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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										
Refease routificatio	OPFRATOR	Initial Report Science Papart								
Name of Company Burlington Resources Oil & Gas Company	Contact Lindsay Dumas									
Address 3401 East 30 th St, Farmington, NM	Telephone No.(505) 599-408	9								
Facility Name: Largo Federal 1A	Facility Type: Gas									
Surface Owner Federal Mineral Owner	BLM (NM-0555563)	A PL No 3004523562								
		ATT NO.5004325502								
LOCATIO	N OF RELEASE									
C3429N9W1190	FNL 1595	East/west Line County FWL San Juan								
Latitude <u>36.686220</u> Longitude <u>-107.771880</u>										
NATURI	E OF RELEASE									
Type of Release Hydrocarbon	Volume of Release 64 BBI	Volume Recovered 27 BBL								
Source of Release Oil/Production Tank	Date and Hour of Occurrence	Date and Hour of Discovery								
Was Immediate Notice Given?	If YES, To Whom?	2/10/14 1150 AW								
🛛 Yes 🔲 No 🗌 Not Required	Brandon Powell, Jonathon H	Kelly & Shari Ketcham								
By Whom? Lindsay Dumas	Date and Hour 2/10/14 @ 3:	45 pm								
Was a Watercourse Reached?	If YES, Volume Impacting the	e Watercourse.								
If a Watercourse was Impacted Describe Fully *		OIL CONS. DIV DIST: 3								
h a watercourse was impacted, Describe Funy.										
		MAY 2 0 2014								
Two holes were found 8" from bottom of tank, oil leaked into groun was recovered.	d towards pit. Some oil settled ir	bottom of water pit containment and this								
Describe Area Affected and Cleanup Action Taken.*										
Excavation was 30' x 70' x 1.5' Deep. 338 c/yds of soil was tr	ansported to IEI Land Farm	and 338 c/yds of clean soil was								
transported from Aztec Machine and placed in the excavation further action required. The soil sampling report is attached	1 site. Analytical results were	e below the regulatory standards – no								
further action required. The son sampling report is attached	ior review.									
•										
I hereby certify that the information given above is true and complete to regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by t should their operations have failed to adequately investigate and remedia or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	the best of my knowledge and uno notifications and perform correcti he NMOCD marked as "Final Rep ate contamination that pose a threa does not relieve the operator of re	derstand that pursuant to NMOCD rules and ve actions for releases which may endanger port" does not relieve the operator of liability it to ground water, surface water, human health sponsibility for compliance with any other								
Signature Inday Dumas	OIL CONS	ERVATION DIVISION								
Printed Name: Lindsay Dumas	Approved by Environmental Spe	scialist: Come And								
Title: Field Environmental Specialist	Approval Date: 5/29/14	/ Expiration Date:								
E-mail Address: Lindsay.Dumas@conocophillips.com	Conditions of Approval:	Attached								
Date: 5/16/14 Phone: (505) 599-4089	A									
Attach Additional Sheets If Necessary	HNCS 141495	2883								



Animas Environmental Services, tre

www.animasenvironmental.com

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

> Durango, Colorado 970-403-3084

May 12, 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 OIL CONS. DIV DIST. 3

MAY 202014

RE: Initial Release Assessment and Final Excavation Report Largo Federal #1A San Juan County, New Mexico

Dear Ms. Dumas:

On February 13, March 13, and March 20, 2014, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) Largo Federal #1A, located in San Juan County, New Mexico. The release consisted of approximately 64 barrels (bbls) of condensate and was the result of a hole at the bottom of the onsite production tank. The initial release assessment was completed by AES on February 13, 2014, and the final excavation was completed by CoP contractors while AES was on location on March 13, 2014.

1.0 Site Information

1.1 Location

Location – NE¼ NW¼, Section 34, T29N, R9W, San Juan County, New Mexico Well Head Latitude/Longitude – N36.68647 and W107.77264, respectively Release Location Latitude/Longitude – N36.68640 and W107.77306, respectively Land Jurisdiction – Bureau of Land Management (BLM) Figure 1. Topographic Site Location Map Figure 2. Aerial Site Map, February 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,*

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and Releases (August 1993) prior to site work. The release was given a ranking score of 20 based on the following factors:

- Depth to Groundwater: A Pit Remediation and Closure report dated 2007 reported the depth to groundwater as greater than 100 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: Unnamed washes are located approximately 100 feet north and 205 feet southeast of the location. Both washes discharge to the wash in Canyon Largo. (20 points)

1.3 Assessment

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AES was initially contacted by Lindsay Dumas of CoP on February 11, 2014, and on February 13, 2014, Deborah Watson and Jesse Sprague of AES completed the release assessment field work. The assessment included collection and field sampling of 19 soil samples from 11 borings in and around the release area. Based on the field sampling results, AES recommended further excavation of the release area. Sample locations are shown on Figure 3.

On March 13, 2014, AES personnel returned to the location to collect confirmation soil samples of the excavation. The field sampling activities included collection of four confirmation soil samples from the walls and base of the excavation. The area of the final excavation was approximately 88 feet by 50 feet by 1.5 feet to 2 feet. The depth of the excavation was limited due to a confining sandstone layer around 1.5 to 2 feet bgs. Two final confirmation soil samples (SC-5 and SC-6) were collected from the base of the excavation on March 20, 2014, following application of Quantum Growth[™]. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

A total of 19 soil samples from 11 borings (SB-1 through SB-11) and 6 composite samples (SC-1 through SC-6) 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). Four composite samples (SC-1 through SC-4) collected during the excavation clearance were submitted for confirmation laboratory analysis.

Lindsay Dumas Largo Federal #1A Initial Release Assessment and Final Excavation Report May 12, 2014 Page 3 of 7

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. All soil samples were laboratory analyzed for:

Benzene, toluene, ethylbenzene, and xylene (BTEX) per USEPA Method 8260B.

Samples SC-1 and SC-2 were also analyzed for:

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

2.3 Field and Laboratory Analytical Results

On February 13, 2014, initial assessment field screening results for VOCs via OVM showed concentrations ranging from 1.6 ppm in SB-10 up to 2,691 ppm in SB-1. Field TPH concentrations ranged from 43.1 mg/kg in SB-5 up to 17,300 mg/kg in SB-3.

On March 13 and March 20, 2014, final excavation field screening results for VOCs via OVM ranged from 5.4 ppm in SC-5 up to 1,952 ppm in SC-1. Field TPH concentrations ranged from 32.2 mg/kg in SC-3 up to 1,440 mg/kg in SC-1. Results are included below in Table 1 and on Figures 3 and 4. The AES Field Sampling Reports are attached.

Lindsay Dumas Largo Federal #1A Initial Release Assessment and Final Excavation Report May 12, 2014 Page 4 of 7

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	Date	Sample Depth	VOCs via OVM	Field TPH
Sample ID	Sampled	(ft bgs)	(ppm)	(mg/kg)
NMO	CD Action Lev	rel*	100	100
CD 1	2/12/14	Surface	20.0	NA
28-1	2/13/14 ·	4.5	2,691	106
CD D	2/12/14	Surface	21.1	NA
3D-2	2/15/14	4.5	2,583	2,510
CD 2	2/12/14	Surface	1,971	NA
5-96	2/13/14	1	2,324	17,300
CD /	3/13/14	Surface	2,552	NA
3D-4	2/15/14	1	991	NA
CD C	2/12/14	Surface	1,795	NA
30-3	2/15/14	1	37.5	43.1
SB 6	2/12/14	Surface	140	NA
50-0	2/13/14	2	1,594	>2,500
SB-7	2/13/14	Surface	819	106
CD Q	2/12/14	Surface	92.3	NA
50-0	2/13/14	2	5.2	NA
SB-9	2/13/14	Surface	62.6	NA
SR. 10	2/12/14	Surface	1.6	NA
30-10	2/13/14	1	5.9	NA
SB-11	2/13/14	0.5	6.1	NA
SC-1	3/13/14	1.5 to 2	1,952	1,440
SC-2	3/13/14	4	679	271
SC-3	3/13/14	0 to 2	272	32.2
SC-4	3/13/14	0 to 2	178	81.0
SC-5	3/20/14	1.5 to 2	5.4	76.2
SC-6	3/20/14	4	12.7	72.2

Table 1. Field Sampling VOCs and TPH Results Largo Federal #1A Initial Release Assessment and Final Excavation

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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 through SC-4 were used to confirm field screening results from the final excavation. Benzene concentrations in all samples were reported below laboratory detection limits. Total BTEX concentrations ranged from 0.096 mg/kg up to 11.2 mg/kg. TPH concentrations as GRO/DRO were reported at 780 mg/kg in SC-1 and 290 mg/kg in SC-2. Results are presented in Table 2 and on Figure 4, and the laboratory analytical report is attached.

Largo Federal #1A Final Excavation, March 2014									
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	1	00			
SC-1	3/13/14	1.5 to 2	<0.16	11.2	430	350			
SC-2	3/13/14	4	<0.033	3.7	180	110			
SC-3	3/13/14	0 to 2	<0.034	0.096	NA	NA			
SC-4	3/13/14	0 to 2	<0.032	0.44	NA	NA			

Table 2 Laboratory Analytical Results - Represe Total RTEX and TPH

NA - not analyzed

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

Conclusions and Recommendations 3.0

On February 13, 2014, AES conducted an initial assessment of petroleum contaminated soils associated with a 64 bbl condensate release at the Largo Federal #1A. 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 20.

Initial assessment field screening results above the NMOCD action level of 100 ppm VOCs and 100 mg/kg TPH were reported in SB-1 through SB-7. The highest VOC concentration was reported in SB-1 with 2,691 ppm, and the highest TPH concentration was reported in SB-3 with 17,300 mg/kg.

On March 13, 2014, final clearance of the excavation area was completed. Field screening results of the excavation extents showed that field VOC concentrations were above the NMOCD action level of 100 ppm for the final walls and base of the excavation. Lindsay Dumas Largo Federal #1A Initial Release Assessment and Final Excavation Report May 12, 2014 Page 6 of 7

Field TPH concentrations were reported below the NMOCD action level of 100 mg/kg in the final sidewalls; however, the base exceeded the NMOCD action level with 1,440 mg/kg (SC-1) and 271 mg/kg (SC-2). Laboratory analytical results from March 13, 2014, reported benzene and total BTEX concentrations in SC-1 through SC-4 below NMOCD action levels. However, TPH concentrations as GRO/DRO were reported above the NMOCD action level of 100 mg/kg in the base samples (SC-1 and SC-2). Quantum Growth[™] was applied to the base of the excavation, and two additional confirmation samples (SC-5 and SC-6) were collected on March 20, 2014. Field sampling results for SC-5 and SC-6 reported VOC and TPH concentrations below applicable NMOCD action levels for the base of the excavation.

Based on the final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the Largo Federal #1A, benzene, total BTEX, VOC, and TPH concentrations were below the applicable NMOCD action levels for the final sidewalls and the base of the excavation. No further work is recommended.

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

Sincerely,

Sinh ShL

Emilee Skyles Staff Geologist

sobit & Mendly

Elizabeth McNally, PE

Attachments:

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, February 2014

Figure 3. Initial Assessment Sample Locations and Results, February 2014

Figure 4. Final Excavation Sample Locations and Results, March 2014

AES Field Sampling Report 021314

AES Field Sampling Report 031314

AES Field Sampling Report 032014

Hall Laboratory Analytical Report 1403602

Lindsay Dumas Largo Federal #1A Initial Release Assessment and Final Excavation Report May 12, 2014 Page 7 of 7

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AES Field Sampling Report

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Animas Environmental Services u.c

www.animasenvironmental.com

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

> Durango, Colorado 970-403-3084

Sample ID	Collection Date	Collection Time	OVM (ppm)	TPH* (mg/kg)	TPH Analysis Time**	TPH PQL (mg/kg)	DF	TPH Analyst Initials
SB-1 @ surface	2/13/2014	15:20	20.0		Not	Analyzed for T	РН	
SB-1 @ 4.5'	2/13/2014	15:25	2,691	106	14:10	20.0	1	EMS
SB-2 @ surface	2/13/2014	15:28	21.1		Not Analyzed for TPH			
SB-2 @ 4.5'	2/13/2014	15:32	2,583	2,513	14:14	20.0	1	EMS
SB-3 @ surface	2/13/2014	15:35	1,971		Not	Analyzed for TPH		
SB-3 @ 1'	2/13/2014	15:37	2,324	17,284	14:38	200	10	EMS
SB-4 @ surface	2/13/2014	15:40	2,552		Not	Analyzed for T	PH	
SB-4 @ 1'	2/13/2014	15:42	991		Not	Analyzed for T	PH	
SB-5 @ surface	2/13/2014	15:45	1,795		Not	Analyzed for T	PH	
SB-5 @ 1'	2/13/2014	15:47	37.5	43.1	14:20	20.0	1	EMS
SB-6 @ surface	2/13/2014	15:50	140		Not	Analyzed for T	PH	
SB-6 @ 2'	2/13/2014	15:53	1,594	>2,500	14:25	20.0	1	EMS
SB-7 @ surface	2/13/2014	16:00	819	106	14:30	20.0	1	EMS
SB-8 @ surface	2/13/2014	16:05	92.3		Not	Analvzed for T	РН	

Page 1 Report Finalized: 2/14/14

Client: ConocoPhillips Project Location: Largo Federal #1A Date: 2/13/2014 Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	TPH* (mg/kg)	TPH Analysis Time**	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-8 @ 2'	2/13/2014	16:07	5.2		Not	Analyzed for T	PH	
SB-9 @ surface	2/13/2014	16:15	62.6	Not Analyzed for TPH				
SB-10 @ surface	2/13/2014	16:20	1.6	Not Analyzed for TPH				
SB-10 @ 1'	2/13/2014	16:25	5.9		Not	Analyzed for T	PH	
SB-11 @ 0.5'	2/13/2014	16:30	6.1		Not	Analyzed for T	PH	

DF Dilution Factor

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- NA Not Analyzed
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- *TPH concentrations recorded may be below PQL.
- **Samples were analyzed for TPH on 02/14/14.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Sich Sy L

Page 2 Report Finalized: 2/14/14

AES Field Sampling Report

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Client: ConocoPhillips Project Location: Largo Federal #1A Date: 3/13/2014

Matrix: Soil



Animas Environmental Services: LC

www.animasenvironmental.com 624 E. Comorche Farmington, INM 87401 505-564-2281

505-504-2281 Durango, Colorado 970-403-3084

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	3/13/2014	11:45	Base (North)	1,952	1,443	12:35	20.0	1	CL
SC-2	3/13/2014	11:50	Base (South)	679	271	12:37	20.0	1	CL
SC-3	3/13/2014	15:16	North Wall	272	32.2	15:29	20.0	1	CL
SC-4	3/13/2014	13:40	East Wall	178	81.0	13:51	20.0	1	CL

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

Coi h Analyst:

Page 1 Report Finalized: 3/13/14

AES Field Sampling Report

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Client: ConocoPhillips Project Location: Largo Federal #1A Date: 3/20/2014

Matrix: Soil



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Farmington, NM 87401 505-567-2281;

> Durango, Colorado 970-403-3084

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-5	3/20/2014	11:50	Base (North)	5.4	76.2	15:35	20.0	1	DAW
SC-6	3/20/2014	11:55	Base (South)	12.7	72.2	15:37	20.0	1	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:

Sebrah Wate

Page 1 Report Finalized: 3/20/14



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

March 17, 2014

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

RE: COP Largo Federal 1A

OrderNo.: 1403602

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/14/2014 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 <u>www.hallenvironmental.com</u> 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 qualifers 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,

andig

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1403602

Date Reported: 3/17/2014

Hall Environmental Analysis Laboratory, Inc.

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Lab ID: 140 Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch
Lab ID: 140						
riojeci: CC	403602-001	Matrix	MEOH (SOIL)	Receive	d Date: 3/14/2014 10:00:00 AM	
Drainate CC	OP Largo Federal 1A			Collectio	on Date: 3/13/2014 11:45:00 AM	
CLIENT: An	LIENT: Animas Environmental Client Sample ID: SC-1					

EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst:	BCN
Diesel Range Organics (DRO)	350	10	mg/Kg	1	3/14/2014 2:05:12 PM	12179
Surr: DNOP	101	66-131	%REC	1	3/14/2014 2:05:12 PM	12179
EPA METHOD 8260B: VOLATILES SI	HORT LIST				Analyst:	cadg
Benzene	ND	0.16	mg/Kg	5	3/14/2014 12:52:18 PM	R17327
Toluene	1.0	0.16	mg/Kg	5	3/14/2014 12:52:18 PM	R17327
Ethylbenzene	0.75	0.16	mg/Kg	5	3/14/2014 12:52:18 PM	R17327
Xylenes, Total	9.4	0.32	mg/Kg	5	3/14/2014 12:52:18 PM	R17327
Surr: 1,2-Dichloroethane-d4	102	70-130	%REC	5	3/14/2014 12:52:18 PM	R17327
Surr: 4-Bromofluorobenzene	85.3	70-130	%REC	5	3/14/2014 12:52:18 PM	R17327
Surr: Dibromofluoromethane	101	70-130	%REC	5	3/14/2014 12:52:18 PM	R17327
Surr: Toluene-d8	92.2	70-130	%REC	5	3/14/2014 12:52:18 PM	R17327
EPA METHOD 8015D MOD: GASOLIN	IE RANGE				Analyst:	KJH
Gasoline Range Organics (GRO)	430	16	mg/Kg	5	3/14/2014 12:47:51 PM	R17325
Surr: BFB	117	70-130	%REC	5	3/14/2014 12:47:51 PM	R17325

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank	
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 8	
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	rage roro	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report	
Lab Order 1403602	

Date Reported: 3/17/2014

Hall Environmental Analysis Laboratory, Inc.

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Analyses		Result	RL Qual	Units	DF Date Analyzed	Batch		
Lab ID:	1403602-002	Matrix:	MEOH (SOIL)	Receive	d Date: 3/14/2014 10:00:00 AM			
Project:	COP Largo Federal 1A			Collectio	n Date: 3/13/2014 11:50:00 AM			
CLIENT:	Animas Environmental	onmental Client Sample ID: SC-2						

EPA METHOD 8015D: DIESEL RANGE O	RGANICS					Analyst:	BCN
Diesel Range Organics (DRO)	110	10		mg/Kg	1	3/14/2014 2:27:35 PM	12179
Surr: DNOP	93.8	66-131		%REC	1	3/14/2014 2:27:35 PM	12179
EPA METHOD 8260B: VOLATILES SHOP	RT LIST					Analyst:	cadg
Benzene	ND	0.033		mg/Kg	1	3/14/2014 11:25:48 AM	R17327
Toluene	0.46	0.033		mg/Kg	1	3/14/2014 11:25:48 AM	R17327
Ethylbenzene	0.24	0.033		mg/Kg	1	3/14/2014 11:25:48 AM	R17327
Xylenes, Total	3.0	0.067		mg/Kg	1	3/14/2014 11:25:48 AM	R17327
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/14/2014 11:25:48 AM	R17327
Surr: 4-Bromofluorobenzene	80.3	70-130		%REC	1	3/14/2014 11:25:48 AM	R17327
Surr: Dibromofluoromethane	103	70-130		%REC	1	3/14/2014 11:25:48 AM	R17327
Surr: Toluene-d8	83.4	70-130		%REC	1	3/14/2014 11:25:48 AM	R17327
EPA METHOD 8015D MOD: GASOLINE F	RANGE					Analyst:	KJH
Gasoline Range Organics (GRO)	180	3.3		mg/Kg	1	3/14/2014 11:39:16 AM	R17325
Surr: BFB	139	70-130	S	%REC	1	3/14/2014 11:39:16 AM	R17325

Qualifiers: *		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
-	E	Value above quantitation range	H	exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 8
	O RSD is greater than RSD limit		Р	Sample pH greater than 2.	1 age 2 01 6
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report	
Lab Order 1403602	

Date Reported: 3/17/2014

Hall Environmental Analysis Laboratory, Inc.

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CLIENT:Animas EnvironmentalProject:COP Largo Federal 1ALab ID:1403602-003	Client Sample ID: SC-3 Collection Date: 3/13/2014 3:16:00 PM Matrix: MEOH (SOIL) Received Date: 3/14/2014 10:00:00 AM										
Analyses	Result	RL Qua	Units	DF	Date Analyzed	Batch					
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst:	cadg					
Benzene	ND	0.034	mg/Kg	1	3/14/2014 11:54:38 AM	R17327					
Toluene	ND	0.034	mg/Kg	1	3/14/2014 11:54:38 AM	R17327					
Ethylbenzene	ND	0.034	mg/Kg	1	3/14/2014 11:54:38 AM	R17327					
Xylenes, Total	0.096	0.069	mg/Kg	1	3/14/2014 11:54:38 AM	R17327					
Surr: 1,2-Dichloroethane-d4	102	70-130	%REC	1	3/14/2014 11:54:38 AM	R17327					
Surr: 4-Bromofluorobenzene	94.6	70-130	%REC	1	3/14/2014 11:54:38 AM	R17327					
Surr: Dibromofluoromethane	106	70-130	%REC	1	3/14/2014 11:54:38 AM	R17327					
Surr: Toluene-d8	92.9	70-130	%REC	1	3/14/2014 11:54:38 AM	R17327					

*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank			
Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded			
J Analyte detected below quantitation limits		ND	Not Detected at the Reporting Limit	Page 3 of 8		
0	RSD is greater than RSDlimit	р	Sample pH greater than 2.	1 450 5 61 6		
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit			
S	Spike Recovery outside accepted recovery limits					
	* E J O R S	 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 	* Value exceeds Maximum Contaminant Level. B E Value above quantitation range H J Analyte detected below quantitation limits ND O RSD is greater than RSDlimit P R RPD outside accepted recovery limits RL S Spike Recovery outside accepted recovery limits P	* Value exceeds Maximum Contaminant Level. B Analyte detected in the associated Method E Value above quantitation range H Holding times for preparation or analysis 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		

Analytical Report Lab Order 1403602 Date Reported: 3/17/2014

Hall Environmental Analysis Laboratory, Inc.

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CLIENT: Animas Environmental		Client Sample ID: SC-4										
Project: COP Largo Federal 1A			Collection	Date: 3/1	3/2014 1:40:00 PM							
Lab ID: 1403602-004	Matrix:	MEOH (SOIL)	Received	Date: 3/14/2014 10:00:00 AM								
Analyses	Result	RL Qua	l Units	DF	Date Analyzed	Batch						
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst:	cadg						
Benzene	ND	0.032	mg/Kg	1	3/14/2014 12:23:28 PM	R17327						
Toluene	0.092	0.032	mg/Kg	1	3/14/2014 12:23:28 PM	R17327						
Ethylbenzene	ND	0.032	mg/Kg	1	3/14/2014 12:23:28 PM	R17327						
Xylenes, Total	0.35	0.064	mg/Kg	1	3/14/2014 12:23:28 PM	R17327						
Surr: 1,2-Dichloroethane-d4	101	70-130	%REC	1	3/14/2014 12:23:28 PM	R17327						
Surr: 4-Bromofluorobenzene	86.6	70-130	%REC	1	3/14/2014 12:23:28 PM	R17327						
Surr: Dibromofluoromethane	100	70-130	%REC	1	3/14/2014 12:23:28 PM	R17327						
Surr: Toluene-d8	90.6	70-130	%REC	1	3/14/2014 12:23:28 PM	R17327						

Qualifiers: *		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank			
C	E Value above quantitation range		H Holding times for preparation or analysis exceed					
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 8			
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.				
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

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Client: Animas Project: COP La	Environmental rgo Federal 1A								
Sample ID MR 12179	SamuType: M		Tes	tCode: EP	A Method	8015D: Diese		Tragnice	
	Janpiype. W	IBLK	103		Amethou	ourse. Diese	a nange (Jiganics	
Client ID: PBS	Batch ID: 1:	2179	R	RunNo: 17	323				
Prep Date: 3/14/2014	Analysis Date: 3	3/14/2014	S	SeqNo: 49	9010	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10)							
Motor Oil Range Organics (MRO)	ND 50)							
Surr: DNOP	10	10.00		101	66	131			
Sample ID LCS-12179	SampType: L	cs	Tes	tCode: EP	A Method	8015D: Diese	el Range (Drganics	
Client ID: LCSS	Batch ID: 1:	2179	R	RunNo: 17	323				
Prep Date: 3/14/2014	Analysis Date: 3	3/14/2014	S	SeqNo: 49	9012	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53 10	50.00	0	106	60.8	145			
Surr: DNOP	4.9	5.000		98.5	66	131			
Sample ID MB-12165	SampType: M	IBLK	Tes	tCode: EP	A Method	8015D: Diese	el Range (Drganics	
Client ID: PBS	Batch ID: 1	2165	F	RunNo: 17	309				
Prep Date: 3/13/2014	Analysis Date: 3	3/14/2014	S	SeqNo: 49	9648	Units: %RE	с		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10	10.00		101	66	131			

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

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1403602 17-Mar-14

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WO#:

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WO#: 1403602

17-Mar-14

Client: Animas H Project: COP Lar	Environme go Federa	ental I 1A								
Sample ID 5mL rb	Samp	Туре: МВ	3LK	Tes	tCode: El	PA Method	8260B: Vola	tiles Shor	List	
Client ID: PBS	Batc	h ID: R1	7327	F	RunNo: 1	7327				
Prep Date:	Analysis [Date: 3/	14/2014	ç	SeqNo: 4	99475	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.53		0.5000		107	70	130		· · · · · · · · · · · ·	
Sample ID 100ng Ics	Samp	Type: LC	s	Tes	tCode: El	PA Method	8260B: Vola	tiles Shori	List	
Client ID: LCSS	Batc	h ID: R1	7327	F	7327					
Prep Date:	Analysis I	Date: 3/	14/2014	S	SeqNo: 4	99476	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	1.000	0	117	70	130			
Toluene	1.1	0.050	1.000	0	107	60.1	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			
Sample ID 1403602-002a ms	Samp	Type: MS	6	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: SC-2	Batc	h ID: R1	7327	F	RunNo: 1	7327				
Prep Date:	Analysis (Date: 3/	14/2014	S	SeqNo: 4	99479	Units: mg/M	(g		
Analyte	Result	_ PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.033	0.6658	0.01275	110	62.6	140			
Toluene	1.1	0.033	0.6658	0.4586	89.2	66.3	136			
Surr: 1,2-Dichloroethane-d4	0.34		0.3329		102	70	130			
Surr: 4-Bromofluorobenzene	0.26		0.3329		79.4	70	130			
Surr: Dibromofluoromethane	0.35		0.3329		105	70	130			
Surr: Toluene-d8	0.27		0.3329		81.1	70	130		·····	
Sample ID 1403602-002a ms	d Samp	Type: MS	SD	Tes	tCode: El	PA Method	8260B: Vola	tiles Shor	List	
Client ID: SC-2	Batc	h ID: R1	7327	F	RunNo: 1	7327				
Prep Date:	Analysis I	Date: 3/	14/2014	S	SeqNo: 4	99480	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.71	0.033	0.6658	0.01275	105	62.6	140	5.20	20	
 Qualifiers:							··· ··· ······························			

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- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 6 of 8

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Client:Animas EnvironmentalProject:COP Largo Federal 1A

Sample ID 1403602-002a msd SampType: MSD				TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: SC-2	Batc	h ID: R1	7327	F	RunNo: 1	7327				
Prep Date:	Analysis [Date: 3/	14/2014	S	SeqNo: 4	99480	Units: mg/M	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	1.0	0.033	0.6658	0.4586	80.8	66.3	136	5.44	20	
Surr: 1,2-Dichloroethane-d4	0.33		0.3329	-	99.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.26		0.3329		78.6	70	130	0	0	
Surr: Dibromofluoromethane	0.34		0.3329		101	70	130	0	0	
Surr: Toluene-d8	0.27		0.3329		80.9	70	130	0	0	

Qualifiers:

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- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
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- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1403602

17-Mar-14

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WO#: 1403602

17-Mar-14

Client: Project:	Animas E COP Larg	nvironmenta 30 Federal 17	1 4								
Sample ID	2.5ug gro LCS	SampTyp	e: LC	S	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range	-
Client ID:	LCSS	Batch IE): R1	7325	F	RunNo: 1	7325				
Prep Date:		Analysis Date	e: 3/	14/2014	S	SeqNo: 4	98998	Units: mg/l	٨g		
Analyte		Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	27	5.0	25.00	0	109	80	120			
Surr: BFB		510		500.0		102	70	130			
Sample ID	1403602-001A MS	SampTyp	e: MS	3	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	SC-1	Batch I): R1	7325	F	RunNo: 1	7325				
Prep Date:		Analysis Date	e: 3/	14/2014	5	SeqNo: 4	99687	Units: mg/l	≺g		
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	530	16	79.31	433.0	121	58	134			
Surr: BFB	·····	1700		1586		109	70	130			
Sample ID	1403602-001a msc	SampTyp	e: MS	SD	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	SC-1	Batch IE	D: R1	7325	F	RunNo: 1	7325				
Prep Date:		Analysis Date	e: 3/	14/2014	5	SeqNo: 4	99705	Units: mg/l	Кg		
Analyte		Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	520	16	79.31	433.0	· 106	58	134	2.32	20	
Surr: BFB		1900		1586		117	70	130	0	0	
Sample ID	b1	SampTyp	e: MI	3LK	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range	<u></u>
Client ID:	PBS	Batch IC): R1	7325	F	RunNo: 1	7325				
Prep Date:		Analysis Date	e: 3/	/14/2014	S	SeqNo: 4	199801	Units: mg/l	Kg		
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	ND	5.0								
Surr: BFB		500		500.0		100	70	130			

Qualifiers:

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- RL Reporting Detection Limit

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Analysi. 4901 Albuquergu TEL: 505-345-3975 FAX: 5 Website: www.hallenviro	s Laboratory Hawkins NE e, NM 87109 05-345-4107 nmental.com	Sam	ble Log-In C	heck List
Client Name: Animas Environmental	Nork Order Number: .14036	602		RcptNo	: 1
Received by/date: 02 Logged By: Ashley Gallegos 3/1	4/2014 10:00:00 AM		₩ ₩		
Completed By: Ashley Gallegos 3/1	4/2014 10:13:21 AM	÷	Ð		
Reviewed By: Mg O	3[14]14		• 0		
Chain of Custody					
1. Custody seals intact on sample bottles?	Yes	י <u></u>	No 门	Not Present 🗹	
2. Is Chain of Custody complete?	Yes		No 🛄	Not Present	
3. How was the sample delivered?	Cour	ier			
Log In					
4. Was an attempt made to cool the samples?	Yes	V	No 🗌	NA []	
5. 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 []]		
7. Sufficient sample volume for indicated test(s)?	Yes		No 🗌		•
8. Are samples (except VOA and ONG) properly p	reserved? 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 🗹	# of preserved	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes	V	No (22	bottles checked for pH: (<2	or >12 unless noted)
13. Are matrices correctly identified on Chain of Cu	stody? Yes		No 🗔	Adjusted?	
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 🗌	Checked by:	······································
Special Handling (if applicable)					
16. Was client notified of all discrepancies with this	order? Yes	<u> </u>	No 🗔	NA 🗹	•
Person Notified:	Date:				
By Whom:	Via: 📋 eMa	ill 🗌 Phon	e 🗌 Fax	📋 In Person	
Regarding:					
Client Instructions:		· · · · ·	· ···		
17. Additional remarks:					
18. <u>Cooler Information</u> Cooler No Temp ^s C Condition Seal 1 1.6 Good Yes	Intact Seal No Seal D	ate /Sig	ned By		
Page 1 of 1				r, , 94, 47,, e., 19, 19, 19, 19	17 RA

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Date: Time: Relinquished by: Jate: Time: Refinquished by: Jate: If necessary samples submitted to Hall Environmental may be subc			-13-14 1340 Soil SC-4	13-14 1516 Soul SC-3	-13-14 1150 Soil SC-Z	13-14 1145 an 2-1	Date Time Matrix Sample Request ID	I EDD (Type)	Accreditation	XAVQC Package:	mail or Fax#	Tarmindon NM 87401	Aailing Address 624 E Comanche	Services LLC.	Slient A.M.IMIS Environmental	Chain-of-Custody Record
Received by: Received by: Recei			toz Mustificat carly her H-	AOZ MEDHLAL Cold MO17	ADT MUBLICH Cold MCOH	402 MeDHKY COLD MEDH	Container Preservative Type and # Type	Sample Temperature:	Sampler: Jesse Some	D. Walson	Project Manager:		CoP Laras Federa	Project Name:	Standard KRush	านทา-คางมาน เท่าย.
Date Time 3/13/14/17/3 Date Time 53/14/14/1200 This serves as notice of this po			-004	- 003	- 602	-001	HEAL NO		No					(Same day	
Remarks; PM WO; 20043 Area: 22 Archiving (2 ossibility: Any sub-			×	X	××	×	BTEX + MTBE + TPH (Gas only) BTEX + MTBE + TPH (Gas only) TPH 8015B (GRO DRO MRO)				Tel. 505	4901 Ha			-	
1 to Conoco 581 2001 DISO							EDB (Metho PAH's (831 RCRA 8 Me	od 4 od 4 0 o etal	504.1) 504.1) r 8270 s	SIMS)	-345-3975 Fay	wkins NE - Albuq	www.hallenviro	ANALYSI	
Fullings Super VI Sol : M USA : KGARCUA Ordurudby; Eri arty notated on the analytical							8081 Pestic 8260B (VO 8270 (Sem	aide A)	s / 808	< 505-345-4107 S Request	uerque, NM 87109	nmental.com	VIRONMEI S LABORA			
ulce Smith CSmith							Air Bubbles	s (Y	or N)						TORY	

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