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

NOV 2 3 2015

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office to accordance with 19.15.29 NMAC.

			Rele	ease Notifi	cation	and Co	orrective A	ction	1			
We That				4115		<b>OPERA</b>			Initi	al Report		Final Repor
		onocoPhillip				Contact Li						
		th St, Farmin	igton, NM	L			No.(505) 258-10 be: Gas Well	607				
Facility Na	me: Bruing	gion 29 #1		L. Carlos		Facility Typ	be: Gas Well					
Surface Ov	vner: Fee			Mineral	Owner: I	Fee			API No	. 30-045-0	9148	
	W. T. T.				ATION	OF RE	LEASE					
Unit Letter K	Section 29	Township 30N	Range 11W	Feet from the 1450		South Line South	Feet from the 1450	The second second	West Line West	County San Juan		
			L	atitude: 36.	77991	Longitu	ide: -108.01	858				
	a Local of			NA'	TURE	OF REL	Market Property		100	100	la.	
Type of Rele	ease Histor	ric Contamina	ation			Volume of	f Release Unknown	own	Volume I	Recovered	341yds	
		ve Grade Tan	k			Unknown		ce	Date and August 1	Hour of Dis 8, 2015	scovery	
Was Immed	as Immediate Notice Given?  Yes No Not Require						Whom?					
By Whom?	y Whom? N/A					Date and I	Hour	16	7 - W	Ser bee		TOTAL
Was a Water	rcourse Read		Yes 🛛 1	No		If YES, V	olume Impacting	the Wat	ercourse.			
If a Waterco N/A	urse was Im	pacted, Descr	ibe Fully.*									
		em and Reme liscovered du										
Historical hy of soil was to	drocarbon i	IEI land fari	was found m and 341	during P&A acti	from an a	approved sou	well. The excavarce was placed in ned for review.					
regulations a public health should their or the enviro	all operators n or the envi operations h onment. In a	are required to ronment. The lave failed to	to report are acceptance adequately OCD accep	nd/or file certain ce of a C-141 rep investigate and	release no ort by the remediate	otifications a NMOCD m contaminat	knowledge and und perform correct narked as "Final Rion that pose a three the operator of	ctive act Report" of reat to g	tions for rel does not rel round water	eases which ieve the ope r, surface wa	may en erator of ater, hu	idanger Tliability man health
Signature:	for	lu 111	+			Approved by	OIL CON	0	\ (	DIVISIO	<u>ON</u>	
Printed Nam	e: Lisa Hu	nter						1	)ou		e	5
Title: Field	Environme	ntal Speciali	st			Approval Da	te:\2\22\2	015	Expiration	Date:		
E-mail Addr	ess: Lisa.H	unter@cop.co	om			Conditions o	f Approval:			Attached		
Date: 11/18/				one: (505) 258-1						E III		
Attach Add	itional She	ets If Necess	sary		,	NOFI	5356559	286				

# Animas Environmental Services, LLC



October 13, 2015

Lisa Hunter ConocoPhillips San Juan Business Unit (505) 326-9786

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

RE: Release Assessment and Final Excavation Report

Bruington 29 #1

San Juan County, New Mexico

Dear Ms. Hunter:

On August 19 and 20, 2015, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (COPC) Bruington 29 #1, located in San Juan County, New Mexico. Historic contamination was discovered below the above grade tank (AGT) during plugging and abandonment activities at the location. The initial release assessment was completed by AES on August 19, 2015, and the final excavation was completed by COPC contractors prior to AES' arrival at the location on August 20, 2015.

### 1.0 Site Information

#### 1.1 Location

Site Name – Bruington 29 #1

Location – NE½ SW¾, Section 29, T30N, R11W, San Juan County, New Mexico

Well Head Latitude/Longitude – N36.77999 and W108.01816, respectively

Release Location Latitude/Longitude – N36.77991 and W108.01858, respectively

Land Jurisdiction – Private

Figure 1. Topographic Site Location Map Figure 2. Aerial Site Map, August 2015

604 W. Piñon St. Farmington, NM 87401 505-564-2281

> 1911 Main, Ste 280 Durango, CO 81301 970-403-3084

www.animasenvironmental.com

### 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: Depth to water is 109 feet below ground surface (bgs), based on Site Specific Hydrogeology listed in the C-144 form dated December 2008. (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 to Blancett Arroyo is located approximately 215 feet southeast of the location. (10 points)

#### 1.3 Assessment

AES was initially contacted by Crystal Walker of COPC on August 18, 2015, and on August 19, 2015, Emilee Skyles of AES completed the release assessment field work. The assessment included collection and field sampling of seven soil samples from six test holes in and around the release area. Test holes were terminated on sandstone, between 2 and 8 feet below grade. Based on field sampling results, AES recommended further excavation of the release area. Sample locations are shown on Figure 3.

On August 20 and September 9, 2015, AES returned to the location to collect confirmation soil samples of the excavation. The field sampling activities included collection of nine confirmation soil samples (SC-1 through SC-9) from the walls and base of the excavation. The area of the final excavation measured approximately 48 feet by 48 feet by 2 to 6 feet in depth. Sample locations and final excavation extents are presented on Figure 4.

## 2.0 Soil Sampling

A total of seven soil samples from six test holes (TH-1 through TH-6) and eight composite samples (SC-1 through SC-8) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH). All composite samples collected during the excavation clearance 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. All soil samples were laboratory analyzed for:

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

### 2.3 Field and Laboratory Analytical Results

On August 19, 2015, initial assessment field screening results for VOCs via OVM showed concentrations ranging from 52.4 ppm in TH-4 up to 5,961 ppm in TH-1. Field TPH concentrations ranged from 60.5 mg/kg in TH-4 up to greater than 2,500 mg/kg in TH-1 and TH-2.

On August 20 and September 9, 2015, final excavation field screening results for VOCs via OVM ranged from 19.4 ppm in SC-7 up to 249 ppm in SC-2. Field TPH concentrations ranged from 42.5 mg/kg in SC-7 up to 3,690 mg/kg in SC-2. Results are included below in Table 1 and on Figures 3 and 4. The AES Field Sampling Reports are attached.

Table 1. Soil Field VOCs and TPH Results

Bruington 29 #1 Initial Release Assessment and Final Excavation

August 2015

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	TPH 418.1 (mg/kg)
NMOCI	D Action Level*		100	1,000
TILA	0/10/15	3	5,961	>2,500
TH-1	8/19/15 -	8	61.6	1,242
TH-2	8/19/15	5.5	1,633	>2,500
TH-3	8/19/15	5.5	230	1,831
TH-4	8/19/15	5	52.4	60.5
TH-5	8/19/15	2	3,867	523
TH-6	8/19/15	5	63.4	103
SC-1	8/20/15	0 to 2	43.6	954
SC-2	8/20/15	0 to 4	249	3,690
SC-3	8/20/15	0 to 6	157	1,020
SC-4	8/20/15	0 to 6	156	450
SC-5	8/20/15	0 to 2	232	559
SC-6	8/20/15	2 to 6	19.8	149
SC-7	8/20/15	2 to 6	19.4	42.5
SC-8	8/20/15	0 to 6	29.8	894
SC-9	9/9/15	0 to 4	26.6	245

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

Laboratory analyses of SC-1 through SC-9 were used to confirm field sampling results from the final excavation. Benzene concentrations in all samples were reported below laboratory detection limits. Total BTEX concentrations ranged from below laboratory detection limits in SC-1, SC-3, and SC-5 through SC-8, up to 0.24 mg/kg in SC-4. TPH concentrations as GRO/DRO varied from below the laboratory detection limit of 14.6 mg/kg in SC-7, up to 1,215 mg/kg in SC-2. Results are presented in Table 2 and on Figure 4. The laboratory analytical report is attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH Bruington 29 #1 Initial Release Assessment and Final Excavation

August 2015

ministra i	A - 1 - 10 -	Sample	The gradients	Total	COLUMN TO	election
Sample ID	Date Sampled	Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)
NMOC	D Action Lev	el*	10	50	1,0	000
SC-1	8/20/15	0 to 2	<0.046	<0.230	<4.6	270
SC-2	8/20/15	0 to 4	<0.050	0.15	15	1,200
SC-3	8/20/15	0 to 6	<0.046	<0.231	<4.6	33
SC-4	8/20/15	0 to 6	<0.048	0.24	<4.8	100
SC-5	8/20/15	0 to 2	<0.047	<0.235	<4.7	160
SC-6	8/20/15	2 to 6	<0.048	<0.241	<4.8	22
SC-7	8/20/15	2 to 6	<0.046	<0.230	<4.6	<10
SC-8	8/20/15	0 to 6	<0.046	<0.230	<4.6	260
SC-9	9/9/15	0 to 4	<0.050	<0.250	<5.0	110

<sup>\*</sup>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 August 19, 2015, AES conducted an initial assessment of petroleum contaminated soils associated with historic contamination at the Bruington 29 #1. 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.

Initial assessment field sampling results above the NMOCD action level of 100 ppm VOCs and 1,000 mg/kg TPH were reported in all samples except TH-4. The highest VOC concentration was reported in TH-1 with 5,961 ppm, and the highest TPH concentrations were reported in TH-1 and TH-2, each with greater than 2,500 mg/kg.

On September 9, 2015, final excavation of the impacted area was completed. Field sampling results of the excavation extents showed that VOC concentrations were below applicable NMOCD action levels for the base of the excavation as well as the south half of the east wall (SC-1) and north half of the west wall (SC-8). In contrast, VOC concentrations exceeded NMCOD action levels for the south half of the west wall (SC-2, 249 ppm), north half of the east wall (SC-3, 157 ppm), north wall (SC-4, 156 ppm), and south wall (SC-5, 232 ppm). Field TPH concentrations were below the applicable NMOCD action level of 1,000

Lisa Hunter Bruington 29 #1 Release Assessment and Final Excavation Report October 13, 2015, Page 6

mg/kg for the final walls and base of the excavation, with the exception of SC-2 and SC-3, which had TPH concentrations of 3,690 mg/kg and 1,020 mg/kg, respectively.

Laboratory analytical results reported benzene and total BTEX concentrations in SC-1 through SC-8 below NMOCD action levels, and TPH concentrations as GRO/DRO were reported below the applicable NMOCD action level in all samples except SC-2 (1,215 mg/kg). Additional soil was removed, and another sample (SC-9) was collected on September 9, 2015. Laboratory analytical results for SC-9 were below laboratory detection limits for benzene and total BTEX, and were below the NMOCD action level for TPH as GRO/DRO.

Based on the final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the Bruington 29 #1, benzene, total BTEX, and TPH concentrations were below the applicable NMOCD action levels for all of 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 Emilee Skyles at (505) 564-2281.

Sincerely,

David J. Reese

**Environmental Scientist** 

David & Reme

**Emilee Skyles** 

Geologist/Project Lead

Elizabeth V MiNdly

Sinh ShL

Elizabeth McNally, PE

Lisa Hunter Bruington 29 #1 Release Assessment and Final Excavation Report October 13, 2015, Page 7

#### Attachments:

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, August 2015

Figure 3. Initial Assessment Sample Locations and Results, August 2015

Figure 4. Final Excavation Sample Locations and Results, August and September 2015

AES Field Sampling Report 081915

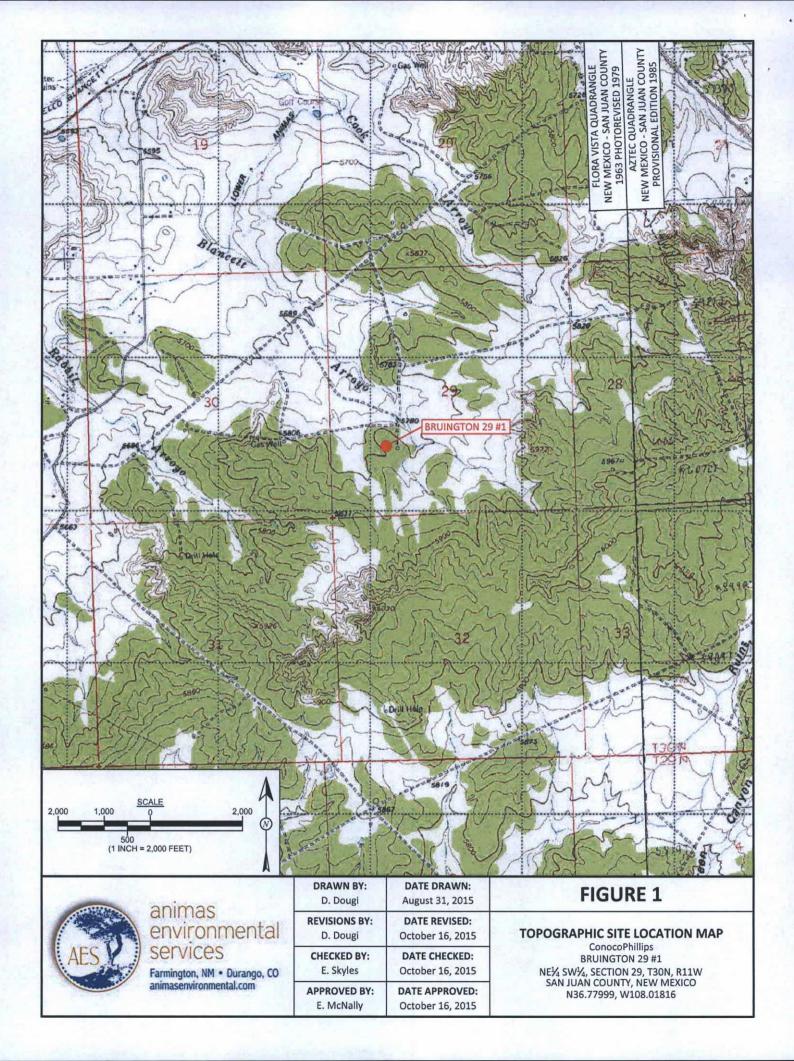
AES Field Sampling Report 082015

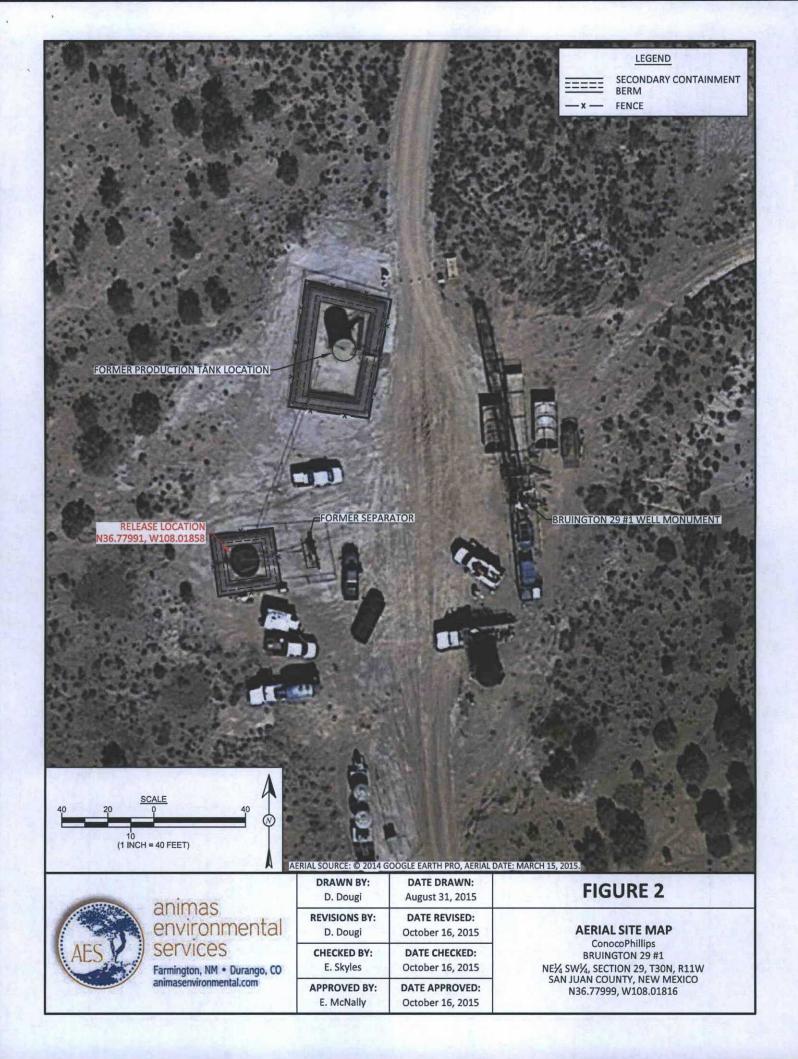
AES Field Sampling Report 090915

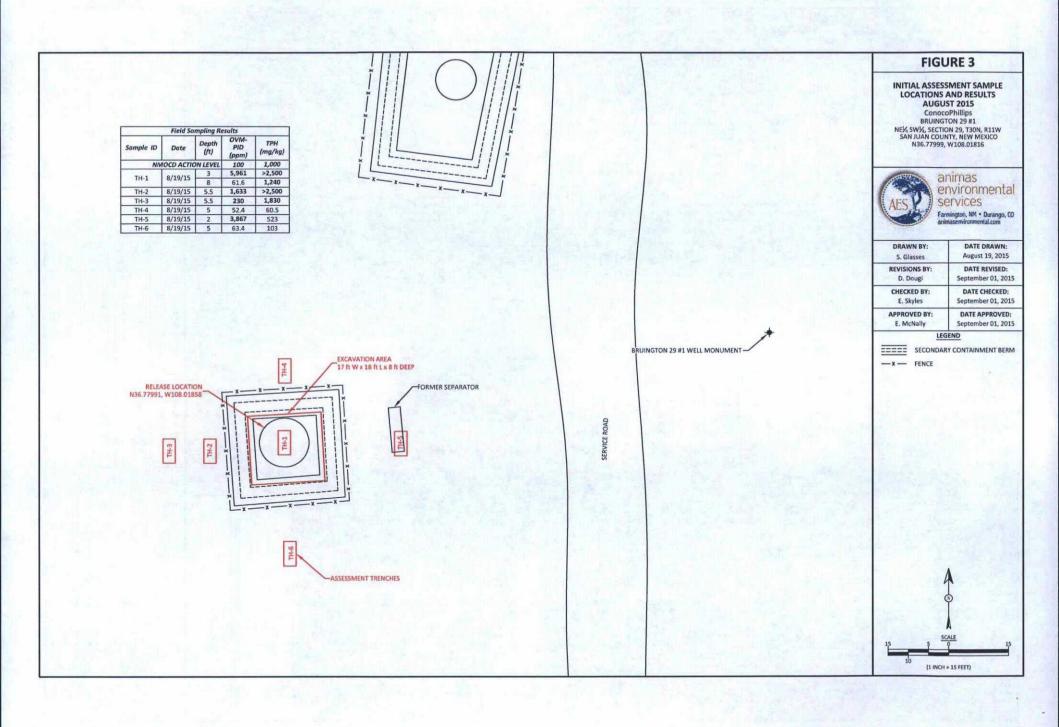
Hall Laboratory Analytical Report 1508A82

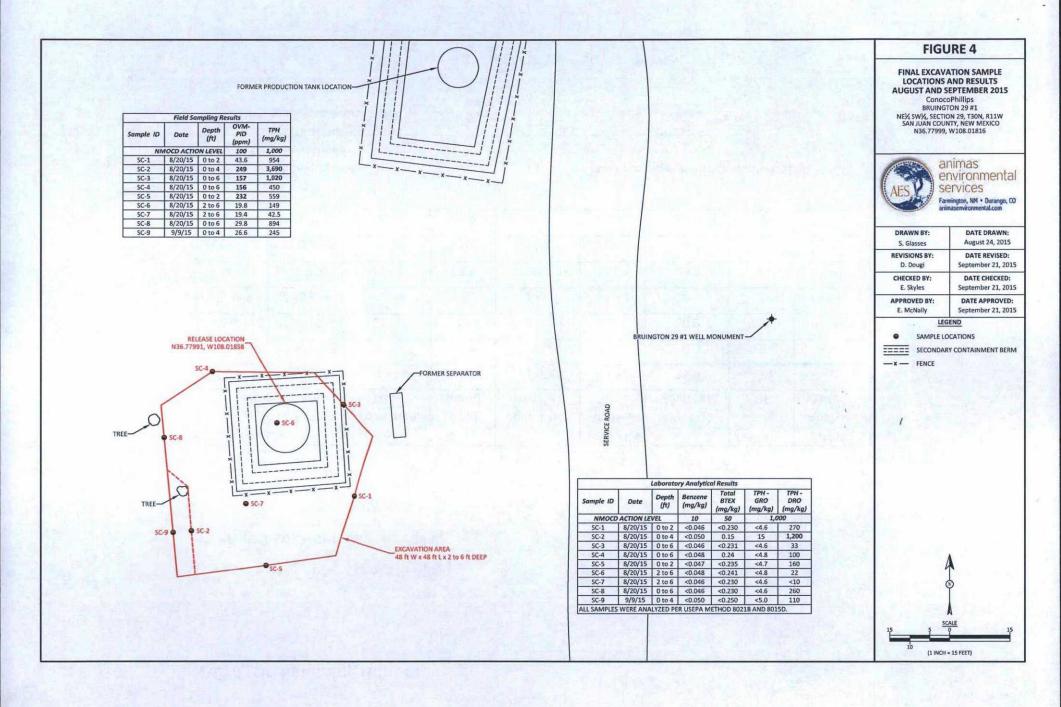
Hall Laboratory Analytical Report 1509537

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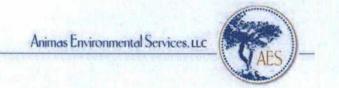








# **AES Field Sampling Report**



Client: ConocoPhillips

Project Location: Bruington 29 #1

Date: 8/19/2015

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
TH-1 @ 3'	8/19/2015	9:52	5,961	>2,500	10:12	20.0	1	EMS
TH-1 @ 8'	8/19/2015	10:20	61.6	1,242	11:09	20.0	1	EMS
TH-2 @ 5.5'	8/19/2015	10:55	1,633	>2,500	11:30	20.0	1	EMS
TH-3 @ 5.5'	8/19/2015	11:00	230	1,831	11:33	20.0	1	EMS
TH-4 @ 5'	8/19/2015	11:03	52.4	60.5	12:07	20.0	1	EMS
TH-5 @ 2'	8/19/2015	11:10	3,867	523	12:09	20.0	1	EMS
TH-6 @ 4'	8/19/2015	11:13	63.4	103	12:12	20.0	1	EMS

DF

**Dilution Factor** 

NA

Not Analyzed

PQL

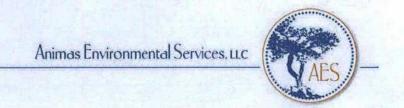
**Practical Quantitation Limit** 

\*Field TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Sinh Shl

# **AES Field Sampling Report**



Client: ConocoPhillips

Project Location: Bruington 29 #1

Date: 8/20/2015

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	8/20/2015	10:23	East Wall South	43.6	954	11:37	20.0	1	CL
SC-2	8/20/2015	10:25	West Wall South	249	3,690	11:46	200	10	CL
SC-3	8/20/2015	15:00	Northeast Wall	157	1,020	15:36	20.0	1	CL
SC-4	8/20/2015	15:20	North Wall West	156	450	15:38	20.0	. 1	CL
SC-5	8/20/2015	10:34	South Wall	232	559	12:10	20.0	1	CL
SC-6	8/20/2015	12:50	East Base	19.8	149	13:11	20.0	1	CL
SC-7	8/20/2015	13:25	West Base	19.4	42.5	13:41	20.0	1	CL
SC-8	8/20/2015	13:50	West Wall North	29.8	894	14:18	20.0	1	CL

DF

**Dilution Factor** 

NA

Not Analyzed

PQL

**Practical Quantitation Limit** 

\*TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

# **AES Field Sampling Report**



Client: ConocoPhillips

Project Location: Bruington 29 #1

Date: 9/9/2015

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-9	9/9/2015	10:29	Southwest Wall	26.6	245	10:48	20.0	1	CL

DF

**Dilution Factor** 

NA Not Analyzed

PQL

**Practical Quantitation Limit** 

\*TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst



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

August 31, 2015

Emilee Skyles Animas Environmental 604 Pinon Street Farmington, NM 87401 TEL: (505) 564-2281

FAX

RE: CoPC Bruington 29 #1

OrderNo.: 1508A82

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/21/2015 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

### Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Project: CoPC Bruington 29 #1

Lab ID: 1508A82-001

Client Sample ID: SC-1

Collection Date: 8/20/2015 10:23:00 AM

Matrix: AQUEOUS Received Date: 8/21/2015 8:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analyst	том
Diesel Range Organics (DRO)	270	9.6	mg/Kg	1	8/25/2015 4:55:12 PM	20948
Surr: DNOP	88.5	57.9-140	%REC	_ 1	8/25/2015 4:55:12 PM	20948
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/25/2015 9:21:49 PM	20933
Surr: BFB	85.3	75.4-113	%REC	1	8/25/2015 9:21:49 PM	20933
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.046	mg/Kg	1	8/25/2015 9:21:49 PM	20933
Toluene	ND	0.046	mg/Kg	1	8/25/2015 9:21:49 PM	20933
Ethylbenzene	ND	0.046	mg/Kg	1	8/25/2015 9:21:49 PM	20933
Xylenes, Total	ND	0.092	mg/Kg	1	8/25/2015 9:21:49 PM	20933
Surr: 4-Bromofluorobenzene	95.7	80-120	%REC	1	8/25/2015 9:21:49 PM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Project: CoPC Bruington 29 #1

Client Sample ID: SC-2

Collection Date: 8/20/2015 10:25:00 AM

Lab ID: 1508A82-002

Matrix: AQUEOUS

Received Date: 8/21/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS					Analyst	том
Diesel Range Organics (DRO)	1200	96		mg/Kg	10	8/26/2015 3:37:56 PM	20948
Surr: DNOP	0	57.9-140	S	%REC	10	8/26/2015 3:37:56 PM	20948
EPA METHOD 8015D: GASOLINE RAM	NGE					Analyst	NSB
Gasoline Range Organics (GRO)	15	5.0		mg/Kg	1	8/25/2015 9:46:43 PM	20933
Surr: BFB	161	75.4-113	S	%REC	1	8/25/2015 9:46:43 PM	20933
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst	NSB
Benzene	ND	0.050		mg/Kg	1	8/25/2015 9:46:43 PM	20933
Toluene	ND	0.050		mg/Kg	1	8/25/2015 9:46:43 PM	20933
Ethylbenzene	ND	0.050		mg/Kg	1	8/25/2015 9:46:43 PM	20933
Xylenes, Total	0.15	0.099		mg/Kg	1	8/25/2015 9:46:43 PM	20933
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	8/25/2015 9:46:43 PM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Client Sample ID: SC-3

Project: CoPC Bruington 29 #1 Collection Date: 8/20/2015 3:00:00 PM

Lab ID: 1508A82-003 Matrix: AQUEOUS Received Date: 8/21/2015 8:00:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	S	- 113	Ment	Analyst:	том
Diesel Range Organics (DRO)	33	10	mg/Kg	1	8/25/2015 7:03:59 PM	20948
Surr: DNOP	89.6	57.9-140	%REC	1	8/25/2015 7:03:59 PM	20948
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/25/2015 10:11:29 PM	20933
Surr: BFB	91.9	75.4-113	%REC	1	8/25/2015 10:11:29 PM	20933
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.046	mg/Kg	1	8/25/2015 10:11:29 PM	20933
Toluene	ND	0.046	mg/Kg	1	8/25/2015 10:11:29 PM	20933
Ethylbenzene	ND	0.046	mg/Kg	1	8/25/2015 10:11:29 PM	20933
Xylenes, Total	ND	0.093	mg/Kg	1	8/25/2015 10:11:29 PM	20933
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/25/2015 10:11:29 PM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Analytical Report Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Project: CoPC Bruington 29 #1

Client Sample ID: SC-4

Collection Date: 8/20/2015 3:20:00 PM

Lab ID: 1508A82-004

Matrix: AQUEOUS

Received Date: 8/21/2015 8:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	s	A JAMES T	113	Analyst	том
Diesel Range Organics (DRO)	100	10	mg/Kg	1	8/25/2015 7:25:21 PM	20948
Surr: DNOP	84.6	57.9-140	%REC	1	8/25/2015 7:25:21 PM	20948
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2015 10:36:17 PM	20933
Surr: BFB	104	75.4-113	%REC	1	8/25/2015 10:36:17 PM	20933
<b>EPA METHOD 8021B: VOLATILES</b>					Analyst	NSB
Benzene	ND	0.048	mg/Kg	1	8/25/2015 10:36:17 PM	20933
Toluene	ND	0.048	mg/Kg	1	8/25/2015 10:36:17 PM	20933
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2015 10:36:17 PM	20933
Xylenes, Total	0.24	0.096	mg/Kg	1	8/25/2015 10:36:17 PM	20933
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/25/2015 10:36:17 PM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Project: CoPC Bruington 29 #1

Lab ID: 1508A82-005

Collection Date: 8/20/2015 10:34:00 AM

Matrix: AQUEOUS Received Date: 8/21/2015 8:00:00 AM

Client Sample ID: SC-5

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	s	ten May to	141-16	Analyst:	том
Diesel Range Organics (DRO)	160	9.8	mg/Kg	1	8/25/2015 8:51:14 PM	20948
Surr: DNOP	95.1	57.9-140	%REC	1	8/25/2015 8:51:14 PM	20948
EPA METHOD 8015D: GASOLINE R.	ANGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/25/2015 11:01:07 PM	20933
Surr: BFB	91.7	75.4-113	%REC	1	8/25/2015 11:01:07 PM	20933
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.047	mg/Kg	1	8/25/2015 11:01:07 PM	20933
Toluene	ND	0.047	mg/Kg	1	8/25/2015 11:01:07 PM	20933
Ethylbenzene	ND	0.047	mg/Kg	1	8/25/2015 11:01:07 PM	20933
Xylenes, Total	ND	0.094	mg/Kg	1	8/25/2015 11:01:07 PM	20933
Surr: 4-Bromofluorobenzene	97.4	80-120	%REC	1	8/25/2015 11:01:07 PM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

#### Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Client Sample ID: SC-6

Project: CoPC Bruington 29 #1

Collection Date: 8/20/2015 12:50:00 PM

Lab ID: 1508A82-006

Matrix: AQUEOUS

Received Date: 8/21/2015 8:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	s	Pallichia ra	10	Analyst	том
Diesel Range Organics (DRO)	22	9.9	mg/Kg	1	8/25/2015 9:12:50 PM	20948
Surr: DNOP	87.4	57.9-140	%REC	1	8/25/2015 9:12:50 PM	20948
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2015 11:25:53 PM	20933
Surr: BFB	81.8	75.4-113	%REC	1	8/25/2015 11:25:53 PM	20933
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.048	mg/Kg	1	8/25/2015 11:25:53 PM	20933
Toluene	ND	0.048	mg/Kg	1	8/25/2015 11:25:53 PM	20933
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2015 11:25:53 PM	20933
Xylenes, Total	ND	0.097	mg/Kg	1	8/25/2015 11:25:53 PM	20933
Surr: 4-Bromofluorobenzene	95.6	80-120	%REC	1	8/25/2015 11:25:53 PM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

### Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Project:

Lab ID:

CoPC Bruington 29 #1

1508A82-007

Client Sample ID: SC-7

Collection Date: 8/20/2015 1:25:00 PM

Matrix: AQUEOUS Received Date: 8/21/2015 8:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	s	Harrison 18		Analyst:	том
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/25/2015 9:34:24 PM	20948
Surr: DNOP	85.1	57.9-140	%REC	1	8/25/2015 9:34:24 PM	20948
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/25/2015 11:50:41 PM	20933
Surr: BFB	83.2	75.4-113	%REC	1	8/25/2015 11:50:41 PM	20933
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.046	mg/Kg	1	8/25/2015 11:50:41 PM	20933
Toluene	ND	0.046	mg/Kg	1	8/25/2015 11:50:41 PM	20933
Ethylbenzene	ND	0.046	mg/Kg	1	8/25/2015 11:50:41 PM	20933
Xylenes, Total	ND	0.092	mg/Kg	1	8/25/2015 11:50:41 PM	20933
Surr: 4-Bromofluorobenzene	97.2	80-120	%REC	1	8/25/2015 11:50:41 PM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

#### Lab Order 1508A82

Date Reported: 8/31/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Client Sample ID: SC-8

Project: CoPC Bruington 29 #1

Collection Date: 8/20/2015 1:50:00 PM

Lab ID: 1508A82-008

Matrix: AQUEOUS

Received Date: 8/21/2015 8:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	S			Analyst:	том
Diesel Range Organics (DRO)	260	9.9	mg/Kg	1	8/25/2015 9:56:02 PM	20948
Surr: DNOP	92.3	57.9-140	%REC	1	8/25/2015 9:56:02 PM	20948
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/26/2015 12:15:32 AM	20933
Surr: BFB	83.6	75.4-113	%REC	1	8/26/2015 12:15:32 AM	20933
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.046	mg/Kg	1	8/26/2015 12:15:32 AM	20933
Toluene	ND	0.046	mg/Kg	1	8/26/2015 12:15:32 AM	20933
Ethylbenzene	ND	0.046	mg/Kg	1	8/26/2015 12:15:32 AM	20933
Xylenes, Total	ND	0.092	mg/Kg	1	8/26/2015 12:15:32 AM	20933
Surr: 4-Bromofluorobenzene	95.4	80-120	%REC	1	8/26/2015 12:15:32 AM	20933

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

## **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

Result

47

4.3

PQL

10

WO#:

**RPDLimit** 

Qual

%RPD

1508A82

31-Aug-15

Client: Animas Environmental
Project: CoPC Bruington 29 #1

Diesel Range Organics (DRO)

Surr: DNOP

Sample ID MB-20948	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 20948	RunNo: 28434	
Prep Date: 8/24/2015	Analysis Date: 8/25/2015	SeqNo: 859160	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	8.6 10.00	85.6 57.9	140
Sample ID LCS-20948	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 20948	RunNo: 28434	
Prep Date: 8/24/2015	Analysis Date: 8/25/2015	SeqNo: 859161	Units: mg/Kg

%REC

93.8

85.4

LowLimit

57.4

57.9

HighLimit

139

140

SPK value SPK Ref Val

50.00

5.000

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 9 of 11

## **OC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

WO#: 1508A82

31-Aug-15

Client: Project:

Animas Environmental CoPC Bruington 29 #1

Sample ID MB-20933

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 20933

5.0

RunNo: 28433

Prep Date: 8/24/2015 Analysis Date: 8/25/2015

Analyte

Result PQL SPK value SPK Ref Val %REC

SeqNo: 859725

Units: mg/Kg

HighLimit %RPD

**RPDLimit** Qual

Gasoline Range Organics (GRO)

ND

1000

83.6

75.4

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

**RPDLimit** 

Qual

Surr: BFB

Client ID:

Prep Date:

840

113

Sample ID LCS-20933

LCSS

SampType: LCS Batch ID: 20933

RunNo: 28433

Analyte

8/24/2015

Analysis Date: 8/25/2015

SeqNo: 859726

Units: mg/Kg

%RPD

Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 25 Gasoline Range Organics (GRO) 5.0 25.00 0 99.5 79.6 122 Surr: BFB 880 1000 88.2 75.4 113

### Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded H

% Recovery outside of range due to dilution or matrix

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit

Page 10 of 11

# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1:

1508A82 31-Aug-15

Client: Animas Environmental
Project: CoPC Bruington 29 #1

Sample ID MB-20933	Samp1	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	h ID: 20	933	F	RunNo: 2	8433				
Prep Date: 8/24/2015	Analysis D	Date: 8/	25/2015	8	SeqNo: 8	59761	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050	No.				-, 31, 30		The state of the s	AL BUIL
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	80	120			

Sample ID LCS-20933	Samp	Type: LC	S	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 20	933	F	RunNo: 2	8433				
Prep Date: 8/24/2015	Analysis [	Date: 8/	25/2015	8	SeqNo: 8	59762	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.0	76.6	128			
Toluene	0.99	0.050	1.000	0	99.0	75	124			
Ethylbenzene	1.0	0.050	1.000	0	103	79.5	126			
Xylenes, Total	3.0	0.10	3.000	0	101	78.8	124			
Surr: A Bromofluorobenzene	1.1		1 000		100	80	120			

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 11 of 11



### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.halleuvironmental.com

# Sample Log-In Check List

Client Name Animas Environmental Work Order Nymi	ber: 1508A82		RcptNo:	1
Received by/date: A. 08 21 6	5	Mark		
Logged By: Ashley Gallegos 8/21/2015 8:00:00	AM	A		
Completed By: Ashley Gallegos 8/21/2015 2:25:36	PM	*		
Reviewed By: A 08/21/15		. 0		
Chain of Custody		W.E.		
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 🗹	# of preserved	
		No □	bottles checked for pH:	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	NO L	CALLY CONTROL OF THE PARTY OF T	>12 unless note
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	
14, Is it clear what analyses were requested?	Yes 🗸	No 🗆	SETTING STANS	
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 🗆	No 🗆	NA 🗹	
Person Notified: Dat	е	representation to		
By Whom: Via	eMail	Phone  Fax	In Person	
Regarding:			115	
Client Instructions:				
17. Additional remarks:				
18. Cooler Information				
Cooler No Temp C Condition Seal Intact Seal No	Seal Date	Signed By		

lailing	Address Avmin	15 Envi	ironmental Services  W. Diñon St.  NM 87401  -2281	Project Name Copc Project #:	BRUING	FTON 29#1				A	www ns N	AL halle -	YS lenv Alb	rironr	ment erqu	AE al.co e, NI 345-	om M 87 4107	109		AL	
-	tation	□ Othe	□ Level 4 (Full Validation)		Skyles Lamen		Mes (8021)	TPH (Gas pub	GROY DRO HATE	418.1)	04.1)	8270 SIMS)		Anions (F,CI,NO3,NO2,PO4,SO4)	/ 8082 PCB's		A)				or N)
) EDD Date	(Type)_ Time	Matrix	Sample Request ID	Sample Tem Container Type and #			BTEX +ATTE	BTEX + MTBE +	трн 8015В (GR	TPH (Method 41	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,CI,NC	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
		Soil	SC-1	1-402.	(001	-001	X		X												
20/15	10:25	Soil	Sc-2	1-402.	cool	-002	X		X						3						
20/5	15:00	Soil	SC-3	1-402.	C00 1	-003	X		X												
20/15	15.70	Soil	SC-4	1-402.	Cool	4004	X		X												
	10:34	Snil	SC-5	1-402.	cool	-005	X		X										1		Ш
20/15	15:20	801	SC-6	1-402	cool	-6010	X		X										1	_	Ш
20/15	13.25	Soil	Sc-7	1-402.	cool	-007	X		X										1	_	Ш
took	13:50	Sail	SC-8	1-402.	cool	-008	X		X												
Pate:	Time:	Relinquisher Relin	-(n-	Received by:  Received by:  Received by:  Contracted to other a	www.	Date Time    Sols   1841   Date Time   OB/Z/15 0800   Date Time   OB/Z/15 0800   Date Time   OB/Z/15 0800	_	_		_	_		_	_				ps : 2		atoy	L K



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

September 21, 2015

Emilee Skyles Animas Environmental 604 Pinon Street Farmington, NM 87401 TEL: (505) 564-2281

FAX

RE: COPC Bruington 29 #1

OrderNo.: 1509537

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/11/2015 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

### Lab Order 1509537

Received Date: 9/11/2015 7:00:00 AM

Date Reported: 9/21/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Client Sample ID: SC-9

Project: COPC Bruington 29 #1 Collection Date: 9/9/2015 10:29:00 AM

Matrix: SOIL

Batch RL Qual Units **DF** Date Analyzed Analyses Result Analyst: TOM **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** 9/18/2015 7:19:20 PM 21313 Diesel Range Organics (DRO) 110 10 mg/Kg 1 %REC 9/18/2015 7:19:20 PM 21313 Surr: DNOP 109 57.9-140 Analyst: RAA **EPA METHOD 8015D: GASOLINE RANGE** 9/16/2015 1:07:45 PM 21284 Gasoline Range Organics (GRO) ND 5.0 mg/Kg 1 Surr: BFB 93.7 75.4-113 %REC 9/16/2015 1:07:45 PM 21284 **EPA METHOD 8021B: VOLATILES** Analyst: RAA Benzene ND 0.050 mg/Kg 9/16/2015 1:07:45 PM 21284 Toluene ND 0.050 mg/Kg 9/16/2015 1:07:45 PM 21284 21284 Ethylbenzene ND 0.050 mg/Kg 9/16/2015 1:07:45 PM Xylenes, Total ND 0.10 mg/Kg 9/16/2015 1:07:45 PM 21284 %REC 9/16/2015 1:07:45 PM 21284 Surr: 4-Bromofluorobenzene 108 80-120

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

#### Qualifiers:

Lab ID:

1509537-001

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 5
- P Sample pH Not In Range
- RL Reporting Detection Limit

## **QC SUMMARY REPORT**

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1509537

21-Sep-15

Client:

Animas Environmental

Project: COPC	C Bruington 29 #1
Sample ID MB-21313	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 21313 RunNo: 28881
Prep Date: 9/15/2015	Analysis Date: 9/16/2015 SeqNo: 876328 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 10 8.8 10.00 87.9 57.9 140
Sample ID LCS-21313	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 21313 RunNo: 28881
Prep Date: 9/15/2015	Analysis Date: 9/16/2015 SeqNo: 876329 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	42 10 50.00 0 83.8 57.4 139
Surr: DNOP	4.3 5.000 86.2 57.9 140
Sample ID MB-21316	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 21316 RunNo: 28881
Prep Date: 9/15/2015	Analysis Date: 9/16/2015 SeqNo: 876351 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	9.2 10.00 92.1 57.9 140
Sample ID LCS-21316	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 21316 RunNo: 28881
Prep Date: 9/15/2015	Analysis Date: 9/16/2015 SeqNo: 876352 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	4.4 5.000 87.1 57.9 140
Sample ID MB-21319	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 21319 RunNo: 28881
Prep Date: 9/15/2015	Analysis Date: 9/16/2015 SeqNo: 876353 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	9.4 10.00 94.3 57.9 140
Sample ID LCS-21319	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 21319 RunNo: 28881
Prep Date: 9/15/2015	Analysis Date: 9/16/2015 SeqNo: 876354 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

#### Qualifiers:

Surr: DNOP

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

4.5

5.000

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

57.9

140

E Value above quantitation range

89.6

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

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## **OC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1509537

21-Sep-15

Client: Project: Animas Environmental COPC Bruington 29 #1

Sample ID MB-21344

PBS Client ID:

SampType: MBLK

Batch ID: 21344 RunNo: 28881

Prep Date: 9/16/2015 Analysis Date: 9/17/2015 SPK value SPK Ref Val

PQL

Units: %REC SeqNo: 876960

57.9

%RPD **RPDLimit** LowLimit HighLimit

Analyte Surr: DNOP Result 11

10.00

Qual

Sample ID LCS-21344

SampType: LCS

%REC

111

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS

Batch ID: 21344 9/16/2015

RunNo: 28881

Units: %REC

140

Prep Date: Analyte

Analysis Date: 9/17/2015

SeqNo: 876961

Surr: DNOP

Result

5.2

SPK value SPK Ref Val %REC

LowLimit 105 57.9 HighLimit 140

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD **RPDLimit**  Qual

Sample ID 1509537-001AMS

SampType: MS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

SC-9 9/15/2015 Batch ID: 21313

5.000

48.73

4.873

RunNo: 28949 SeqNo: 879493

Units: mg/Kg

146

140

Analyte Diesel Range Organics (DRO)

Prep Date:

Surr: DNOP

9/15/2015

Analysis Date: 9/18/2015 Result PQL

95

5.0

SPK value SPK Ref Val %REC LowLimit 110.5 -32.0

HighLimit 42.3

%RPD **RPDLimit** 

Qual S

Qual

Sample ID 1509537-001AMSD

SampType: MSD

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: SC-9

Batch ID: 21313

RunNo: 28949

104

Prep Date:

Analysis Date: 9/18/2015

9.7

SeqNo: 879495

Units: mg/Kg

146

140

**RPDLimit** %RPD

Analyte Diesel Range Organics (DRO) Surr: DNOP

Result SPK value SPK Ref Val PQL 99 9.8 49.16 5.2 4.916

%REC -22.7 106

110.5

HighLimit LowLimit 42.3 57.9

57.9

4.58 0

28.9 0

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#### **Qualifiers:**

S

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H
- ND
- RPD outside accepted recovery limits R
- Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

- Not Detected at the Reporting Limit
- Analyte detected in the associated Method Blank B
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Sample pH Not In Range
  - Reporting Detection Limit RL

### **OC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

WO#: 1509537

21-Sep-15

Client: Project: Animas Environmental COPC Bruington 29 #1

Sample ID LCS-21284 TestCode: EPA Method 8015D: Gasoline Range SampType: LCS Client ID: LCSS Batch ID: 21284 RunNo: 28925 Prep Date: 9/14/2015 Analysis Date: 9/16/2015 SeqNo: 877364 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 23 5.0 25.00 92.9 79.6 122 Surr: BFB 940 1000 94.1 75.4 113

SampType: LCS Sample ID LCS-21310 TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 21310 RunNo: 28925 Prep Date: 9/15/2015 Analysis Date: 9/16/2015 SeqNo: 877365 Units: %REC Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Surr: BFB 990 1000 98.9 75.4 113

Sample ID MB-21284 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 21284 RunNo: 28925 Prep Date: 9/14/2015 Analysis Date: 9/16/2015 SeqNo: 877366 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Result PQL HighLimit Qual Analyte Gasoline Range Organics (GRO) ND 5.0 113 Surr: BFB 860 1000 86.4 75.4

Sample ID MB-21310 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 21310 RunNo: 28925 Prep Date: 9/15/2015 Analysis Date: 9/16/2015 SeqNo: 877367 Units: %REC SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result POL LowLimit HighLimit Qual Surr: BFB 860 1000 86.4 75.4 113

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

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# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1509537

21-Sep-15

Client:	Animas Environmental
Project:	COPC Bruington 29 #1

Sample ID LCS-21284	SampType: LCS	TestCode: EPA Method	8021B: Volatiles	
Client ID: LCSS	Batch ID: 21284	RunNo: 28925		
Prep Date: 9/14/2015	Analysis Date: 9/16/2015	SeqNo: 877406	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD F	RPDLimit Qual
Benzene	1.9 0.050 2.000	0 93.3 80	120	
Toluene	1.8 0.050 2.000	0 92.3 80	120	
Ethylbenzene	0.93 0.050 1.000	0 92.7 80	120	
Xylenes, Total	2.7 0.10 3.000	0 89.4 80	120	
Surr: 4-Bromofluorobenzene	1.0 1.000	104 80	120	
Sample ID LCS-21310	SampType: LCS	TestCode: EPA Method	8021B: Volatiles	
Client ID: LCSS	Batch ID: 21310	RunNo: 28925		
Prep Date: 9/15/2015	Analysis Date: 9/16/2015	SeqNo: 877407	Units: %REC	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD F	RPDLimit Qual
Surr: 4-Bromofluorobenzene	1.1 1.000	107 80	120	
Sample ID MB-21284	SampType: MBLK	TestCode: EPA Method	8021B: Volatiles	7 PM
Client ID: PBS	Batch ID: 21284	RunNo: 28925		
Prep Date: 9/14/2015	Analysis Date: 9/16/2015	SeqNo: 877408	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD F	RPDLimit Qual
Benzene	ND 0.050		The second second	
Toluene	ND 0.050			
Ethylbenzene	ND 0.050			
Xylenes, Total	ND 0.10			
Surr: 4-Bromofluorobenzene	1.0 1.000	102 80	120	
Sample ID MB-21310	SampType: MBLK	TestCode: EPA Method	8021B: Volatiles	TALL THE
Client ID: PBS	Batch ID: 21310	RunNo: 28925		
Prep Date: 9/15/2015	Analysis Date: 9/16/2015	SeqNo: 877409	Units: %REC	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD I	RPDLimit Qual
Surr: 4-Bromofluorobenzene	1.0 1.000	102 80	120	

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 5 of 5



### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Sample Log-In Check List

ReptNo: 1 Animas Environmental Work Order Number: 1509537 Client Name: 09/11/15 Received by/date: Celin Som 9/11/2015 7:00:00 AM Logged By: Celina Sessa 9/14/2015 8:41:00 AM Completed By: Celina Sessa Reviewed By: Chain of Custody No 🗆 Not Present Yes | 1. Custody seals intact on sample bottles? No 🗌 Not Present Yes V 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In Yes V No 🗌 NA 🗆 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 V No | 6. Sample(s) in proper container(s)? No 🗌 Yes V 7. Sufficient sample volume for indicated test(s)? No | Yes V 8. Are samples (except VOA and ONG) properly preserved? No V NA 🗌 Yes 9. Was preservative added to bottles? No 🗌 No VOA Vials Yes 10. VOA vials have zero headspace? Yes -No V 11. Were any sample containers received broken? # of preserved bottles checked for pH: No 🗌 Yes V 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗌 Yes V 13. Are matrices correctly identified on Chain of Custody? Yes V No 🗌 14. Is it clear what analyses were requested? Checked by: Yes V No L 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) NA V Yes | No 🗌 16. Was client notified of all discrepancies with this order? Person Notified: Date Via: eMail Phone Fax In Person By Whom: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp C Condition Seal Intact Seal No Seal Date

	Chain-of-Custody Record  Client: Animas Environmental Services  Malling Address: Lord W. Pinn St			Turn-Around Time:   Standard					=	A	N		Y	SIS	S L	AE	30		NT	AL
Mailing	Address	GOY W	Pinn St	COPE BRI	DINGTON 2	9 #1		49	01 H									109		
			ngton NM 87401	Project #:				Te	el. 50	5-34	5-3	975	-	ах	505-	345-	4107	7_		
-		724-228						_				A	nal	/sis	Req	uest				
		stylenean	ninos enermountal com	Project Mana	iger:		3	(yluc	砸					(700	SO					
QA/QC I	Package: dard		☐ Level 4 (Full Validation)	E	E. Skyles		TAMBES (8021)	(Gas	3/6			SIMS)		PO4,5	PCB					
Accredi			Marin Marin	Sampler:	C, Lames	nan No	中中	+ TPH	ल्ल	18.1)	04.1)			J3,NO2,	1 8082		(A)			2 io
D EDD	(Type)			Sample Tem	perature: 4,(	)	一溜	BE	0	by by	3d 5	0 0	stals	N.	ides	8	3			1 8
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MATSE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GROy ORO) I MINE	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)			Air Bubbles (Y or N)
1-9-15	1029	Soil	456-2 SC-9	1-402	Cosl	-001	1		X											
																			+	
																			-	44
							+												+	
Date:	Time: 1810 Time:	Relinquishe Relinquishe	ilu	Received by:	Warts 09	11 (15 0700)	Sup use	*10 w:	): k	KR KR	rw Ru	A		A	del	ed i			sta	