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 (November 2016)
2RP-3995
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 November 2016 release associated with the Cochiti 28 Federal #1 saltwater disposal (SWD) facility (Site). The release is at latitude 32.2777977 and longitude -103.996315 in Eddy County, New Mexico (Figure 1).

Site Background

On November 8, 2016, a release of eight barrels of produced water was observed at the Site. The release was due to a loose seal on the triplex plunger pump. The suction lines were isolated immediately, and the triplex plunger pump was subsequently repaired. Approximately eight barrels of produced water plus 62 barrels of rainwater were recovered. The area affected was limited to the southwestern portion of the well pad.

Because the volume release was between five barrels and 25 barrels, this is considered a minor release according to the New Mexico Oil Conservation Division (NMOCD). On November 15, 2016, 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-3995.

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 0.64 mile from the Site; the depth to water in this well was 18 feet below ground surface (bgs).

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?	Less than 50 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

Site Characterization	Response/Discussion
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 medium 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?	No

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 April 14, 2020, HRL mobilized to the Site to evaluate the release (Attachment B, Photographs). Soil samples were collected at 14 locations (FS1 through FS14). All samples except FS9 were collected from ground surface. To fully delineate the vertical extent of impacts, additional samples were collected from FS9 at depths of four inches below ground surface (bgs), eight inches bgs, and 12 inches 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 field screening results, five soil samples (SP1 through SP5) were collected for laboratory analysis. SP1 through SP5 were collected at ground surface; and one additional sample was collected from SP3 at 12 inches bgs, where refusal was encountered with the hand auger. The samples were immediately

placed on ice and kept under strict chain of custody protocol prior to submission to Hall Environmental Analysis Laboratory, Inc in Albuquerque, New Mexico for analysis of (Attachment C):

- 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

Based on the results of the soil samples, HRL remobilized to the Site on May 11, 2020 to collect additional horizontal soil samples. Additionally, HRL retained Kelley Oilfield Services to mobilize to the Site with heavy equipment to attempt further vertical delineation below 12 inches, where refusal was encountered with the hand auger. Soil samples were collected at three locations (SP6 through SP8); samples from SP6 and SP7 were collected from ground surface and samples from SP8 were collected from 30 inches and 60 inches bgs. At 60 inches bgs, refusal with the track hoe was encountered due to caliche; this sample did not exceed applicable closure criteria.

HRL mobilized to the site again on May 21, 2020 to complete the horizontal delineation at the Site. Sample SP-10 was collected from three inches bgs.

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)
Less than 50 feet below ground surface	Chloride	600 mg/kg or natural background, whichever is greater
	Total Petroleum Hydrocarbons (TPH) *[Gasoline Range Organics (GRO) + Diesel Range Organics (DRO) + Oil Range Organics (ORO)]*	100 mg/kg
	Benzene	10 mg/kg
	Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)	50 mg/kg

Remediation Plan

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

Chloride concentrations in soil exceeded the applicable closure criteria in SP3 at ground surface. TPH concentrations in soil exceeded the applicable closure criteria in SP4, SP5, SP7 at ground surface and SP8 at 30 inches bgs.

Remediation

On July 21, 2020, HRL mobilized to the Site with its excavation subcontractor, Wild West Services, to excavate the impacted soil. The area of the excavation was approximately 300 square feet in size; total depth was two feet bgs on the western one-third of the excavation and three feet bgs on the eastern two-thirds of the excavation (Figure 4). The pad was approximately 12 inches thick, native soil was observed beneath that depth. Following excavation activities, HRL collected four confirmation soil samples in accordance with 19.15.29.12 NMAC. Two samples were from the floor of the excavation (Floor-West and Floor-East) and two samples were from the sidewalls. Sample "Sidewall 0-12" was collected from the pad material at depths from ground surface to 12 inches bgs. Sample "Sidewall 12-36" was collected from the native soil beneath the pad, at 12 inches to 36 inches bgs. Each confirmation soil sample was a five-point composite soil sample representative of an area less than 200-square feet. The samples were submitted to Hall Environmental Analysis Laboratory, Inc in Albuquerque, New Mexico as stated above. Sample results were below applicable closure criteria (Table 2, Attachment D).

Scope and Limitations

The scope of HRL's services consists of performing site characterization oversight of remediation, 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.

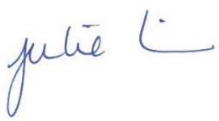
Conclusions

The soil impacted by chloride and TPH above applicable closure criteria from the November 2016 release at the Site has been removed. Confirmation soil samples indicate the impacted soil has been removed from the Site; 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 Sample Location and Results
Figure 4: Confirmation Sample Location and Results

Tables:

Table 1: Site Characterization Soil Sample Results
Table 2: Confirmation Soil Sample Results

Attachments:

Attachment A: NMOCD Form C-141
Attachment B: Photographs
Attachment C: Characterization Sampling Analytical Laboratory Report
Attachment D: Confirmation Sampling Analytical Laboratory Report

Figures

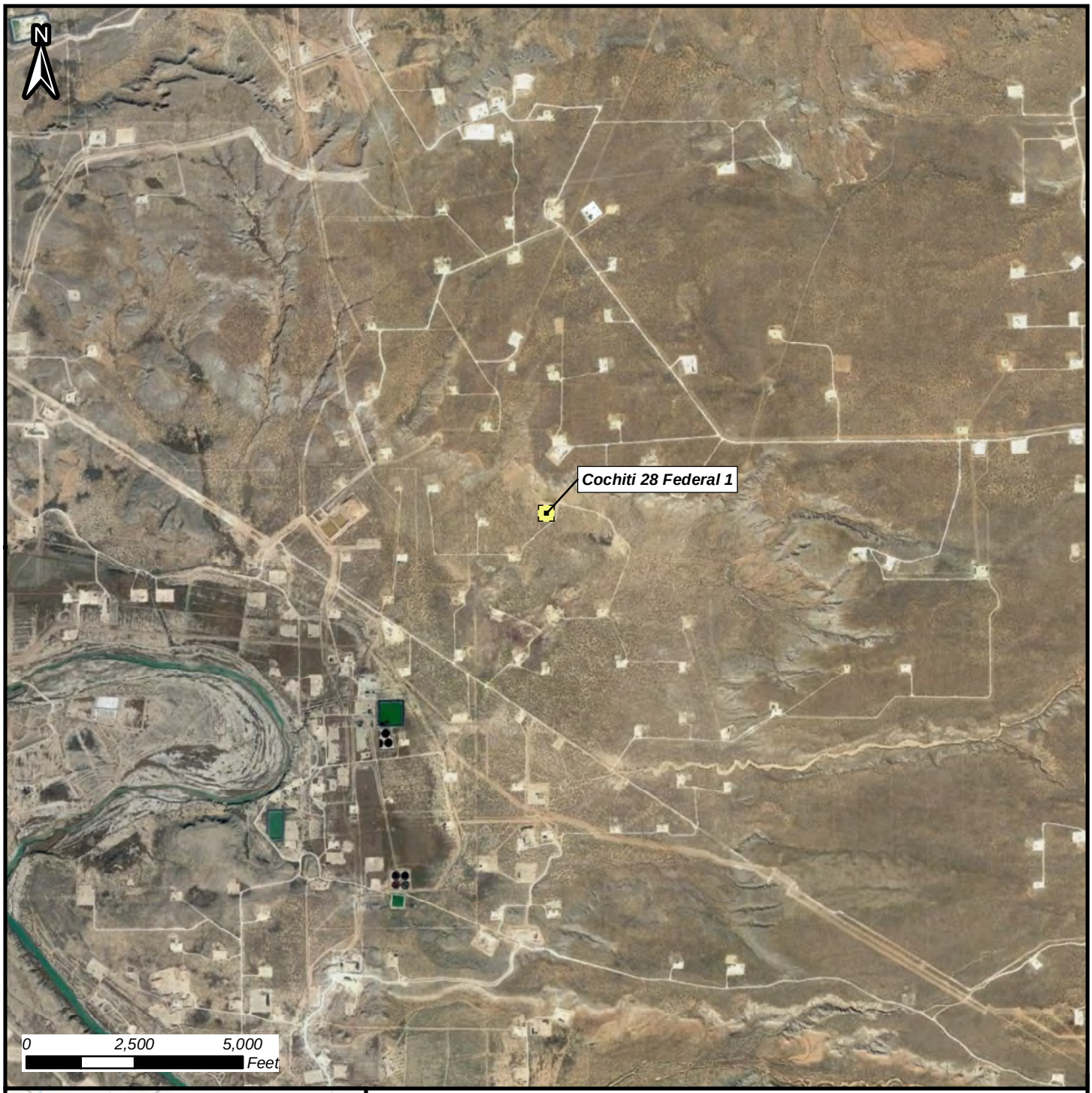


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Figure 1: Site Location Map

Cochiti 28 Federal 1
November 2016 Spill

32.2777977, -103.996315
Section 28, Township 23 South, Range 29 East

NOTES / COMMENTS:

Mapped Features

Facility Location

DISCLAIMER: This representation and the Geographic Information System (GIS) used to create it are designed as a source of reference and not intended to replace official records and/or legal surveys. HRL assumes no responsibility for any risks, dangers, or liabilities that may result from its use and makes no guarantees as to the quality or accuracy of the underlying data.

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Author: A. Asay
Revision: 0
Date: 5/13/2020

T:\CLIENTS\DEVON ENERGY\2020\Cochiti 28 Federal 1\Maps\Cochiti 28 Federal 1 Site Location Map (November 2016 Spill) 051320.mxd

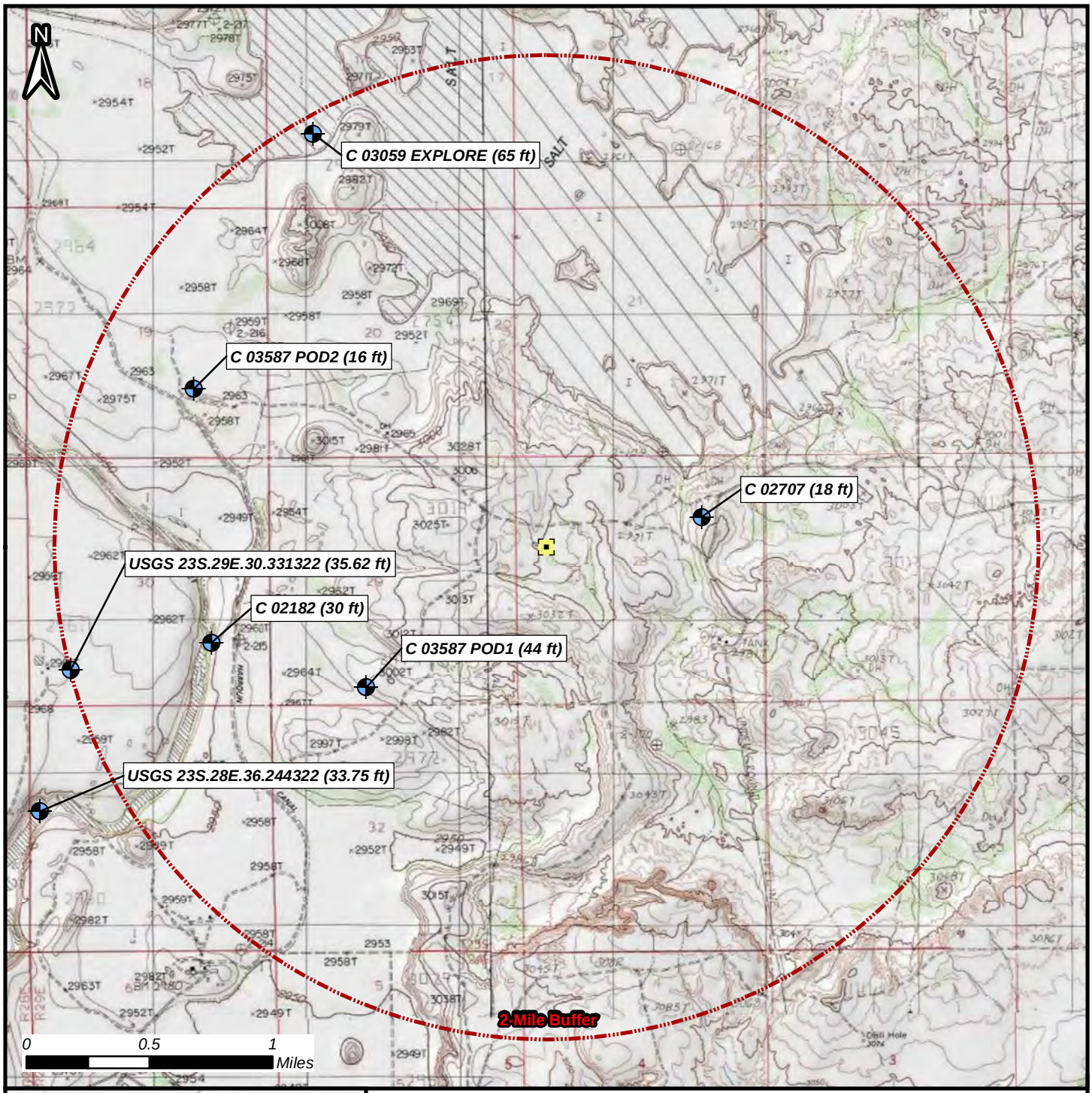

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Figure 2: Depth to Groundwater Map

Cochiti 28 Federal 1
November 2016 Spill

32.2777977, -103.996315
Section 28, Township 23 South, Range 29 East

Mapped Features

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

Well Number	Water Level Below Ground Surface (ft)	Distance from Source (mi)
C 02707	18.00	0.64
C 03587 POD1	44.00	0.93
C 02182	30.00	1.42
C 03587 POD2	16.00	1.57
C 03059 EXPLORE	65.00	1.93
USGS 23S.29E.30.331322	35.62	2.00
USGS 23S.28E.36.244322	33.75	2.32

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Author: A. Asay
Revision: 0
Date: 6/1/2020

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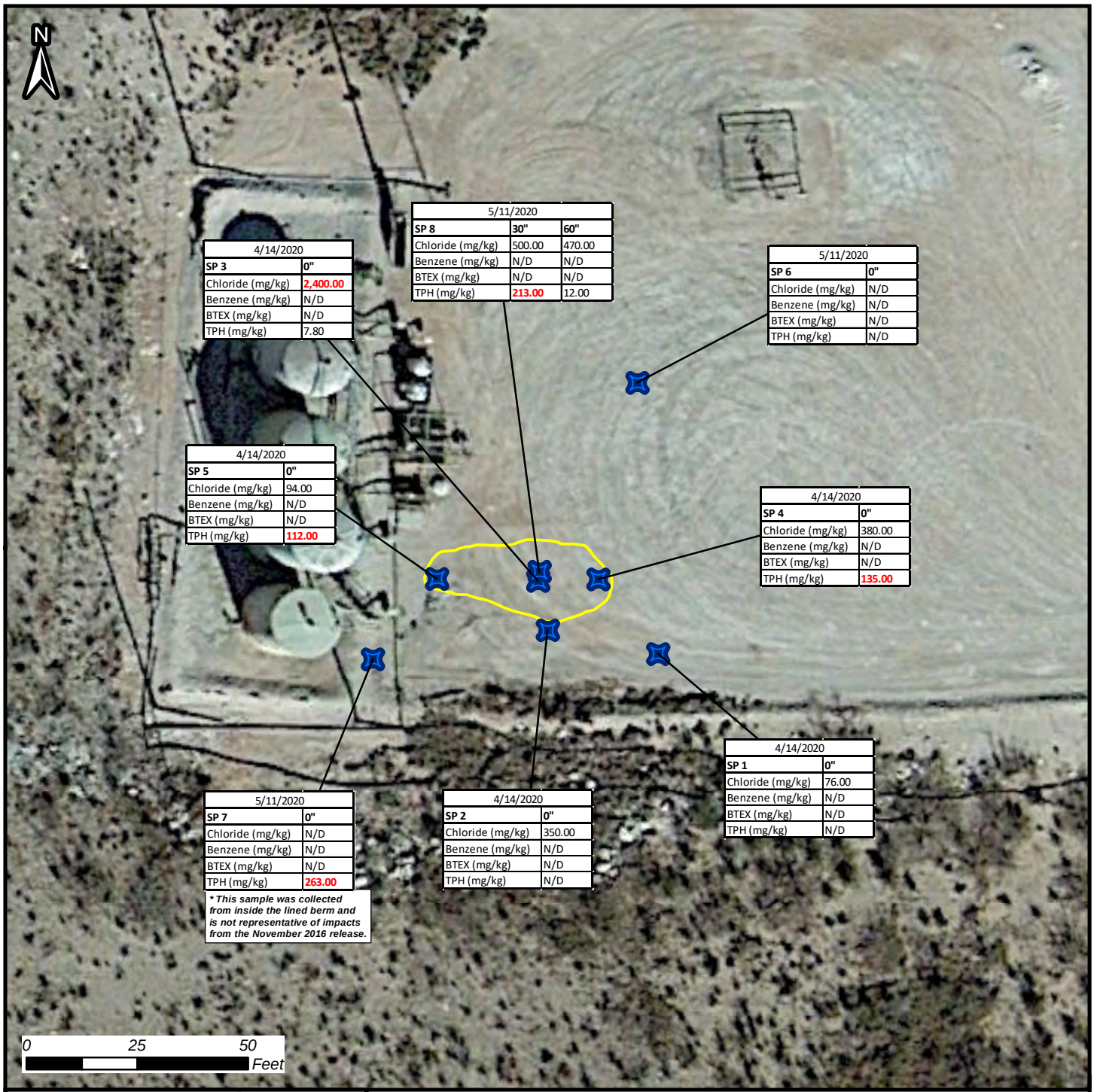

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Figure 3: Characterization Sample Location and Results

Cochiti 28 Federal 1
November 2016 Spill
32.2777977, -103.996315
Section 14, Township 24 South, Range 29 East

NOTES / COMMENTS:

The impacted area is approximately 550 square feet.

Results in red exceed closure criteria.

Mapped Features

- Sample Location (Submitted for Analysis)
- Impacted Area

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Author: A. Asay
Revision: 0
Date: 6/9/2020

T:\CLIENTS\DEVON ENERGY\2020\Cochiti 28 Federal 1\Maps\Cochiti 28 Federal 1 Sample Location and Results Map (November 2016 Spill) 060920.mxd

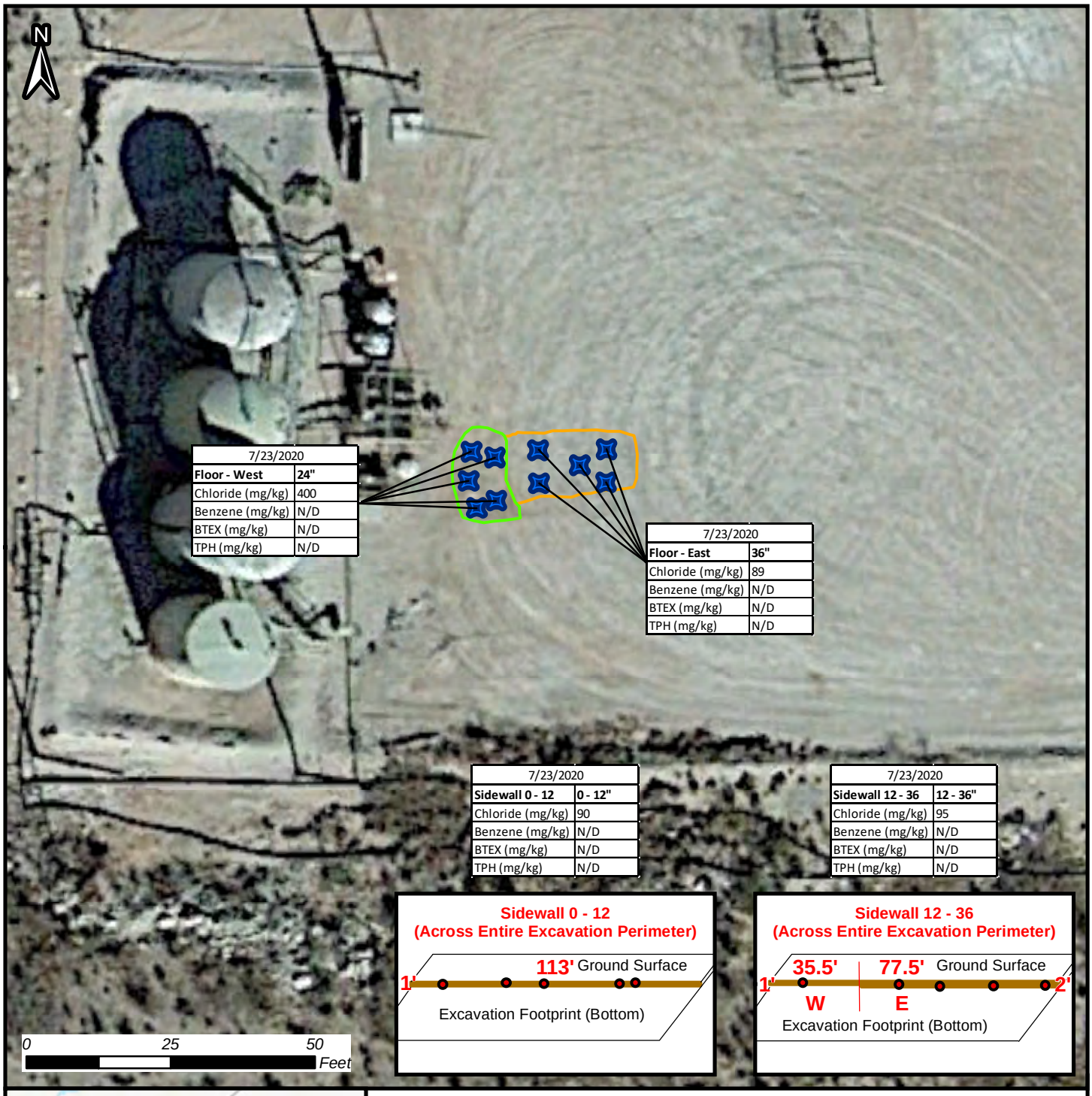

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Figure 4: Confirmation Sample Location and Results

Cochiti 28 Federal 1
November 2016 Spill
32.2777977, -103.996315
Section 14, Township 24 South, Range 29 East

NOTES / COMMENTS:

The 2-ft deep excavation area is approximately 145 square feet. The 3-ft deep excavation area is approximately 243 square feet.

Results in red exceed closure criteria.

Mapped Features

- Footprint Composite Sample Location (Submitted for Analysis)
- Sidewall Composite Sample Location (Submitted for Analysis)
- Excavation Area (2' Depth)
- Excavation Area (3' Depth)

HRL COMPLIANCE SOLUTIONS

Author: A. Asay
Revision: 0
Date: 8/31/2020

T:\CLIENTS\DEVON ENERGY\2020\Cochiti 28 Federal 1\Maps\Cochiti 28 Federal 1 Confirmation Sample Location and Results Map (November 2016 Spill) 083120.mxd

Tables

HRL COMPLIANCE SOLUTIONS

Table 1
Soil Sample Results
Devon Energy
Cochiti 28 Federal 1 (November 2016)
Eddy County, New Mexico

Sample ID	Depth (inches)	Sample Date	Chloride	Benzene	BTEX	TPH
			Values are in milligrams per kilogram (mg/kg)			
NMOCD Closure Criteria (Groundwater less than 50 feet) *			600	10	50	100
SP1	0	4/14/2020	76	ND	ND	ND
SP2	0	4/14/2020	350	ND	ND	ND
SP3	0	4/14/2020	**2,400**	ND	ND	7.8
SP4	0	4/14/2020	380	ND	ND	**135**
SP5	0	4/14/2020	94	ND	ND	**112**
SP6	0	5/11/2020	ND	ND	ND	ND
SP7	0	5/11/2020	ND	ND	ND	**263**
SP8	30	5/11/2020	500	ND	ND	**213**
SP8	60	5/11/2020	470	ND	ND	12
SP-10	3	5/21/2020	140	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

Results shaded in grey 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 Federal 1 (November 2016)
Eddy County, New Mexico

Sample ID	Depth (inches)	Sample Date	Chloride	Benzene	BTEX	TPH
			Values are in milligrams per kilogram (mg/kg)			
NMOCD Closure Criteria (Groundwater less than 50 feet) *			600	10	50	100
Floor-East	36	7/23/2020	89	ND	ND	ND
Floor-West	24	7/23/2020	400	ND	ND	ND
Sidewall 0-12	0 - 12	7/23/2020	90	ND	ND	ND
Sidewall 12-36	12 - 36	7/23/2020	95	ND	ND	ND

Notes:

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes

TPH: Total Petroleum Hydrocarbons

Bold results exceed closure criteria

* Closure Criteria specified in 19.15.29.12 NMAC

Attachment A

NMOCD Form C-141

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 15 2016
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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1632133942 6137

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company	**Contact** Matt Nettles, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	**Telephone No.** 575-513-5767
Facility Name Cochiti 28 Federal #1	**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
E	28	23S	29E	1980	North	660	West	Eddy

Latitude: N 32.2777977 **Longitude:** W -103.996315

NATURE OF RELEASE

8 recovered

Type of Release Produced water	**Volume of Release** 8 BBLS	**Volume Recovered** 70 BBLS
Source of Release Triplex plunger pump	**Date and Hour of Occurrence** 11/8/2016 @ 11:30pm	**Date and Hour of Discovery** 11/8/2016 @ 11:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** OCD-Mike Bratcher BLM-Jim Amos	
By Whom? Hub Perry, Night Production Foreman	**Date and Hour** OCD- 11/9/16 @ 8:44pm BLM- 11/9/16 @ 8:27pm	
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.*
The seal on the Triplex plunger pump became loose resulting in a release of 8 BBLS produced water. The suction lines were isolated immediately to prevent further release. The Triplex plunger pump has been repaired.

Describe Area Affected and Cleanup Action Taken.*
8 BBLS produced water was released from the Triplex plunger pump onto the ground. The area affected was on the Southwestern portion of the pad. All released produced water was contained on pad. None of the released fluid left pad. Vacuum truck recovered approximately 8 BBLS of produced water and 62 BBLS of rain water on location. Environmental agency will be contacted for remediation.

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: Sarah Gallegos-Troublefield	OIL CONSERVATION DIVISION Signed By Approved by Environmental Specialist:	
Printed Name: Sarah Gallegos-Troublefield		
Title: Field Admin Support	Approval Date: 11/16/16	Expiration Date: N/A
E-mail Address: Sarah.Gallegos-Troublefield@dvn.com	Conditions of Approval:	Attached ☑
Date:11/15/2016 Phone: 575.748.1864		

* Attach Additional Sheets If Necessary

2RP-3995

Bratcher, Mike, EMNRD

From: Gallegos-Troublefield, Sarah <Sarah.Gallegos-Troublefield@dvn.com>
Sent: Tuesday, November 15, 2016 9:12 AM
To: jamos@blm.gov; Tucker, Shelly; Patterson, Heather, EMNRD; Bratcher, Mike, EMNRD
Cc: Fulks, Brett
Subject: Cochiti 28 Federal #1_8 BBLS PW_11-8-2016_Initial C-141
Attachments: Cochiti 28 Federal 1_8 BBLS PW_11-8-2016_GIS Image.pdf; Cochiti 28 Federal 1_8 BBLS PW_11-8-2016_Initial C-141.doc

Good Morning,

Please find attached the Initial C-141 and the GIS Image of the Cochiti 28 Federal #1 release of 8 BBLS PW that occurred on 11/8/2016. Please be advised that the blue dot on the GIS Image represents the approximate location of the origin of release. Please contact me with any questions you may have.

Thank you very much and have a wonderful and safe day!

Respectfully,

Sarah Gallegos-Troublefield
Field Admin Support
Production

Devon Energy Corporation
P.O. Box 250
Artesia, NM 88211
575 748 1864 Direct Line

devon

State of New Mexico
Oil Conservation Division

Incident ID	NAB1632133942
District RP	2RP-3995
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?	<50 (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
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAB1632133942
District RP	2RP-3995
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: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1632133942
District RP	2RP-3995
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	NAB1632133942
District RP	2RP-3995
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.***

[X] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[X] 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)

[X] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

[X] 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: Brittany Hall Date: 11/1/2022

Printed Name: Brittany Hall Title: Environmental Specialist

Attachment B

Photographs

South and East walls of the excavation

South and west walls of the excavation

West wall of the excavation

North wall of the excavation

Attachment C

Characterization Sampling Analytical Laboratory Results

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 24, 2020

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

RE: Cochiti 28 Fed 1 Nov 2016 OrderNo.: 2004848

Dear Tom Bynum:

Hall Environmental Analysis Laboratory received 6 sample(s) on 4/18/2020 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 **2004848**
Date Reported: **4/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2004848-001 **Matrix:** SOIL

Client Sample ID: SP1
Collection Date: 4/14/2020 12:24:00 PM
Received Date: 4/18/2020 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	4/21/2020 10:50:29 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/21/2020 10:50:29 AM
Surr: DNOP	95.9	55.1-146		%Rec	1	4/21/2020 10:50:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/22/2020 4:13:49 PM
Surr: BFB	99.2	66.6-105		%Rec	1	4/22/2020 4:13:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/22/2020 4:13:49 PM
Toluene	ND	0.047		mg/Kg	1	4/22/2020 4:13:49 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/22/2020 4:13:49 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/22/2020 4:13:49 PM
Surr: 4-Bromofluorobenzene	99.7	80-120		%Rec	1	4/22/2020 4:13:49 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	76	60		mg/Kg	20	4/22/2020 8:42:56 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 **2004848**
Date Reported: **4/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2004848-002 **Matrix:** SOIL

Client Sample ID: SP2
Collection Date: 4/14/2020 12:45:00 PM
Received Date: 4/18/2020 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	4/21/2020 11:14:31 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/21/2020 11:14:31 AM
Surr: DNOP	87.4	55.1-146		%Rec	1	4/21/2020 11:14:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/22/2020 4:37:14 PM
Surr: BFB	98.7	66.6-105		%Rec	1	4/22/2020 4:37:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.023		mg/Kg	1	4/22/2020 4:37:14 PM
Toluene	ND	0.047		mg/Kg	1	4/22/2020 4:37:14 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/22/2020 4:37:14 PM
Xylenes, Total	ND	0.093		mg/Kg	1	4/22/2020 4:37:14 PM
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	4/22/2020 4:37:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	350	60		mg/Kg	20	4/22/2020 8:55:17 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 **2004848**
Date Reported: **4/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2004848-003 **Matrix:** SOIL

Client Sample ID: SP3 @ 0"
Collection Date: 4/14/2020 12:50:00 PM
Received Date: 4/18/2020 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	7.8	7.5		mg/Kg	1	4/20/2020 11:15:36 AM
Motor Oil Range Organics (MRO)	ND	37		mg/Kg	1	4/20/2020 11:15:36 AM
Surr: DNOP	97.6	55.1-146		%Rec	1	4/20/2020 11:15:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/22/2020 5:00:32 PM
Surr: BFB	98.1	66.6-105		%Rec	1	4/22/2020 5:00:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/22/2020 5:00:32 PM
Toluene	ND	0.047		mg/Kg	1	4/22/2020 5:00:32 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/22/2020 5:00:32 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/22/2020 5:00:32 PM
Surr: 4-Bromofluorobenzene	98.2	80-120		%Rec	1	4/22/2020 5:00:32 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	2400	150		mg/Kg	50	4/23/2020 11:26:12 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 **2004848**
Date Reported: **4/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2004848-004 **Matrix:** SOIL

Client Sample ID: SP4
Collection Date: 4/14/2020 1:14:00 PM
Received Date: 4/18/2020 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	25	9.6		mg/Kg	1	4/20/2020 11:39:40 AM
Motor Oil Range Organics (MRO)	110	48		mg/Kg	1	4/20/2020 11:39:40 AM
Surr: DNOP	82.9	55.1-146		%Rec	1	4/20/2020 11:39:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/22/2020 5:23:55 PM
Surr: BFB	99.5	66.6-105		%Rec	1	4/22/2020 5:23:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	4/22/2020 5:23:55 PM
Toluene	ND	0.049		mg/Kg	1	4/22/2020 5:23:55 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/22/2020 5:23:55 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/22/2020 5:23:55 PM
Surr: 4-Bromofluorobenzene	99.2	80-120		%Rec	1	4/22/2020 5:23:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	380	59		mg/Kg	20	4/22/2020 9:20:00 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 **2004848**
Date Reported: **4/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2004848-005 **Matrix:** SOIL

Client Sample ID: SP5
Collection Date: 4/14/2020 1:32:00 PM
Received Date: 4/18/2020 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	14	9.9		mg/Kg	1	4/20/2020 12:03:51 PM
Motor Oil Range Organics (MRO)	98	49		mg/Kg	1	4/20/2020 12:03:51 PM
Surr: DNOP	89.0	55.1-146		%Rec	1	4/20/2020 12:03:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/22/2020 5:47:16 PM
Surr: BFB	99.7	66.6-105		%Rec	1	4/22/2020 5:47:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/22/2020 5:47:16 PM
Toluene	ND	0.048		mg/Kg	1	4/22/2020 5:47:16 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/22/2020 5:47:16 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/22/2020 5:47:16 PM
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	4/22/2020 5:47:16 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	94	60		mg/Kg	20	4/22/2020 9:32:21 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 **2004848**
Date Reported: **4/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2004848-006 **Matrix:** SOIL

Client Sample ID: SP3 @ 12"
Collection Date: 4/14/2020 4:45:00 PM
Received Date: 4/18/2020 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	32	9.5		mg/Kg	1	4/20/2020 12:27:58 PM
Motor Oil Range Organics (MRO)	77	48		mg/Kg	1	4/20/2020 12:27:58 PM
Surr: DNOP	103	55.1-146		%Rec	1	4/20/2020 12:27:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/22/2020 6:10:41 PM
Surr: BFB	101	66.6-105		%Rec	1	4/22/2020 6:10:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/22/2020 6:10:41 PM
Toluene	ND	0.049		mg/Kg	1	4/22/2020 6:10:41 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/22/2020 6:10:41 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/22/2020 6:10:41 PM
Surr: 4-Bromofluorobenzene	98.9	80-120		%Rec	1	4/22/2020 6:10:41 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	300	60		mg/Kg	20	4/22/2020 9:44:41 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#: **2004848**

24-Apr-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **MB-52033** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **52033** RunNo: **68324**

Prep Date: **4/22/2020** Analysis Date: **4/22/2020** SeqNo: **2364906** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52033** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **52033** RunNo: **68324**

Prep Date: **4/22/2020** Analysis Date: **4/22/2020** SeqNo: **2364907** 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			

Sample ID: **MB-52033** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **52033** RunNo: **68356**

Prep Date: **4/22/2020** Analysis Date: **4/23/2020** SeqNo: **2365666** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52033** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **52033** RunNo: **68356**

Prep Date: **4/22/2020** Analysis Date: **4/23/2020** SeqNo: **2365667** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	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#: **2004848**

24-Apr-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **LCS-51944** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51944** RunNo: **68265**
Prep Date: **4/19/2020** Analysis Date: **4/20/2020** SeqNo: **2361901** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	113	70	130			
Surr: DNOP	6.2		5.000		124	55.1	146			

Sample ID: **LCS-51945** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51945** RunNo: **68265**
Prep Date: **4/19/2020** Analysis Date: **4/20/2020** SeqNo: **2361902** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		73.6	55.1	146			

Sample ID: **MB-51944** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51944** RunNo: **68265**
Prep Date: **4/19/2020** Analysis Date: **4/20/2020** SeqNo: **2361903** 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	12		10.00		115	55.1	146			

Sample ID: **MB-51945** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51945** RunNo: **68265**
Prep Date: **4/19/2020** Analysis Date: **4/20/2020** SeqNo: **2361904** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.4		10.00		74.4	55.1	146			

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#: **2004848**

24-Apr-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **mb-51937** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **51937** RunNo: **68306**

Prep Date: **4/19/2020** Analysis Date: **4/22/2020** SeqNo: **2363135** 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		101	66.6	105			

Sample ID: **lcs-51937** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **51937** RunNo: **68306**

Prep Date: **4/19/2020** Analysis Date: **4/22/2020** SeqNo: **2363136** 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	84.6	80	120			
Surr: BFB	1100		1000		112	66.6	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#: **2004848**

24-Apr-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **mb-51937** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **51937** RunNo: **68306**

Prep Date: **4/19/2020** Analysis Date: **4/22/2020** SeqNo: **2363182** 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		100	80	120			

Sample ID: **LCS-51937** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **51937** RunNo: **68306**

Prep Date: **4/19/2020** Analysis Date: **4/22/2020** SeqNo: **2363183** 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	89.0	80	120			
Toluene	0.92	0.050	1.000	0	91.8	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.3	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **DEVON ENERGY** Work Order Number: **2004848** RcptNo: 1

Received By: **Isaiah Ortiz** **4/18/2020 10:20:00 AM** I-Ox

Completed By: **Isaiah Ortiz** **4/18/2020 11:54:52 AM** I-Ox

Reviewed By: dkm 4/18/2020

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 preserved 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 ☑

# of preserved bottles checked for pH: 4/18/20
(<2 or >12 unless noted)
Adjusted?
Checked by:

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 ☐

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	3.4	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 Fed 1 Nov 2016
Project #: 208430060
Project Manager: Tom Bynum
Sampler: T. Elwell (HRL)
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 3.4-0 CF | 3.4 (°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. 2009848	BTEX / MTBE / TMB's (8021)	TPH: 8015D (GRO / DRO / MRO) 8015M	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)
4/14/20	1224	Soil	SP1	4oz Glass	Ice	-001	X	X					X			
4/14/20	1245	Soil	SP2	4oz Glass	Ice	-002	X	X					X			
4/14/20	1250	Soil	SP3 @ 0"	4oz Glass	Ice	-003	X	X					X			
4/14/20	1314	Soil	SP4	4oz Glass	Ice	-004	X	X					X			
4/14/20	1332	Soil	SP5	4oz Glass	Ice	-005	X	X					X			
4/14/20	16:45	Soil	SP3 @ 12"	4oz Glass	Ice	-006	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/17/20	13:41	Taylor Elwell				
4/17	1900				4/17	1340
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			I-O	courier	4/18/20	1020

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.

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

May 27, 2020

Tom Bynum

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

RE: Cochiti 28 Fed 1 Nov 2016 OrderNo.: 2005574

Dear Tom Bynum:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/14/2020 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued May 20, 2020.

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2005574**
Date Reported: **5/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2005574-001 **Matrix:** SOIL

Client Sample ID: SP-6-0'
Collection Date: 5/11/2020 11:45:00 AM
Received Date: 5/14/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/18/2020 3:51:41 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/18/2020 3:51:41 PM
Surr: DNOP	90.3	55.1-146		%Rec	1	5/18/2020 3:51:41 PM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	ND	60		mg/Kg	20	5/18/2020 9:29:13 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	5/16/2020 5:53:22 AM
Toluene	ND	0.050		mg/Kg	1	5/16/2020 5:53:22 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/16/2020 5:53:22 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/16/2020 5:53:22 AM
Surr: 1,2-Dichloroethane-d4	90.0	70-130		%Rec	1	5/16/2020 5:53:22 AM
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	5/16/2020 5:53:22 AM
Surr: Dibromofluoromethane	92.4	70-130		%Rec	1	5/16/2020 5:53:22 AM
Surr: Toluene-d8	102	70-130		%Rec	1	5/16/2020 5:53:22 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/16/2020 5:53:22 AM
Surr: BFB	100	70-130		%Rec	1	5/16/2020 5:53:22 AM

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 **2005574**
Date Reported: **5/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2005574-002 **Matrix:** SOIL

Client Sample ID: SP-7-0'
Collection Date: 5/11/2020 1:13:00 PM
Received Date: 5/14/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	43	9.3		mg/Kg	1	5/18/2020 4:16:06 PM
Motor Oil Range Organics (MRO)	220	46		mg/Kg	1	5/18/2020 4:16:06 PM
Surr: DNOP	95.3	55.1-146		%Rec	1	5/18/2020 4:16:06 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	60		mg/Kg	20	5/19/2020 12:04:58 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	5/16/2020 6:22:36 AM
Toluene	ND	0.050		mg/Kg	1	5/16/2020 6:22:36 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/16/2020 6:22:36 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/16/2020 6:22:36 AM
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%Rec	1	5/16/2020 6:22:36 AM
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	5/16/2020 6:22:36 AM
Surr: Dibromofluoromethane	93.4	70-130		%Rec	1	5/16/2020 6:22:36 AM
Surr: Toluene-d8	105	70-130		%Rec	1	5/16/2020 6:22:36 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/16/2020 6:22:36 AM
Surr: BFB	101	70-130		%Rec	1	5/16/2020 6:22:36 AM

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 **2005574**
Date Reported: **5/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2005574-003 **Matrix:** SOIL

Client Sample ID: SP-8-2.5'
Collection Date: 5/11/2020 12:29:00 PM
Received Date: 5/14/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	83	9.4		mg/Kg	1	5/18/2020 4:40:18 PM
Motor Oil Range Organics (MRO)	130	47		mg/Kg	1	5/18/2020 4:40:18 PM
Surr: DNOP	98.7	55.1-146		%Rec	1	5/18/2020 4:40:18 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	500	59		mg/Kg	20	5/19/2020 1:06:42 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.024		mg/Kg	1	5/16/2020 6:51:36 AM
Toluene	ND	0.048		mg/Kg	1	5/16/2020 6:51:36 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/16/2020 6:51:36 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/16/2020 6:51:36 AM
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%Rec	1	5/16/2020 6:51:36 AM
Surr: 4-Bromofluorobenzene	93.3	70-130		%Rec	1	5/16/2020 6:51:36 AM
Surr: Dibromofluoromethane	94.5	70-130		%Rec	1	5/16/2020 6:51:36 AM
Surr: Toluene-d8	101	70-130		%Rec	1	5/16/2020 6:51:36 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/16/2020 6:51:36 AM
Surr: BFB	99.4	70-130		%Rec	1	5/16/2020 6:51:36 AM

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 **2005574**
Date Reported: **5/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti 28 Fed 1 Nov 2016
Lab ID: 2005574-004 **Matrix:** SOIL

Client Sample ID: SP-8-5'
Collection Date: 5/11/2020 2:23:00 PM
Received Date: 5/14/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	12	9.6		mg/Kg	1	5/18/2020 5:04:37 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/18/2020 5:04:37 PM
Surr: DNOP	96.1	55.1-146		%Rec	1	5/18/2020 5:04:37 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	470	60		mg/Kg	20	5/19/2020 1:19:02 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.024		mg/Kg	1	5/16/2020 7:20:55 AM
Toluene	ND	0.047		mg/Kg	1	5/16/2020 7:20:55 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/16/2020 7:20:55 AM
Xylenes, Total	ND	0.095		mg/Kg	1	5/16/2020 7:20:55 AM
Surr: 1,2-Dichloroethane-d4	89.8	70-130		%Rec	1	5/16/2020 7:20:55 AM
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	5/16/2020 7:20:55 AM
Surr: Dibromofluoromethane	92.9	70-130		%Rec	1	5/16/2020 7:20:55 AM
Surr: Toluene-d8	101	70-130		%Rec	1	5/16/2020 7:20:55 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/16/2020 7:20:55 AM
Surr: BFB	103	70-130		%Rec	1	5/16/2020 7:20:55 AM

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#: **2005574**

27-May-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **MB-52539**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **52539**	RunNo: **68997**							
Prep Date: **5/18/2020**	Analysis Date: **5/18/2020**	SeqNo: **2388722**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52539**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **52539**	RunNo: **68997**							
Prep Date: **5/18/2020**	Analysis Date: **5/18/2020**	SeqNo: **2388723**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.6	90	110			

Sample ID: **MB-52555**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **52555**	RunNo: **69004**							
Prep Date: **5/19/2020**	Analysis Date: **5/19/2020**	SeqNo: **2390685**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52555**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **52555**	RunNo: **69004**							
Prep Date: **5/19/2020**	Analysis Date: **5/19/2020**	SeqNo: **2390686**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	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#: **2005574**

27-May-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **LCS-52490**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52490**	RunNo: **68971**
Prep Date: **5/15/2020**	Analysis Date: **5/18/2020**	SeqNo: **2387773** 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	95.0	70	130			
Surr: DNOP	3.8		5.000		75.1	55.1	146			

Sample ID: **MB-52490**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52490**	RunNo: **68971**
Prep Date: **5/15/2020**	Analysis Date: **5/18/2020**	SeqNo: **2387774** 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	8.5		10.00		85.2	55.1	146			

Sample ID: **MB-52635**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52635**	RunNo: **69011**
Prep Date: **5/21/2020**	Analysis Date: **5/22/2020**	SeqNo: **2395784** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		115	55.1	146			

Sample ID: **LCS-52635**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52635**	RunNo: **69011**
Prep Date: **5/21/2020**	Analysis Date: **5/22/2020**	SeqNo: **2395787** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		97.7	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#: **2005574**

27-May-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **mb-52478**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **52478**	RunNo: **68938**
Prep Date: **5/14/2020**	Analysis Date: **5/16/2020**	SeqNo: **2385946** 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: 1,2-Dichloroethane-d4	0.48		0.5000		95.5	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.2	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.7	70	130			
Surr: Toluene-d8	0.49		0.5000		98.6	70	130			

Sample ID: **lcs-52478**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **52478**	RunNo: **68938**
Prep Date: **5/14/2020**	Analysis Date: **5/15/2020**	SeqNo: **2385947** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.0	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.5	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.7	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

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#: **2005574**

27-May-20

Client: Devon Energy

Project: Cochiti 28 Fed 1 Nov 2016

Sample ID: **mb-52478**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **52478**	RunNo: **68938**
Prep Date: **5/14/2020**	Analysis Date: **5/16/2020**	SeqNo: **2385968** 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	510		500.0		102	70	130			

Sample ID: **lcs-52478**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **52478**	RunNo: **68938**
Prep Date: **5/14/2020**	Analysis Date: **5/15/2020**	SeqNo: **2385969** 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	92.1	70	130			
Surr: BFB	510		500.0		101	70	130			

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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **DEVON ENERGY** Work Order Number: **2005574** RcptNo: 1

Received By: **Isaiah Ortiz** **5/14/2020 9:30:00 AM** I_Ox

Completed By: **Isaiah Ortiz** **5/14/2020 11:02:12 AM** I_Ox

Reviewed By: DAD 5/14/20

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: JR 5/14/20

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	3.3	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: 5 Day
☒ Standard ☐ Rush
Project Name: Cochiti 28 Fed 1
Nov 2016
Project #:
20843060
Project Manager: Tom Bynum
Sampler: T. Elwell (HRL)
On Ice: ■ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 3.2+0.1(CF) 3.3 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2005574	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)
5/11/20	1145	Soil	SP-6-0'	4oz Glass	Ice	-001	X	X					X			
5/11/20	1313	Soil	SP-7-0' TE 5.13.20	4oz Glass	Ice	-002	X	X					X			
5/11/20	1229	Soil	SP-8-2.5'	4oz Glass	Ice	-003	X	X					X			
5/11/20	1423	Soil	SP-8-5'	4oz Glass	Ice	-004	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/12/20	1000	Taylor Elwell				
5/13	1900				5/13	1000
			T Q courier		5/14/20	0930

Remarks: Please also send report to:
jinn@hrlcomp.com
tdwell@hrlcomp.com

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

June 02, 2020

Tom Bynum

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

RE: Cochiti 28 Fed 1- Nov 2016 OrderNo.: 2005A45

Dear Tom Bynum:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/23/2020 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 **2005A45**
Date Reported: **6/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: SP-10
Project: Cochiti 28 Fed 1- Nov 2016
Collection Date: 5/21/2020 4:01:00 PM
Lab ID: 2005A45-001 **Matrix:** SOIL
Received Date: 5/23/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	5/29/2020 4:08:10 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	5/29/2020 4:08:10 PM
Surr: DNOP	64.2	55.1-146		%Rec	1	5/29/2020 4:08:10 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	140	60		mg/Kg	20	6/1/2020 4:08:52 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	5/28/2020 1:15:11 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2020 1:15:11 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2020 1:15:11 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/28/2020 1:15:11 AM
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%Rec	1	5/28/2020 1:15:11 AM
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	5/28/2020 1:15:11 AM
Surr: Dibromofluoromethane	97.5	70-130		%Rec	1	5/28/2020 1:15:11 AM
Surr: Toluene-d8	102	70-130		%Rec	1	5/28/2020 1:15:11 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2020 1:15:11 AM
Surr: BFB	103	70-130		%Rec	1	5/28/2020 1:15:11 AM

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#: **2005A45**

02-Jun-20

Client: Devon Energy

Project: Cochiti 28 Fed 1- Nov 2016

Sample ID: **MB-52800**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **52800**	RunNo: **69292**
Prep Date: **6/1/2020**	Analysis Date: **6/1/2020**	SeqNo: **2403563** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52800**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **52800**	RunNo: **69292**
Prep Date: **6/1/2020**	Analysis Date: **6/1/2020**	SeqNo: **2403565** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	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#: **2005A45**
02-Jun-20

Client: Devon Energy
Project: Cochiti 28 Fed 1- Nov 2016

Sample ID: **LCS-52738** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **52738** RunNo: **69198**
Prep Date: **5/28/2020** Analysis Date: **5/29/2020** SeqNo: **2399901** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	114	70	130			
Surr: DNOP	4.6		5.000		92.5	55.1	146			

Sample ID: **MB-52738** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **52738** RunNo: **69198**
Prep Date: **5/28/2020** Analysis Date: **5/29/2020** SeqNo: **2399902** 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	10		10.00		101	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#: **2005A45**
02-Jun-20

Client: Devon Energy
Project: Cochiti 28 Fed 1- Nov 2016

Sample ID: **LCS-52674** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **52674** RunNo: **69165**
Prep Date: **5/25/2020** Analysis Date: **5/27/2020** SeqNo: **2397013** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.8	80	120			
Toluene	1.0	0.050	1.000	0	99.7	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 1,2-Dichloroethane-d4	0.46		0.5000		91.7	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.1	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.5	70	130			
Surr: Toluene-d8	0.49		0.5000		97.5	70	130			

Sample ID: **mb-52674** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **52674** RunNo: **69165**
Prep Date: **5/25/2020** Analysis Date: **5/27/2020** SeqNo: **2397014** 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: 1,2-Dichloroethane-d4	0.46		0.5000		92.5	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.0	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.8	70	130			
Surr: Toluene-d8	0.48		0.5000		96.1	70	130			

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#: **2005A45**

02-Jun-20

Client: Devon Energy

Project: Cochiti 28 Fed 1- Nov 2016

Sample ID: **lcs-52674** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **LCSS** Batch ID: **52674** RunNo: **69165**

Prep Date: **5/25/2020** Analysis Date: **5/27/2020** SeqNo: **2397020** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.3	70	130			
Surr: BFB	550		500.0		110	70	130			

Sample ID: **mb-52674** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **PBS** Batch ID: **52674** RunNo: **69165**

Prep Date: **5/25/2020** Analysis Date: **5/27/2020** SeqNo: **2397021** 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	550		500.0		109	70	130			

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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DEVON ENERGY Work Order Number: 2005A45 RcptNo: 1

Received By: **Juan Rojas** 5/23/2020 8:00:00 AM

Completed By: **Juan Rojas** 5/23/2020 9:11:37 AM

Reviewed By: 05/23/20

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: JR 5/23/20

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	0.8	Good				

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: 5 Day
☒ Standard ☐ Rush
Project Name: Cochiti 28 Fed 1 - Nov 2016
Project #: 20843060
Project Manager: Tom Bynum
Sampler: T. Elwell (HEL)
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 0.8-0=0.8 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
5/12/16	1601	Soil	SP-10	4oz Glass Jar	Ice	2005A45-001

Analysis Request

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)
X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
5/12/16	0800	Taylor Elwell				
5/12	1900			courier	5/13/20	8:00

Remarks: Please also send report to jlinn@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

Confirmation Sampling Analytical Laboratory Results

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 04, 2020

Tom Bynum

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

RE: Cochiti Nov 2016 OrderNo.: 2007E39

Dear Tom Bynum:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/29/2020 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 **2007E39**
Date Reported: **8/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti Nov 2016
Lab ID: 2007E39-001 **Matrix:** SOIL

Client Sample ID: Floor-East
Collection Date: 7/23/2020 8:07:00 AM
Received Date: 7/29/2020 8:00:00 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	7/31/2020 6:50:58 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/31/2020 6:50:58 PM
Surr: DNOP	42.8	30.4-154		%Rec	1	7/31/2020 6:50:58 PM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	89	60		mg/Kg	20	8/3/2020 5:53:09 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	7/31/2020 6:32:17 PM
Toluene	ND	0.050		mg/Kg	1	7/31/2020 6:32:17 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/31/2020 6:32:17 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/31/2020 6:32:17 PM
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	7/31/2020 6:32:17 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/31/2020 6:32:17 PM
Surr: Dibromofluoromethane	110	70-130		%Rec	1	7/31/2020 6:32:17 PM
Surr: Toluene-d8	104	70-130		%Rec	1	7/31/2020 6:32:17 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/31/2020 6:32:17 PM
Surr: BFB	104	70-130		%Rec	1	7/31/2020 6:32:17 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 **2007E39**
Date Reported: **8/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: Floor-West
Project: Cochiti Nov 2016
Collection Date: 7/23/2020 8:11:00 AM
Lab ID: 2007E39-002 **Matrix:** SOIL
Received Date: 7/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/31/2020 7:01:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/31/2020 7:01:14 PM
Surr: DNOP	59.0	30.4-154		%Rec	1	7/31/2020 7:01:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	400	60		mg/Kg	20	8/3/2020 6:05:33 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.025		mg/Kg	1	7/31/2020 7:00:51 PM
Toluene	ND	0.050		mg/Kg	1	7/31/2020 7:00:51 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/31/2020 7:00:51 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/31/2020 7:00:51 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	7/31/2020 7:00:51 PM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	7/31/2020 7:00:51 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	7/31/2020 7:00:51 PM
Surr: Toluene-d8	98.8	70-130		%Rec	1	7/31/2020 7:00:51 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/31/2020 7:00:51 PM
Surr: BFB	98.8	70-130		%Rec	1	7/31/2020 7:00:51 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 **2007E39**
Date Reported: **8/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti Nov 2016
Lab ID: 2007E39-003 **Matrix:** SOIL

Client Sample ID: Sidewall-0-12
Collection Date: 7/23/2020 8:18:00 AM
Received Date: 7/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/31/2020 7:11:28 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/31/2020 7:11:28 PM
Surr: DNOP	67.8	30.4-154		%Rec	1	7/31/2020 7:11:28 PM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	90	60		mg/Kg	20	8/3/2020 6:17:57 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.024		mg/Kg	1	7/31/2020 7:29:26 PM
Toluene	ND	0.048		mg/Kg	1	7/31/2020 7:29:26 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/31/2020 7:29:26 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/31/2020 7:29:26 PM
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	7/31/2020 7:29:26 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/31/2020 7:29:26 PM
Surr: Dibromofluoromethane	110	70-130		%Rec	1	7/31/2020 7:29:26 PM
Surr: Toluene-d8	103	70-130		%Rec	1	7/31/2020 7:29:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/31/2020 7:29:26 PM
Surr: BFB	102	70-130		%Rec	1	7/31/2020 7:29:26 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 **2007E39**
Date Reported: **8/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Cochiti Nov 2016
Lab ID: 2007E39-004 **Matrix:** SOIL

Client Sample ID: Sidewall-12-36
Collection Date: 7/23/2020 8:24:00 AM
Received Date: 7/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/31/2020 7:21:43 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/31/2020 7:21:43 PM
Surr: DNOP	49.7	30.4-154		%Rec	1	7/31/2020 7:21:43 PM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	95	60		mg/Kg	20	8/3/2020 6:55:11 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**
Benzene	ND	0.024		mg/Kg	1	7/31/2020 7:57:58 PM
Toluene	ND	0.049		mg/Kg	1	7/31/2020 7:57:58 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/31/2020 7:57:58 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/31/2020 7:57:58 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	7/31/2020 7:57:58 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	7/31/2020 7:57:58 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	7/31/2020 7:57:58 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	7/31/2020 7:57:58 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/31/2020 7:57:58 PM
Surr: BFB	96.9	70-130		%Rec	1	7/31/2020 7:57:58 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2007E39**

04-Aug-20

Client: Devon Energy

Project: Cochiti Nov 2016

Sample ID: **MB-54133**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **54133**	RunNo: **70785**
Prep Date: **8/3/2020**	Analysis Date: **8/3/2020**	SeqNo: **2465333** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-54133**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **54133**	RunNo: **70785**
Prep Date: **8/3/2020**	Analysis Date: **8/3/2020**	SeqNo: **2465334** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	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#: **2007E39**

04-Aug-20

Client: Devon Energy

Project: Cochiti Nov 2016

Sample ID: **MB-54051**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **54051**	RunNo: **70804**
Prep Date: **7/29/2020**	Analysis Date: **7/31/2020**	SeqNo: **2464708** 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	12		10.00		124	30.4	154			

Sample ID: **LCS-54051**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **54051**	RunNo: **70804**
Prep Date: **7/29/2020**	Analysis Date: **7/31/2020**	SeqNo: **2464710** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	116	70	130			
Surr: DNOP	5.7		5.000		115	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#: **2007E39**

04-Aug-20

Client: Devon Energy

Project: Cochiti Nov 2016

Sample ID: **mb-54042**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **54042**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/30/2020**	SeqNo: **2462167** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		99.0	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		103	70	130			
Surr: Toluene-d8	0.48		0.5000		96.4	70	130			

Sample ID: **lcs-54042**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **54042**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/30/2020**	SeqNo: **2462168** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		99.8	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		103	70	130			
Surr: Toluene-d8	0.48		0.5000		95.6	70	130			

Sample ID: **mb-54045**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **54045**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/31/2020**	SeqNo: **2462218** 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: 1,2-Dichloroethane-d4	0.50		0.5000		99.4	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.53		0.5000		106	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID: **lcs-54045**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **54045**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/30/2020**	SeqNo: **2462219** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.4	80	120			
Toluene	0.99	0.050	1.000	0	98.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		103	70	130			

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#: **2007E39**

04-Aug-20

Client: Devon Energy
Project: Cochiti Nov 2016

Sample ID: **lcs-54045** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **54045** RunNo: **70747**
Prep Date: **7/29/2020** Analysis Date: **7/30/2020** SeqNo: **2462219** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.49		0.5000		98.4	70	130			

Sample ID: **mb-54070** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **54070** RunNo: **70769**
Prep Date: **7/30/2020** Analysis Date: **7/31/2020** SeqNo: **2462806** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		99.5	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.8	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		107	70	130			
Surr: Toluene-d8	0.52		0.5000		104	70	130			

Sample ID: **lcs-54070** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **54070** RunNo: **70769**
Prep Date: **7/30/2020** Analysis Date: **7/31/2020** SeqNo: **2462807** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.0	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.1	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.49		0.5000		97.3	70	130			

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **S70775** RunNo: **70775**
Prep Date: Analysis Date: **8/1/2020** SeqNo: **2463032** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID: **100ng lcs** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **S70775** RunNo: **70775**
Prep Date: Analysis Date: **8/1/2020** SeqNo: **2463033** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			

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#: **2007E39**

04-Aug-20

Client: Devon Energy

Project: Cochiti Nov 2016

Sample ID: **100ng lcs** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **BatchQC** Batch ID: **S70775** RunNo: **70775**

Prep Date: Analysis Date: **8/1/2020** SeqNo: **2463033** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.53		0.5000		107	70	130			
Surr: Toluene-d8	0.51		0.5000		101	70	130			

Sample ID: **mb-54081** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBS** Batch ID: **54081** RunNo: **70775**

Prep Date: **7/30/2020** Analysis Date: **8/2/2020** SeqNo: **2463058** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.6	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.50		0.5000		99.0	70	130			

Sample ID: **lcs-54081** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **BatchQC** Batch ID: **54081** RunNo: **70775**

Prep Date: **7/30/2020** Analysis Date: **8/2/2020** SeqNo: **2463059** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.49		0.5000		98.0	70	130			

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#: **2007E39**

04-Aug-20

Client: Devon Energy

Project: Cochiti Nov 2016

Sample ID: **mb-54042**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **54042**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/30/2020**	SeqNo: **2462229** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	480		500.0		96.1	70	130			

Sample ID: **lcs-54042**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **54042**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/30/2020**	SeqNo: **2462230** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	510		500.0		102	70	130			

Sample ID: **mb-54045**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **54045**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/31/2020**	SeqNo: **2462278** 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	510		500.0		101	70	130			

Sample ID: **lcs-54045**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **54045**	RunNo: **70747**
Prep Date: **7/29/2020**	Analysis Date: **7/31/2020**	SeqNo: **2462279** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.0	70	130			
Surr: BFB	520		500.0		105	70	130			

Sample ID: **mb-54070**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **54070**	RunNo: **70769**
Prep Date: **7/30/2020**	Analysis Date: **7/31/2020**	SeqNo: **2462847** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	520		500.0		103	70	130			

Sample ID: **lcs-54070**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **54070**	RunNo: **70769**
Prep Date: **7/30/2020**	Analysis Date: **7/31/2020**	SeqNo: **2462848** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	520		500.0		103	70	130			

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#: **2007E39**

04-Aug-20

Client: Devon Energy

Project: Cochiti Nov 2016

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **G70775**	RunNo: **70775**
Prep Date:	Analysis Date: **8/1/2020**	SeqNo: **2463070** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	510		500.0		103	70	130			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G70775**	RunNo: **70775**
Prep Date:	Analysis Date: **8/1/2020**	SeqNo: **2463071** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	500		500.0		99.7	70	130			

Sample ID: **mb-54081**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **54081**	RunNo: **70775**
Prep Date: **7/30/2020**	Analysis Date: **8/2/2020**	SeqNo: **2463097** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	500		500.0		99.8	70	130			

Sample ID: **lcs-54081**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **54081**	RunNo: **70775**
Prep Date: **7/30/2020**	Analysis Date: **8/2/2020**	SeqNo: **2463098** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	480		500.0		96.5	70	130			

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: **2007E39** RcptNo: **1**

Received By: **Isaiah Ortiz** **7/29/2020 8:00:00 AM** I. Ortiz

Completed By: **Isaiah Ortiz** **7/29/2020 8:27:24 AM** I. Ortiz

Reviewed By: JR 7/29/20

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: SPA 7-29-20

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	0.4	Good	Yes			

Chain-of-Custody Record

Client: Devon Energy
attn: Tom Bynum

Mailing Address:

Phone #:

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 Nov 2016

Project #:

Project Manager: Tom Bynum

Sampler: J. Linn, HEL

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.4 +0 (cf) 0.4 °C (°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. 2007E39	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)
7/23/20	0807	Soil	Floor-EAST	1 4oz jar	None	001	✓	✓					✓			
	0811		Floor-West			002	✓	✓					✓			
	0818		Sidewall-0-12			003	✓	✓					✓			
	0824		Sidewall-12-36			004	✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/27/20	1300		Cynthia Walters		7/28/2020	1308
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/28/2020	1807	Cynthia Walters		courier	7/29/20	0800

Remarks: Please also send copy of rept to jlinn@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.

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 10760

CONDITIONS

Operator:	OGRID:
Pima Environmental Services, LLC 5614 N Lovington Hwy Hobbs, NM 88240	329999
	Action Number: 10760
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	11/1/2022