Administrative/Environmental Order



# **AE Order Number Banner**

**Report Description** 

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pCS1507831688

## 3RP - 1024

## DJR OPERATING, LLC

5/4/2018

#### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505 NMOCD

Form C-141 Revised April 3, 2017

Submit 1 Copy 20 appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa	Fe, NM 87505							
Release Notificati	on and Corrective Ac	tion						
	OPERATOR	🗌 Initial Report 🛛 Final Rep						
Name of Company: DJR Operating, LLC	Contact: Amy Archuleta							
Address: PO BOX 156 Bloomfield, NM 87413	Telephone No.: 505-632-3476 x201							
Facility Name: S. Lybrook 9, 11, and 15 Flowline	Facility Type: Flowline							
Surface Owner: Federal Mineral Owne	er: N/A	API No.: N/A						
LOCATI	ON OF RELEASE							
		East/West Line County						
NE/SE (I) 18 23N 06W N/A	N/A	Rio Arriba						
Latitude <u>36.222833</u>	Longitude107.505378 N	IAD83						
NATUR	<b>RE OF RELEASE</b>							
Type of Release Gas Flowline leak	Volume of Release 412 MCF	Volume Recovered 40 Yrds Soil						
Source of Release 1 1/2" split in flowline	Date and Hour of Occurrence <b>2-27-18</b>	Date and Hour of Discovery 4:30 PM						
Was Immediate Notice Given?	If YES, To Whom?	4.30 1 111						
Yes No Not Require		ields, Whitney Thomas						
By Whom? Amy Archuleta	Date and Hour 2-27-18 6:41P							
Was a Watercourse Reached?	If YES, Volume Impacting the	e Watercourse.						
If a Watercourse was Impacted, Describe Fully.*								
Describe Cause of Problem and Remedial Action Taken.* A midstream operator was doing some work around this area and	his gas meter detected gas. He im	mediately shut the 3 wells that flow through						
that pipeline in and began investigating this leak. They discovered								
Describe Area Affected and Cleanup Action Taken.*								
On 3-2-18 (after one-call) they excavated 40 bbls of soil and took in location with an oxidization agent (please see attached). We used so								
focution with an oxidization agent (please see attached). We used so	on purchased it on Enviroteen to	Juckim the location.						
I hereby certify that the information given above is true and complete t	to the best of my knowledge and und	derstand that pursuant to NMOCD rules and						
regulations all operators are required to report and/or file certain releas	e notifications and perform correcti	ve actions for releases which may endanger						
public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remed								
or the environment. In addition, NMOCD acceptance of a C-141 report								
federal, state, or local laws and/or regulations.								
	OIL CONS	ERVATION DIVISION						
Signature:		1. (						
	Approved by Environmental Spe	cialist:						
Printed Name: Amy Archuleta								
Title: Regulatory Supervisor	Approval Date: 5/4/18	Expiration Date.						
E-mail Address: aarchuleta@djrllc.com	Conditions of Approval:	Attached						
Date: 4-26-18 Phone: 505-632-3476 x201								
* Attach Additional Sheets If Necessary HNCS 181244	12951	$\frown$						
ANC DION	1017	(29)						



# DJR Production Upstream Remediation Final Report

**Prepared for:** Amy Archuleta, *HS&E Supervisor* **Location:** DJR South Lybrook 11, 15, 9 **Project:** Environmental Remediation of Natural Gas Release

## **Background**

Sample Collection Date: 3/29/2018

Microbial Contact Date: 4/16/2018

Initial Site Evaluation: 4/18/2018

Completion Date: 4/25/2018

- New Mexico Bureau of Land Management (BLM) requires all hydrocarbon ranges be below 1000 ppm.
- DJR previously excavated and hauled contaminated materials to OCD approved site for disposal
- DJR has already delivered soil to be used for backfill
- Form C-138 to be completed by DJR Operating

## **Estimated Action Plan for Closure**

Being already approved by New Mexico Bureau of Land Management to use an oxidizing agent, Microbial Energy recommends using a 34% concentration of  $H_2O_2$ , better known as Hydrogen Peroxide. Hydrogen peroxide oxidizes hydrocarbons into mineralized products such as  $CO_2$ , salts, and readily available organic fragments. Being both relatively safe and cost-effective, Hydrogen Peroxide will save DJR additional capital.

With the use of hand tools, Microbial Energy plans to spray the solution onto the contaminated walls and base of the open pit. Once the pit is sprayed, the soil already on location can be used to backfill the pit pictured in the *Appendix*.



## **Estimated Steps to Complete**

- Treat open pit with a 34% concentration of Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) oxidizing agent
- Backfill pit with soil provided by DJR Operating
- Reseed land if required or requested

## **Steps Conducted for Completion**

- Truck with spray unit on location at 11:00 am on April 25, 2018.
- Barrier fence was removed and placed on work vehicle
- Hydrogen Peroxide oxidizer was sprayed for approximately 1.5 hours
- Sides of the open pit were scraped down with hand tools and mixed with Hydrogen Peroxide for maximum saturation of oxidizing chemical
- Skid steer loader arrived on location at 2:00 pm
- Approved backfill dirt was backfilled into place for approximately 1 hour completing job on April 25, 2018.

## **Initial Sampling**

\*\*The following lab results were conducted by Hall Environmental Analysis Laboratory and were analyzed according to EPA procedures\*\*

Hall Environmental Analysis	s Labora	tory, In	IC.			Analytical Report Lab Order 1803G11 Date Reported: 4/10/201	18
CLIENT: Animas Environmental Service	s		C	lient Sampl	e ID: SC	-1	
Project: DJR S Lybrook 11, 15, 9				Collection I	Date: 3/2	9/2018 9:50:00 AM	
Lab ID: 1803G11-001	Matrix:	SOIL		Received I	Date: 3/3	0/2018 8:00:00 AM	
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	30		mg/Kg	20	4/9/2018 1:27:44 PM	37490
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	S				Analyst	TOM
Diesel Range Organics (DRO)	1800	95		mg/Kg	10	4/3/2018 4:32:30 PM	37362
Motor Oil Range Organics (MRO)	740	470		mg/Kg	10	4/3/2018 4:32:30 PM	37362
Surr: DNOP	0	70-130	S	%Rec	10	4/3/2018 4:32:30 PM	37362
EPA METHOD 8015D: GASOLINE RANG	ε					Analyst	NSB
Gasoline Range Organics (GRO)	120	4.7		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Surr: BFB	914	15-316	S	%Rec	1	4/2/2018 8:59:38 PM	37344
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.023		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Toluene	ND	0.047		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Ethylbenzene	ND	0.047		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Xylenes, Total	ND	0.094		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Surr: 4-Bromofluorobenzene	98.0	80-120		%Rec	1	4/2/2018 8:59:38 PM	37344



## Appendix

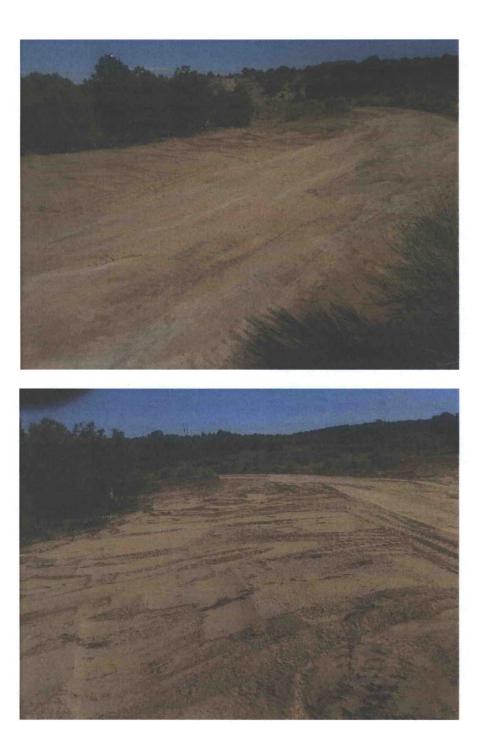
Before



\*



After



e - 5



April 17, 2018

Amy Archuleta Regulatory Supervisor DJR Operating, LLC PO Box 156 Bloomfield, New Mexico 87413

Sent via electronic mail to: aarchuleta@djrllc.com

#### RE: Excavation Clearance Report Lybrook South 9-11 & 15 Pipeline Release Rio Arriba County, New Mexico

Dear Ms. Archuleta:

On March 29, 2018, Animas Environmental Services, LLC (AES) completed confirmation sampling of the excavated area associated with petroleum-contaminated soils at the DJR Operating (DJR) Lybrook South 9-11 & 15 pipeline release location. The initial excavation and sampling event was conducted by DJR personnel on March 13, 2018.

The laboratory analytical results confirmed that soil concentrations of benzene, toluene, ethyl-benzene and total xylenes (BTEX) were below the New Mexico Oil Conservation Division (NMOCD) action levels for the excavation side walls and base. Soil concentrations of total petroleum hydrocarbons (TPH) were also below NMOCD action levels for the excavation side walls, but exceeded action levels for the excavation base. DJR personnel continued the excavation until sandstone bedrock was encountered.

AES returned to the location for the final excavation and collection of confirmation soil samples. The excavation was completed by DJR contractors prior to AES personnel arriving to the location.

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

> 1911 Main, Ste 206 Durango, CO 81301 970-403-3084

www.animasenvironmental.com

Amy Archuleta Lybrook South 9-11 & 15 Excavation Clearance Report April 17, 2018 Page 2 of 4

#### 1.0 Site Information

#### 1.1 Location

Legal Description – NW¼ SE¼, Section 18, T23N, R6W, Rio Arriba County, New Mexico Release Latitude/Longitude – N36.22285 and W107.50539, respectively Land Jurisdiction – Bureau of Land Management (BLM) Figure 1. Topographic Site Location Map Figure 2. Aerial Site Map, March 2018

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#### 1.2 NMOCD Ranking

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

- Depth to Groundwater: A water well within the same section reported the depth to groundwater at 200 feet below ground surface (bgs). (0 points)
- Wellhead Protection Area: The release location is not within a wellhead protection area. (0 points)
- Distance to Surface Water Body: An unnamed drainage is located approximately 227 feet east of the location. (10 points)

#### 1.3 Excavation Clearance

On March 29, 2018, DJR contractors completed an excavation of impacted soils as a result of a pipeline release, and AES personnel collected one composite soil confirmation sample for laboratory analysis from the base of the excavation area. The final excavation measured approximately 18 feet by 22 feet by 3 to 5 feet deep. Sample locations and final excavation extents are presented on Figure 3.

#### 2.0 Soil Sampling

On March 29, 2018, one composite soil sample (SC-1) was collected from the base of the excavation and submitted for laboratory analysis.

#### 2.1 Laboratory Analyses

The samples collected for laboratory analysis were placed into new, clean, laboratorysupplied containers, which were then labeled, placed on ice, and logged onto sample chain of custody records. The samples were maintained on ice until delivery to the analytical laboratory, Green Analytical Laboratories, in Durango, Colorado, and Hall Amy Archuleta Lybrook South 9-11 & 15 Excavation Clearance Report April 17, 2018 Page 3 of 4

Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. The samples were laboratory analyzed for:

- BTEX per USEPA Method 8021;
- TPH as gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) per USEPA Method 8015 M/D; and

< \*

Chlorides per USEPA Method 300.1

#### 2.3 Laboratory Analytical Results

Laboratory analytical results are summarized in Table 1 and on Figure 3. The laboratory analytical reports are attached.

Excavation Area Sample Results, March 2018									
Sample ID	Date Sampled	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH – GRO (mg/kg)	TPH – DRO (mg/kg)	TPH – MRO (mg/kg)	Chlorides (mg/kg)	
NMOC	D Action Lev	vel*	10	50		1,000		NE	
S. Lybrook 11, 15, 9 'Base'	3/13/18	3	0.053	12.2	256	2,390	313	13.1	
S. Lybrook 11, 15, 9 'Sides'	3/13/18	3 to 5	<0.050	<0.300	<10.0	<10.0	11.5	52.2	
SC-1	3/29/18	3 to 5	0.023	<0.211	120	1,800	740	<30	

Table 1.	Soil Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides
	Excavation Area Sample Results, March 2018

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

#### 3.0 Conclusions and Recommendations

Based on the final laboratory analytical results from March 13 and 29, 2018, of the excavation of petroleum contaminated soils at the Lybrook South 9-11 & 15 pipeline release, benzene, total BTEX, and TPH concentrations were below the applicable NMOCD action levels for the final excavation, except for the base. TPH concentrations from the base of the excavation (sandstone) exceeded the NMOCD action level, with 2,660 mg/kg. On April 16, 2018, DJR received permission from NMOCD and BLM, to backfill the excavation after the application of a chemical oxidant to the base of the excavation. No additional work is recommended.

Amy Archuleta Lybrook South 9-11 & 15 Excavation Clearance Report April 17, 2018 Page 4 of 4

If you have any questions about this report or site conditions, please do not hesitate to contact Tami Knight, Project Lead, or Elizabeth McNally at (505) 564-2281.

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Sincerely,

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Davil g Reme

David J. Reese Environmental Scientist

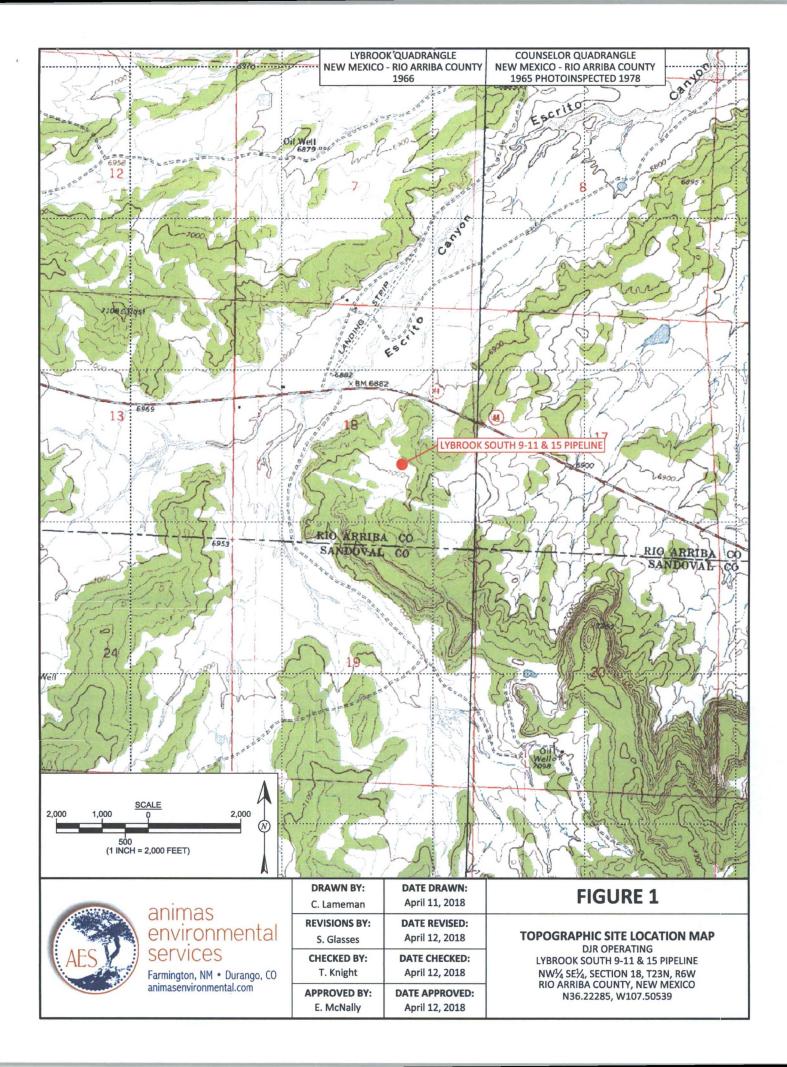
Elizabeth V Mervely

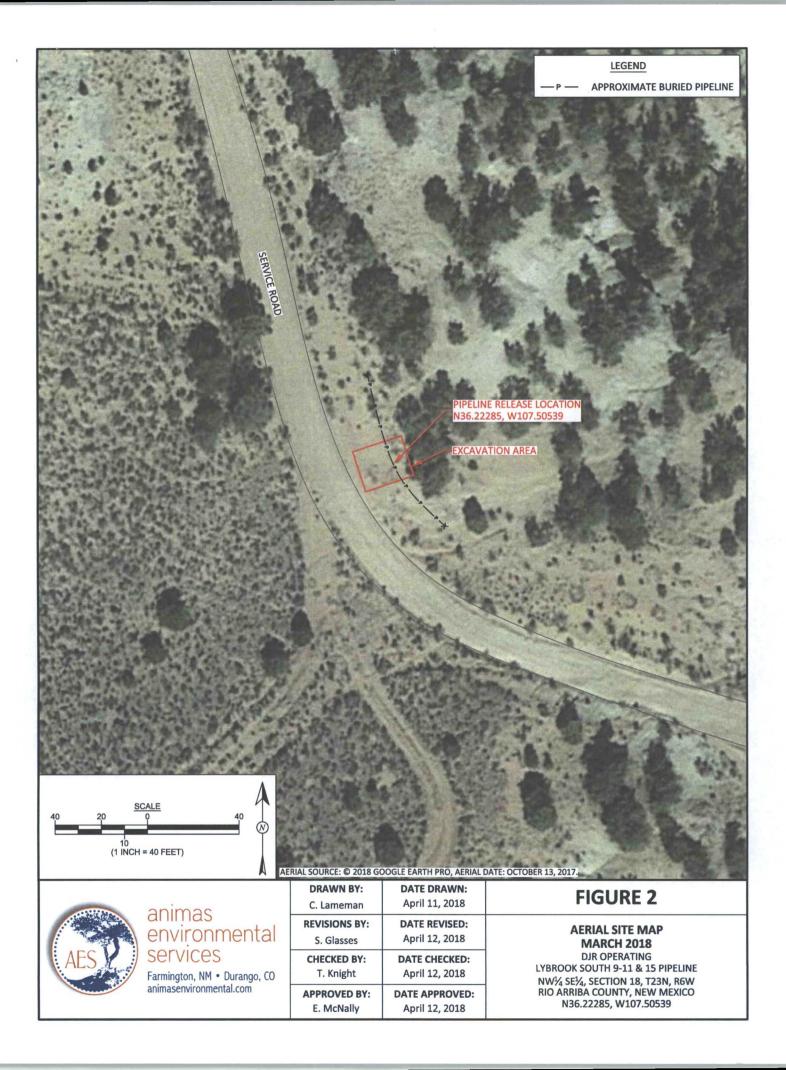
Elizabeth McNally, P.E.

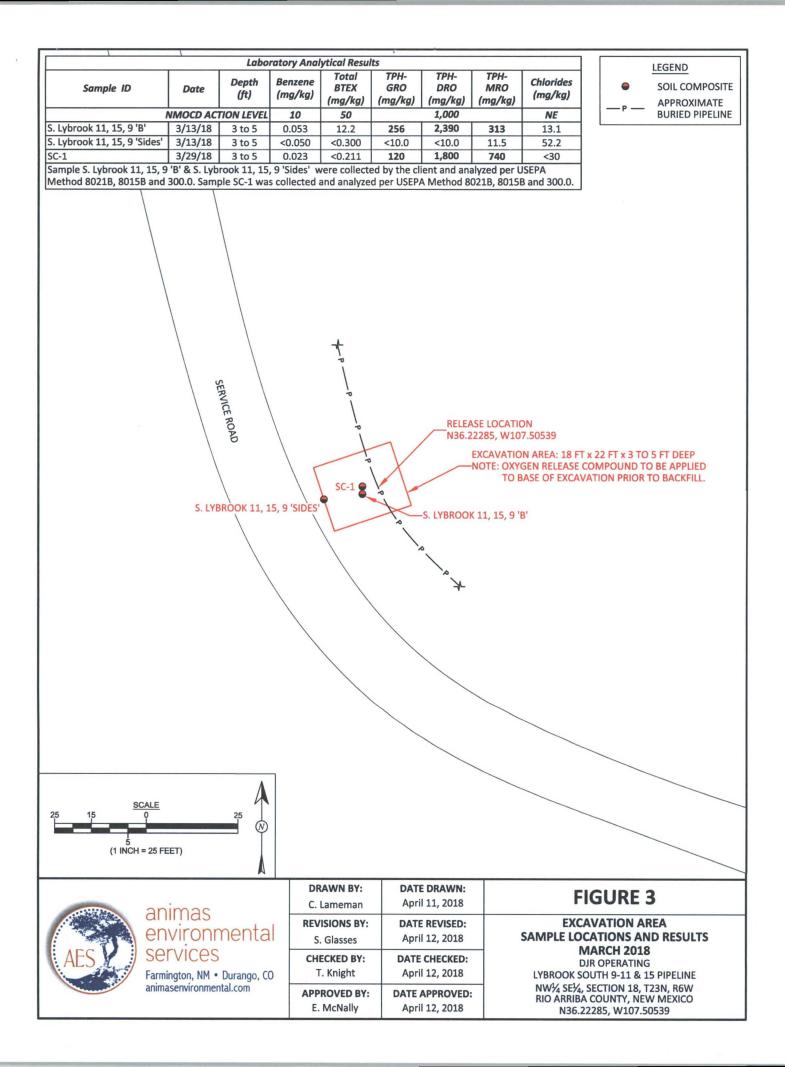
Attachments:

Figure 1. Topographic Site Location Map Figure 2. Aerial Site Map, March 2018 Figure 3. Excavation Area Sample Locations and Results, March 2018 Green Analytical Laboratories Report 1803124-01 Hall Analytical Report 1803G11

C:\Users\emcnally\Dropbox (Animas Environmental)\0000 aes server client projects dropbox\2018 Client Projects\DJ Resources\Lybrook South 9-11 & 15 Pipeline Release Excavation Clearance\Lybrook South 9-11 & 15 Excavation Clearance Report 041718 TK EM.docx









75 Suttle Street Durango, CO 81303 970.247.4220 Phone 970.247.4227 Fax www.greenanalytical.com

21 March 2018

Amy Archuleta DJR Operating #20 CR 5060 Bloomfield, NM 87413 RE: BTEX,TPH, CI

Enclosed are the results of analyses for samples received by the laboratory on 03/13/18 13:40. The data to follow was performed, in whole or in part, by a subcontract laboratory with an additional report attached.

If you any any further assistance, please feel free to contact me.

Sincerely,

blie Zufett

Debbie Zufelt Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (\*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <a href="http://greenanalytical.com/certifications/">http://greenanalytical.com/certifications/</a>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8.



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DJR Operating	Project: BTEX,TPH, Cl	
#20 CR 5060	Project Name / Number: TR	Reported:
Bloomfield NM, 87413	Project Manager: Amy Archuleta	03/21/18 09:21

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#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S. Lybrook 11, 15, 9 'B'	1803124-01	Solid	03/13/18 09:35	03/13/18 13:40
S. Lybrook 11, 15, 9 'Sides'	1803124-02	Solid	03/13/18 09:45	03/13/18 13:40

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Debbie Zufelt, Reports Manager



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DJR Operating			Project: B7	FEX,TPH, Cl					
#20 CR 5060	Pro	ject Name / I	Number: TF	2				Reported:	
Bloomfield NM, 87413		Project N	Manager: An	my Archuleta				03/21/18	09:21
		S. Lyl	brook 11,	15, 9 'B'					
		18	03124-01 (	Solid)					
Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
% Dry Solids	93.8			%	1	03/16/18	EPA160.3/1684		LLG
Soluble (DI Water Extraction)									
Chloride	13.1	10.7	1.53	mg/kg dry	10	03/15/18	EPA300.0		JLM
Subcontracted Cardinal I Volatile Organic Compounds by EPA N									S-04
Benzene*	0.053	0.050	0.002	mg/kg	50	03/16/18	8021B		MS
Toluene*	0.769	0.050	0.002	mg/kg	50	03/16/18	8021B	8	MS
Ethylbenzene*	1.61	0.050	0.004	mg/kg	50	03/16/18	8021B		MS
Total Xylenes*	9.73	0.150	0.010	mg/kg	50	03/16/18	8021B		MS
Total BTEX	12.2	0.300	0.018	mg/kg	50	03/16/18	8021B		MS
Surrogate: 4-Bromofluorobenzene (P1D)			161 %	72-148		03/16/18	8021B		MS
Petroleum Hydrocarbons by GC FID									
GRO C6-C10*	256	10.0	5.30	mg/kg	1	03/16/18	8015B		MS
DRO >C10-C28*	2390	10.0	1.56	mg/kg	1	03/16/18	8015B		MS
EXT DRO >C28-C36	313	10.0	1.56	mg/kg	1	03/16/18	8015B		MS
Surrogate: 1-Chlorooctane			102 %	41-142		03/16/18	8015B		MS
Surrogate: 1-Chlorooctadecane			107 %	37.6-147		03/16/18	8015B		MS

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DJR Operating			Project: BT	EX,TPH, Cl					
#20 CR 5060	Project Name / Number: TR								
Bloomfield NM, 87413		03/21/18 09:21							
		S. Lybro	ook 11, 15	,9 'Sides'					
		180	3124-02 (5	Solid)					
Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
% Dry Solids	93.6			%	1	03/16/18	EPA160.3/1684		LLG
Soluble (DI Water Extraction)									
Chloride	52.2	10.7	1.53	mg/kg dry	10	03/15/18	EPA300.0		JLM
Subcontracted Cardinal L	aboratories								
Volatile Organic Compounds by EPA M	ethod 8021								
Benzene*	< 0.050	0.050	0.002	mg/kg	50	03/16/18	8021B		MS
Foluene*	< 0.050	0.050	0.002	mg/kg	50	03/16/18	8021B		MS
Ethylbenzene*	< 0.050	0.050	0.004	mg/kg	50	03/16/18	8021B		MS
Fotal Xylenes*	< 0.150	0.150	0.010	mg/kg	50	03/16/18	8021B		MS
Total BTEX	< 0.300	0.300	0.018	mg/kg	50	03/16/18	8021B		MS
Surrogate: 4-Bromofluorobenzene (PID)			101 %	72-148		03/16/18	8021B		MS
Petroleum Hydrocarbons by GC FID									
GRO C6-C10*	<10.0	10.0	5.30	mg/kg	1	03/16/18	8015B		MS
GRU C0-C10"	<10.0								
	<10.0	10.0	1.56	mg/kg	1	03/16/18	8015B		MS
DRO >C10-C28*		10.0 10.0	1.56 1.56	mg/kg mg/kg	1 1	03/16/18 03/16/18	8015B 8015B		MS MS
DRO >C10-C28* EXT DRO >C28-C36 Surrogate: 1-Chlorooctane	<10.0								

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DJR Operating	Project: B	TEX,TPH, Cl	
#20 CR 5060	Project Name / Number: T	R	Reported:
Bloomfield NM, 87413	Project Manager: A	my Archuleta	03/21/18 09:21

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#### **General Chemistry - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B803091 - General Prep - Wet Chem	Result	Lunit	Units	Level	Kesun	70KEC	Linits	KFD	Liint	Notes
Duplicate (B803091-DUP1)	Sou	rce: 1803069-	04 Prepa	ared: 03/14/	'18 Analyze	ed: 03/16/18	3			
% Dry Solids	34.6		%		33.9			2.04	20	
	Soluble	(DI Water	Extractio	n) - Qua	lity Cont	rol				
Analyte	Result	Reporting Limit	Units	Spike	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B803096 - General Prep - Wet Chem	Result	Linit	Onits	Level	Result	/orce	Linits	N D	Linit	Notes
Blank (B803096-BLK1)			Prepa	ared: 03/14/	/18 Analyze	ed: 03/16/18	8			
Chloride	ND	10.0	mg/kg wet							
LCS (B803096-BS1)			Prepa	ared: 03/14/	18 Analyze	ed: 03/15/18	8			
Chloride	225	10.0	mg/kg wet	250		90.1	85-115			
LCS Dup (B803096-BSD1)			Prepa	ared: 03/14/	18 Analyz	ed: 03/15/18	8			
Chloride	227	10.0	mg/kg wet	250		91.0	85-115	1.01	20	

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DJR Operating	Project: BTEX, TPH, Cl	
#20 CR 5060	Project Name / Number: TR	Reported:
Bloomfield NM, 87413	Project Manager: Amy Archuleta	03/21/18 09:21

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#### Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8031604 - Volatiles										
Blank (8031604-BLK1)			Prep	ared & Ana	lyzed: 03/16	5/18				
Surrogate: 4-Bromofluorobenzene (PID)	0.102		mg/kg	0.100		102	72-148			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (8031604-BS1)			Prep	ared & Ana	lyzed: 03/16	5/18				
Surrogate: 4-Bromofluorobenzene (PID)	0.0966		mg/kg	0.100		96.6	72-148			
Benzene	2.02	0.050	mg/kg	2.00		101	79.5-124			
Ethylbenzene	2.05	0.050	mg/kg	2.00		102	77.7-125			
Toluene	2.00	0.050	mg/kg	2.00		100	75.5-127			
Total Xylenes	6.00	0.150	mg/kg	6.00		100	70.9-124			
LCS Dup (8031604-BSD1)			Prep	ared & Ana	lyzed: 03/16	5/18				
Surrogate: 4-Bromofluorobenzene (PID)	0.101		mg/kg	0.100		101	72-148			
Benzene	1.85	0.050	mg/kg	2.00		92.3	79.5-124	9.15	6.5	QR-0
Ethylbenzene	1.89	0.050	mg/kg	2.00		94.7	77.7-125	7.82	7.83	
Toluene	1.86	0.050	mg/kg	2.00		93.2	75.5-127	7.32	7.02	QR-0
Total Xylenes	5.48	0.150	mg/kg	6.00		91.3	70.9-124	9.09	7.78	QR-0

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Debbie Zufelt, Reports Manager



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DJR Operating	Project: BTEX,TPH, Cl	
#20 CR 5060	Project Name / Number: TR	Reported:
Bloomfield NM, 87413	Project Manager: Amy Archuleta	03/21/18 09:21

#### Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8031602 - General Prep - Organics										
Blank (8031602-BLK1)			Prep	ared & Anal	yzed: 03/16	5/18				
Surrogate: 1-Chlorooctadecane	46.0		mg/kg	50.0		92.0	37.6-147			
Surrogate: 1-Chlorooctane	47.5		mg/kg	50.0		94.9	41-142			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (8031602-BS1)			Prep	ared & Anal	yzed: 03/16	5/18				
Surrogate: 1-Chlorooctadecane	42.2		mg/kg	50.0		84.5	37.6-147			
Surrogate: 1-Chlorooctane	43.5		mg/kg	50.0		87.0	41-142			
DRO >C10-C28	188	10.0	mg/kg	200		94.2	72.9-138			
GRO C6-C10	183	10.0	mg/kg	200		91.4	76.5-133			
Total TPH C6-C28	371	10.0	mg/kg	400		92.8	78-132			
LCS Dup (8031602-BSD1)			Prep	ared & Anal	yzed: 03/16	5/18				
Surrogate: 1-Chlorooctadecane	43.4		mg/kg	50.0		86.9	37.6-147			
Surrogate: 1-Chlorooctane	45.2		mg/kg	50.0		90.4	41-142			
DRO >C10-C28	196	10.0	mg/kg	200		98.0	72.9-138	3.87	20.6	
GRO C6-C10	188	10.0	mg/kg	200		94.1	76.5-133	2.93	20.6	
Total TPH C6-C28	384	10.0	mg/kg	400		96.1	78-132	3.41	18	

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Debbie Zufelt, Reports Manager



www.GreenAnalytical.com

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DJR Ope	erating	Project: BTEX, TPH, Cl	
#20 CR 5	5060	Project Name / Number: TR	Reported:
Bloomfie	eld NM, 87413	Project Manager: Amy Archuleta	03/21/18 09:21
		Notes and Definitions	
-04 The surrogate recovery for this sample is outside of establis		r this sample is outside of established control limits due to a sample matrix effect.	
QR-02		the QC control limits; however, both percent recoveries were acceptable. Sample recent recoveries and completeness of QC data.	esults for the QC batch
DET	Analyte DETECTED		
ND	Analyte NOT DETECTED at or	bove the reporting limit	
√R	Not Reported		
ry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.		
RPD	Relative Percent Difference		
.CS	Laboratory Control Sample (Blan	k Spike)	
RL	Report Limit		

- RL
- MDL Method Detection Limit

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Debbie Zufelt, Reports Manager

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#### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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mpany Name: DSC OPE	a hulter	25	Bill to (if differen P.O. #:	itj:		ANAL			
Idress: PO Bac 156	Chrosom				3				
ty: Bloomfield	State: NM	ZLD: 87413	Company: Attn:		A		N.		
hone #: 505-632-3476		adicili.com	Address:		Ó		$\cap$		
ditional Report To:		C B I C C C C C C C C C C C C C C C C C	City:		B	X	D		
roject Name:			State: Zip:		2	R	0		
oject Number:			Phone #:		D	3			
ampler Name (Print): An	Archuleta		Fax or Email:		30	14	3		
OR LAB USE ONLY		Collected		containers	Y		10		
			GROUNDWATER SURFACEWATER WASTEWATER MASTEWATER PRODUCEDWATER SOIL OTHER: OTHER: OTHER: HNO <sub>3</sub>		10	<u>a</u>	X		
Lab I.D. Samp	ele Name or Location		GROUNDWATER SURFACEWATER WASTEWATER PRODUCEDWATER SOIL OTHER : D PREMIER : D PREMIER : D PREMIER : D P		1	2	1		
			GROUNI GROUNI WASTEV WASTEV PRODUCI SOIL OTHER : No preserve HNO <sub>3</sub> HCI	0 5 5 5	8	2	5		
2-2-10-11-1	1	Date Time	GROL SURF WAST WAST PROD PROD SOIL OTHE MO PROD	H <sub>2</sub> SO <sub>4</sub> H <sub>2</sub> SO <sub>4</sub> Other: Other:	$\omega$	SU	C		
803-174-01 B. Lybr	2012 11.16+9"B"	31318 9:350	×		X	X	X		
	K MICO HOLT	Shelle ANE					10		_
-02 S. Lybro	ok 1115,9 "Side	3 15 18 945			X	x	K	+	
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ASE NOTE: GAL's MENTY and clarg's exclusive name	dy for any claim arising whether based in contract	or tort, shall be limited to the amount and	by the client for the analyses. All claims inclusion the	hose for medicence and a	my other entries and	vetecover shall be	semed weived where	made in writing	and receiver
ARE NOTE: CALS is plity and claim's exclusive reme AL within 30 days after completion. In no event shall C AL, regardless of whicher such claim is based upon a linguished by:	GAL be liable for incidental or consequental damag any of the above stated reasons or off-endice.	ges, including without limitation, business	interruptions, loss of use, or loss of profits incurred by	r client, its subsidiaries, at	filiates or success	ors arising out of or	related to the performe	ince of services	hereunder
linguished by:	31/3/18	11.1	Ca	ADDITIONAL F	EMARKS:			e? (Circle)	
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### HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 10, 2018

Tami Knight Animas Environmental Services 604 Pinon Street Farmington, NM 87401 TEL: (505) 564-2281 FAX (505) 324-2022

RE: DJR S Lybrook 11, 15, 9

OrderNo.: 1803G11

Dear Tami Knight:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/30/2018 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 qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical	Report
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#### Lab Order 1803G11

Date Reported: 4/10/2018

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services Project: DJR S Lybrook 11, 15, 9

1803G11-001

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Lab ID:

#### Client Sample ID: SC-1 Collection Date: 3/29/2018 9:50:00 AM Received Date: 3/30/2018 8:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				18)		Analys	t: MRA
Chloride	ND	30		mg/Kg	20	4/9/2018 1:27:44 PM	37490
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	1800	95		mg/Kg	10	4/3/2018 4:32:30 PM	37362
Motor Oil Range Organics (MRO)	740	470		mg/Kg	10	4/3/2018 4:32:30 PM	37362
Surr: DNOP	0	70-130	S	%Rec	10	4/3/2018 4:32:30 PM	37362
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	120	4.7		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Surr: BFB	914	15-316	S	%Rec	1	4/2/2018 8:59:38 PM	37344
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.023		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Toluene	ND	0.047		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Ethylbenzene	ND	0.047		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Xylenes, Total	ND	0.094		mg/Kg	1	4/2/2018 8:59:38 PM	37344
Surr: 4-Bromofluorobenzene	98.0	80-120		%Rec	1	4/2/2018 8:59:38 PM	37344

Matrix: SOIL

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 5
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1803G11

10-Apr-18

Client: Project:		as Environmental Services S Lybrook 11, 15, 9					
Sample ID	MB-37490	SampType: mblk	TestCode: EPA Method	300.0: Anions			
Client ID:	PBS	Batch ID: 37490	RunNo: 50408				
Prep Date:	4/9/2018	Analysis Date: 4/9/2018	SeqNo: 1634764	Units: mg/Kg			
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND 1.5					
Sample ID	LCS-37490	SampType: Ics	TestCode: EPA Method	300.0: Anions			
Client ID:	LCSS	Batch ID: 37490	RunNo: 50408				
Prep Date:	4/9/2018	Analysis Date: 4/9/2018	SeqNo: 1634765	Units: mg/Kg	1		
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit	%RPD	RPDLimit	Qual

ResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit141.515.00092.090110

Qualifiers:

Chloride

- \* 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
- PQL Practical Quanitative Limit
- 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
- W Sample container temperature is out of limit as specified

Page 2 of 5

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1803G11

10-Apr-18

	Environmental Servi ybrook 11, 15, 9	ces								
Sample ID LCS-37362	SampType: LCS	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: LCSS	Batch ID: 3736	Batch ID: 37362			0269					
Prep Date: 4/2/2018	Analysis Date: 4/3/	2018	S	eqNo: 1	628774	Units: mg/K	g			
Analyte	Result PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	45 10	50.00	0	90.5	70	130				
Surr: DNOP	3.8	5.000		75.4	70	130				
Sample ID MB-37362	SampType: MBL	Test	Code: El	PA Method	8015M/D: Die	sel Range	e Organics			
Client ID: PBS	Batch ID: 3736	2	R	unNo: 5	0269					
Prep Date: 4/2/2018	Analysis Date: 4/3/	2018	S	eqNo: 1	628775	Units: mg/K	g			
Analyte	Result PQL S	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	8.9	10.00		89.2	70	130				
Sample ID LCS-37405	SampType: LCS		Test	Code: El	PA Method	8015M/D: Die	sel Range	e Organics		
Client ID: LCSS	Batch ID: 3740	5	R	unNo: 5	0301					
Prep Date: 4/3/2018	Analysis Date: 4/4/	2018	S	eqNo: 1	630258	Units: %Rec	:			
Analyte	Result PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	4.1	5.000		82.1	70	130				
Sample ID MB-37405	SampType: MBL	.K	Test	Code: El	PA Method	8015M/D: Die	sel Range	e Organics		
Client ID: PBS	Batch ID: 3740	)5	R	unNo: 5	0301					
Prep Date: 4/3/2018	Analysis Date: 4/4/	2018	S	eqNo: 1	630259	Units: %Rec	:			
Analyte	Result PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

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

PQL Practical Quanitative Limit

- 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
- W Sample container temperature is out of limit as specified

Page 3 of 5

#### QC SUMMARY REPORT Hall Environmental Analysis Laborator

**Client:** 

WO#: 1803G11

10-Apr-18

## Hall Environmental Analysis Laboratory, Inc.

Animas Environmental Services

Project: DJR S I	ybrook 11, 15, 9-	)			×					
Sample ID MB-37344	B-37344 SampType: MBLK				TestCode: EPA Method 8015D: Gasoline Range					
Client ID: PBS	Batch ID:	Batch ID: 37344			0259					
Prep Date: 3/30/2018	Analysis Date:	Analysis Date: 4/2/2018			627779	Units: mg/K	g			
Analyte	Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND 5	.0								
Surr: BFB	960	1000		95.5	15	316				
Sample ID LCS-37344	SampType:	LCS	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e		
Client ID: LCSS	Batch ID:	37344	F	RunNo: 5	0259					
Prep Date: 3/30/2018	Analysis Date:	4/2/2018	S	SeqNo: 1	627780	Units: mg/K	g			
Analita	Result PQ	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Analyte	Result PQ								1.0511.551	
Gasoline Range Organics (GRO)		.0 25.00	0	118	75.9	131				

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
- PQL Practical Quanitative Limit
- 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
- W Sample container temperature is out of limit as specified

Page 4 of 5

- - - 8-

## QC SUMMARY REPORT

WO#: 1803G11

Page 5 of 5

10-Apr-18

Client: Animas	Animas Environmental Services												
Project: DJR S	DJR S Lybrook 11, 15, 9												
Sample ID MB-37344	SampType: M	BLK	Tes										
Client ID: PBS	Batch ID: 37	344	F	RunNo: 5									
Prep Date: 3/30/2018	Analysis Date: 4/2/2018 SeqNo: 1627797		Units: mg/K	g									
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit %RP		RPDLimit	Qual				
Benzene	ND 0.025												
Toluene	ND 0.050												
Ethylbenzene	ND 0.050												
Xylenes, Total	ND 0.10												
Surr: 4-Bromofluorobenzene	0.88	1.000	1.000 87.9 80										
Sample ID LCS-37344	SampType: LCS TestCode: EPA Method 8021B: Volatiles												
Client ID: LCSS	Batch ID: 37	Batch ID: 37344 RunNo: 50259											
Prep Date: 3/30/2018	Analysis Date: 4	/2/2018	5	SeqNo: 1627798			g						
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	1.0 0.025	1.000	0	101	77.3	128							
Toluene	1.0 0.050	1.000	0	99.8	79.2	125							
Ethylbenzene	0.97 0.050	1.000	0	97.3	80.7	127							
Xylenes, Total	3.0 0.10	3.000	0	100	81.6	129							
Surr: 4-Bromofluorobenzene	0.90	1.000		89.7	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
- PQL Practical Quanitative Limit
- 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
- W Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Envtronmental Albu TEL: 505-345-3975 Website: www.ha	4901 Iquerqu FAX: 5	Hawkins e, NM 87 05-345-4	NE 109 107	Sample Log-In Check List									
Client Name: Animas Environmental	Work Order Number:	18030	311			RcptNo: 1								
Received By: Sophia Campuzano	3/30/2018 8:00:00 AM			Sopher	ion MA	_								
Completed By: Erin Melendrez Reviewed By: PDS LB: <u>MW 330</u> [8	3/30/2018 8:28:07 AM 3/30//3			M	nz									
Chain of Custody														
1. Is Chain of Custody complete?	Yes	$\checkmark$	No		Not Present									
2. How was the sample delivered?		Couri	er											
Log In 3. Was an attempt made to cool the samples?		Yes		No										
4. Were all samples received at a temperature	Yes		No		NA 🗌									
5. Sample(s) in proper container(s)?		Yes	$\checkmark$	No										
6. Sufficient sample volume for indicated test(s)	Yes		No											
7. Are samples (except VOA and ONG) property	Yes E		No		·									
8. Was preservative added to bottles?	Yes [		No		NA 🗆									
9. VOA vials have zero headspace?		Yes [		No		No VOA Vials	. 1							
10. Were any sample containers received broke	Yes		No		# of preserved bottles checked	118								
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes		No		for pH:	unless noted)								
12. Are matrices correctly identified on Chain of 0			No		Applisted?									
13. Is it clear what analyses were requested?			No		Checked by:									
<ol> <li>Were all holding times able to be met? (If no, notify customer for authorization.)</li> </ol>	Yes (	<b>V</b>	No		Checked by.									
Special Handling (if applicable)						* <sup>*</sup>								
15. Was client notified of all discrepancies with t	his order?	Yes		No		NA 🗹								
Person Notified:	Date:		****											
By Whom:	Via:	] eMa	il 🗌 Pł	none	] <mark>F</mark> ax	In Person								
Regarding:						Manager and an address of the second state of the								
Client Instructions:														
16. Additional remarks:														
17. <u>Cooler Information</u> Cooler No Temp °C Condition Se	al Intact   Seal No   S	eal Da		Signed	By.	l .								
1 1.9 Good Yes		odi Da		Signed	Υ.									
	na ang mgang ang na gang gang gang gang	rai Murumonalirika A	ale contrary 3 to one of	pengel a successor y garage da										

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Chain-of-Custody Record Client: Animas Environmental Services, LLC				Turn-Around Time: X Standard □ Rush														NT		
	,																	ATC	R	r
Mailing Address: 604 W Binon St				Project Name:		15.0	www.hallenvironmental.com													
004 W FINON St.			DJR S. Lybrook 11, 15, 9				4901 Hawkins NE - Albuquerque, NM 87109													
Farmington, NM 87401			Project #:				Tel. 505-345-3975 Fax 505-345-4107													
Phone #: 505-564-2281							Analysis Request													
Email or Fax#: <u>tknight@animasenvironmental.com</u>																				
QA/QC Package:			T. Knight		ы															
X Standar		2,10	Level 4 (Full Validation)				8015													
Accreditation	on:	C Other		Sampler: CL																
	vpe)	L Oulei		On Ice VYes No Sample Temperature: 2:0-0:1(cr)=1:9			MR													2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	TPH (GRO/DRO/MRO)	8021B - BTEX	Chloride - 300.0											Air Bubbles (Y or N)
3/29/18	9:50	SOIL	SC-1	2 - 4 oz jar	cool	-001	х	X	х											Π
												+	+					-	+	+
											-+	+	+	-+	-+	-	-+			+
											-	$\rightarrow$		-+	$\rightarrow$		-+		-	+
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			5																	
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Date:	Time:	Relinquishe	nquished by: Date Time			Remarks:														
3/29/18	1530	Co	Contro Punte 3/2/4 1530																	
Date:	Time:	Relinquished by: Date Time					Please call with any questions													
3/29/18	1745	Chitubet Spl C- 03/30/18 0800																		

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

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