

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

RCVD 7/31/19

Responsible Party

Responsible Party DJR Operating, LLC	OGRID 371838
Contact Name Amy Archuleta	Contact Telephone 505-632-3476 x201
Contact email aarchuleta@djrlc.com	Incident # (assigned by OCD)
Contact mailing address 1 Road 3263 Aztec, NM 87410	nCS1917731471

Location of Release Source

Latitude 36.27968 Longitude -107.39692
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Jicarilla Apache B TSE	Site Type Well Site
Date Release Discovered 06-15-2019	API# (if applicable) 30-039-27724

Unit Letter	Section	Township	Range	County
P	30	24N	05W	Rio Arriba

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 5.1 bbls	Volume Recovered (bbls) 2 bbls
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A hole in the produced water tank allowed approximately 5.1 bbls to escape from the release. The release was contained in the berm.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? 	

Initial Response

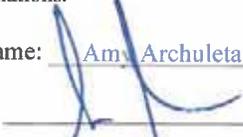
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- The source of the release has been stopped.
- The impacted area has been secured to protect human health and the environment.
- Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B, (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Am Archuleta Title: Regulatory
 Signature:  Date: 06-20-2019
 email: aarchuleta@djrnc.com Telephone: 505-632-3476

OCD Only
 Received by: _____ Date: _____

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

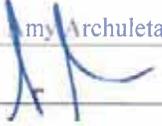
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: my Archuleta Title: Regulatory

Signature:  Date: 06-20-19

email: aarchuleta@djrlc.com Telephone: 505-632-3476

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Amy Archuleta Title: Regulatory
 Signature:  Date: _____
 email: aarchuleta@djrlc.com Telephone: 505-632-3476

OCD Only

Received by: OCD Date: 7/31/19

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 8/8/19
 Printed Name: Cory Title: Environmental Specialist



July 29, 2019

Project #17035-0090

Ms. Amy Archuleta
DJR Operating, LLC.
PO Box 156
Bloomfield, New Mexico 87413

Phone: (505) 787-9100
Email: aarchuleta@djrlc.com

RE: CLOSURE REPORT FOR A RELEASE OF PRODUCED WATER LOCATED AT THE JICARILLA APACHE B 15E WELL SITE (API: 30-039-27724), RIO ARRIBA COUNTY, NEW MEXICO

Dear Ms. Archuleta,

Enclosed please find the *Release Closure Report* detailing confirmation soil sampling activities conducted at the Jicarilla Apache B 15E Well site, located in Section 30, Township 24N, Range 5W, Rio Arriba County, New Mexico.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,
ENVIROTECH, INC.

A handwritten signature in blue ink that reads 'Brittany Hall'.

Brittany Hall
Environmental Field Technician
bhall@envirotech-inc.com

Enclosure: Release Closure Report

Cc: Client File Number 17035



RELEASE CLOSURE REPORT

**LOCATION:
JICARILLA APACHE B 15E WELL SITE
SECTION 30, TOWNSHIP 24N, RANGE 5W
RIO ARRIBA COUNTY, NEW MEXICO**

**CONTRACTED BY:
MS. AMY ARCHULETA
DJR OPERATING, LLC.
PO BOX 156
BLOOMFIELD, NEW MEXICO 87413**

**PROJECT #17035-0090
JULY 2019**

DJR OPERATING, LLC
RELEASE CLOSURE REPORT
JICARILLA APACHE B15E; API: 30-039-27724
SECTION 30, TOWNSHIP 24N, RANGE 5W
RIO ARRIBA COUNTY, NEW MEXICO
PROJECT #17035-0090

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Practical Solutions for a Better Tomorrow

Introduction

Envirotech, Inc. (Envirotech) of Farmington, New Mexico, was contracted by DJR Operating, LLC (DJR) to provide confirmation sampling activities for a produced water release excavation at the Jicarilla Apache B15E well site (API:30-039-27724) located in Section 30, Township 24 North, Range 5 West in Rio Arriba County, New Mexico; see **Figure 1, Vicinity Map**.

Confirmation Soil Sample Collection

Prior to Envirotech's arrival, DJR had removed the produced water tank and excavated the contaminated soil. Excavation dimensions were approximately 23 feet by 24 feet by 1.5 feet depth. Confirmation soil samples were collected under witness of Hobson Sandoval, Jicarilla Apache Nation Oil and Gas (JOGA) representative, on July 2, 2019.

The excavated area was divided into a north section (Area 1) and a south section (Area 2). One (1) five-point composite sample was collected from each section (B15E Area #1 and B15E Area #2). Samples were placed into individual laboratory provided 4-ounce jars, capped head space free, and transported on ice to Envirotech's analytical laboratory. Soil samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, diesel, and oil range organics (GRO/DRO/ORO) using EPA Method 8015D; benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8021B; and chlorides using EPA Method 300.0. Soil sample locations are illustrated in **Figure 2, Site Map and Appendix A, Site Photography and Field Notes**.

Laboratory Analytical Results

The following New Mexico Oil Conservation Division (NMOCD) closure criteria from *Table 1 in 19.15.29.12 (E) New Mexico Administrative Code (NMAC)* was used as the release closure criteria:

- Chloride – 20,000 mg/kg
- TPH (GRO+DRO+ORO) – 2,500 mg/kg
- BTEX - 50 mg/kg
- Benzene - 10 mg/kg

Siting criteria documentation is provided in **Appendix B, Siting Criteria Documentation**.

All soil samples collected for laboratory analysis returned results below the laboratory detection limits for BTEX and TPH except DRO which returned results of 74.4 mg/kg in B-15E Area #1 and 71.0 mg/kg in B-15E Area #2. Chloride was detected in both samples analyzed and returned

concentrations of 1,770 mg/kg in B-15E Area #1 and 1,700 mg/kg in B-15E Area #2. Analytical results are summarized in **Appendix C, Laboratory Analytical Report** and **Table 1, Summary of Soil Analytical Results**.

Summary and Conclusions

On July 2, 2019, Envirotech personnel completed confirmation sampling of soil impacted by produced water due to a hole in the produced water tank at the Jicarilla Apache B15E well site, Rio Arriba County, New Mexico.

Based on the final laboratory analytical results of the excavation at the location, GRO, DRO, ORO, BTEX, and chlorides were below the applicable NMOCD and JOGA Closure Criteria for Soils Impacted by a Release. DJR Operating will place a tank back in operation at the location; therefore, reclamation will not be required at this time. Envirotech recommends **No Further Action** regarding the subject release site.

Statement of Limitations

The work and services provided by Envirotech were in accordance with NMOCD and JOGA standards. All observations and conclusions provided here are based on the information and current site conditions found at the site of the incident. This work has been conducted and reported in accordance with generally accepted professional practices in geology, engineering, environmental chemistry, and hydrogeology.

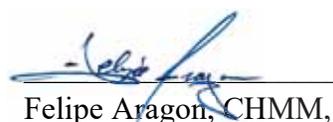
We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,
ENVIROTECH, INC.



Brittany Hall
Environmental Field Technician
bhall@envirotech-inc.com

Reviewed by:



Felipe Aragon, CHMM, CES
Environmental Assistant Manager
faragon@envirotech-inc.com

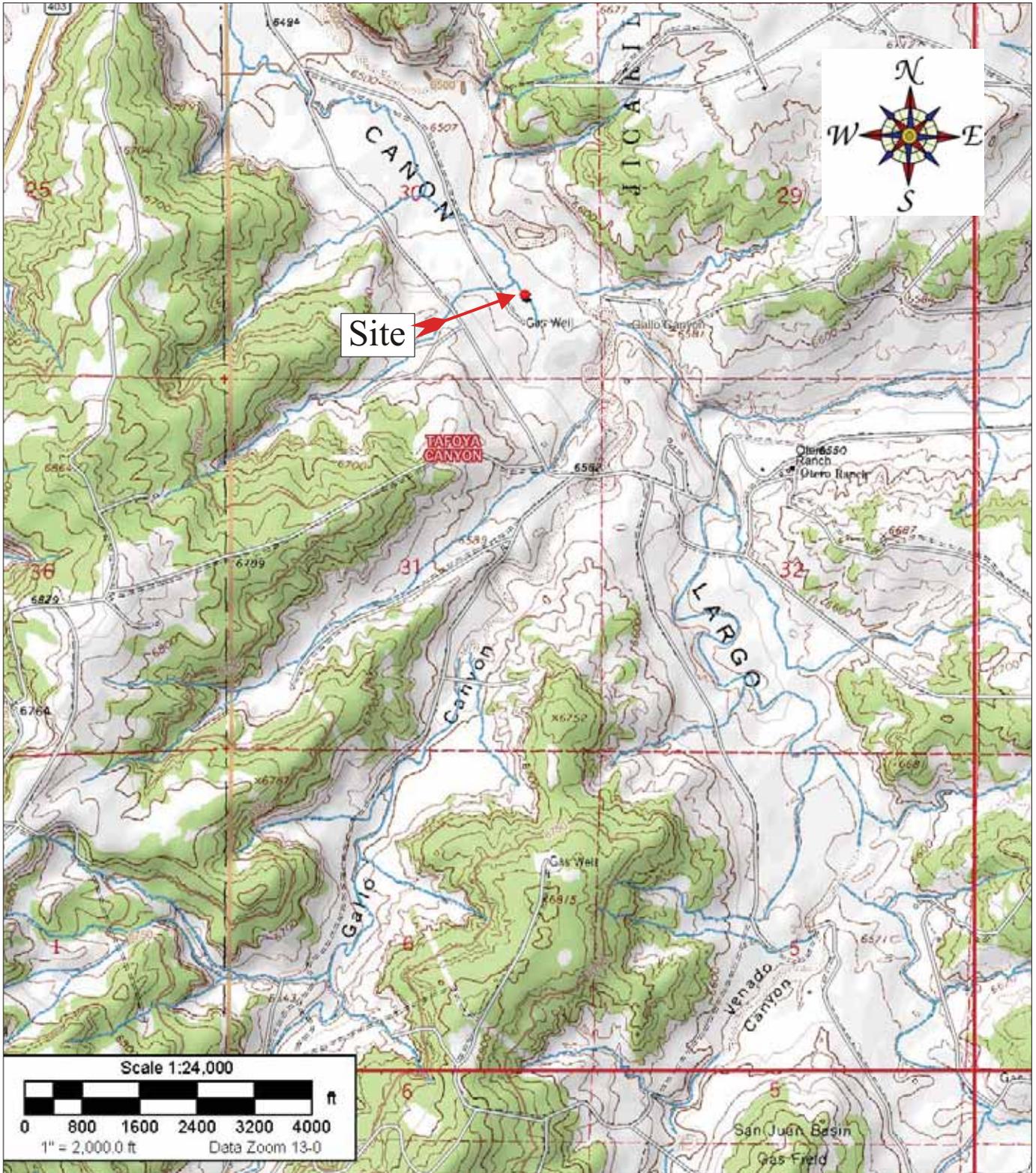
FIGURES

Figure 1, *Vicinity Map*

Figure 2, *Site Map*



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Source: 7.5 Minute, Tafoya Canyon, New Mexico U.S.G.S. Topographic Quadrangle Map
 Scale: 1:24,000 1" = 2,000

<p>DJR Operating, LLC. Jicarilla Apache B 15E Well Site API Number 43-037-50077 Section 30, Township 24N, Range 5W Rio Arriba County, New Mexico</p>		 <p>5796 U.S. HIGHWAY 64 Farmington, New Mexico 87401 505.632.0615</p>	<p>Vicinity Map</p>	
<p>Project Number: 17035-0090 Date Drawn: 7/15/2019</p>			<p>Figure #1</p> <p>DRAWN BY: Brittany Hall PROJECT MANAGER: Felipe Aragon</p>	

Figure 2, Site Map

DJR Operating, LLC.
 Release Closure Report
 Jicarilla Apache B15E Well Site
 API: 30-039-27724
 Section 30, Township 24N, Range 5W
 Rio Arriba County, New Mexico
 Project #17035-0090



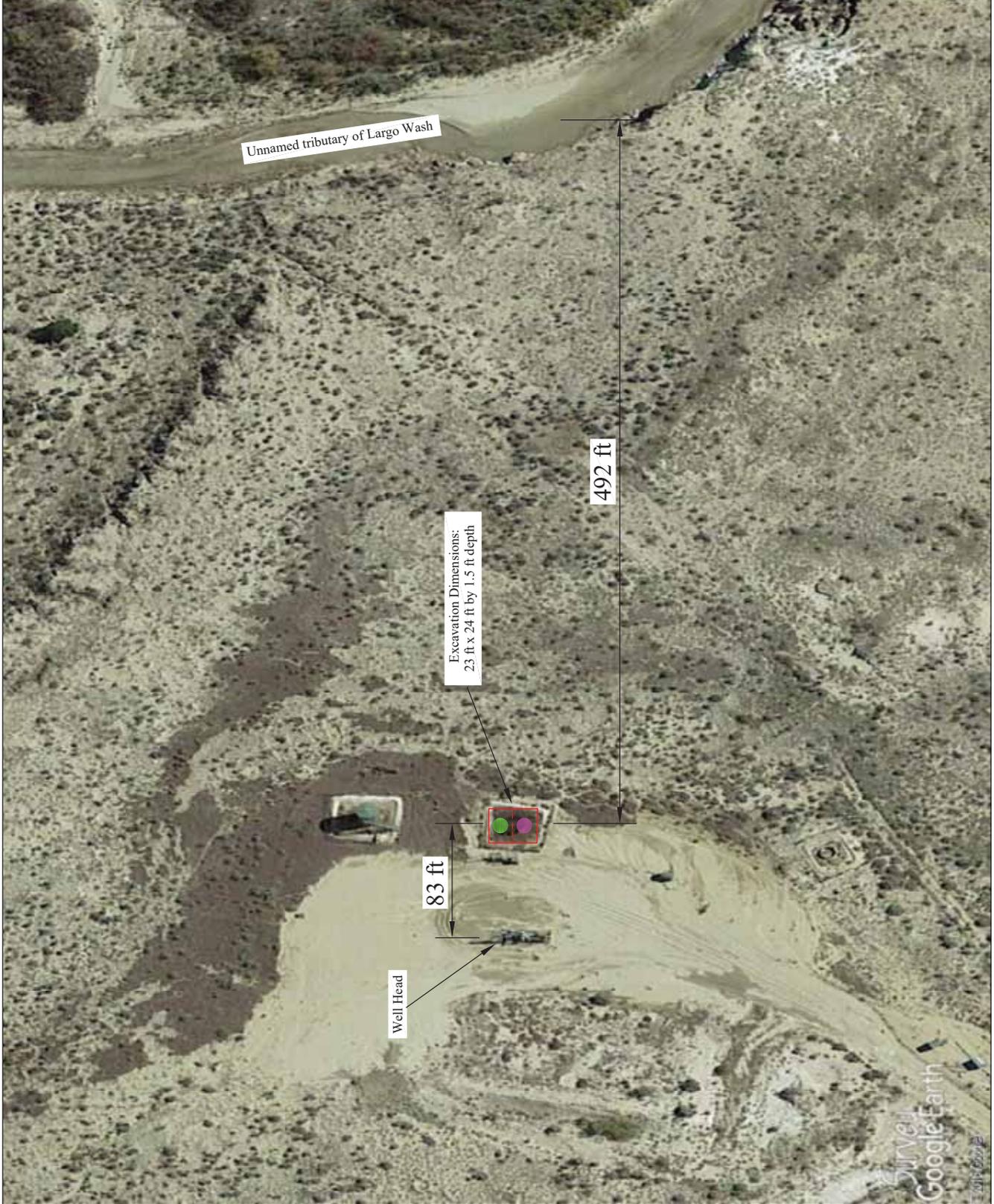
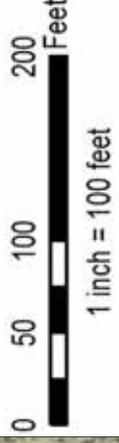
5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615

MAP DRAWN BY: BAH	DATE DRAWN: 7/15/2019
REVISIONS BY: BAH	DATE REVISED: 7/19/2019
APPROVED BY: FRA	DATE APPROVED: 7/19/2019

LEGEND

- - B15E Area #1
- - B15E Area #2
- Excavation

Sample locations represent 5-point composite samples collected along the excavation walls and base



Unnamed tributary of Largo Wash

Excavation Dimensions:
23 ft x 24 ft by 1.5 ft depth

83 ft

Well Head

492 ft

TABLES

Table 1, *Summary of Soil Analytical Results*



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Table 1, Summary of Soil Analytical Results
 DJR Operating, LLC
 Release Closure Report
 Jicarilla Apache B15E; API: 30-039-27724
 Section 30, Township 24N, Range 5W
 Rio Arriba County, New Mexico
 Project #17035-0090

Sample Description*	Date	Sample Depth	EPA Method 8015			EPA Method 8021		EPA Method 300.0
			GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release [Table 1 -19.15.29.12 (E) NMAC]			2,500 mg/Kg			10 mg/Kg	50 mg/Kg	20,000 mg/Kg
B-15E Area #1	7/2/2019	0.5 - 1.5 feet	<20.0	74.4	<50.0	<0.025	<0.100	1,770
B-15E Area #2	7/2/2019	0.5 - 1.5 feet	<20.0	71.0	<50.0	<0.025	<0.100	1,700

*5-point composite soil samples



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APPENDIX A

Site Photography and Field Notes



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**SITE PHOTOGRAPHY
BGT RELEASE CLOSURE REPORT
DJR OPERATING, LLC.
JICARILLA APACHE B 15E WELL SITE
PROJECT NUMBER 17035-0090
JULY 2019**



Picture 1: Well Site Sign



Picture 2: View of Excavation looking East

**SITE PHOTOGRAPHY
BGT RELEASE CLOSURE REPORT
DJR OPERATING, LLC.
JICARILLA APACHE B 15E WELL SITE
PROJECT NUMBER 17035-0090
JULY 2019**



Picture 3: View of Excavation Looking North



Picture 4: View of Sampling Points

**SITE PHOTOGRAPHY
BGT RELEASE CLOSURE REPORT
DJR OPERATING, LLC.
JICARILLA APACHE B 15E WELL SITE
PROJECT NUMBER 17035-0090
JULY 2019**



Picture 5: Subsequent Backfill of Release Site



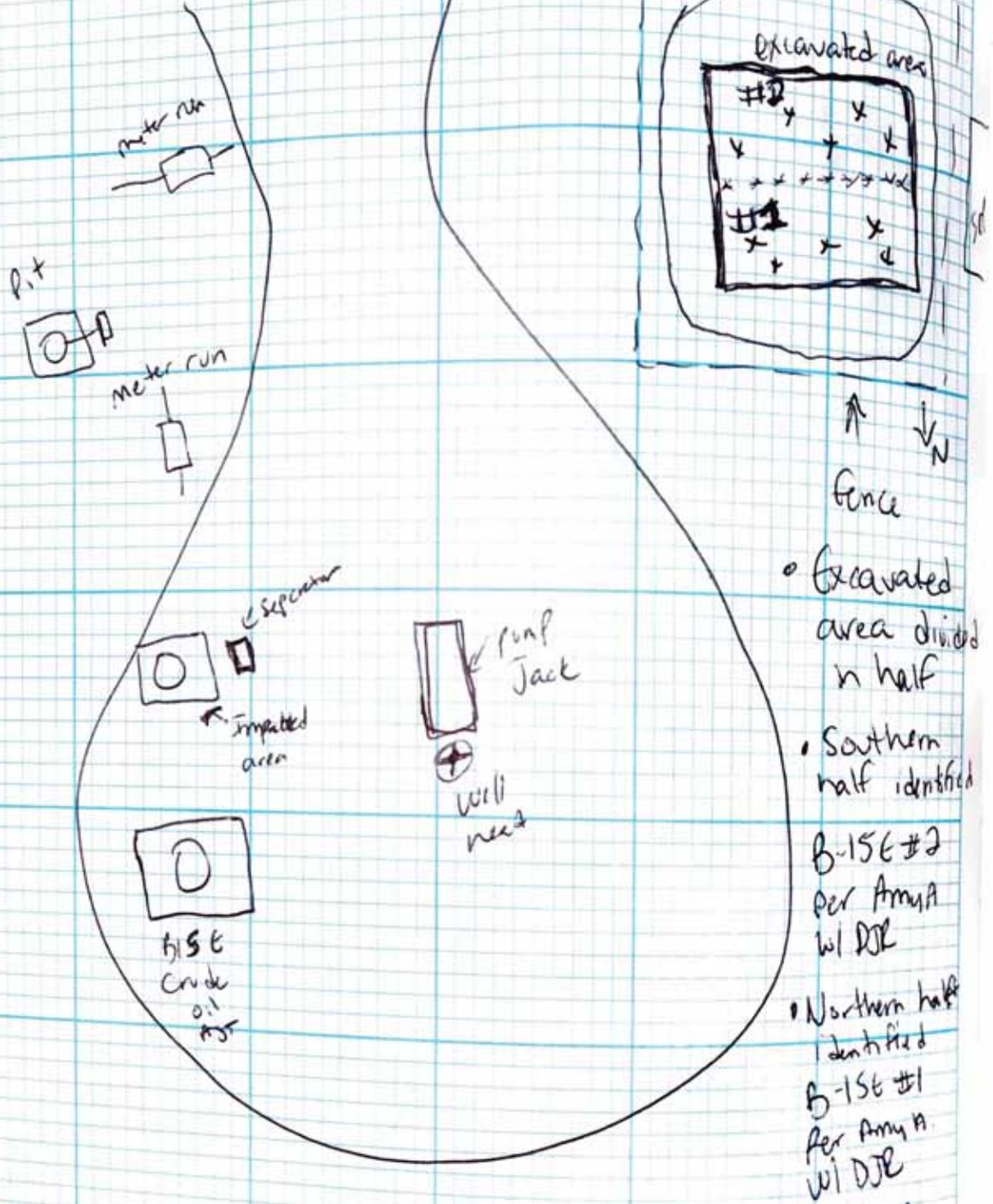
Picture 6: View of New In-Service Tank

DJR Operating, LLC

7/2/19

Jicarilla Apache B 15E

APT: 30-039-27724



- Excavated area divided in half
- Southern half identified B-15E #2 Per Amy A w/ DJR
- Northern half identified B-15E #1 Per Amy A w/ DJR



APPENDIX B

Siting Criteria Documentation



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Site Name: Jicarilla Apache B 15 E
API #:
Lat/Long: 36.27968, -107.39682
TRS: Unit P SE/SE Section 10 T24N R5W
Land Jurisdiction: Jicarilla Apache Nation
County: Rio Arriba

Wellhead Protection Area Assessment				
Determine the horizontal distance from all known water sources within 1/2 mile of the release including private and domestic water sources. Water sources are wells, springs or other sources of fresh water extraction . Private and domestic water sources are those water sources used by less than five households for domestic or stock purposes. (NMAC 19.15.29.11A.3)				
Water Source Type (well/spring/stock pond)	ID (if available)	Latitude	Longitude	Distance
None reported within 1,000 feet of BGT				

Distance to Nearest Significant Watercourse (NMAC 19.15.29.11A.4)
 'Significant watercourse' means a watercourse with a defined bed and bank either named or identified by a dashed blue line on a USGS 7.5 minute quadrangle map or the next lower order tributary with a defined bed and bank of such watercourse.

490 ft to east, 397 ft to west - unnamed tributaries of Largo Wash; measurements taken from Google Earth aerial images from BGT

Depth to Groundwater Determination (NMAC 19.15.29.11A.2)	
Catholic Report/Site Specific Hydrogeology	None Available
Elevation Differential	46 ft higher elevation than SJ-00074 (similar proximity to unnamed
Water Wells	SJ-00074 reports depth to water at 216 feet
Catholic Report Nearby Wells	None Available

Sensitive Receptor Determination		
**If a release occurs within the following areas, the RP must treat the release as if it occurred less than 50 ft to Groundwater (NMAC 19.15.29.12C.4):	Yes	No
<300' of any continuously flowing watercourse or any other significant watercourse	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<200' of any lakebed, sinkhole or playa lake (measured from the Ordinary High Water Mark)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<300' of an occupied permanent residence, school, hospital, institution or church	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<500' of a spring or private/domestic water well used by <5 households for domestic or stock watering purposes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<1000' of any water well or spring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within incorporated municipal boundaries or within a defined municipal fresh water well field	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<300' of a wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the area overlying a subsurface mine	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within an unstable area	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within a 100-year floodplain	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Explain any 'Yes' Marks:		

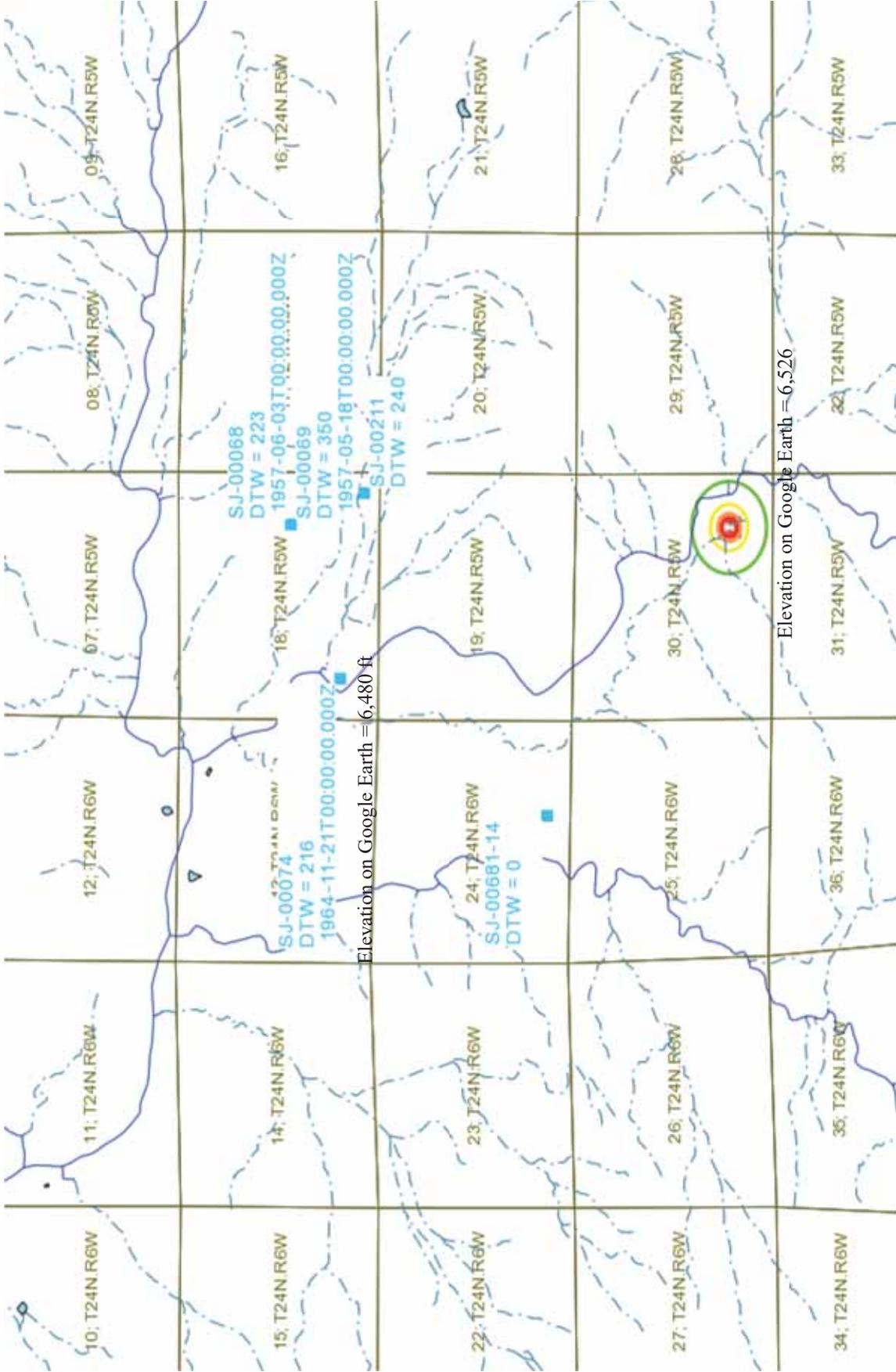
Actual Depth to Groundwater is: ≤50 50-100 >100

**Treat Depth to Groundwater as if it's ≤ 50 ft? Yes No

Release Action Levels are...	≤50	50-100	>100
Benzene	10	10	10
BTEX (mg/kg)	50	50	50
8015 TPH (GRO/DRO) (mg/kg)	Not Applicable	1,000	1,000
8015 TPH (GRO/DRO/MRO) (mg/kg)	100	2,500	2,500
Chlorides (mg/kg)	600	10,000	20,000



Practical Solutions for a Better Tomorrow



Petroleum Recovery Research Center

SJ-00074

Depth to Groundwater Siting Documentation

Figure:
Jicarilla

August 16, 2019



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
		(quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng	X	Y
	SJ 00074	2	3	3	18	24N	05W	283811	4020835*

Driller License:		Driller Company:							
Driller Name:		MCDONALD & JOHNSON							
Drill Start Date:	11/21/1964	Drill Finish Date:	01/28/1965	Plug Date:					
Log File Date:	11/29/1965	PCW Rcv Date:		Source:		Shallow			
Pump Type:		Pipe Discharge Size:		Estimated Yield:					
Casing Size:	10.75	Depth Well:		1004 feet	Depth Water:		216 feet		

Water Bearing Stratifications:	Top	Bottom	Description
	960	990	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom	
	945	995	

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/16/19 12:17 PM

POINT OF DIVERSION SUMMARY

APPENDIX C

Laboratory Analytical Report



Practical Solutions for a Better Tomorrow

Analytical Report

Report Summary

Client: DJR Operating, LLC

Samples Received: 7/2/2019

Job Number: 17035-0090

Work Order: P907006

Project Name/Location: Jicarilla Apache
B15E-Confirmation Sampling

Report Reviewed By:



Date: 7/25/19

Walter Hinchman, Laboratory Director

Supplement to analytical report generated on: 7/10/19 2:09 pm



Envirotech Inc. certifies the test results meet all requirements of TNi unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNi certification NM009792018-1 for the data reported.

DJR Operating, LLC 1 Rd 3263 Aztec NM, 87410	Project Name: Jicarilla Apache B15E-Confirmation Sampling Project Number: 17035-0090 Project Manager: Felipe Aragon	Reported: 07/25/19 14:13
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Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
B-15E Area #1	P907006-01A	Soil	07/02/19	07/02/19	Glass Jar, 4 oz.
	P907006-01B	Soil	07/02/19	07/02/19	Glass Jar, 4 oz.
B-15E Area #2	P907006-02A	Soil	07/02/19	07/02/19	Glass Jar, 4 oz.
	P907006-02B	Soil	07/02/19	07/02/19	Glass Jar, 4 oz.

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DJR Operating, LLC 1 Rd 3263 Aztec NM, 87410	Project Name: Jicarilla Apache B15E-Confirmation Sampling Project Number: 17035-0090 Project Manager: Felipe Aragon	Reported: 07/25/19 14:13
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**B-15E Area #1
P907006-01 (Solid)**

Analyte	Result	Reporting							
		Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.3 %		50-150	1927020	07/05/19	07/08/19	EPA 8021B	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	74.4	25.0	mg/kg	1	1928016	07/09/19	07/09/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1928016	07/09/19	07/09/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		102 %		50-200	1928016	07/09/19	07/09/19	EPA 8015D	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		102 %		50-150	1927020	07/05/19	07/08/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	1770	20.0	mg/kg	1	1928006	07/08/19	07/08/19	EPA 300.0/9056A	

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**B-15E Area #2
P907006-02 (Solid)**

Analyte	Result	Reporting							
		Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		96.8 %		50-150	1927020	07/05/19	07/08/19	EPA 8021B	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	71.0	25.0	mg/kg	1	1928016	07/09/19	07/09/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1928016	07/09/19	07/09/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		104 %		50-200	1928016	07/09/19	07/09/19	EPA 8015D	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1927020	07/05/19	07/08/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		100 %		50-150	1927020	07/05/19	07/08/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	1700	20.0	mg/kg	1	1928006	07/08/19	07/08/19	EPA 300.0/9056A	

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Volatile Organics by EPA 8021 - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1927020 - Purge and Trap EPA 5030A

Blank (1927020-BLK1)

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							

Surrogate: 4-Bromochlorobenzene-PID 7.75 " 8.00 96.9 50-150

LCS (1927020-BS1)

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Benzene	4.42	0.0250	mg/kg	5.00		88.4	70-130			
Toluene	4.79	0.0250	"	5.00		95.9	70-130			
Ethylbenzene	4.76	0.0250	"	5.00		95.3	70-130			
p,m-Xylene	9.79	0.0500	"	10.0		97.9	70-130			
o-Xylene	4.74	0.0250	"	5.00		94.7	70-130			
Total Xylenes	14.5	0.0250	"	15.0		96.9	70-130			

Surrogate: 4-Bromochlorobenzene-PID 7.75 " 8.00 96.8 50-150

Matrix Spike (1927020-MS1)

Source: P907006-01

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Benzene	4.43	0.0250	mg/kg	5.00	ND	88.6	54.3-133			
Toluene	4.80	0.0250	"	5.00	ND	96.1	61.4-130			
Ethylbenzene	4.77	0.0250	"	5.00	ND	95.3	61.4-133			
p,m-Xylene	9.81	0.0500	"	10.0	ND	98.1	63.3-131			
o-Xylene	4.75	0.0250	"	5.00	ND	94.9	63.3-131			
Total Xylenes	14.6	0.0250	"	15.0	ND	97.1	63.3-131			

Surrogate: 4-Bromochlorobenzene-PID 7.77 " 8.00 97.1 50-150

Matrix Spike Dup (1927020-MSD1)

Source: P907006-01

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Benzene	4.20	0.0250	mg/kg	5.00	ND	84.1	54.3-133	5.22	20	
Toluene	4.55	0.0250	"	5.00	ND	91.0	61.4-130	5.41	20	
Ethylbenzene	4.51	0.0250	"	5.00	ND	90.3	61.4-133	5.42	20	
p,m-Xylene	9.30	0.0500	"	10.0	ND	93.0	63.3-131	5.41	20	
o-Xylene	4.51	0.0250	"	5.00	ND	90.2	63.3-131	5.04	20	
Total Xylenes	13.8	0.0250	"	15.0	ND	92.1	63.3-131	5.29	20	

Surrogate: 4-Bromochlorobenzene-PID 7.84 " 8.00 98.0 50-150

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Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1928016 - DRO Extraction EPA 3570

Blank (1928016-BLK1)

Prepared & Analyzed: 07/09/19 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
<i>Surrogate: n-Nonane</i>	<i>48.9</i>		<i>"</i>	<i>50.0</i>		<i>97.8</i>	<i>50-200</i>			

LCS (1928016-BS1)

Prepared & Analyzed: 07/09/19 1

Diesel Range Organics (C10-C28)	482	25.0	mg/kg	500		96.4	38-132			
<i>Surrogate: n-Nonane</i>	<i>52.1</i>		<i>"</i>	<i>50.0</i>		<i>104</i>	<i>50-200</i>			

Matrix Spike (1928016-MS1)

Source: P907006-01

Prepared & Analyzed: 07/09/19 1

Diesel Range Organics (C10-C28)	562	25.0	mg/kg	500	74.4	97.6	38-132			
<i>Surrogate: n-Nonane</i>	<i>53.3</i>		<i>"</i>	<i>50.0</i>		<i>107</i>	<i>50-200</i>			

Matrix Spike Dup (1928016-MSD1)

Source: P907006-01

Prepared & Analyzed: 07/09/19 1

Diesel Range Organics (C10-C28)	591	25.0	mg/kg	500	74.4	103	38-132	4.94	20	
<i>Surrogate: n-Nonane</i>	<i>53.1</i>		<i>"</i>	<i>50.0</i>		<i>106</i>	<i>50-200</i>			

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Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1927020 - Purge and Trap EPA 5030A

Blank (1927020-BLK1)

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.10		"	8.00		101	50-150			

LCS (1927020-BS2)

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Gasoline Range Organics (C6-C10)	54.3	20.0	mg/kg	50.0		109	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.19		"	8.00		102	50-150			

Matrix Spike (1927020-MS2)

Source: P907006-01

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Gasoline Range Organics (C6-C10)	53.7	20.0	mg/kg	50.0	ND	107	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.02		"	8.00		100	50-150			

Matrix Spike Dup (1927020-MSD2)

Source: P907006-01

Prepared: 07/05/19 1 Analyzed: 07/08/19 1

Gasoline Range Organics (C6-C10)	54.9	20.0	mg/kg	50.0	ND	110	70-130	2.09	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.18		"	8.00		102	50-150			

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Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1928006 - Anion Extraction EPA 300.0/9056A

Blank (1928006-BLK1)

Prepared & Analyzed: 07/08/19 1

Chloride	ND	20.0	mg/kg							
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LCS (1928006-BS1)

Prepared & Analyzed: 07/08/19 1

Chloride	251	20.0	mg/kg	250	1770	100	90-110			
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Matrix Spike (1928006-MS1)

Source: P907006-01

Prepared & Analyzed: 07/08/19 1

Chloride	2290	20.0	mg/kg	250	1770	208	80-120			SPK1
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Matrix Spike Dup (1928006-MSD1)

Source: P907006-01

Prepared & Analyzed: 07/08/19 1

Chloride	1440	20.0	mg/kg	250	1770	NR	80-120	45.7	20	D1, SPK1
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QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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Notes and Definitions

- SPK1 The spike recovery is outside of quality control limits.
- D1 Duplicates or Matrix Spike Duplicates or Laboratory Control Sample Duplicates Relative Percent Difference is outside of control limits.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- ** Methods marked with ** are non-accredited methods.

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