

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 Lisa Hunter	
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 326-9786	
Facility Name: San Juan 31-6 Unit 228	Facility Type: Gas Well	
Surface Owner BLM	Mineral Owner BLM	API No. 3003924986

LOCATION OF RELEASE

Unit Letter H	Section 28	Township 31N	Range 06W	Feet from the 1377	North/South Line North	Feet from the 913	East/West Line East	County Rio Arriba
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Latitude **36.87387** Longitude **-107.46188**

NATURE OF RELEASE

Type of Release Historic Contamination	Volume of Release Unknown	Volume Recovered 8 yds
Source of Release Water Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery April 16, 2014
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.*
N/A

OIL CONS. DIV DIST. 3

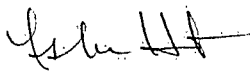
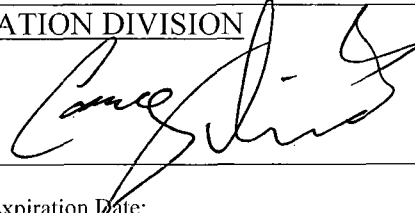
Describe Cause of Problem and Remedial Action Taken.*
N/A

JUL 18 2014

Describe Area Affected and Cleanup Action Taken.*

Historic hydrocarbon impacted soil was found under water tank during facility reset. The excavation was 9' x 8' x 4' in depth, and 8 yds of soil was transported to IEI land farm and 8 yds of clean soil was placed in the excavation site. Analytical results were below the regulatory standards – no further action required. The soil sampling report is attached for review. 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	
Printed Name: Lisa Hunter	Approved by Environmental Specialist: 	
Title: Field Environmental Specialist	Approval Date: 9/5/14	Expiration Date:
E-mail Address: Lisa.Hunter@cop.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: July 16, 2014	Phone: (505) 326-9786	

* Attach Additional Sheets If Necessary

#WCS 142 48 53 204

(24)



Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado
970-403-3084

June 9, 2014

Lisa Hunter
ConocoPhillips
San Juan Business Unit
Office 214-04
5525 Hwy 64
Farmington, New Mexico 87401

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

OIL CONS. DIV DIST. 3
JUL 18 2014

**RE: Final Excavation Report
San Juan 31-6 #228
Rio Arriba County, New Mexico**

Dear Ms. Hunter:

On April 17, 2014, Animas Environmental Services, LLC (AES) completed an environmental clearance of the final excavation limits at the ConocoPhillips (CoP) San Juan 31-6 #228, located in Rio Arriba County, New Mexico. A historic release of petroleum contaminated soils was discovered during reset activities at the location. The final excavation was completed by CoP contractors while AES was on location.

1.0 Site Information

1.1 Location

Location – SE¼ NE¼, Section 28, T31N, R6W, Rio Arriba County, New Mexico

Well Head Latitude/Longitude – N36.87408 and W107.46228, respectively

Release Location Latitude/Longitude – N36.87411 and W107.46264, respectively

Land Jurisdiction – Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, April 2014

1.2 NMOCD Ranking

In accordance with New Mexico Oil Conservation Division (NMOCD) release protocols, action levels were established per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to site work. The release was given a ranking score of 10 based on the following factors:

- **Depth to Groundwater:** A cathodic protection report form dated September 1992 reported the depth to groundwater at 160 feet below ground surface (bgs). (0 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** An unnamed wash which discharges north to Navajo Lake is located 250 feet north. (10 points)

1.3 Assessment

AES was initially contacted by Crystal Tafoya of CoP on April 16, 2014, and on April 17, 2013, Heather Woods and Stephanie Lynn of AES completed the excavation clearance field work. Field sampling activities included collection of six soil samples and two composite soil samples from the walls and base of the excavation. The area of the final excavation measured approximately 9 feet by 8 feet by 4 feet in depth. Sample locations and final excavation extents are presented on Figure 3.

2.0 Soil Sampling

A total of 6 soil samples (from S-1 through S-6) and 2 composite samples (SC-1 and SC-2) were collected during the assessments. All soil samples except SC-1 and SC-2 were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). The two composite samples collected during the excavation clearance were submitted for laboratory analysis. A waste characterization sample was also collected for 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. Both soil samples were laboratory analyzed for:

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

In addition, soil sample SC-1 was laboratory analyzed for:

- Chloride per USEPA Method 300.0.

2.3 Field and Laboratory Analytical Results

On April 17, 2014, field screening results for VOCs via OVM showed concentrations ranging from 0.8 ppm in S-3 and S-6, up to 28.5 ppm in S-2. Field TPH concentrations ranged from 50.1 mg/kg in S-3 to greater than 2,500 mg/kg in S-2 and S-4. Results are included below in Table 1 and Figure 3. The AES Field Sampling Report is attached.

Table 1. Field Sampling VOCs and TPH Results
San Juan 31-6 #228 Final Excavation, April 2014

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	TPH 418.1 (mg/kg)
<i>NMOCD Action Level*</i>			100	1,000
S-1	4/17/14	1 to 4	0.9	54.9
S-2	4/17/14	4	28.5	>2,500
S-3	4/17/14	4	0.8	50.1
S-4	4/17/14	4	15.9	>2,500
S-5	4/17/14	4	1.2	2,340
S-6	4/17/14	1 to 4	0.8	246

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-1 and SC-2 were used to confirm field screening results from the final excavation. TPH concentrations as GRO/DRO in SC-1 and SC-2 were reported at 18 mg/kg and 580 mg/kg, respectively. Chloride concentrations in SC-1 were below the

laboratory detection limit of 30 mg/kg. Results are presented in Table 2 and Figure 3. The laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results –TPH and Chloride
San Juan 31-6 #228 Final Excavation, April 2014

		Sample			
	Date	Depth	GRO	DRO	Chloride
Sample ID	Sampled	(ft bgs)	(mg/kg)	(mg/kg)	(mg/kg)
NMOCD Action Level*			1,000		NE
SC-1	4/17/14	1 to 4	<4.1	18	<30
SC-2	4/17/14	4	<2.7	580	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

On April 17, 2014, AES completed final clearance of the excavation area associated with petroleum contaminated soils at the San Juan 31-6 #228. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the site was assigned a rank of 10.

Field sampling results of the excavation extents showed that VOC concentrations were below applicable NMOCD action levels for the final walls and base of the excavation. Field TPH concentrations were below the applicable NMOCD action level of 1,000 mg/kg for the final walls of the excavation, but were above the NMOCD action level for the excavation base, which had concentrations of greater than 2,500 mg/kg (S-2 and S-4) and 2,340 mg/kg (S-5). However, laboratory analytical results reported TPH concentrations in SC-1 and SC-2 below NMOCD action levels, and chloride concentrations in SC-1 of less than 30 mg/kg.

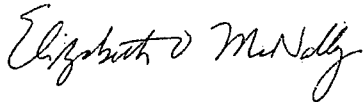
Based on final field screening and laboratory analytical results of the excavation of petroleum contaminated soils at the San Juan 31-6 #228, VOC and TPH concentrations were below applicable NMOCD action levels for each of the sidewalls and base of the excavation. No further work is recommended at the release area.

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

Sincerely,



David J. Reese
Environmental Scientist

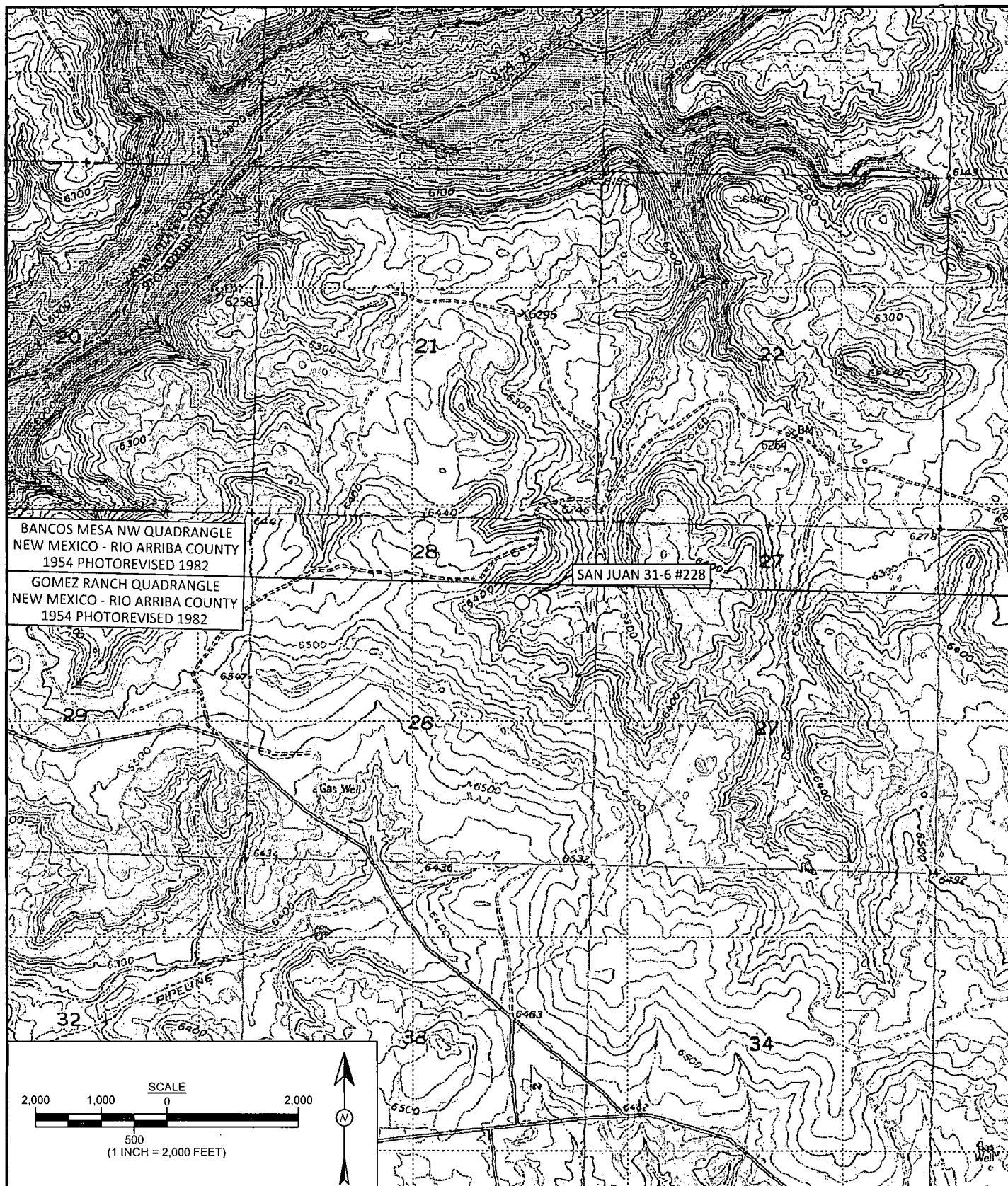


Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, April 2014
- Figure 3. Final Excavation Sample Locations and Results, April 2014
- AES Field Sampling Report 041714
- Hall Laboratory Analytical Report 1404850
- Hall Laboratory Analytical Report 1404855

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#228\San Juan 31-6 #228 Final Excavation Report 060914.docx



Animas Environmental Services, LLC

DRAWN BY:

C. Lameman

DATE DRAWN:

April 18, 2014

REVISIONS BY:

C. Lameman

DATE REVISED:

June 1, 2014

CHECKED BY:

D. Watson

DATE CHECKED:

June 1, 2014

APPROVED BY:

E. McNally

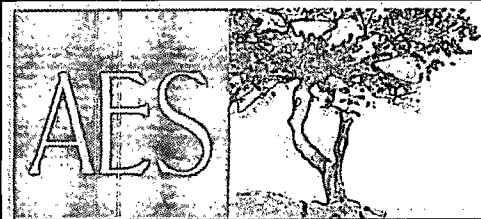
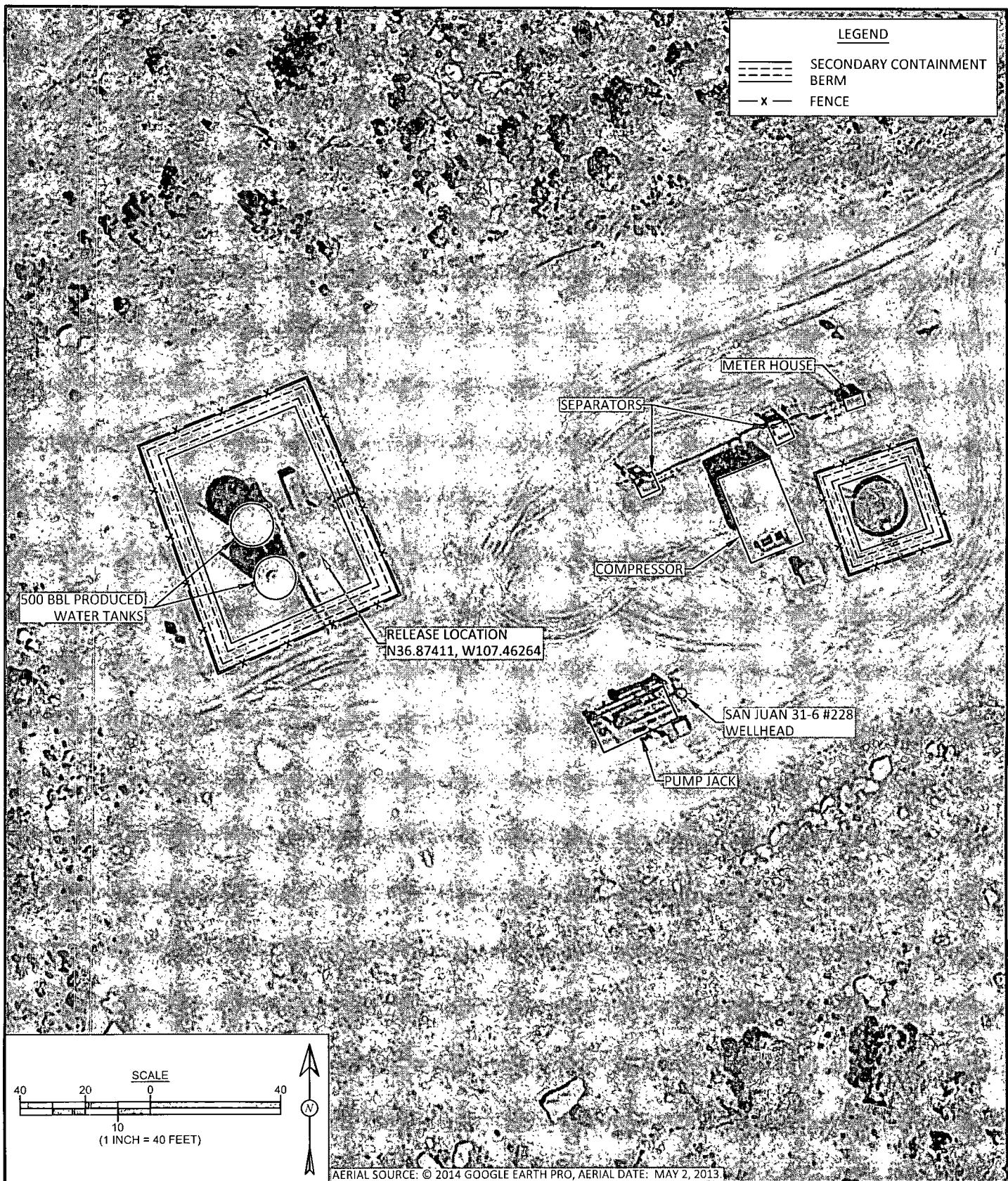
DATE APPROVED:

June 1, 2014

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips
SAN JUAN 31-6 #228
SE¼, NE¼, SECTION 28, T31N, R6W
RIO ARriba COUNTY, NEW MEXICO
N36.87408, W107.46228



Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: April 18, 2014
REVISIONS BY: C. Lameman	DATE REVISED: June 1, 2014
CHECKED BY: D. Watson	DATE CHECKED: June 1, 2014
APPROVED BY: E. McNally	DATE APPROVED: June 1, 2014

FIGURE 2

AERIAL SITE MAP APRIL 2014

ConocoPhillips
SAN JUAN 31-6 #228
SE¼ NE¼, SECTION 28, T31N, R6W
RIO ARriba COUNTY, NEW MEXICO
N36.87408, W107.46228

FIGURE 3

**FINAL EXCAVATION SAMPLE
LOCATIONS AND RESULTS
APRIL 2014**
ConocoPhillips
SAN JUAN 31-6 #228
SE¼ NE¼, SECTION 28, T31N, R6W
RIO ARriba COUNTY, NEW MEXICO
N36.87408, W107.46228



Animas Environmental Services, LLC

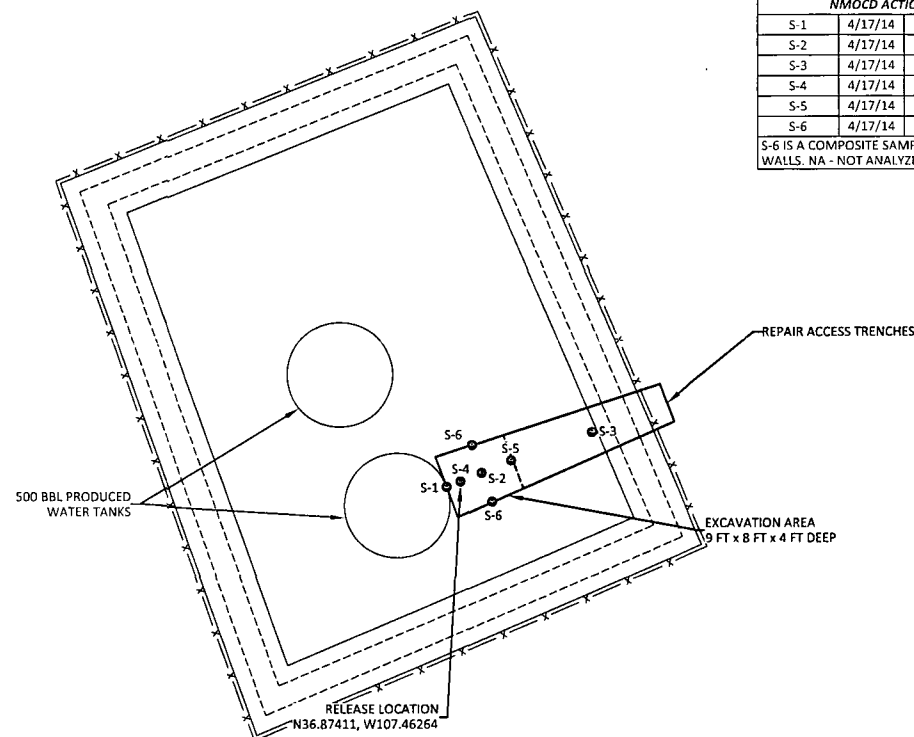
DRAWN BY: C. Lameman	DATE DRAWN: April 18, 2014
REVISIONS BY: C. Lameman	DATE REVISED: June 1, 2014
CHECKED BY: D. Watson	DATE CHECKED: June 1, 2014
APPROVED BY: E. McNally	DATE APPROVED: June 1, 2014

LEGEND

- SAMPLE LOCATIONS
- ===== SECONDARY CONTAINMENT BERM
- x- FENCE

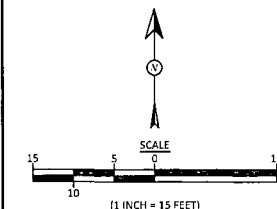
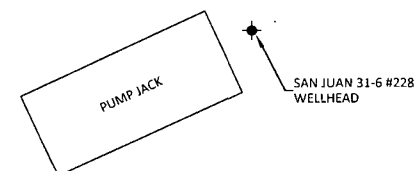
Field Sampling Results				
Sample ID	Date	Depth (ft)	OV/M- PID (ppm)	TPH (mg/kg)
		NMOC ACTION LEVEL	100	1,000
S-1	4/17/14	1 to 4	0.9	54.9
S-2	4/17/14	4	28.5	>2,500
S-3	4/17/14	4	0.8	50.1
S-4	4/17/14	4	15.9	>2,500
S-5	4/17/14	4	1.2	2,340
S-6	4/17/14	1 to 4	0.8	246

S-6 IS A COMPOSITE SAMPLE OF NORTH AND SOUTH WALLS. NA - NOT ANALYZED



Laboratory Analytical Results					
Sample ID	Date	Depth (ft)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
		NMOC ACTION LEVEL	1,000		NE
SC-1	4/17/14	1 to 4	<4.1	18	<30
SC-2	4/17/14	4	<2.7	580	NA

SC-1 IS A COMPOSITE OF S-1 AND S-6. SC-2 IS A COMPOSITE OF S-2, S-3, S-4, AND S-5. ALL SAMPLES WERE ANALYZED PER EPA METHOD 8015D. SC-1 WAS ANALYZED PER EPA METHOD 300.0.
NE - NOT ESTABLISHED, NA - NOT ANALYZED



AES Field Sampling Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: ConocoPhillips

Project Location: San Juan 31-6 #228

Date: 4/17/2014

Matrix: Soil

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

Durango, Colorado
970-403-3084

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	TPH* 418.1 (mg/kg)	TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	4/17/2014	9:00	West Wall	0.9	54.9	11:14	20.0	1	SL
S-2	4/17/2014	9:03	Base	28.5	>2,500	10:03	20.0	1	SL
S-3	4/17/2014	9:05	Base	0.8	50.1	11:21	20.0	1	SL
S-4	4/17/2014	9:07	Base	15.9	>2,500	10:12	20.0	1	SL
S-5	4/17/2014	12:57	Base	1.2	2,343	13:34	200	10	SL
S-6	4/17/2014	13:00	North and South Walls	0.8	246	13:26	20.0	1	SL
SC-1	4/17/2014	13:40	Sidewall Composite	NA	Not analyzed for TPH.				
SC-2	4/17/2014	13:44	Base Composite	NA	Not analyzed for TPH.				

DF Dilution Factor

NA Not Analyzed

ND Not Detected at the Reporting Limit

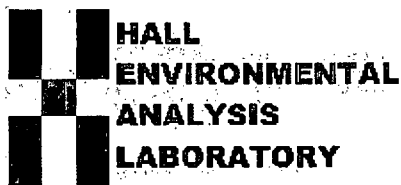
PQL Practical Quantitation Limit

*TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

Stephanie Lynn



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

April 29, 2014

Debbie Watson

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

RE: San Juan 31-6 #228

OrderNo.: 1404850

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/18/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 23, 2014.

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.

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', with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1404850

Date Reported: 4/29/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental**Client Sample ID:** SC-1**Project:** San Juan 31-6 #228**Collection Date:** 4/17/2014 1:40:00 PM**Lab ID:** 1404850-001**Matrix:** MEOH (SOIL)**Received Date:** 4/18/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	18	9.9		mg/Kg	1	4/21/2014 9:29:06 AM	12781
Surr: DNOP	112	57.9-140		%REC	1	4/21/2014 9:29:06 AM	12781
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	4/18/2014 12:18:04 PM	R18084
Surr: BFB	87.8	74.5-129		%REC	1	4/18/2014 12:18:04 PM	R18084
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	ND	30		mg/Kg	20	4/18/2014 11:44:36 AM	12780

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.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1404850

Date Reported: 4/29/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental**Client Sample ID:** SC-2**Project:** San Juan 31-6 #228**Collection Date:** 4/17/2014 1:44:00 PM**Lab ID:** 1404850-002**Matrix:** MEOH (SOIL)**Received Date:** 4/18/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	580	490		mg/Kg	50	4/21/2014 11:00:34 AM	12781
Surr: DNOP	0	57.9-140	S	%REC	50	4/21/2014 11:00:34 AM	12781
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	2.7		mg/Kg	1	4/18/2014 12:46:39 PM	R18084
Surr: BFB	88.0	74.5-129		%REC	1	4/18/2014 12:46:39 PM	R18084

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.
	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#: 1404850

29-Apr-14

Client: Animas Environmental

Project: San Juan 31-6 #228

Sample ID	MB-12780	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	12780	RunNo:	18105					
Prep Date:	4/18/2014	Analysis Date:	4/18/2014	SeqNo:	522731	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-12780	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	12780	RunNo:	18105					
Prep Date:	4/18/2014	Analysis Date:	4/18/2014	SeqNo:	522732	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	90	110			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404850

29-Apr-14

Client: Animas Environmental

Project: San Juan 31-6 #228

Sample ID	MB-12781	SampType	MBLK	TestCode	EPA Method 8015D: Diesel Range Organics					
Client ID	PBS	Batch ID	12781	RunNo	18068					
Prep Date	4/18/2014	Analysis Date	4/18/2014	SeqNo	521276	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	9.6		10.00		96.0	57.9	140			

Sample ID	LCS-12781	SampType	LCS	TestCode	EPA Method 8015D: Diesel Range Organics					
Client ID	LCSS	Batch ID	12781	RunNo	18068					
Prep Date	4/18/2014	Analysis Date	4/18/2014	SeqNo	521898	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.6	60.8	145			
Surr: DNOP	4.6		5.000		91.5	57.9	140			

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. |
| 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#: 1404850

29-Apr-14

Client: Animas Environmental

Project: San Juan 31-6 #228

Sample ID	MB-12765 MK		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	R18084		RunNo:	18084				
Prep Date:			Analysis Date:	4/18/2014		SeqNo:	522566		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	860		1000		85.6	74.5	129				

Sample ID	LCS-12765 MK		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: R18084		RunNo: 18084					
Prep Date:			Analysis Date: 4/18/2014		SeqNo: 522567		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.9	71.7	134			
Surr: BFB	910		1000		91.5	74.5	129			

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: 1404850

RcptNo: 1

Received by/date:	<i>[Signature]</i>	<i>04/18/14</i>
Logged By:	Lindsay Mangin	4/18/2014 10:00:00 AM <i>[Signature]</i>
Completed By:	Lindsay Mangin	4/18/2014 10:05:46 AM <i>[Signature]</i>
Reviewed By:	IO	04/18/14

Chain of Custody

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

Log In

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

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

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

Person Notified:	<i>[Signature]</i>	Date:	<i>[Signature]</i>
By Whom:	<i>[Signature]</i>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<i>[Signature]</i>		
Client Instructions:	<i>[Signature]</i>		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

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) _____

Project Name: 9

Project #:

D. Watson

Sampler: H. Woods / S. Lynn

On Ice: ☒ Yes ☐ No

Sample Temperature: 1,8

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/74	1730	Heather M. Woods	Christine White	4/17/14	1730
Date:	Time:	Relinquished by:	Received by:	Date	Time
4/17/14	1730	Christine White	Heather M. Woods	4/18/14	1000

Remarks: Bill to Concepcion/llips
WO: Supervisor: Mike Murphy
Area: 5 Ordered by: Crystal Tafuya
User ID: ~~00~~KGARCIA

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

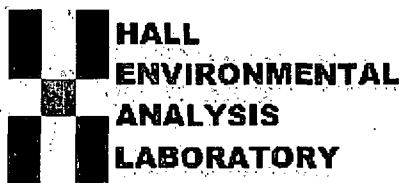
4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

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

April 29, 2014

Debbie Watson

Animas Environmental

624 East Comanche

Farmington, NM 87401

TEL: (505) 486-4071

FAX

RE: San Juan 31-6 # 228

OrderNo.: 1404855

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/18/2014 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".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1404855

Date Reported: 4/29/2014

CLIENT: Animas Environmental

Client Sample ID: SC-1

Project: San Juan 31-6 # 228

Collection Date: 4/17/2014 10:20:00 AM

Lab ID: 1404855-001

Matrix: SOIL

Received Date: 4/18/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
MERCURY, TCLP							Analyst: JML
Mercury	ND	0.020		mg/L	1	4/23/2014 4:17:28 PM	12843
EPA METHOD 6010B: TCLP METALS							Analyst: ELS
Arsenic	ND	5.0		mg/L	1	4/25/2014 10:38:45 AM	12864
Barium	ND	100		mg/L	1	4/25/2014 10:38:45 AM	12864
Cadmium	ND	1.0		mg/L	1	4/25/2014 10:38:45 AM	12864
Chromium	ND	5.0		mg/L	1	4/25/2014 10:38:45 AM	12864
Lead	ND	5.0		mg/L	1	4/25/2014 10:38:45 AM	12864
Selenium	ND	1.0		mg/L	1	4/25/2014 10:38:45 AM	12864
Silver	ND	5.0		mg/L	1	4/25/2014 10:38:45 AM	12864

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.
	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#: 1404855

29-Apr-14

Client: Animas Environmental

Project: San Juan 31-6 # 228

Sample ID	MB-12843	SampType:	MBLK	TestCode:	MERCURY, TCLP					
Client ID:	PBW	Batch ID:	12843	RunNo:	18168					
Prep Date:	4/23/2014	Analysis Date:	4/23/2014	SeqNo:	524330	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID	LCS-12843	SampType:	LCS	TestCode:	MERCURY, TCLP					
Client ID:	LCSW	Batch ID:	12843	RunNo:	18168					
Prep Date:	4/23/2014	Analysis Date:	4/23/2014	SeqNo:	524331	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	95.9	80	120			

Sample ID	1404855-001AMS	SampType:	MS	TestCode:	MERCURY, TCLP					
Client ID:	SC-1	Batch ID:	12843	RunNo:	18168					
Prep Date:	4/23/2014	Analysis Date:	4/23/2014	SeqNo:	524333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	94.7	75	125			

Sample ID	1404855-001AMSD	SampType:	MSD	TestCode:	MERCURY, TCLP					
Client ID:	SC-1	Batch ID:	12843	RunNo:	18168					
Prep Date:	4/23/2014	Analysis Date:	4/23/2014	SeqNo:	524334	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	94.4	75	125	0	20	

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. |
| 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#: 1404855

29-Apr-14

Client: Animas Environmental

Project: San Juan 31-6 # 228

Sample ID	MB-12864	SampType:	MBLK		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	PBW	Batch ID:	12864		RunNo:	18212				
Prep Date:	4/24/2014	Analysis Date:	4/25/2014		SeqNo:	525697	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Barium	ND	100								
Cadmium	ND	1.0								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID	LCS-12864	SampType: LCS			TestCode: EPA Method 6010B: TCLP Metals					
Client ID:	LCSW	Batch ID: 12864			RunNo: 18212					
Prep Date:	4/24/2014	Analysis Date: 4/25/2014			SeqNo: 525698		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	105	80	120			
Barium	ND	100	0.5000	0	96.4	80	120			
Cadmium	ND	1.0	0.5000	0	101	80	120			
Chromium	ND	5.0	0.5000	0	97.8	80	120			
Lead	ND	5.0	0.5000	0	95.0	80	120			
Selenium	ND	1.0	0.5000	0	103	80	120			
Silver	ND	5.0	0.1000	0	108	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: 1404855

RcptNo: 1

Received by/date: 1/18/10

Logged By: Lindsay Mangin 4/18/2014 10:00:00 AM

Completed By: **Lindsay Mangin** 4/18/2014 10:35:39 AM

Reviewed By: 04/18/14

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 <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 6. Sample(s) in proper container(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Sufficient sample volume for indicated test(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Was preservative added to bottles? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 10. VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA Vials <input checked="" type="checkbox"/> |
| 11. Were any sample containers received broken? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 14. Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 15. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
- # of preserved bottles checked for pH: (<2)

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	1.8	Good	Yes			

Client: <u>Animas Environmental Services</u>	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush
Mailing Address: <u>624 E. Comanche</u>	Project Name: <u>San Juan 31-6#228</u>
<u>Farmington, NM 87401</u>	Project #: _____
Phone #: <u>505-564-2281</u>	Project Manager: _____
email or Fax#: _____	<u>D. Watson</u>
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)	Sampler: <u>H. Woods / S. Lynn</u>
Accreditation <input type="checkbox"/> NELAP <input type="checkbox"/> Other _____	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> EDD (Type) _____	Sample Temperature: <u>1.8</u>

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/17/14	1730	Heather M. Woods	Christa Wale	4/17/14	1730
Date:	Time:	Relinquished by:	Received by:	Date	Time
4/17/14	1750	Christa Wale	Christa Wale	04/18/14	1000



Remarks: Bill to Conocopinillips
WO:
Area: 8
~~WFO~~ Mike Murphy
Superior

Ordered by: Crystal Tafaya
User ID: KCARCIA

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.

