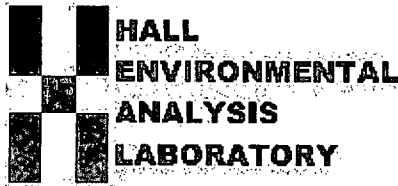
ND Not Detected at the Reporting Limit

PQL Practical Quantitation Limit

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

**Field TPH concentrations recorded may be below PQL.*



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

December 23, 2013

Debbie Watson

Animas Environmental

624 East Comanche

Farmington, NM 87401

TEL: (505) 486-4071

FAX

RE: COP Charles E+Al #2

OrderNo.: 1312986

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/20/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1312986

Date Reported: 12/23/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental**Client Sample ID:** SC-4**Project:** COP Charles E+AI #2**Collection Date:** 12/19/2013 10:38:00 AM**Lab ID:** 1312986-001**Matrix:** MEOH (SOIL)**Received Date:** 12/20/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	45	10		mg/Kg	1	12/20/2013 11:34:10 AM	10913
Surr: DNOP	84.7	66-131		%REC	1	12/20/2013 11:34:10 AM	10913
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	69	15		mg/Kg	5	12/20/2013 12:32:41 PM	R15650
Surr: BFB	154	74.5-129	S	%REC	5	12/20/2013 12:32:41 PM	R15650
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.076		mg/Kg	5	12/20/2013 12:32:41 PM	R15650
Toluene	ND	0.15		mg/Kg	5	12/20/2013 12:32:41 PM	R15650
Ethylbenzene	0.30	0.15		mg/Kg	5	12/20/2013 12:32:41 PM	R15650
Xylenes, Total	2.5	0.30		mg/Kg	5	12/20/2013 12:32:41 PM	R15650
Surr: 4-Bromofluorobenzene	106	80-120		%REC	5	12/20/2013 12:32:41 PM	R15650

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1312986

Date Reported: 12/23/2013

CLIENT: Animas Environmental

Client Sample ID: SC-5

Project: COP Charles E+AI #2

Collection Date: 12/19/2013 10:40:00 AM

Lab ID: 1312986-002

Matrix: MEOH (SOIL)

Received Date: 12/20/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	41	10		mg/Kg	1	12/20/2013 11:56:17 AM	10913
Surr: DNOP	85.3	66-131		%REC	1	12/20/2013 11:56:17 AM	10913
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/20/2013 1:02:51 PM	R15650
Surr: BFB	83.6	74.5-129		%REC	1	12/20/2013 1:02:51 PM	R15650

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	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#: 1312986

23-Dec-13

Client: Animas Environmental

Project: COP Charles E+AI #2

Sample ID	MB-10913	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	10913	RunNo:	15627					
Prep Date:	12/20/2013	Analysis Date:	12/20/2013	SeqNo:	450715	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.9		10.00		78.7	66	131			

Sample ID	LCS-10913	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	10913	RunNo:	15627					
Prep Date:	12/20/2013	Analysis Date:	12/20/2013	SeqNo:	450748	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	62.1	127			
Surr: DNOP	4.4		5.000		87.1	66	131			

Sample ID	1312986-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	SC-4	Batch ID:	10913	RunNo:	15627					
Prep Date:	12/20/2013	Analysis Date:	12/20/2013	SeqNo:	451309	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	10	50.45	44.69	112	47.4	148			
Surr: DNOP	4.5		5.045		89.6	66	131			

Sample ID	1312986-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	SC-4	Batch ID:	10913	RunNo:	15627					
Prep Date:	12/20/2013	Analysis Date:	12/20/2013	SeqNo:	451310	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	92	9.9	49.60	44.69	96.4	47.4	148	8.98	22.7	
Surr: DNOP	4.4		4.960		88.2	66	131	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 |
| O RSD is greater than RSDlimit | P Sample pH greater than 2 for VOA and TOC only. |
| 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#: 1312986

23-Dec-13

Client: Animas Environmental

Project: COP Charles E+AI #2

Sample ID	MB-10904 MK	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R15650	RunNo:	15650					
Prep Date:		Analysis Date:	12/20/2013	SeqNo:	451464	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	840		1000		84.5	74.5	129			

Sample ID	LCS-10904 MK	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R15650	RunNo:	15650					
Prep Date:		Analysis Date:	12/20/2013	SeqNo:	451468	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.8	74.5	126			
Surr: BFB	870		1000		86.7	74.5	129			

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 |
| O RSD is greater than RSDlimit | P Sample pH greater than 2 for VOA and TOC only. |
| 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#: 1312986

23-Dec-13

Client: Animas Environmental

Project: COP Charles E+AI #2

Sample ID	MB-10904 MK	SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	R15650		RunNo:	15650				
Prep Date:		Analysis Date:	12/20/2013		SeqNo:	451488		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	0.99		1.000		98.8	80	120			

Sample ID	LCS-10904 MK		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: R15650		RunNo: 15650					
Prep Date:			Analysis Date: 12/20/2013		SeqNo: 451489		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	99.1	80	120			
Toluene	0.96	0.050	1.000	0	96.0	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.1	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.4	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery 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
P Sample pH greater than 2 for VOA and TOC only.
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87106
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1312986

RcptNo: 1

Received by/date:

AG 12/20/13

Logged By: Lindsay Mangin

12/20/2013 10:00:00 AM

Lindsay Mangin

Completed By: Lindsay Mangin

12/20/2013 10:13:35 AM

Lindsay Mangin

Reviewed By:

mg

12/20/13

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp. $^{\circ}\text{C}$	Condition:	Seal Intact	Seal No.	Seal Date	Signed By
1	1.0	Good	Yes			

Client: Annas Environmental Services

Mailing Address: 624 E. Comanche
Farmington, NM 87401

Phone #: 505-564-2261

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush <u>Same Day</u>	
Project Name:	
Col Charles E + Al #2	
Project #:	
Project Manager:	
D. Watson	
Sampler: H. Woods	
On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Temperature: 1. <u>0</u>	



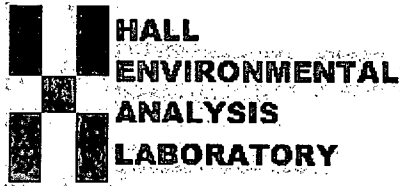
Tel. 505-345-3975 Fax 505-345-4107

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/19/10	1644	Heather M. Woods	Christine Walter	12/19/13	1644
Date:	Time:	Relinquished by:	Received by:	Date	Time
12/19/13	1700	Christine Walter	Isabel A. Baller	12/20/13	1644

Remarks:
Bill to CanocoPhillips

~~If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.~~



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

February 27, 2014

Debbie Watson

Animas Environmental

624 East Comanche

Farmington, NM 87401

TEL: (505) 486-4071

FAX

RE: CoP Charles Et Al #2

OrderNo.: 1402988

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/26/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1402988

Date Reported: 2/27/2014

CLIENT: Animas Environmental

Client Sample ID: SC-6

Project: CoP Charles Et Al #2

Collection Date: 2/25/2014 10:15:00 AM

Lab ID: 1402988-001

Matrix: MEOH (SOIL)

Received Date: 2/26/2014 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: JMP
Benzene	ND	0.092		mg/Kg	5	2/26/2014 2:04:27 PM	R16966
Toluene	ND	0.18		mg/Kg	5	2/26/2014 2:04:27 PM	R16966
Ethylbenzene	ND	0.18		mg/Kg	5	2/26/2014 2:04:27 PM	R16966
Xylenes, Total	3.1	0.37		mg/Kg	5	2/26/2014 2:04:27 PM	R16966
Surr: 4-Bromofluorobenzene	98.8	80-120		%REC	5	2/26/2014 2:04:27 PM	R16966

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 2
	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	
	O	RSD is greater than RSDlimit	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#: 1402988

27-Feb-14

Client: Animas Environmental

Project: CoP Charles Et Al #2

Sample ID	MB-11892 MK		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	R16966		RunNo:	16966			
Prep Date:			Analysis Date:	2/26/2014		SeqNo:	488628		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		92.1	80	120			

Sample ID	LCS-11892 MK		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	R16966		RunNo:	16966			
Prep Date:			Analysis Date:	2/26/2014		SeqNo:	488629		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	108	80	120			
Toluene	1.1	0.050	1.000	0	111	80	120			
Ethylbenzene	1.1	0.050	1.000	0	111	80	120			
Xylenes, Total	3.4	0.10	3.000	0	114	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery 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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1402988

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

2/26/2014 10:15:00 AM

Completed By: Ashley Gallegos

2/26/2014 10:45:59 AM

Reviewed By:

02/26/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0° C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Client: Animas Environmental
Services LLC

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) _____

Project Name:

CoP Charles Et H #2

Project #:

Project Manager:

D. Watson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.6

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks: Bill to ConocoPhillips WO: 9927589 Aren : 21 act code: D150 user KGARCIA ordered by : Eric Smith supervisor: Mike Smith
2/25/14	1717	Debrah Watson	Christa Watson	2/25/14	1717	
Date:	Time:	Relinquished by:	Received by:	Date	Time	
2/25/14	1749	Christa Watson	Christa Watson	02/26/14	1015	



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

X	BTEX + PAHs + PCBs (8021)
	BTEX + MTBE + TPH (Gas only)
	TPH 8015B (GRO / DRO / MRO)
	TPH (Method 418.1)
	EDB (Method 504.1)
	PAH's (8310 or 8270 SIMS)
	RCRA 8 Metals
	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
	8081 Pesticides / 8082 PCB's
	8260B (VOA)
	8270 (Semi-VOA)
	Air Bubbles (Y or N)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.