



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

ELM RIDGE EXPLORATION COMPANY LLC

10/20/2017

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Elm Ridge Exploration kna DJR operating	Contact: Dianna Hamilton 330-2736	
Address: #20 CR 5060 Bloomfield, NM 87413	Telephone No. 634-1144	
Facility Name: AXI Apache H12	Facility Type: pipeline	
Surface Owner: Jicarilla	Mineral Owner:	API No. n/a

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	9	23N	5W					

Latitude: 36.24511 Longitude: -107.37634

OIL CONS. DIV DIST. 3

NATURE OF RELEASE

OCT 05 2017

Type of Release: Water and oil mixture	Volume of Release: unknown	Volume Recovered: n/a
Source of Release: unknown at this time, suspected corrosion in pipeline	Date and Hour of Occurrence	9.5.17 afternoon
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Cory Smith	
By Whom? Dianna Hamilton	Date and Hour 9.5.17 3:48pm	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.* Release is just off the bank of the wash, water table was not reached during the course of the excavation and clean up.

Describe Cause of Problem and Remedial Action Taken.* Source of release was about a dime size hole in pipe due to corrosion. During a routine standard line locate, employee was using gas sniffer detection device which report high concentrations of gas, employee had wells shut in and placed a one call. Once one call was released, excavation began where it was discovered that soil was saturated with hydrocarbon odor. Jicarilla tribe was notified, once source of release was found, soil sampling was conducted, all labs came back well below standards. Approval from the tribe was received on 9/25/17 for backfill. Permission to use backfill soil from the J6 borrow pit was given by the tribe, backfill was completed on 9/25/17.

Describe Area Affected and Cleanup Action Taken.* See diagram for sampling details. Area was excavated, contaminated soil was hauled to IEI. Clean backfill soil was taken from the J6 borrow pit per the tribes request. 5pt. composite soil samples were taken from N, S, E & W walls as well as the base of the excavation. Lab results were well below OCD standards, backfill was completed.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Dianna Hamilton</i>	OIL CONSERVATION DIVISION	
Printed Name: Dianna Hamilton	Approved by Environmental Specialist: <i>Cory Smith</i>	
Title: HSE Coordinator	Approval Date: 10/20/17	Expiration Date:
E-mail Address: dhamilton@djrlc.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: September 26, 2017 Phone: 505-330-2736		

* Attach Additional Sheets If Necessary

#NCS 1729340045

20

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State of New Mexico
Energy Minerals and Natural Resources

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 in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration kna DJR operating	Contact: Dianna Hamilton 330-2736
Address: #20 CR 5060 Bloomfield, NM 87413	Telephone No. 634-1144
Facility Name: AXI Apache H12	Facility Type: pipeline

Surface Owner: Jicarilla	Mineral Owner:	API No. n/a
--------------------------	----------------	-------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	9	23N	5W					

Latitude: 36.24511 Longitude: -107.37634

NATURE OF RELEASE


Type of Release: Water and oil mixture	Volume of Release: unknown	Volume Recovered: n/a
Source of Release: unknown at this time, suspected corrosion in pipeline	Date and Hour of Occurrence	9.5.17
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Cory Smith	
By Whom? Dianna Hamilton	Date and Hour 9.5.17 3:48pm	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.* Release is just off the bank of the wash, full extent of excavation is still yet to be determined.

Describe Cause of Problem and Remedial Action Taken.* Source of release has not been discovered yet, During a routine standard line locate, employee was using gas sniffer detection device which report high concentrations of gas, employee had wells shut in and placed a one call. Once one call was released, excavation began where it was discovered that soil was saturated with hydrocarbon odor. Jicarilla tribe was notified, once source of release is found, soil sampling and clean up will begin.

Describe Area Affected and Cleanup Action Taken.* TBD

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Dianna Hamilton	Approved by Environmental Specialist: _____	
Title: HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address: dhamilton@djrlc.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: September 6, 2017 Phone: 505-330-2736		

* Attach Additional Sheets If Necessary

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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

DJR Operating, LLC

2. Originating Site:

AXI Apache H12

3. Location of Material (Street Address, City, State or ULSTR):

N. 36.24511 W. -107.37624

S9 T23N R5W

4. Source and Description of Waste: Water oil mixture from pipeline release.

Estimated Volume 50 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Dianna R. Hamilton, representative or authorized agent for DJR Operating do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Dianna Hamilton, representative for DJR Operating do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: NRE

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: JFJ Landfarm / Industrial Ecosystems, INC

Address of Facility: #49 CR 3150 Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: _____

TITLE: _____

DATE: _____

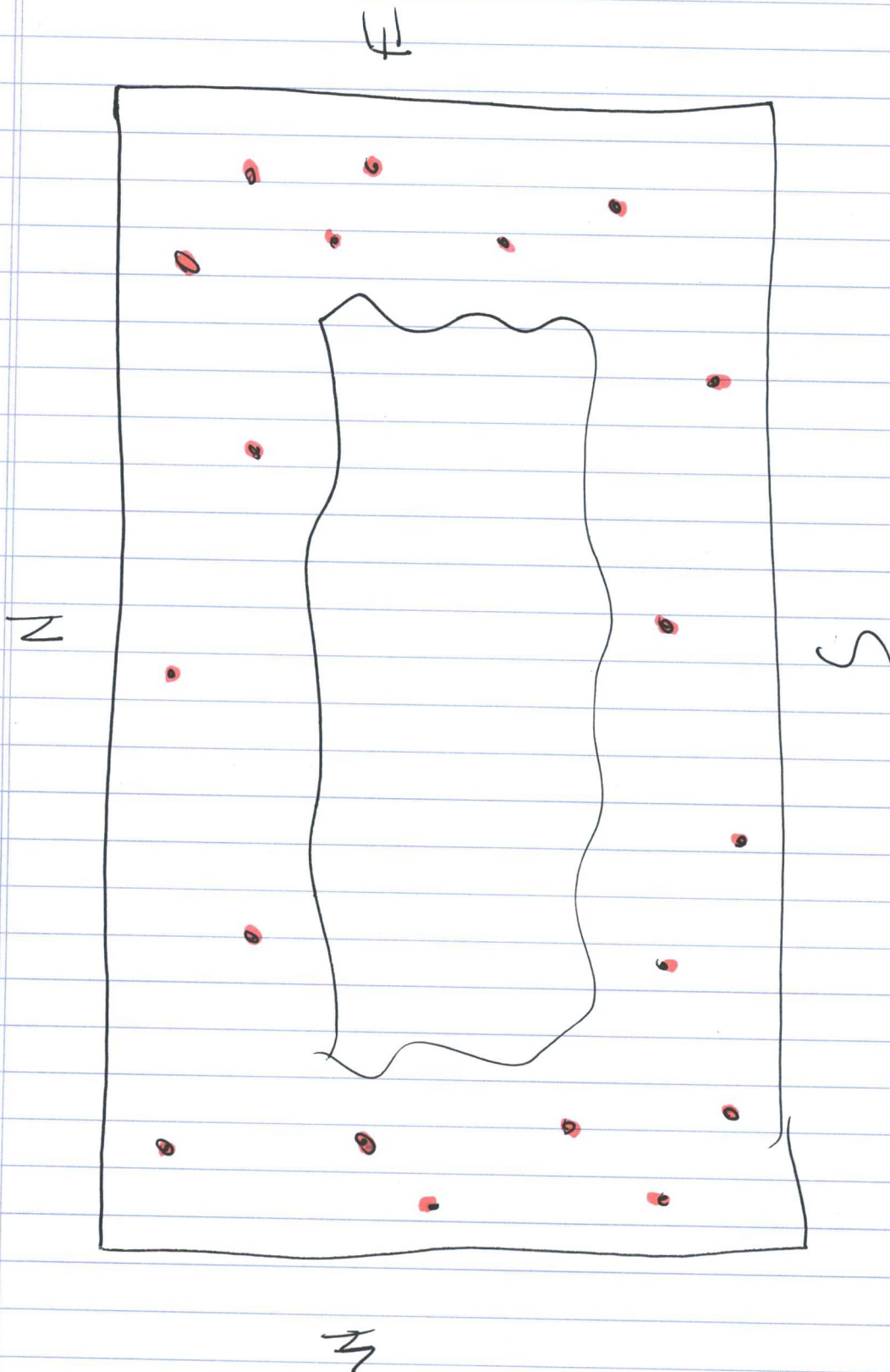
SIGNATURE: _____

TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

Jic. AXI H-12 Sampling

Date





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

21 September 2017

Dianna Hamilton
DJR Operating
#20 CR 5060
Bloomfield, NM 87413
RE: TPH Ext.

Enclosed are the results of analyses for samples received by the laboratory on 09/11/17 15:40.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'.

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 <http://greenanalytical.com/certifications/>

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.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N. Wall SC1	1709083-01	Solid	09/11/17 13:00	09/11/17 15:40
N. Wall SC2	1709083-02	Solid	09/11/17 13:00	09/11/17 15:40
S. Wall SC1	1709083-03	Solid	09/11/17 13:00	09/11/17 15:40
S. Wall SC2	1709083-04	Solid	09/11/17 13:00	09/11/17 15:40
E. Wall SC1	1709083-05	Solid	09/11/17 13:00	09/11/17 15:40
E. Wall SC2	1709083-06	Solid	09/11/17 13:00	09/11/17 15:40
W. Wall SC1	1709083-07	Solid	09/11/17 13:00	09/11/17 15:40
W. Wall SC2	1709083-08	Solid	09/11/17 13:00	09/11/17 15:40
Base SC1	1709083-09	Solid	09/11/17 13:00	09/11/17 15:40
Base SC2	1709083-10	Solid	09/11/17 13:00	09/11/17 15:40

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



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DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

N. Wall SC1

1709083-01 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 100 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 102 % 34.7-157 09/15/17 8015B MS

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

N. Wall SC2

1709083-02 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 105 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 106 % 34.7-157 09/15/17 8015B MS

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Debbie Zufelt

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DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

S. Wall SC1

1709083-03 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 96.5 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 101 % 34.7-157 09/15/17 8015B MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

S. Wall SC2

1709083-04 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 102 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 98.0 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 96.1 % 34.7-157 09/15/17 8015B MS

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

E. Wall SC1

1709083-05 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 100 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 96.9 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 102 % 34.7-157 09/15/17 8015B MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

E. Wall SC2

1709083-06 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 102 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	18.3	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 101 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 106 % 34.7-157 09/15/17 8015B MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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DJR Operating
#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

W. Wall SC1

1709083-07 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 101 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 102 % 34.7-157 09/15/17 8015B MS

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#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

W. Wall SC2

1709083-08 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/19/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/19/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/19/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/19/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 100 % 72-148 09/19/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 88.0 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 98.3 % 34.7-157 09/15/17 8015B MS

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Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

Base SC1

1709083-09 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/20/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/20/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/20/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/20/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/20/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 72-148 09/20/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	14.7	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 94.5 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 96.5 % 34.7-157 09/15/17 8015B MS

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Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
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Base SC2

1709083-10 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	09/20/17	8021B		MS
Toluene*	<0.050	0.050	0.002	mg/kg	50	09/20/17	8021B		MS
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	09/20/17	8021B		MS
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	09/20/17	8021B		MS
Total BTEX	<0.300	0.300	0.018	mg/kg	50	09/20/17	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148 09/20/17 8021B MS

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	3.53	mg/kg	1	09/15/17	8015B		MS
DRO >C10-C28	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	2.04	mg/kg	1	09/15/17	8015B		MS

Surrogate: 1-Chlorooctane 105 % 28.3-164 09/15/17 8015B MS

Surrogate: 1-Chlorooctadecane 105 % 34.7-157 09/15/17 8015B MS

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Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

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
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Batch 7091802 - Volatiles

Blank (7091802-BLK1)

Prepared: 09/18/17 Analyzed: 09/19/17

Surrogate: 4-Bromofluorobenzene (PID)	0.0508		mg/kg	0.0500		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 (7091802-BS1)

Prepared: 09/18/17 Analyzed: 09/19/17

Surrogate: 4-Bromofluorobenzene (PID)	0.0496		mg/kg	0.0500		99.2	72-148			
Benzene	1.95	0.050	mg/kg	2.00		97.6	79.5-124			
Ethylbenzene	1.87	0.050	mg/kg	2.00		93.5	77.7-125			
Toluene	1.79	0.050	mg/kg	2.00		89.6	75.5-127			
Total Xylenes	5.67	0.150	mg/kg	6.00		94.5	70.9-124			

LCS Dup (7091802-BSD1)

Prepared: 09/18/17 Analyzed: 09/19/17

Surrogate: 4-Bromofluorobenzene (PID)	0.0506		mg/kg	0.0500		101	72-148			
Benzene	1.94	0.050	mg/kg	2.00		97.0	79.5-124	0.549	6.5	
Ethylbenzene	1.86	0.050	mg/kg	2.00		93.0	77.7-125	0.518	7.83	
Toluene	1.80	0.050	mg/kg	2.00		90.0	75.5-127	0.457	7.02	
Total Xylenes	5.65	0.150	mg/kg	6.00		94.2	70.9-124	0.307	7.78	

Batch 7091902 - Volatiles

Blank (7091902-BLK1)

Prepared: 09/19/17 Analyzed: 09/20/17

Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		99.7	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 (7091902-BS1)

Prepared: 09/19/17 Analyzed: 09/20/17

Surrogate: 4-Bromofluorobenzene (PID)	0.0498		mg/kg	0.0500		99.7	72-148			
Benzene	2.01	0.050	mg/kg	2.00		100	79.5-124			
Ethylbenzene	1.93	0.050	mg/kg	2.00		96.3	77.7-125			
Toluene	1.84	0.050	mg/kg	2.00		92.2	75.5-127			
Total Xylenes	5.74	0.150	mg/kg	6.00		95.7	70.9-124			

LCS Dup (7091902-BSD1)

Prepared: 09/19/17 Analyzed: 09/20/17

Surrogate: 4-Bromofluorobenzene (PID)	0.0499		mg/kg	0.0500		99.8	72-148			
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#20 CR 5060
Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

**Volatile Organic Compounds by EPA Method 8021 - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7091902 - Volatiles (Continued)

LCS Dup (7091902-BSD1) (Continued)

Prepared: 09/19/17 Analyzed: 09/20/17

Benzene	1.96	0.050	mg/kg	2.00		98.1	79.5-124	2.29	6.5	
Ethylbenzene	1.89	0.050	mg/kg	2.00		94.5	77.7-125	1.88	7.83	
Toluene	1.82	0.050	mg/kg	2.00		91.0	75.5-127	1.40	7.02	
Total Xylenes	5.69	0.150	mg/kg	6.00		94.9	70.9-124	0.914	7.78	

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7091501 - General Prep - Organics

Blank (7091501-BLK1)

Prepared & Analyzed: 09/15/17

Surrogate: 1-Chlorooctadecane	54.3		mg/kg	50.0		109	34.7-157			
Surrogate: 1-Chlorooctane	49.8		mg/kg	50.0		99.7	28.3-164			
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 (7091501-BS1)

Prepared & Analyzed: 09/15/17

Surrogate: 1-Chlorooctadecane	52.8		mg/kg	50.0		106	34.7-157			
Surrogate: 1-Chlorooctane	52.9		mg/kg	50.0		106	28.3-164			
DRO >C10-C28	203	10.0	mg/kg	200		102	81.4-124			
GRO C6-C10	192	10.0	mg/kg	200		96.1	76.6-119			
Total TPH C6-C28	395	10.0	mg/kg	400		98.8	79.4-121			

LCS Dup (7091501-BSD1)

Prepared & Analyzed: 09/15/17

Surrogate: 1-Chlorooctadecane	51.0		mg/kg	50.0		102	34.7-157			
Surrogate: 1-Chlorooctane	52.6		mg/kg	50.0		105	28.3-164			
DRO >C10-C28	198	10.0	mg/kg	200		99.2	81.4-124	2.31	9.83	
GRO C6-C10	192	10.0	mg/kg	200		95.9	76.6-119	0.181	7.94	
Total TPH C6-C28	390	10.0	mg/kg	400		97.6	79.4-121	1.27	8.57	

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Bloomfield NM, 87413

Project: TPH Ext.
Project Name / Number: AXI Apache H-12
Project Manager: Dianna Hamilton

Reported:
09/21/17 17:07

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
*Results reported on as received basis unless designated as dry.
RPD Relative Percent Difference
LCS Laboratory Control Sample (Blank Spike)
RL Report Limit
MDL Method Detection Limit

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Page 16 of 16

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Dianne Hamilton		9/11/17	Christin Clau			Yes No
Christin Clau		9/12/17	Fed Ex			
Relinquished By:		Date:	Received By:			
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