HRL COMPLIANCE SOLUTIONS
P.O. Box 1708 • Artesia, NM 88211
www.hrlcomp.com

September 24, 2020

Mr. Tom Bynum
Devon Energy
6488 Seven Rivers Highway
Artesia, New Mexico 88211
Email: tom.bynum@dvn.com

Subject: **Site Characterization, Remediation, and Closure Report**
Cochiti 28 Federal #1 SWD (May 2018)
2RP-4753
Eddy County, New Mexico

Dear Mr. Bynum:

HRL Compliance Solutions, Inc. (HRL) is pleased to submit this site characterization, remediation, and closure report for the May 2018 release associated with the Cochiti 28 Federal #1 saltwater disposal (SWD) facility (Site). The release is at latitude 32.214136 and longitude -103.959774 in Eddy County, New Mexico (Figure 1).

Site Background

On May 2, 2018, a three-inch poly transfer line failed at a previously installed repair clamp adjacent to a lease road while transferring produced water from the Cochiti 28 Federal #1 SWD facility to the Ore Ida 14 Federal 10 SWD. The transfer pumps were immediately shut down and the valves were isolated. Approximately six barrels of produced water was released, none of the produced water was recovered.

Because the volume released was greater than 5 barrels but less than 25 barrels, this is considered a minor release according to the New Mexico Oil Conservation Division (NMOCD). On May 16, 2018, Devon reported the release to the NMOCD on a Release Notification and Corrective Action Form (Form C-141) (Attachment B). The release was assigned Remediation Permit (RP) number 2RP-4753.

Scope of Work

Devon has requested HRL to provide the following deliverables:

- Research the information as specified in the Site Characterization on the New Mexico Oil and Conservation Division (NMOCD) Form C-141
- Prepare a map with sample points labeled
- Prepare a table summarizing the results obtained during the site characterization activities
- Prepare a site characterization report including a remediation plan per NMOCD closure requirements and related cost estimates
- Oversee excavation activities and collect confirmation soil samples
- Prepare this closure report

New Mexico Administrative Code (NMAC) Site Characterization Criteria

Title 19, Chapter 15, Part 29, Section 11 of the New Mexico Administrative Code (NMAC) provides requirements for release characterization once the free liquids and recoverable materials have been removed from the Site.

Depth to groundwater

Depth to groundwater at the release was estimated by evaluating data from the New Mexico Office of the State Engineer (NMOSE) and the United States Geological Survey (USGS) (Figure 2). The nearest groundwater well was approximately 2.6 miles from the Site; the depth to water in this well was 150 feet below ground surface.

Wellhead Protection Area

There are no sources of water, including springs, wells, or other sources of fresh water, within one-half mile of the release (Figure 2).

Distance to Nearest Significant Watercourse

A significant watercourse is defined as "…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" (19.15.17.7 NMAC) (Figure 2). There are no significant watercourses within one-half mile of the lateral extents of the release.

Additional Site Characterization Criteria

The following is additional information related to characterization of the Site.

Site Characterization	Response/Discussion
What is the shallowest depth to groundwater beneath the area affected by the release?	Greater than 100 feet
Did the release impact groundwater or surface water?	No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or other significant watercourse?	No
Are the lateral extents of the release within 200 feet of a lakebed, sinkhole, or playa lake?	No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital institution, or church?	No
Are the lateral extents of the release within 500 feet of a spring or private, domestic fresh water well used by less than five households for domestic or stock watering purposes?	No
Are the lateral extents of the release within 1,000 feet of any fresh water well or spring?	No
Are the lateral extents of the release within any incorporated municipal boundaries?	No
Are the lateral extents of the release within a defined municipal fresh water well field?	No
Are the lateral extents of the release within 300 feet of a wetland?	No
Are the lateral extents of the release overlying a subsurface mine?	No
Are the lateral extents of the release overlying an unstable area such as karst geology?	The Site is in an area of low potential for karst topography
Are the lateral extents of the release within the 100-year floodplain?	No
Did the release impact areas not on an exploration, development, production, or storage site?	Yes

Site Delineation

Prior to initiating field activities, HRL submitted a Mechanical Excavation Permit to Devon Energy and had subsurface utilities located at the Site. On March 18, 2020, HRL mobilized to the Site to evaluate the release. Soil samples were collected at eight locations (FS1 through FS8). Samples FS1 through FS8 were collected from ground surface. To fully delineate the vertical extent of impacts, additional samples were

collected from FS1 and FS8 at a depth of four inches below ground surface (bgs). The samples were analyzed in the field (field screening) by one or more of the following methods:

- Chloride was approximated using an electrical conductivity (EC) meter in accordance with methods recommended by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS)
- Non-specific volatile organic compounds (VOCs) were measured using a photoionization detector (PID) with a 10.6 electron-volt (eV) lamp
- Total petroleum hydrocarbons (TPH) was measured using a PetroFlag® field test kit in accordance with U.S. Environmental Protection Agency (EPA) Method 9074

Based on the results of the field screening, on April 10, 2020 HRL collected six soil samples (SP1, SP2, SP3, SP4, SP5@0", SP5@4") for laboratory analysis. Samples were immediately placed on ice and kept under strict chain of custody protocol prior to submission to Hall Environmental Analysis Laboratory, Inc. of Albuquerque, New Mexico for analysis of:

- Chloride by United States Environmental Protection Agency (US EPA) Method 300.0
- Benzene, toluene, ethyl benzene, and total xylenes (BTEX) by US EPA Method 8021B
- Total petroleum hydrocarbons (TPH) – gasoline range organics (GRO), diesel range organics (DRO), and oil range organics (ORO) by US EPA Method 8015M

Closure Criteria

Based on the NMAC Site Characterization Criteria, HRL recommends the following NMOCD Closure Criteria to the Site:

Depth to Groundwater	Parameter	Closure Criteria in milligrams per kilogram (mg/kg)
Greater than 100 feet below ground surface	Chloride	20,000 mg/kg or natural background, whichever is greater
	Total Petroleum Hydrocarbons (TPH) *[Gasoline Range Organics (GRO) + Diesel Range Organics (DRO) + Oil Range Organics (ORO)]*	2,500 mg/kg
	Gasoline Range Organics (GRO) + Diesel Range Organics (DRO)	1,000 mg/kg
	Benzene	10 mg/kg
	Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)	50 mg/kg

Remediation Plan

A scaled diagram depicting the potentially impacted area and nearby significant features, such as roads, site infrastructure, location of borings, sample points, monitoring wells (if present) and subsurface features

has been prepared (Figure 3). HRL utilized a Trimble GeoXT global positioning system (GPS) unit to collect latitude and longitude data for the sample locations (Figure 3). Based on evaluation of the laboratory results, the release impacted a surficial area of approximately 120 square-feet and less than four inches deep. While the concentrations of chloride, TPH, and BTEX were below the closure criteria provided in 19.15.29.12 NMAC, remediation via excavation was recommended to remove the soil with chloride concentrations greater than 600 mg/kg (19.15.29.13 NMAC).

Remediation

On August 14, 2020, HRL mobilized to the site with its excavation subcontractor Halo Services to excavate the impacted soil. Impacted soil was removed from the bar ditch along the north/northeast side of the lease road. Approximately 120-square feet of soil to a depth of approximately six inches bgs was removed from the Site for off-site disposal at a NMOCD approved facility (Attachment D, Soil Disposal Manifests). Following excavation, HRL collected two confirmation soil samples from the Site (Figure 4). Sample results confirmed the soil remaining in the ground has less than 600 mg/kg chloride (Table 2, Attachment E). The excavated area was graded to and contoured to blend with the adjacent topographic surface, achieve erosion control, long-term stability, and preservation of surface water flow patterns.

The disturbed area will be reseeded with the Bureau of Land Management (BLM) seed mixture for sandy sites. This seed mixture includes:

- Two pound per acre Sand dropseed (Sporobolus cryptandrus)
- Two pound per acre Sand love gras (Eragrostis trichodes)
- Four pounds per acre Plains bristlegrass (Setaria macrostachya)

The seed will be broadcast uniformly and evenly over the disturbed area; therefore, the application ratio provided above is double the recommended rate. In accordance with 19.15.29.13 NMAC, the area will be monitored annually until at a uniform vegetative cover has been established that reflects a life form ratio of at least fifty percent of pre-disturbance levels and the total percent plant cover is at least seventy percent of pre-disturbance levels, excluding noxious weeds.

Scope and Limitations

The scope of HRL's services consists of performing site characterization, overseeing remediation, collection of confirmation soil samples, and preparation of this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin.

Conclusions and Recommendations

An area of soil approximately 120 square feet by four inches deep had elevated concentrations of chloride. The soil has been excavated and disposed of off-Site. The remaining soil is below 600 mg/kg chloride and does not have detectable concentrations of TPH or BTEX. The Site has been graded and will be reseeded. HRL recommends closure of this release.

We appreciate the opportunity to work with Devon on this project. If you have any questions or concerns, please do not hesitate to contact me at (970) 243-3271 or via email at jlinn@hrlcomp.com.

Sincerely,

HRL Compliance Solutions, Inc.

Julie Linn, PG, RG
Project Manager

Figures:

Figure 1: Site Location
Figure 2: Depth to Groundwater
Figure 3: Characterization Soil Sample Locations and Results
Figure 4: Confirmation Soil Sample Locations and Results

Tables:

Table 1: Characterization Soil Sample Summary
Table 2: Confirmation Soil Sample Summary

Attachments:

Attachment A: NMOCD Form C-141
Attachment B: Photographs
Attachment C: Characterization Soil Sample Laboratory Report
Attachment D: Soil Disposal Manifests
Attachment E: Confirmation Soil Sample Laboratory Report

Figures

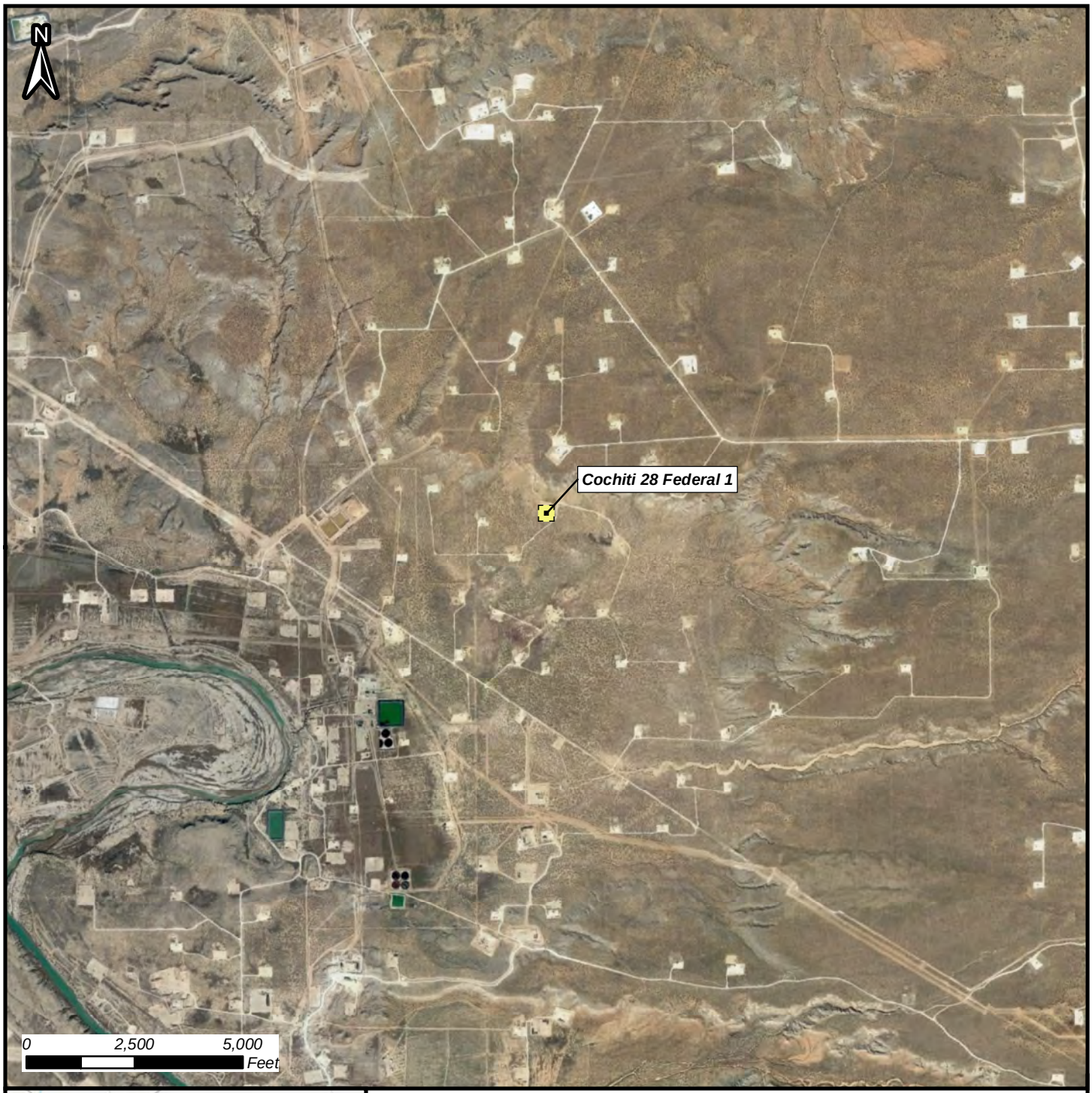

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Figure 1: Site Location Map

Cochiti 28 Federal 1
May 2018 Spill

32.214136, -103.959774
Section 14, Township 24 South, Range 29 East

NOTES / COMMENTS:

Mapped Features

Facility Location

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Author: A. Asay
Revision: 0
Date: 3/9/2020

T:\CLIENTS\DEVON ENERGY\2020\Cochiti 28 Federal 1\Maps\Cochiti 28 Federal 1 Site Location Map (May 2018 Spill) 030920.mxd

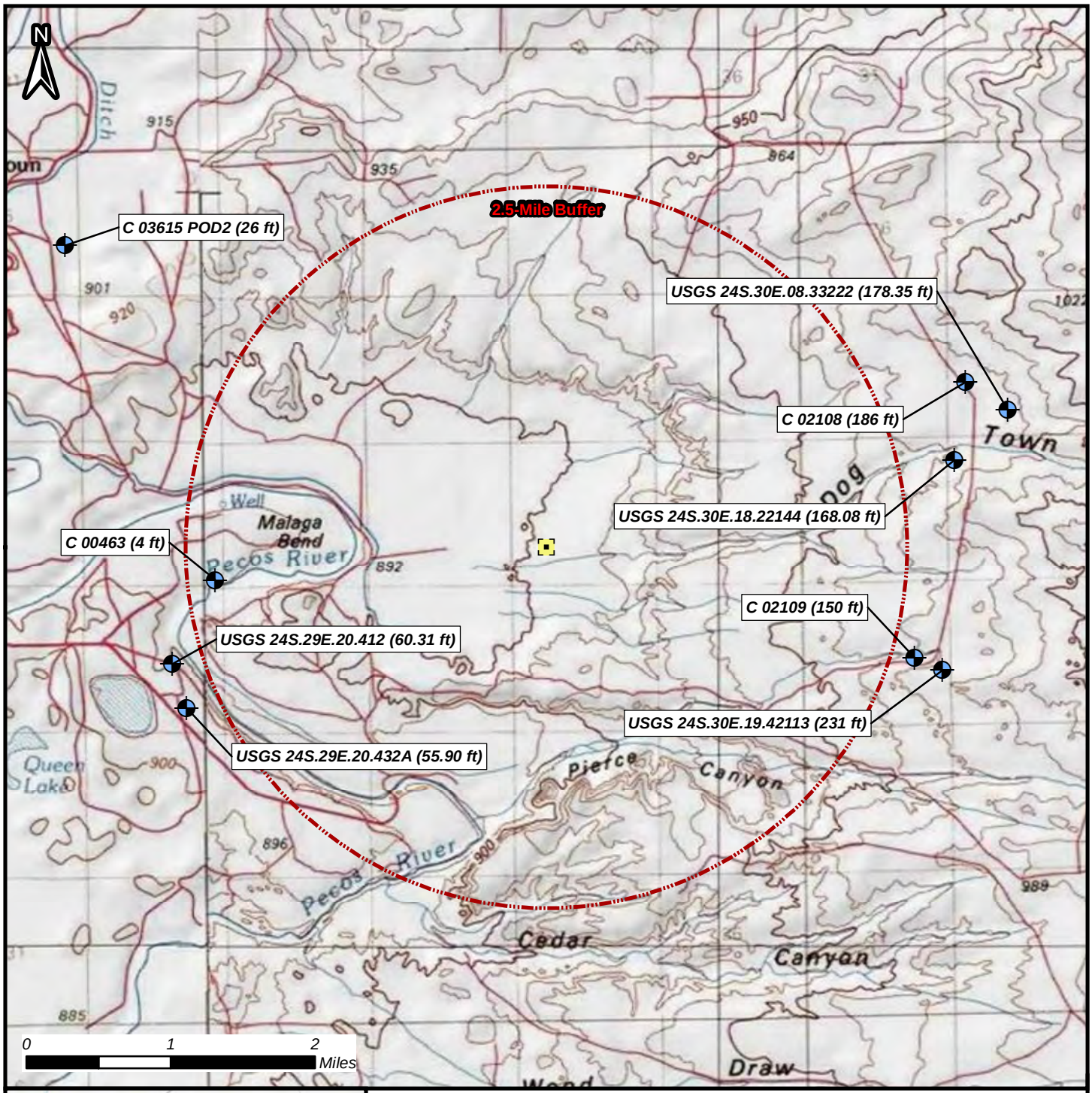

Figure 2: Depth to Groundwater Map

Cochiti 28 Federal 1
May 2018 Spill

32.214136, -103.959774
Section 14, Township 24 South, Range 29 East

Mapped Features

- Point of Release
- Groundwater Well
- 2.5-Mile Buffer

Well Number	Water Level Below Ground Surface (ft)	Distance from Source (mi)
C 00463	4.00	2.31
C 02109	150.00	2.66
C 02108	186.00	3.12
C 03615 POD2	26.00	3.94
USGS 24S.30E.19.42113	231.00	2.87
USGS 24S.30E.18.22144	168.08	2.89
USGS 24S.30E.08.33222	178.35	3.34
USGS 24S.29E.20.432A	55.90	2.73
USGS 24S.29E.20.412	60.31	2.72

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Author: A. Asay
Revision: 0
Date: 5/15/2020

T:\CLIENTS\DEVON ENERGY\2020\Cochiti 28 Federal 1\Maps\Cochiti 28 Federal 1 DTGW Map (May 2018 Spill) 051520.mxd

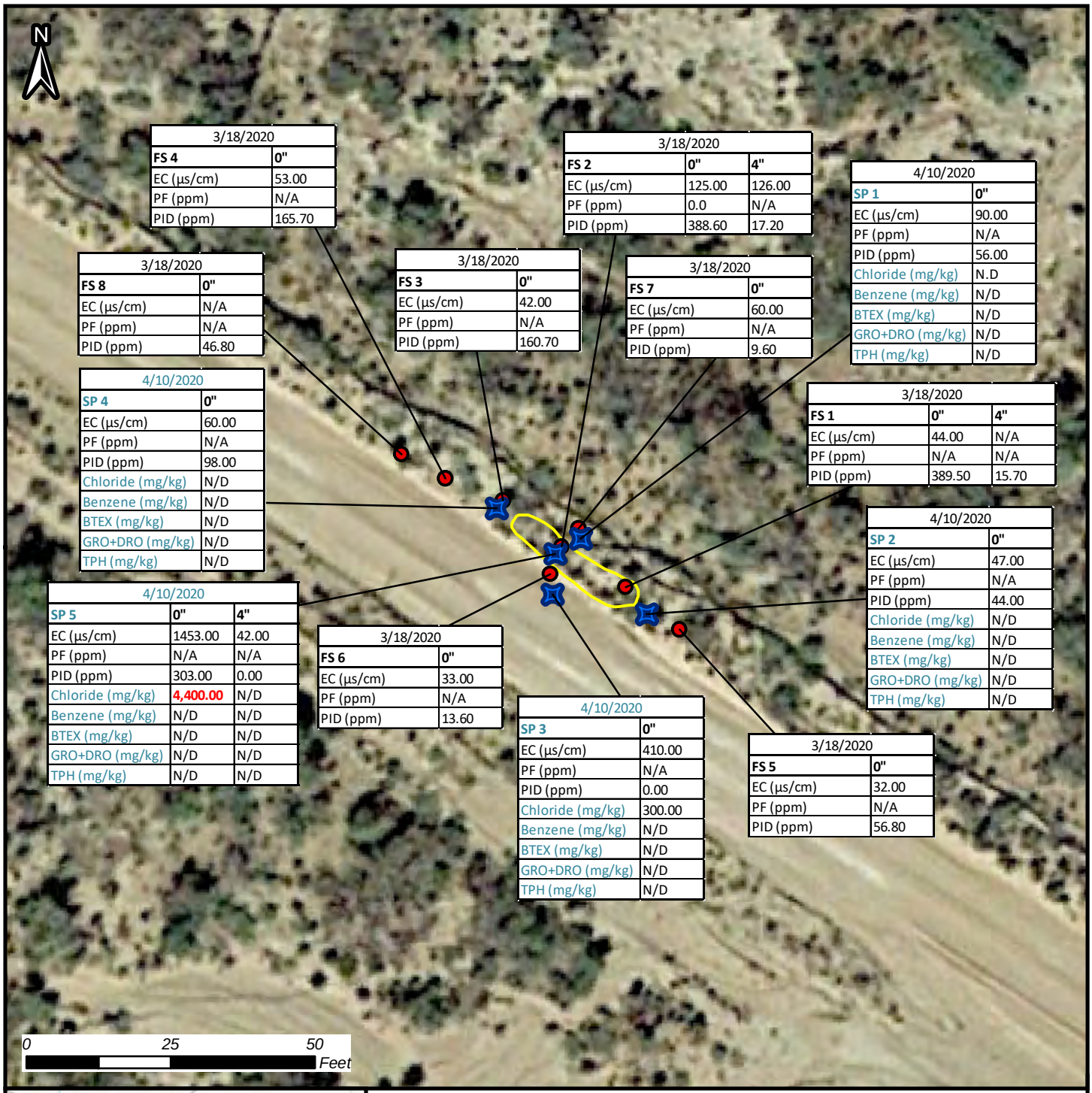

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Figure 3: Sample Location and Results

Cochiti 28 Federal 1

May 2018 Spill

32.214136, -103.959774

Section 14, Township 24 South, Range 29 East

NOTES / COMMENTS:

The impacted area is approximately 118 square feet.

Results in red exceed closure criteria

Mapped Features

- Sample Location (Submitted for Analysis)
- Field Screen Sample Location
- Approximate Area of Soil Impacts Above NMOCD Closure Criteria

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Author: A. Asay

Revision: 0

Date: 5/13/2020

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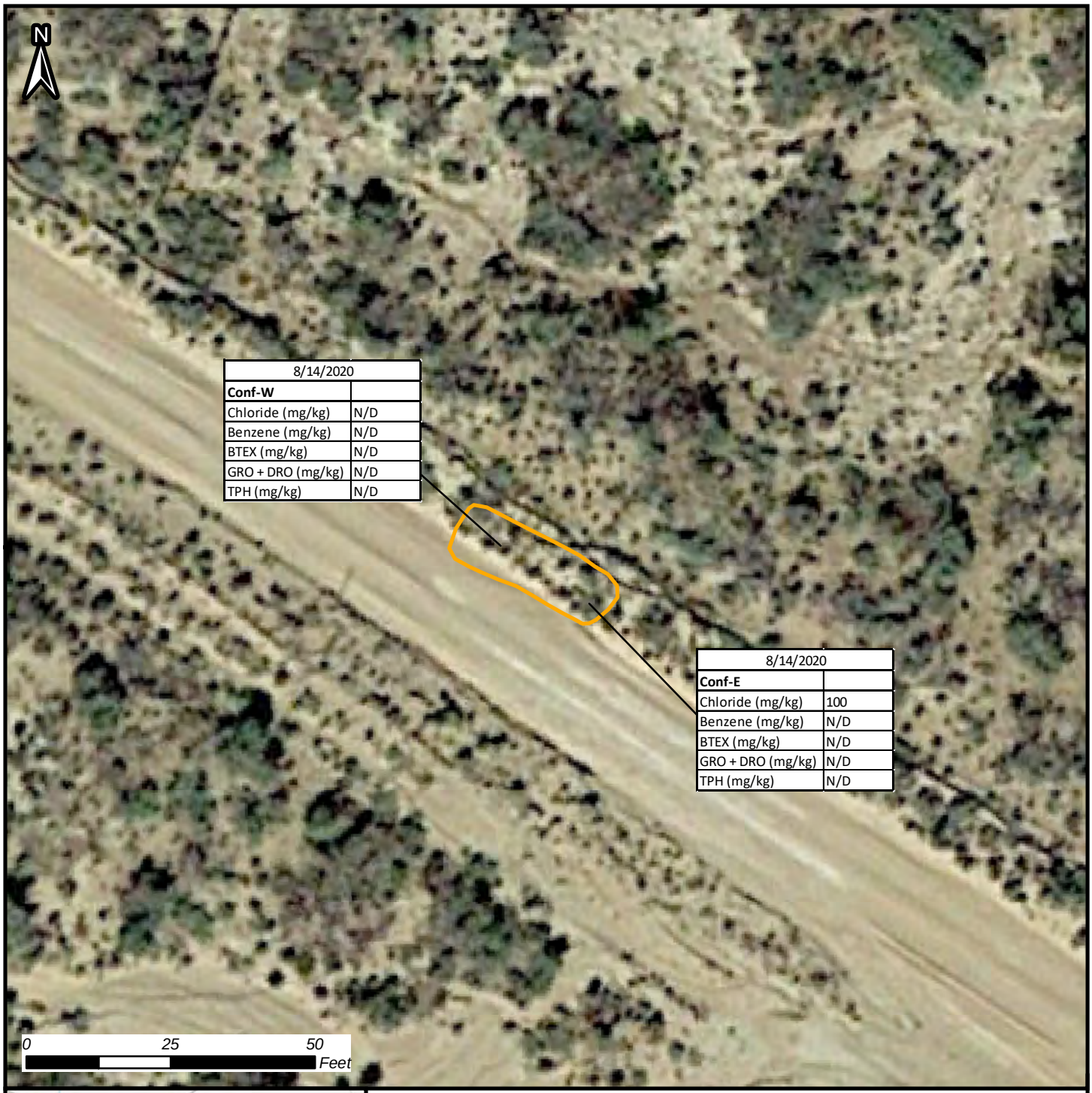

devon

Figure 4: Confirmation Sample Location and Results Map

Cochiti 28 Federal 1

May 2018 Spill

32.214136, -103.959774

Section 14, Township 24 South, Range 29 East

NOTES / COMMENTS:

The excavated area is approximately 290 square feet.

Results in red exceed closure criteria.

Mapped Features

Excavated Area

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Author: A. Asay

Revision: 0

Date: 9/1/2020

T:\CLIENTS\DEVON ENERGY\2020\Cochiti 28 Federal 1\Maps\Cochiti 28 Federal 1 Confirmation Sample Location and Results Map (May 2018 Spill) 090120.mxd

Tables

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Table 1
Soil Sample Results
Devon Energy
Cochiti 28 Fed 1 (May 2018)
Eddy County, New Mexico

Sample ID	Depth (inches)	Sample Date	Chloride	Benzene	BTEX	GRO + DRO	TPH
			Values are in milligrams per kilogram (mg/kg)				
NMOCD Closure Criteria (Groundwater greater than 100 feet) *			20,000	10	50	1,000	2,500
SP1	0	4/10/2020	ND	ND	ND	ND	ND
SP2	0	4/10/2020	ND	ND	ND	ND	ND
SP3	0	4/10/2020	300	ND	ND	ND	ND
SP4	0	4/10/2020	ND	ND	ND	ND	ND
SP5 @ 0"	0	4/10/2020	4,400	ND	ND	ND	ND
SP5 @ 4"	4	4/10/2020	ND	ND	ND	ND	ND

Notes:

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

TPH: Total Petroleum Hydrocarbons

Bold results exceed closure criteria

* Closure Criteria specified in 19.15.29.12 NMAC

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Table 2
Confirmation Soil Sample Results
Devon Energy
Cochiti 28 Fed 1 (May 2018)
Eddy County, New Mexico

Sample ID	Sample Date	Chloride	Benzene	BTEX	GRO + DRO	TPH
		Values are in milligrams per kilogram (mg/kg)				
NMOCD Closure Criteria (Groundwater greater than 100 feet) *		20,000	10	50	1,000	2,500
Conf-E	8/14/2020	100	ND	ND	ND	ND
Conf-W	8/14/2020	ND	ND	ND	ND	ND

Notes:

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

TPH: Total Petroleum Hydrocarbons

Bold results exceed closure criteria

* Closure Criteria specified in 19.15.29.12 NMAC

Attachment A

NMOCD Form C-141

RECEIVED

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

MAY 16 2018

DISTRICT II-ARTESIA O.C.D.

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

nAB1813754470

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company 6137	Contact Aaron Kidd, Technical Services Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Cochiti 28 Federal 1 (release occurred near the Devon Ore Ida 14 Fed 13 #30-015-29417)	Facility Type Salt Water Disposal

Surface Owner Federal	Mineral Owner Federal	API No. 30-015-30113

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	14	24S	29E					Eddy

Latitude 32.214136 N **Longitude** -103.959774 W NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 6.00 bbls	Volume Recovered 0.00 bbls
Source of Release Water transfer line	Date and Hour of Occurrence 5/2/2018 @ 11:00 AM MST	Date and Hour of Discovery 5/2/2018 @ 11:00 AM MST
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Shelly Tucker-BLM	
By Whom? Mike Shoemaker, EHS Professional	Date and Hour May 3, 2018 @ 8:44 PM MST	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
A 3" poly transfer line failed at a previously installed repair clamp while moving produced water from the Cochiti 28 Federal 1 SWD to Ore Ida SWD. The release occurred at the following coordinates (Lat: 32.214136, Long: 103.959774). The transfer pumps were immediately shut down and the valves were isolated.

Describe Area Affected and Cleanup Action Taken.*
Approximately 6 bbls of produced water was released. 0 bbls were recovered. An Environmental contractor will be contacted to assist with delineation and remediation efforts.

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: Michael Shoemaker

Printed Name: Michael Shoemaker

Title: Environmental Professional

E-mail Address: mike.shoemaker@dvn.com

Date: 5/16/2018 Phone: 575-748-3371

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By

Approval Date: 5/17/18 Expiration Date: N/A

Conditions of Approval: See Attached

Attached ☐ 2RP-4753

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 5/16/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4753 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 6/16/2018. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Bratcher, Mike, EMNRD

From: Shoemaker, Mike <Mike.Shoemaker@dvn.com>
Sent: Wednesday, May 16, 2018 7:02 PM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Shelly Tucker (stucker@blm.gov)
Cc: Fulks, Brett; Robison, Tamala
Subject: Cochiti SWD Line to Ore Ida SWD_6 bbls_5.2.2018
Attachments: GIS Map of Cochiti 28 Fed 1 SWD to Ore Ida 14 Fed 10 SWD.pdf; Cochiti SWD to Ore Ida SWD_6 bbls_5.2.2018.doc

Good Evening,

Attached is the C141 and the GIS Image for the 6 bbl produced water release that occurred along the Cochiti 28 Federal 1 SWD line on 05.02.2018.

If you have any questions, feel free to contact me.

Thanks,

Mike Shoemaker
EHS Representative

Devon Energy Corporation
6488 Seven Rivers Highway
Artesia, New Mexico 88210
575-746-5566 Office
575-513-5035 Mobile

devon

Cochiti 28 Federal 1 SWD

6 bbl Produced Water

devon

This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Tamala Robison
Map is current as of: 11-May-2018

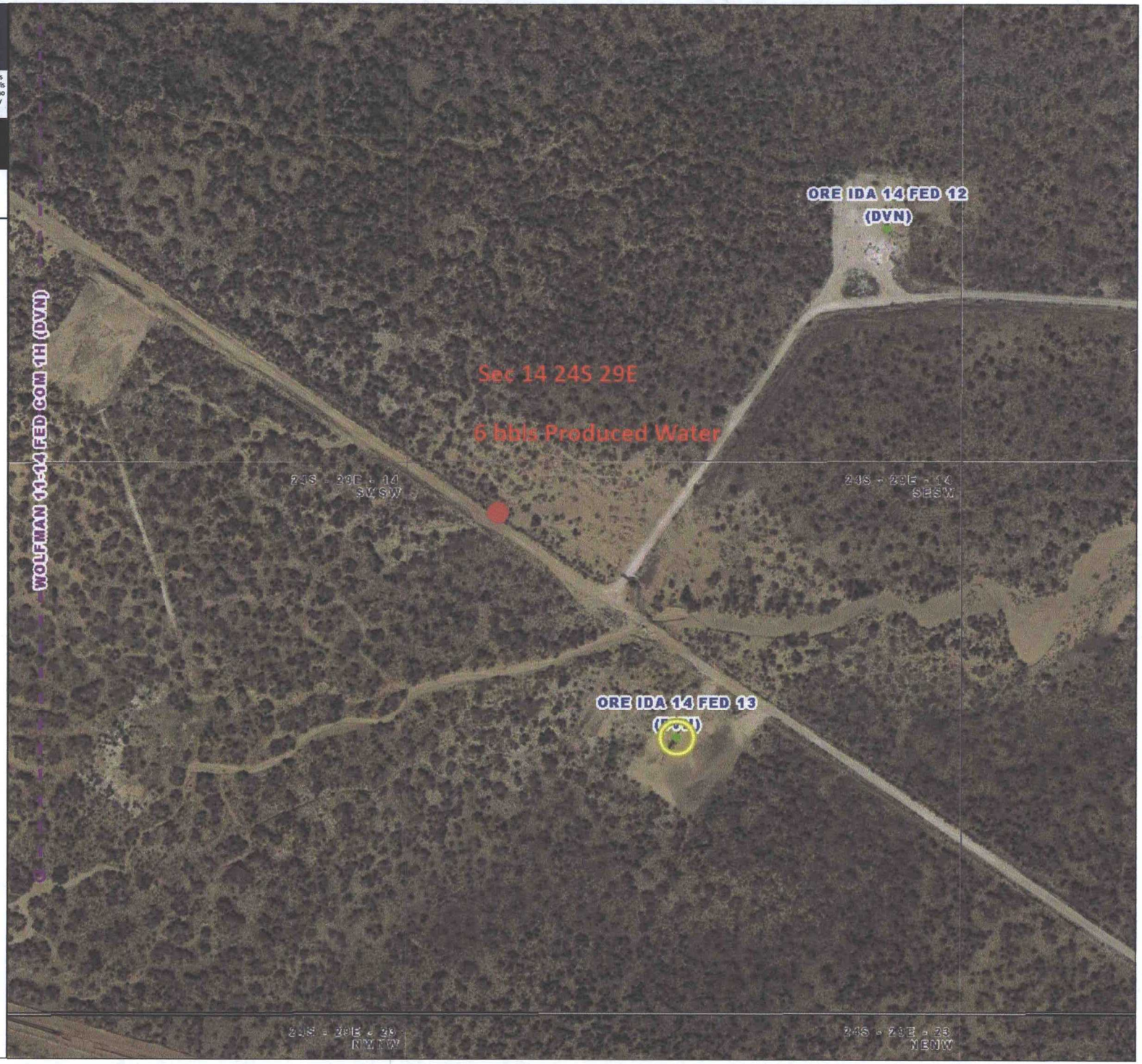
N

Miles
0 0.02 0.04 0.07 1:3,557

Surface Hole (ACT-DVN/OBO)
- Other
- Deviated Surface
- Oil Producing Well
- Gas Producing Well
- Oil and Gas Producing Well
- Drilling or Completing
- Injection Well
- Salt Water Disposal Well
- Shut In

Surface Hole (PRP-DVN/OBO)
- Vertical
- Deviated

Bore Path (PRP-DVN/OBO)



Incident ID	NAB1813756670
District RP	2RP-4753
Facility ID	
Application ID	

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?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ 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 ½-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.

Form C-141 State of New Mexico
Page 4 Oil Conservation Division

Incident ID	NAB1813756670
District RP	2RP-4753
Facility ID	
Application ID	

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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 9/25/2020

email: tom.bynum@dvn.com Telephone: 575-748-2663

OCD Only

Received by: _____ Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NAB1813756670
District RP	2RP-4753
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- [X] Detailed description of proposed remediation technique
- [X] Scaled sitemap with GPS coordinates showing delineation points
- [X] Estimated volume of material to be remediated
- [X] Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- [X] Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

- [ ] Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- [ ] Extents of contamination must be fully delineated.
- [ ] Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 9/25/2020

email: tom.bynum@dvn.com Telephone: 575-748-2663

OCD Only

Received by: _____ Date: _____

- [ ] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAB1813756670
District RP	2RP-4753
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 9/25/2020

email: tom.bynum@dvn.com Telephone: 575-748-2663

OCD Only

Received by: _____ Date: _____

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: _____

Printed Name: _____ Title: _____

Attachment B

Photographs

View of the impacted area prior to excavation; view to the southeast

View of the impacted area prior to excavation; view to the north/northwest

Excavating impacted soil, view to the southeast

Matching the excavated area to the same grade as the adjacent area, view to the southeast

View of the excavated area, view to the north/northwest

View of the complete excavated area after matching to surrounding topography, view to the southeast

Attachment C

Characterization Soil Sample Laboratory Report

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 21, 2020

Tom Bynum
Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (575) 748-0176
FAX:

RE: Cochiti 28 Federal 1 May 2018 OrderNo.: 2004616

Dear Tom Bynum:

Hall Environmental Analysis Laboratory received 6 sample(s) on 4/14/2020 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 www.hallenvironmental.com 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2004616**
Date Reported: **4/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: SP1
Project: Cochiti 28 Federal 1 May 2018
Collection Date: 4/10/2020 1:58:00 PM
Lab ID: 2004616-001 **Matrix:** SOIL **Received Date:** 4/14/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/18/2020 2:28:26 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/18/2020 2:28:26 PM
Surr: DNOP	89.8	55.1-146		%Rec	1	4/18/2020 2:28:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/17/2020 5:10:58 PM
Surr: BFB	97.6	66.6-105		%Rec	1	4/17/2020 5:10:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	4/17/2020 5:10:58 PM
Toluene	ND	0.050		mg/Kg	1	4/17/2020 5:10:58 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/17/2020 5:10:58 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/17/2020 5:10:58 PM
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	4/17/2020 5:10:58 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/17/2020 12:28:07 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004616**
Date Reported: **4/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: SP2
Project: Cochiti 28 Federal 1 May 2018
Collection Date: 4/10/2020 2:06:00 PM
Lab ID: 2004616-002 **Matrix:** SOIL
Received Date: 4/14/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/18/2020 2:52:41 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/18/2020 2:52:41 PM
Surr: DNOP	89.3	55.1-146		%Rec	1	4/18/2020 2:52:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/17/2020 5:34:38 PM
Surr: BFB	100	66.6-105		%Rec	1	4/17/2020 5:34:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	4/18/2020 10:08:31 AM
Toluene	ND	0.048		mg/Kg	1	4/18/2020 10:08:31 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2020 10:08:31 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/18/2020 10:08:31 AM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/18/2020 10:08:31 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/17/2020 1:29:50 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004616**
Date Reported: **4/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: SP3
Project: Cochiti 28 Federal 1 May 2018
Collection Date: 4/10/2020 2:55:00 PM
Lab ID: 2004616-003 **Matrix:** SOIL **Received Date:** 4/14/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/18/2020 3:16:44 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/18/2020 3:16:44 PM
Surr: DNOP	88.1	55.1-146		%Rec	1	4/18/2020 3:16:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/17/2020 6:44:39 PM
Surr: BFB	99.6	66.6-105		%Rec	1	4/17/2020 6:44:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	4/17/2020 6:44:39 PM
Toluene	ND	0.047		mg/Kg	1	4/17/2020 6:44:39 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/17/2020 6:44:39 PM
Xylenes, Total	ND	0.094		mg/Kg	1	4/17/2020 6:44:39 PM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/17/2020 6:44:39 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	300	59		mg/Kg	20	4/17/2020 1:42:11 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004616**
Date Reported: **4/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: SP4
Project: Cochiti 28 Federal 1 May 2018
Collection Date: 4/10/2020 2:23:00 PM
Lab ID: 2004616-004 **Matrix:** SOIL **Received Date:** 4/14/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/18/2020 3:40:56 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/18/2020 3:40:56 PM
Surr: DNOP	92.1	55.1-146		%Rec	1	4/18/2020 3:40:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/17/2020 7:08:00 PM
Surr: BFB	98.2	66.6-105		%Rec	1	4/17/2020 7:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	4/17/2020 7:08:00 PM
Toluene	ND	0.049		mg/Kg	1	4/17/2020 7:08:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/17/2020 7:08:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/17/2020 7:08:00 PM
Surr: 4-Bromofluorobenzene	98.0	80-120		%Rec	1	4/17/2020 7:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/17/2020 1:54:32 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004616**
Date Reported: **4/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Federal 1 May 2018
Lab ID: 2004616-005 **Matrix:** SOIL

Client Sample ID: SP5 @ 0"
Collection Date: 4/10/2020 2:17:00 PM
Received Date: 4/14/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/18/2020 4:05:07 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/18/2020 4:05:07 PM
Surr: DNOP	84.3	55.1-146		%Rec	1	4/18/2020 4:05:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/17/2020 7:31:29 PM
Surr: BFB	96.8	66.6-105		%Rec	1	4/17/2020 7:31:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	4/17/2020 7:31:29 PM
Toluene	ND	0.047		mg/Kg	1	4/17/2020 7:31:29 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/17/2020 7:31:29 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/17/2020 7:31:29 PM
Surr: 4-Bromofluorobenzene	98.3	80-120		%Rec	1	4/17/2020 7:31:29 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	4400	150		mg/Kg	50	4/18/2020 3:10:58 PM

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

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 Limit

Analytical Report
Lab Order **2004616**
Date Reported: **4/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Federal 1 May 2018
Lab ID: 2004616-006 **Matrix:** SOIL

Client Sample ID: SP5 @ 4"
Collection Date: 4/10/2020 2:42:00 PM
Received Date: 4/14/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/18/2020 4:29:21 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/18/2020 4:29:21 PM
Surr: DNOP	75.2	55.1-146		%Rec	1	4/18/2020 4:29:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/17/2020 7:55:00 PM
Surr: BFB	97.6	66.6-105		%Rec	1	4/17/2020 7:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	4/17/2020 7:55:00 PM
Toluene	ND	0.050		mg/Kg	1	4/17/2020 7:55:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/17/2020 7:55:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/17/2020 7:55:00 PM
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	4/17/2020 7:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	61		mg/Kg	20	4/17/2020 2:19:13 PM

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

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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2004616**
21-Apr-20

Client: Devon Energy
Project: Cochiti 28 Federal 1 May 2018

Sample ID: **MB-51889**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **51889**	RunNo: **68216**							
Prep Date: **4/17/2020**	Analysis Date: **4/17/2020**	SeqNo: **2358857**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-51889**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **51889**	RunNo: **68216**							
Prep Date: **4/17/2020**	Analysis Date: **4/17/2020**	SeqNo: **2358858**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.2	90	110			

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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2004616**
21-Apr-20

Client: Devon Energy
Project: Cochiti 28 Federal 1 May 2018

Sample ID: **LCS-51865** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51865** RunNo: **68199**
Prep Date: **4/16/2020** Analysis Date: **4/18/2020** SeqNo: **2358994** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.6	70	130			
Surr: DNOP	3.8		5.000		75.0	55.1	146			

Sample ID: **MB-51865** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51865** RunNo: **68199**
Prep Date: **4/16/2020** Analysis Date: **4/18/2020** SeqNo: **2358997** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		81.9	55.1	146			

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004616**

21-Apr-20

Client: Devon Energy

Project: Cochiti 28 Federal 1 May 2018

Sample ID: **lcs-51837** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **51837** RunNo: **68215**

Prep Date: **4/15/2020** Analysis Date: **4/17/2020** SeqNo: **2358763** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.5	80	120			
Surr: BFB	1100		1000		110	66.6	105			S

Sample ID: **mb-51837** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **51837** RunNo: **68215**

Prep Date: **4/15/2020** Analysis Date: **4/17/2020** SeqNo: **2358765** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	66.6	105			

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004616**

21-Apr-20

Client: Devon Energy

Project: Cochiti 28 Federal 1 May 2018

Sample ID: **LCS-51837** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **51837** RunNo: **68215**

Prep Date: **4/15/2020** Analysis Date: **4/17/2020** SeqNo: **2358813** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.4	80	120			
Toluene	0.94	0.050	1.000	0	93.7	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.9	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: **mb-51837** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **51837** RunNo: **68215**

Prep Date: **4/15/2020** Analysis Date: **4/17/2020** SeqNo: **2358815** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: DEVON ENERGY Work Order Number: 2004616 RcptNo: 1

Received By: Juan Rojas 4/14/2020 8:20:00 AM

Completed By: Isaiah Ortiz 4/14/2020 9:59:17 AM

Reviewed By: LB 4/14/20

Chain of Custody

1. Is Chain of Custody sufficiently complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: EM 4/14/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Not Present			

Chain-of-Custody Record

Client: Devon Energy
Tom Bynum
Mailing Address: 6488 Seven Rivers Hwy
Artesia, NM 88211
Phone #: 580-748-1613
email or Fax#: tom.bynum@dvn.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Cochiti 28 Federal 1 - Pipeline
Project #: 20843060
Project Manager: Tom Bynum
Sampler: Taylor Elwell (HRL)
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 0.1+0.1=0.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2004616	BTEX / MTBE / TMB's (8021)	TPH: 8015D (GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4-10-20	13:58	Soil	SP1	4oz Glass	Ice	-001	X	X					X			
4-10-20	14:06	Soil	SP2	4oz Glass	Ice	-002	X	X					X			
4-10-20	14:55	Soil	SP3	4oz Glass	Ice	-003	X	X					X			
4-10-20	14:23	Soil	SP4	4oz Glass	Ice	-004	X	X					X			
4-10-20	14:17	Soil	SP5 @0'	4oz Glass	Ice	-005	X	X					X			
4-10-20	14:42	Soil	SP5 @4'	4oz Glass	Ice	-006	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4-13-20	14:15	Taylor Elwell			4/13/20	1430
4/13/20	1900			courier	4/14/20	8:20

Remarks: Please send report to
jlinn@hrlcomp.com
telwell@hrlcomp.com

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.

Attachment D

Soil Disposal Manifests

R360 ENVIRONMENTAL SOLUTIONS

TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name Amanda Davis
Phone No.

GENERATOR

NO. 204824

Operator No.
Operators Name Devon
Address 6488 7 Rivers Highway
Artesia NM 88210
City, State, Zip
Phone No. (580) 748-1613

Permit/RRC No.
Lease/Well Name & No.
County Eddy
API No. 3001530113
Rig Name & No.
AFE/PO No. MM-138205.01.RNM

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

		NON-INJECTABLE WATERS		OTHER EXEMPT WASTES (type and generation process of the Waste)
Oil Based Muds		Washout Water (Non-Injectable)		
Oil Based Cuttings		Completion Fluid/Flow back (Non-Injectable)		
Water Based Muds		Produced Water (Non-Injectable)	X	
Water Based Cuttings		Gathering Line Water/Waste (Non-Injectable)		
Produced Formation Solids		INTERNAL USE ONLY		
Tank Bottoms		Truck Washout (exempt waste)		
E&P Contaminated Soil	1 tk			
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), ignitability, Corrosivity and Reactivity.

Non-Exempt Other Produced Water *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS Y - YARDS 1 E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☒ 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 by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

Julie Linn — (PRINT) AUTHORIZED AGENTS SIGNATURE
8/14/20 — DATE
SIGNATURE

TRANSPORTER

Transporter's Name Halo Services
Address 412 N 3rd ST Loving N.M.
Phone No. 793-0201

Driver's Name
Print Name DAN DAGGY
Phone No. 793-0201
Truck No. T-44

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

8-14-20 — SHIPMENT DATE
DRIVER'S SIGNATURE
8-14-20 — DELIVERY DATE
DRIVER'S SIGNATURE

DISPOSAL FACILITY

TRUCK TIME STAMP
IN: 11:51 Am OUT:

RECEIVING AREA
Name/No. T-3

Site Name/Permit No. Red Bluff Facility/ STF-065
Address 5053 US Highway 285, Orla, TX 79770
Phone No. 432-448-4239

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgens? (circle one) YES NO
Chemical Analysis (Mg/l) Chloride
Conductivity (mmhos/cm) pH

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Joseph — NAME (PRINT)
8.14.20 — DATE
RCVR — TITLE
SIGNATURE

White - ORIGINAL Blue - TRANSPORTER Yellow - GENERATOR Version 1

Attachment E

Confirmation Soil Sample Laboratory Report

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 21, 2020

Tom Bynum

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX

RE: Cochiti 28 Fed 1 SWD (May 2018) OrderNo.: 2008839

Dear Tom Bynum:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/15/2020 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 www.hallenvironmental.com 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2008839**
Date Reported: **8/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: CONF-E
Project: Cochiti 28 Fed 1 SWD (May 2018)
Collection Date: 8/14/2020 10:05:00 AM
Lab ID: 2008839-001 **Matrix:** SOIL
Received Date: 8/15/2020 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/19/2020 3:14:00 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/19/2020 3:14:00 PM
Surr: DNOP	92.3	30.4-154		%Rec	1	8/19/2020 3:14:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2020 2:19:15 PM
Surr: BFB	96.3	75.3-105		%Rec	1	8/18/2020 2:19:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	8/18/2020 2:19:15 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2020 2:19:15 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2020 2:19:15 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2020 2:19:15 PM
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	8/18/2020 2:19:15 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	100	60		mg/Kg	20	8/20/2020 2:09:23 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2008839**
Date Reported: **8/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: CONF-W
Project: Cochiti 28 Fed 1 SWD (May 2018)
Collection Date: 8/14/2020 10:09:00 AM
Lab ID: 2008839-002 **Matrix:** SOIL
Received Date: 8/15/2020 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/19/2020 3:38:05 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/19/2020 3:38:05 PM
Surr: DNOP	93.7	30.4-154		%Rec	1	8/19/2020 3:38:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2020 2:42:45 PM
Surr: BFB	98.1	75.3-105		%Rec	1	8/18/2020 2:42:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	8/18/2020 2:42:45 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2020 2:42:45 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2020 2:42:45 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2020 2:42:45 PM
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	8/18/2020 2:42:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	8/20/2020 2:46:25 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2008839**

21-Aug-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 SWD (May 2018)

Sample ID: **MB-54565**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **54565**	RunNo: **71213**							
Prep Date: **8/20/2020**	Analysis Date: **8/20/2020**	SeqNo: **2485707**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-54565**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **54565**	RunNo: **71213**							
Prep Date: **8/20/2020**	Analysis Date: **8/20/2020**	SeqNo: **2485708**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.9	90	110			

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2008839**

21-Aug-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 SWD (May 2018)

Sample ID: **MB-54508**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **54508**	RunNo: **71203**
Prep Date: **8/18/2020**	Analysis Date: **8/19/2020**	SeqNo: **2483963** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		96.7	30.4	154			

Sample ID: **LCS-54508**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **54508**	RunNo: **71203**
Prep Date: **8/18/2020**	Analysis Date: **8/19/2020**	SeqNo: **2483964** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.0	70	130			
Surr: DNOP	4.4		5.000		88.3	30.4	154			

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2008839**

21-Aug-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 SWD (May 2018)

Sample ID: **mb-54438**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **54438**	RunNo: **71136**
Prep Date: **8/15/2020**	Analysis Date: **8/18/2020**	SeqNo: **2480072** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		98.6	75.3	105			

Sample ID: **lcs-54438**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **54438**	RunNo: **71136**
Prep Date: **8/15/2020**	Analysis Date: **8/17/2020**	SeqNo: **2480073** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	82.0	72.5	106			
Surr: BFB	1100		1000		110	75.3	105			S

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2008839**

21-Aug-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 SWD (May 2018)

Sample ID: **mb-54438**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **54438**	RunNo: **71136**
Prep Date: **8/15/2020**	Analysis Date: **8/18/2020**	SeqNo: **2480115** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: **LCS-54438**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **54438**	RunNo: **71136**
Prep Date: **8/15/2020**	Analysis Date: **8/17/2020**	SeqNo: **2480116** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.9	80	120			
Toluene	0.91	0.050	1.000	0	91.3	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.5	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Devon Energy** Work Order Number: **2008839** RcptNo: **1**

Received By: **Cheyenne Cason** **8/15/2020 7:55:00 AM**

Completed By: **Emily Mocho** **8/15/2020 9:01:00 AM**

Reviewed By: EM 8/15/20

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by CM 8/15/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Not Present			
2	2.8	Good	Not Present			
3	3.9	Good	Not Present			
4	3.3	Good	Not Present			

Chain-of-Custody Record

Client: Devon Energy
Attn: Tom Bynum
Mailing Address: 6488 Seven Rivers Hwy
Artesia, NM 88211
Phone #: (580) 748-1613
email or Fax#: tom.bynum@dvn.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5 Day
☒ Standard ☐ Rush
Project Name: Cochiti 28 Fed #1 SWD (May 2018)
Project #: nm-138205.01.RNM
Project Manager: Tom Bynum
Sampler: J. Linn, HRL
On Ice: ☒ Yes ☐ No
# of Coolers: 4
Cooler Temp(including CF): See remarks (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2008839	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/14/20	1005	Soil	CONF-E	1-4oz jar	NONE	001	X	X					X			
8/14/20	1009	Soil	CONF-W	↓	↓	002	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8-14-20	1330				8/14/20	1330
8/14/20	1900				8/15/20	0755

Remarks: Please also send copy of report to jlinn@hrlcomp.com

3.3±0=3.3
4.1±0=4.1
2.8±0=2.8
3.9±0=3.9

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.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1813756670
District RP	2RP-4753
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 9/25/2020

email: tom.bynum@dvn.com Telephone: 575-748-2663

OCD Only

Received by: Robert Hamlet Date: 3/22/2021

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: Robert Hamlet Date: 3/22/2021

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 10759

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
PIMA ENVIRONMENTAL SERVICES, L 1601 N. Turner Suite 500 Hobbs, NM88240	329999	10759	C-141

OCD Reviewer	Condition
rhamlet	We have received your closure report and final C-141 for Incident #NAB1813756670 COCHITI 28 FEDERAL 1, thank you. This closure is approved.