



PO Box 1120
 Carlsbad, New Mexico 88221
 Phone (575) 236-6600

February 13, 2020

NMOCD District 2
 Mr. Robert Hamlet
 811 S. First Street
 Artesia, New Mexico 88210

Dear Mr. Hamlet:

M&M Excavating, Inc. (MMX) has prepared this Closure Report for Devon Energy Production Company that describes the delineation and remediation of two releases of liquid at the Cotton Draw 10 Federal Com #002H site (2RP-4604 & 2RP-5481). The site is in Unit A, Section 10, Township 25S, Range 31E, Latitude 32.15150, Longitude -103.75878, Eddy County, New Mexico, on Federal land. Figure 1 provides the vicinity and site location on an USGS 7.5-minute quadrangle map.

Site Information and Closure Criteria

The Cotton Draw 10 Federal Com #002H is located approximately thirty-three (33) miles southeast of Carlsbad, New Mexico at an elevation of approximately 3,432 feet above mean sea level (amsl).

Based upon well water data. (Appendix B), depth to groundwater in the area is estimated to be between 370 and 450 feet below grade surface (bgs). There are no known water wells within ½ mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) and United State Geological Survey (USGS). The nearest significant watercourse is a Freshwater Emergent Wetland located approximately 3,500 feet to the south.

The sites applicable NMOCD Closure Criteria is for groundwater greater than 100 feet bgs. MMX is requesting deferral of this location as per 19.15.29.12.B.(2).

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

Release Information and Closure Criteria			
Name	Cotton Draw 10 Federal Com #002H		
API Number	30-015-39230		
Incident Number	2RP-4604 & 2RP-5481		
Source of Release	Produced Water Tank Overflow		
Released Material	2RP-4604: PW 2RP-5481: PW & CO	Released Volume	2RP-4604: 181 bbls 2RP-5481: 2 bbls CO & 17 bbls PW
Recovered Volume	2RP-4604: 180 bbls 2RP-5481: 2 bbls CO & 16 bbls	Net Release	2RP-4604: 1 bbls PW 2RP-5481: 1 bbls PW
NMOCD Closure Criteria	>100 feet to groundwater		

Release Information

2RP-4604: On January 21, 2018, the produced water tank ran over resulting in an approximate release of 181 bbls of produced water into the lined SPCC secondary containment ring with less than a barrel of overspray onto the pad. A vacuum truck was dispatched and recovered all the fluids in the lined secondary containment and the tanks were cleaned. A liner inspection was conducted by Devon Energy field staff with no failures in the liner found. Figures 1 and 2 illustrate the vicinity and site location. Figure 3 illustrates the release location. The C-141 form is included in Appendix A.

2RP-5481: On May 2nd, 2019 the produced water tank ran over again resulting in the release of approximately 2 bbls of crude oil and 17 bbls of produced water. Again, the majority of the fluid was released into the lined containment and recovered. The area of overspray overlapped the January 2018 release. The C-141 form is included in Appendix A.

Release Characterization and Remediation Activities

On September 30, 2019, MMX personnel arrived on site in response to the releases associated with Cotton Draw 10 Federal Com #002H. MMX collected initial soil samples around the release site and conducted a liner integrity inspection within the containment. No failures were observed in the liner. Photos of the liner inspection are included in Appendix D.

A total of two (2) sample locations (L1-L2), were investigated with samples collected at three depths (surface, 0.5 and two feet). The samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Cardinal Laboratories in Hobbs, New Mexico (Appendix C).

Figure 3 shows the extent of the release area and sample locations. Results indicate that hydrocarbon contamination exceed closure criteria on the surface around sample location L1. MMX proceeded to excavate the identified impacted area to approximately six inches, a photo of which included in Appendix D.

On November 29, 2019, MMX collected five-point composite, confirmation samples of the walls (SW1 & SW2) and base (BH1 & BH2) of the excavation. A total of four (4) samples were collected for laboratory analysis using the methods listed above. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Laboratories in Albuquerque, New Mexico.

Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported and disposed of at an NMOCD permitted disposal facility. Georeferenced photos are included in Appendix D.

On behalf of Devon Energy, MMX requests closure for the releases associated with 2RP-4604 and 2RP-5481.

Submitted by:
M&M Excavating, Inc.

Parker Kimbley
Parker Kimbley

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3: Site and Sample Location Map

Tables:

Table 2: NMOCD Closure Criteria Justification

Table 3: Summary of Sample Results

Appendices:

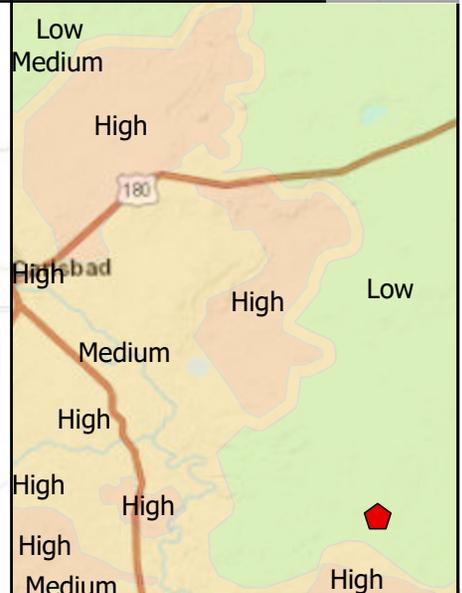
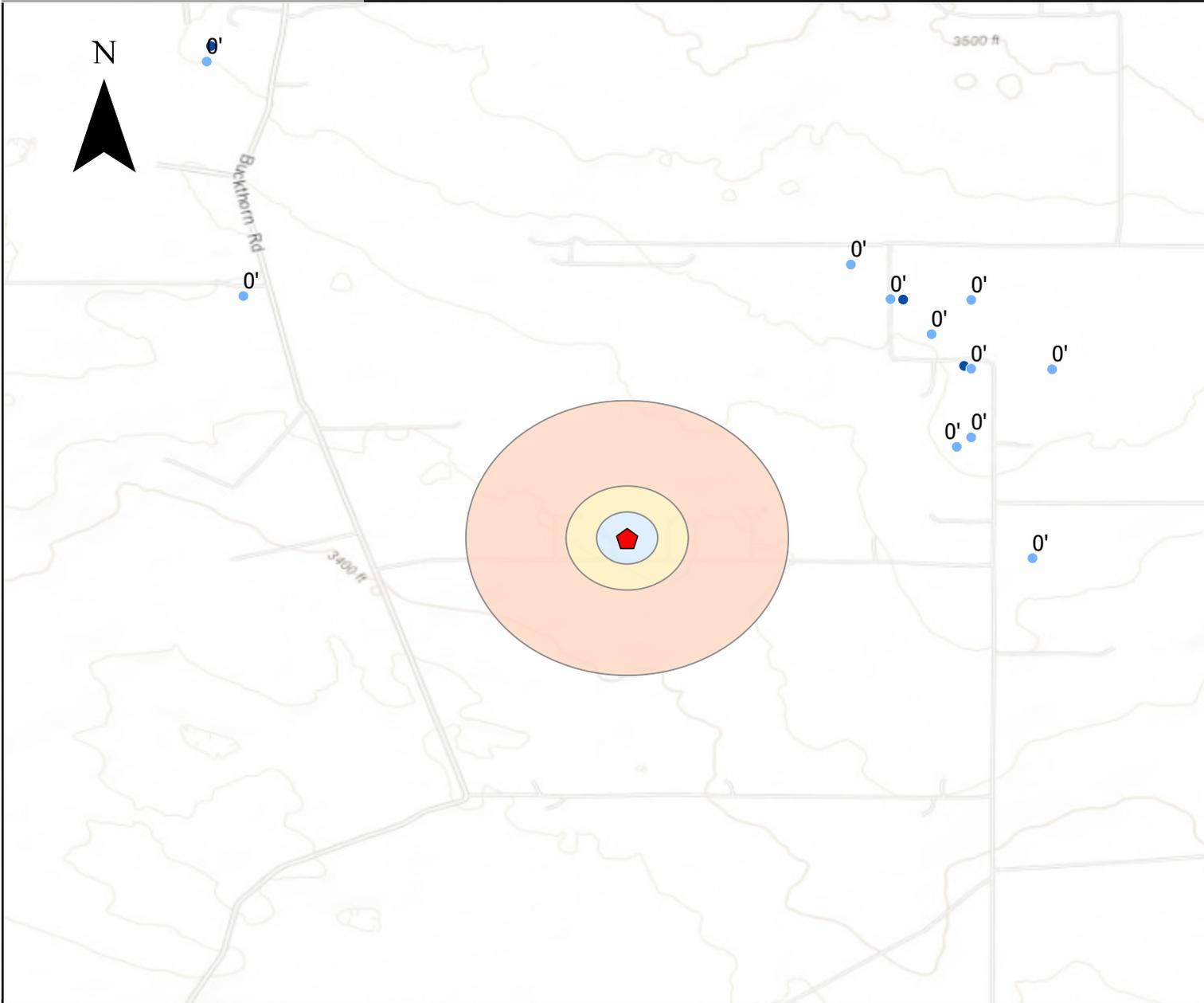
Appendix A: C141 Forms

Appendix B: Water Well Data

Appendix C: Laboratory Analytical Reports

Appendix D: Liner Inspection & Excavation Photo Logs

Figures



Karst Potential

- High
- Low
- Medium

- Point of Release
- OSE Waterwells
- USGS Waterwells

Buffer Distance

- .5 Mile
- 1000 Feet
- 500 Feet

0 0.23 0.46 0.92 Miles

Regional Vicinity & Wellhead Protection Map
 Cotton Draw 10 Federal Com #002H - Devon Energy
 Sec 10 T25S R31E Eddy County, New Mexico

Figure 1

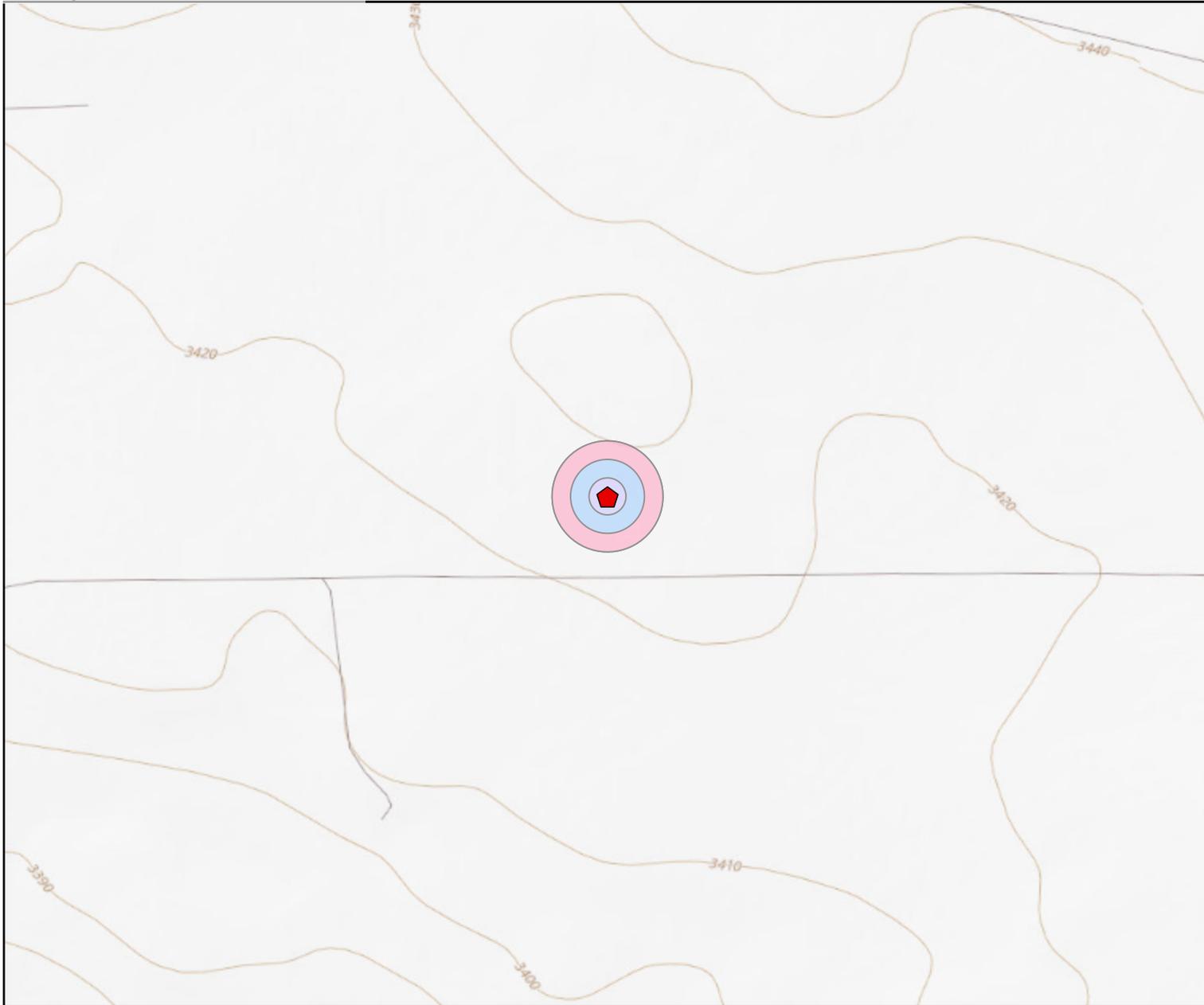
P:\5-MM Excavating (5128335)\GIS\ARCGIS\MMX_MIT.aprx

Revisions		
By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____

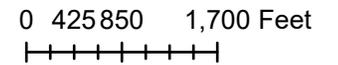
Drawn	LC
Date	7/18/2019
Checked	_____
Approved	_____



78 Roberson Rd
 Carlsbad, NM 88220
 (575) 230-6600



- Point of Release
 - Springs Seeps
 - Streams Canals
 - Rivers
 - NM Wetlands
 - Lakes Playas
 - FEMA Flood Zones 2011
- Buffer Distance**
- 100 Feet
 - 200 Feet
 - 300 Feet



Surface Water Protection Map
 Cotton Draw 10 Federal Com #002H - Devon Energy
 Sec 10 T25S R31E Eddy County, New Mexico

Figure 2

P:\5-MM Excavating (5128335)\GIS\ARCGIS\MMX_MIT.aprx

Revisions		
By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____

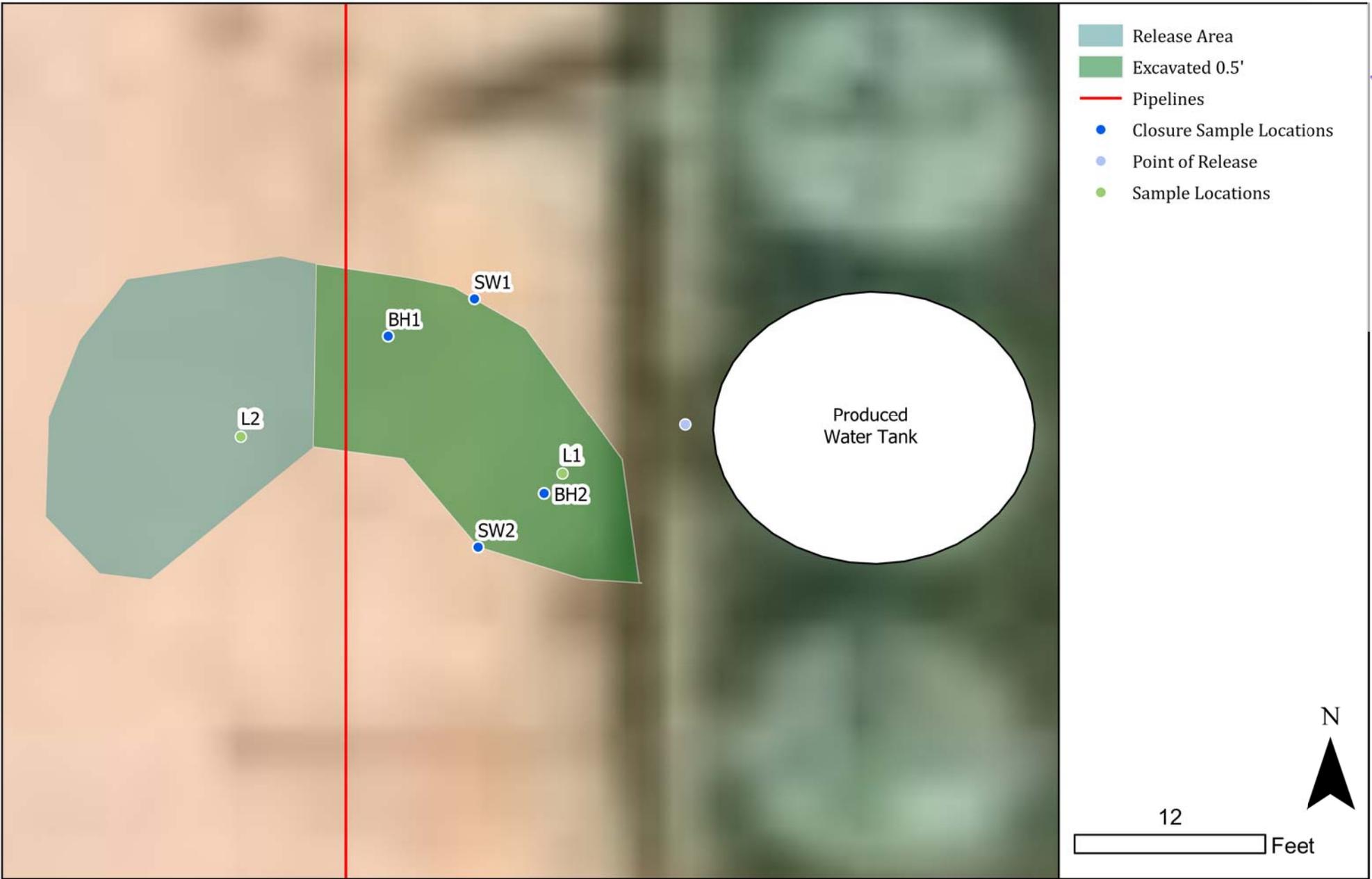
Date Saved: 7/18/2019

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Drawn	LC
Date	7/18/2019
Checked	_____
Approved	_____



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Site & Sample Locations
 Cotton Draw Unit 10 Federal Com 2H- Devon Energy
 Eddy County, New Mexico

Figure 3

Revisions		
By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____

Date Saved: 2/5/2020
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Drawn	Brent A. Jackson
Date	2/5/2020
Checked	_____
Approved	_____



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Tables

Table 2: NMOCD Closure Criteria

Cotton Draw 10 Federal Com #002H
Devon Energy Production Company

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes	
Depth to Groundwater (feet bgs)		370-450	USGS & NMOSE (Appendix B)
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)		--	
Horizontal Distance to Nearest Significant Watercourse (ft)		3500	Freshwater Emergent Wetland to the south

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)							
Depth to Groundwater		Closure Criteria (units in mg/kg)					
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene	
Less than 50' BGS		600	100		50	10	
51' to 100'		10000	2500	1000	50	10	
Greater than 100'	x	20000	2500	1000	50	10	
Surface Water		Yes	No	if yes, then			
Less than 300' from continuously flowing watercourse or other significant watercourse?			x	600	100	50	10
Less than 200' from lakebed, sinkhole or playa lake?			x				
Water Well or Water Source							
Less than 500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?			x				
Less than 1000' from fresh water well or spring?			x				
Human and Other Areas							
Less than 300' from an occupied permanent residence, school, hospital, institution or church?			x				
Within incorporated municipal boundaries or within a defined municipal fresh water well field?			x				
Less than 100' from wetland?			x				
Within area overlying a subsurface mine			x				
Within an unstable area?			x				
Within a 100-year floodplain?			x				



Table 3: Summary of Sample Results

Cotton Draw 10 Federal Com #002H
 Devon Energy Production Company
 2RP-4604 and 2RP-5481

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50	10	1000			2500	20000
L1	9/30/2019	surface	<0.300	<0.050	<10.0	2400	732	3132	6160
		0.5	--	--	<10.0	101	21.2	122.2	896
		2	--	--	<10.0	<10.0	<10.0	<30.0	96
L2	9/30/2019	surface	<0.300	<0.050	<10.0	459	203	662	1550
		0.5	--	--	<10.0	<10.0	<10.0	<30.0	5460
		2	--	--	--	--	--	--	48
BH1	12/2/2019	0.5	<0.221	<0.025	<4.9	<9.4	<47	<61.3	270
BH2		0.5	<0.221	<0.025	<4.9	<8.5	<43	<56.4	100
SW1		0-0.5	<0.216	<0.024	<4.8	37	<48	37	250
SW2		0-0.5	<0.208	<0.023	<4.6	<8.9	<45	<58.5	1900



Appendix A: C141 Forms

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

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

ARTESIA DISTRICT
FEB 05 2018
RECEIVED

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

NAB1803749983

OPERATOR

Initial Report Final Report

Name of Company Devon Energy Production Company 6137		Contact Wes Ryan, Production Foreman	
Address 6488 Seven Rivers Hwy Artesia, NM 88210		Telephone No. 575-390-5436	
Facility Name Cotton Draw 10 Federal Com 2H		Facility Type Oil	
Surface Owner Federal	Mineral Owner Federal	API No. 30-015-39230	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	10	25S	31E					Eddy

Latitude_32.15150_ Longitude_103.75878_ NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 181bbbs	Volume Recovered 180.90 bbbs
Source of Release Produced water tank	Date and Hour of Occurrence January 21, 2018 @ 4:30 PM MST	Date and Hour of Discovery January 21, 2018 @ 4:30 PM MST
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher/Crystal Weaver, OCD Shelly Tucker, BLM	
By Whom? Mike Shoemaker, EHS Representative	Date and Hour January 22, 2018 @ 1:11 PM MST	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.* Water tank ran over causing an approximate 181 bbl release. The wells producing to the battery were immediately shut in to stop the release.		
Describe Area Affected and Cleanup Action Taken.* Approximate 181 bbbs was released the majority of the release occurred inside the lined SPCC secondary containment ring however there was a 0.10 bbl overspray that did go outside the containment area and onto the location. A vacuum truck was dispatched and recovered all the fluids that were released into the lined secondary containment. Once fluids were removed the liner was visually inspected by Devon field staff for any pinholes or punctures and none were found. Based on this inspection there is no evidence that the spill fluids left containment.		
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.		

OIL CONSERVATION DIVISION

Signature: Michael Shoemaker	Approved by Environmental Specialist:	
Printed Name: Michael Shoemaker	Approval Date: 2/6/18	Expiration Date: N/A
Title: Environmental Professional	Conditions of Approval: see attached	
E-mail Address: mike.shoemaker@dmv.com	Attached <input checked="" type="checkbox"/> APP-4604	
Date: 02/01/18	Phone: 575.748.3371	

* Attach Additional Sheets If Necessary

Cotton Draw 10 Fed Com 2H

181bbl pw_1.21.18



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

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Sheila Fisher
Map is current as of: 24-Jan-2018







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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

Cause of Release

Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: _____ Title: _____ Signature: <u>Kendra DeHoyos</u> Date: _____ email: _____ Telephone: _____
<p><u>OCD Only</u></p> Received by: _____ Date: _____

Appendix B: Water Well Data



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 6	Q 16	Q 4	Sec	Tw	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 03830 POD1		CUB	ED	4	2	4	02	25S	31E	618632	3558432	1728	450		
C 02570		CUB	ED	4	2	4	02	25S	31E	618704	3558489*	1814	895		
C 02571		CUB	ED	4	1	2	02	25S	31E	618292	3559294*	1919	860		
C 02573		CUB	ED	1	4	2	02	25S	31E	618499	3559091*	1931			
C 02574		CUB	ED	1	1	2	02	25S	31E	618092	3559494*	1952			
C 02569		CUB	ED	4	4	2	02	25S	31E	618699	3558891*	1981	1016		
C 02572		CUB	ED	4	2	2	02	25S	31E	618695	3559294*	2211	852		
C 02568		CUB	ED	4	3	1	01	25S	31E	619103	3558892*	2338	1025		
C 02250		CUB	ED	3	1	4	21	25S	31E	614912	3553620*	4741	400	390	10
C 03891 POD1		CUB	ED	4	4	2	01	25S	30E	610608	3558890	6466	635	429	206

Average Depth to Water: **409 feet**

Minimum Depth: **390 feet**

Maximum Depth: **429 feet**

Record Count: 10

UTMNAD83 Radius Search (in meters):

Easting (X): 616995

Northing (Y): 3557879

Radius: 7000

*UTM location was derived from PLSS - see Help

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

7/18/19 3:38 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater	Geographic Area: United States	GO
--------------------------------------	--	----

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- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320932103443801

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 320932103443801 25S.31E.02.23441

Available data for this site

Eddy County, New Mexico

Hydrologic Unit Code 13070001

Latitude 32°09'37.4", Longitude 103°44'29.6" NAD83

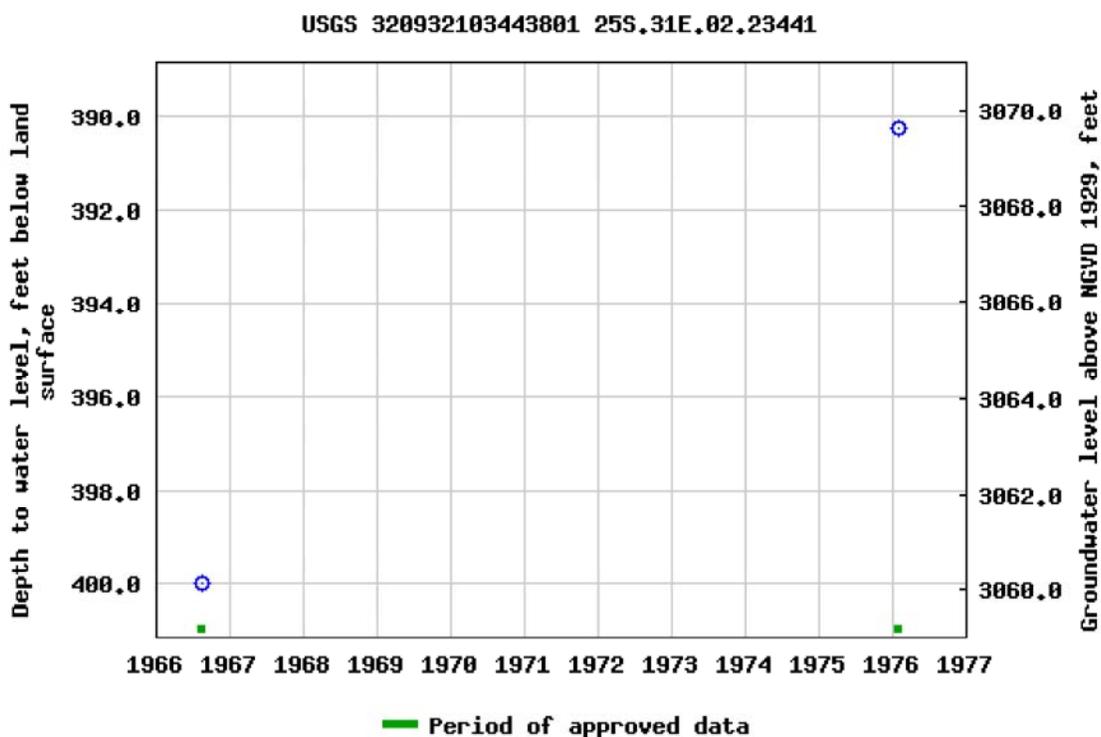
Land-surface elevation 3,460.00 feet above NGVD29

The depth of the well is 1,016 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-07-18 14:51:17 EDT

1.07 1.03 nadww01



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National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater	Geographic Area: United States	GO
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Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320952103444401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 320952103444401 25S.31E.02.214411

Available data for this site

Eddy County, New Mexico

Hydrologic Unit Code 13070001

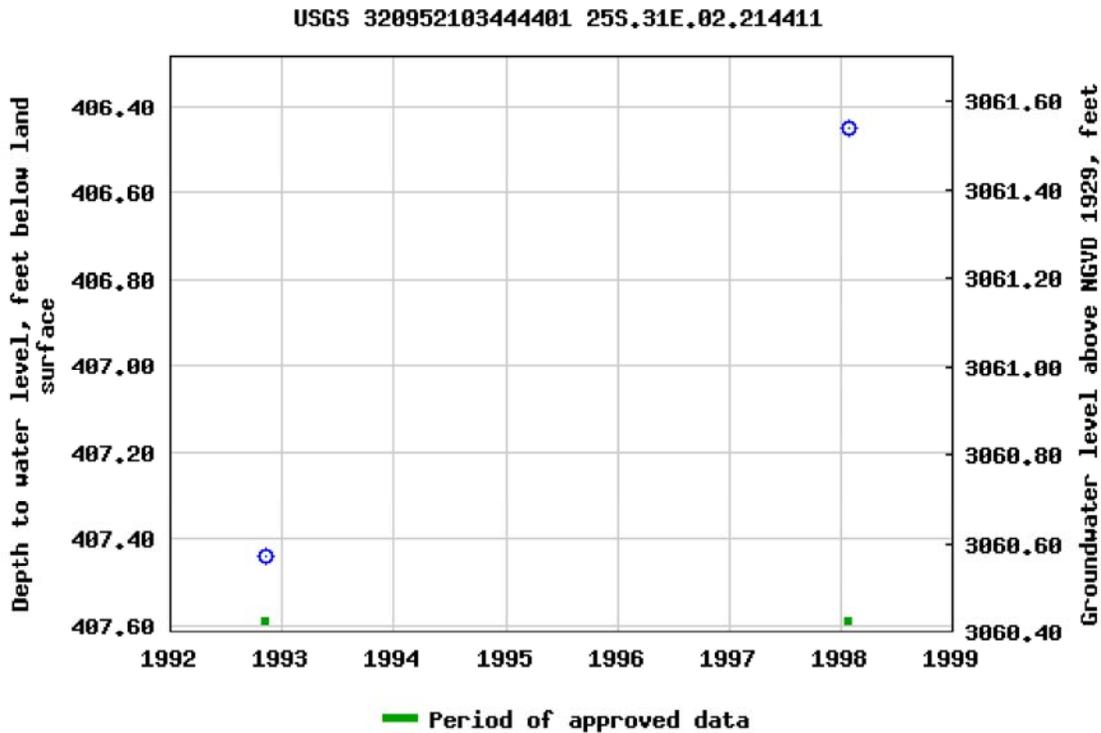
Latitude 32°09'50.0", Longitude 103°44'41.2" NAD83

Land-surface elevation 3,468.0 feet above NGVD29

This well is completed in the Azotea Tongue of Seven Rivers Formation (313AZOT) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-07-18 15:51:15 EDT

0.95 0.9 nadww01



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater	Geographic Area: United States	GO
--------------------------------------	--	----

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Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321034103465501

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321034103465501 24S.31E.33.231113

Available data for this site

Eddy County, New Mexico

Hydrologic Unit Code 13070001

Latitude 32°10'38.2", Longitude 103°46'53.0" NAD83

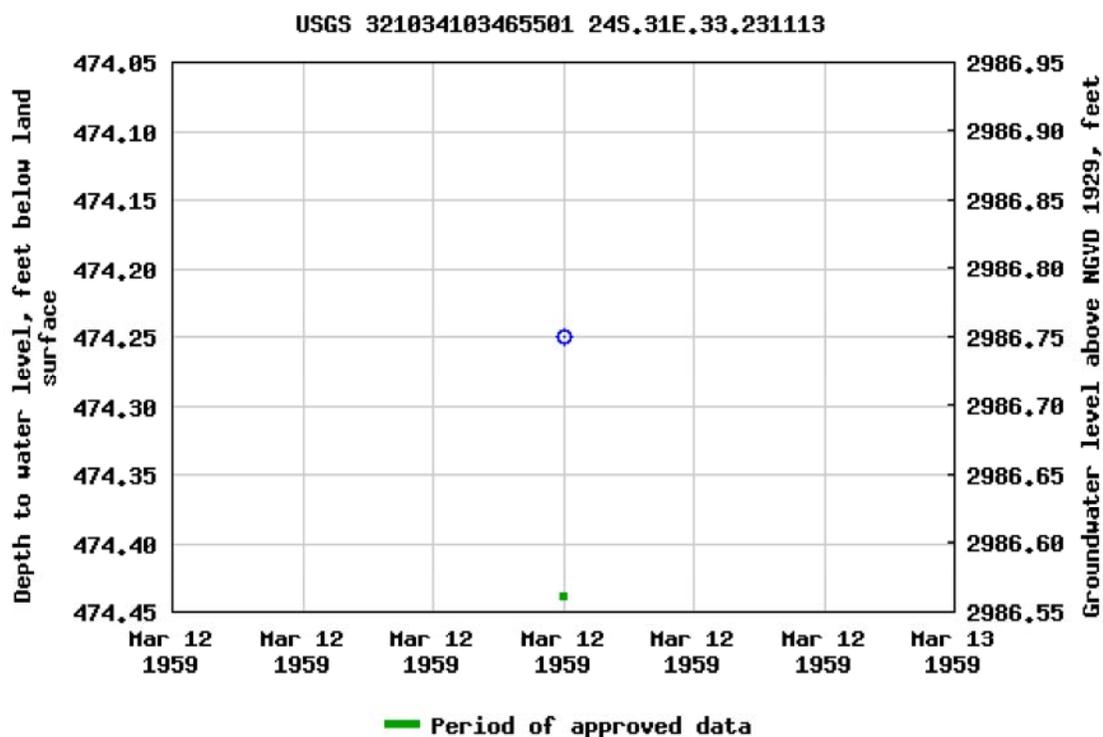
Land-surface elevation 3,461.00 feet above NGVD29

The depth of the well is 740 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-07-18 17:04:24 EDT

0.95 0.89 nadww01

Appendix C: Laboratory Analysis



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 09, 2019

MELODIE SANJARI

MMX

2737 PECOS HWY

CARLSBAD, NM 88220

RE: CDF 10

Enclosed are the results of analyses for samples received by the laboratory on 10/02/19 10:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

MMX
2737 PECOS HWY
CARLSBAD NM, 88220

Project: CDF 10
Project Number: NONE GIVEN
Project Manager: MELODIE SANJARI
Fax To: (575) 236-6201

Reported:
09-Oct-19 12:19

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
L 1 SURFACE	H903357-01	Soil	30-Sep-19 10:30	02-Oct-19 10:45
L 1 .5'	H903357-02	Soil	30-Sep-19 10:35	02-Oct-19 10:45
L 1 2'	H903357-03	Soil	30-Sep-19 10:45	02-Oct-19 10:45
L 2 SURFACE	H903357-04	Soil	30-Sep-19 10:55	02-Oct-19 10:45
L 2 .5'	H903357-05	Soil	30-Sep-19 11:00	02-Oct-19 10:45
L 2 2'	H903357-06	Soil	30-Sep-19 11:10	02-Oct-19 10:45

Client added TPH to sample -03 and Chloride to -03 and -06 on 10/07/19. This is the revised report and will replace the one sent on 10/04/19.

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX
2737 PECOS HWY
CARLSBAD NM, 88220

Project: CDF 10
Project Number: NONE GIVEN
Project Manager: MELODIE SANJARI
Fax To: (575) 236-6201

Reported:
09-Oct-19 12:19

L 1 SURFACE
H903357-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6160		16.0	mg/kg	4	9100208	AC	03-Oct-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			73.3 %		73.3-129	9100301	BF	03-Oct-19	8021B	

Petroleum Hydrocarbons by GC FID**S-04**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
DRO >C10-C28*	2400		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	QM-07
EXT DRO >C28-C36	732		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
Surrogate: 1-Chlorooctane			75.0 %		41-142	9100206	MS	02-Oct-19	8015B	
Surrogate: 1-Chlorooctadecane			171 %		37.6-147	9100206	MS	02-Oct-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX 2737 PECOS HWY CARLSBAD NM, 88220	Project: CDF 10 Project Number: NONE GIVEN Project Manager: MELODIE SANJARI Fax To: (575) 236-6201	Reported: 09-Oct-19 12:19
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L1 .5'
H903357-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	896		16.0	mg/kg	4	9100208	AC	03-Oct-19	4500-CI-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
DRO >C10-C28*	101		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
EXT DRO >C28-C36	21.2		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	

Surrogate: 1-Chlorooctane			79.5 %	41-142		9100206	MS	02-Oct-19	8015B	
Surrogate: 1-Chlorooctadecane			89.0 %	37.6-147		9100206	MS	02-Oct-19	8015B	

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Analytical Results For:

MMX 2737 PECOS HWY CARLSBAD NM, 88220	Project: CDF 10 Project Number: NONE GIVEN Project Manager: MELODIE SANJARI Fax To: (575) 236-6201	Reported: 09-Oct-19 12:19
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L 1 2'
H903357-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	9100908	AC	09-Oct-19	4500-CI-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9100808	MS	08-Oct-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9100808	MS	08-Oct-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9100808	MS	08-Oct-19	8015B	
Surrogate: 1-Chlorooctane			92.3 %	41-142		9100808	MS	08-Oct-19	8015B	
Surrogate: 1-Chlorooctadecane			94.6 %	37.6-147		9100808	MS	08-Oct-19	8015B	

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Analytical Results For:

MMX
2737 PECOS HWY
CARLSBAD NM, 88220

Project: CDF 10
Project Number: NONE GIVEN
Project Manager: MELODIE SANJARI
Fax To: (575) 236-6201

Reported:
09-Oct-19 12:19

L 2 SURFACE**H903357-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1550		16.0	mg/kg	4	9100208	AC	03-Oct-19	4500-CI-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9100301	BF	03-Oct-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9100301	BF	03-Oct-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			79.7 %		73.3-129	9100301	BF	03-Oct-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
DRO >C10-C28*	459		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
EXT DRO >C28-C36	203		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			88.0 %		41-142	9100206	MS	02-Oct-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			115 %		37.6-147	9100206	MS	02-Oct-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX 2737 PECOS HWY CARLSBAD NM, 88220	Project: CDF 10 Project Number: NONE GIVEN Project Manager: MELODIE SANJARI Fax To: (575) 236-6201	Reported: 09-Oct-19 12:19
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**L 2 .5'
H903357-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	5460		16.0	mg/kg	4	9100208	AC	03-Oct-19	4500-CI-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9100206	MS	02-Oct-19	8015B	
Surrogate: 1-Chlorooctane			81.5 %	41-142		9100206	MS	02-Oct-19	8015B	
Surrogate: 1-Chlorooctadecane			84.4 %	37.6-147		9100206	MS	02-Oct-19	8015B	

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Analytical Results For:

MMX 2737 PECOS HWY CARLSBAD NM, 88220	Project: CDF 10 Project Number: NONE GIVEN Project Manager: MELODIE SANJARI Fax To: (575) 236-6201	Reported: 09-Oct-19 12:19
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L 2 2'

H903357-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	48.0		16.0	mg/kg	4	9100908	AC	09-Oct-19	4500-Cl-B	
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Analytical Results For:

MMX 2737 PECOS HWY CARLSBAD NM, 88220	Project: CDF 10 Project Number: NONE GIVEN Project Manager: MELODIE SANJARI Fax To: (575) 236-6201	Reported: 09-Oct-19 12:19
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9100208 - 1:4 DI Water										
Blank (9100208-BLK1) Prepared & Analyzed: 02-Oct-19										
Chloride	ND	16.0	mg/kg							
LCS (9100208-BS1) Prepared & Analyzed: 02-Oct-19										
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (9100208-BSD1) Prepared & Analyzed: 02-Oct-19										
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	
Batch 9100908 - 1:4 DI Water										
Blank (9100908-BLK1) Prepared & Analyzed: 09-Oct-19										
Chloride	ND	16.0	mg/kg							
LCS (9100908-BS1) Prepared & Analyzed: 09-Oct-19										
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (9100908-BSD1) Prepared & Analyzed: 09-Oct-19										
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Analytical Results For:

MMX
2737 PECOS HWY
CARLSBAD NM, 88220

Project: CDF 10
Project Number: NONE GIVEN
Project Manager: MELODIE SANJARI
Fax To: (575) 236-6201

Reported:
09-Oct-19 12:19

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9100301 - Volatiles**Blank (9100301-BLK1)**

Prepared & Analyzed: 03-Oct-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0817</i>		<i>mg/kg</i>	<i>0.100</i>		<i>81.7</i>	<i>73.3-129</i>			

LCS (9100301-BS1)

Prepared & Analyzed: 03-Oct-19

Benzene	1.97	0.050	mg/kg	2.00		98.5	72.2-131			
Toluene	1.90	0.050	mg/kg	2.00		94.8	71.7-126			
Ethylbenzene	1.89	0.050	mg/kg	2.00		94.7	68.9-126			
Total Xylenes	5.82	0.150	mg/kg	6.00		97.0	71.4-125			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0819</i>		<i>mg/kg</i>	<i>0.100</i>		<i>81.9</i>	<i>73.3-129</i>			

LCS Dup (9100301-BSD1)

Prepared & Analyzed: 03-Oct-19

Benzene	1.89	0.050	mg/kg	2.00		94.7	72.2-131	3.87	6.91	
Toluene	1.84	0.050	mg/kg	2.00		91.9	71.7-126	3.15	7.12	
Ethylbenzene	1.82	0.050	mg/kg	2.00		91.2	68.9-126	3.75	7.88	
Total Xylenes	5.58	0.150	mg/kg	6.00		92.9	71.4-125	4.29	7.46	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0801</i>		<i>mg/kg</i>	<i>0.100</i>		<i>80.1</i>	<i>73.3-129</i>			

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Analytical Results For:

MMX
2737 PECOS HWY
CARLSBAD NM, 88220

Project: CDF 10
Project Number: NONE GIVEN
Project Manager: MELODIE SANJARI
Fax To: (575) 236-6201

Reported:
09-Oct-19 12:19

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9100206 - General Prep - Organics**Blank (9100206-BLK1)**

Prepared & Analyzed: 02-Oct-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	37.6		mg/kg	50.0		75.3	41-142			
Surrogate: 1-Chlorooctadecane	38.9		mg/kg	50.0		77.9	37.6-147			

LCS (9100206-BS1)

Prepared & Analyzed: 02-Oct-19

GRO C6-C10	163	10.0	mg/kg	200		81.4	76.5-133			
DRO >C10-C28	154	10.0	mg/kg	200		77.2	72.9-138			
Total TPH C6-C28	317	10.0	mg/kg	400		79.3	78-132			
Surrogate: 1-Chlorooctane	38.5		mg/kg	50.0		76.9	41-142			
Surrogate: 1-Chlorooctadecane	38.9		mg/kg	50.0		77.8	37.6-147			

LCS Dup (9100206-BSD1)

Prepared & Analyzed: 02-Oct-19

GRO C6-C10	172	10.0	mg/kg	200		85.8	76.5-133	5.24	20.6	
DRO >C10-C28	162	10.0	mg/kg	200		81.2	72.9-138	5.01	20.6	
Total TPH C6-C28	334	10.0	mg/kg	400		83.5	78-132	5.12	18	
Surrogate: 1-Chlorooctane	39.6		mg/kg	50.0		79.2	41-142			
Surrogate: 1-Chlorooctadecane	40.5		mg/kg	50.0		80.9	37.6-147			

Batch 9100808 - General Prep - Organics**Blank (9100808-BLK1)**

Prepared & Analyzed: 08-Oct-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	56.3		mg/kg	50.0		113	41-142			
Surrogate: 1-Chlorooctadecane	58.1		mg/kg	50.0		116	37.6-147			

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

MMX 2737 PECOS HWY CARLSBAD NM, 88220	Project: CDF 10 Project Number: NONE GIVEN Project Manager: MELODIE SANJARI Fax To: (575) 236-6201	Reported: 09-Oct-19 12:19
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9100808 - General Prep - Organics

LCS (9100808-BS1)

Prepared & Analyzed: 08-Oct-19

GRO C6-C10	216	10.0	mg/kg	200		108	76.5-133			
DRO >C10-C28	208	10.0	mg/kg	200		104	72.9-138			
Total TPH C6-C28	424	10.0	mg/kg	400		106	78-132			
Surrogate: 1-Chlorooctane	60.5		mg/kg	50.0		121	41-142			
Surrogate: 1-Chlorooctadecane	61.9		mg/kg	50.0		124	37.6-147			

LCS Dup (9100808-BSD1)

Prepared & Analyzed: 08-Oct-19

GRO C6-C10	221	10.0	mg/kg	200		111	76.5-133	2.40	20.6	
DRO >C10-C28	210	10.0	mg/kg	200		105	72.9-138	1.31	20.6	
Total TPH C6-C28	432	10.0	mg/kg	400		108	78-132	1.86	18	
Surrogate: 1-Chlorooctane	62.2		mg/kg	50.0		124	41-142			
Surrogate: 1-Chlorooctadecane	62.9		mg/kg	50.0		126	37.6-147			

Cardinal Laboratories

*=Accredited Analyte

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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

December 09, 2019

Ashley Maxwell
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL:
FAX

RE: CDU 10 Fed

OrderNo.: 1912059

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/3/2019 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1912059

Date Reported: 12/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 1

Project: CDU 10 Fed

Collection Date: 12/2/2019 6:30:00 AM

Lab ID: 1912059-001

Matrix: SOIL

Received Date: 12/3/2019 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	270	60		mg/Kg	20	12/6/2019 9:40:54 AM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/5/2019 1:26:52 PM	49139
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/5/2019 1:26:52 PM	49139
Surr: DNOP	125	70-130		%Rec	1	12/5/2019 1:26:52 PM	49139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/4/2019 1:03:11 PM	49121
Surr: BFB	86.8	77.4-118		%Rec	1	12/4/2019 1:03:11 PM	49121
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/4/2019 1:03:11 PM	49121
Toluene	ND	0.049		mg/Kg	1	12/4/2019 1:03:11 PM	49121
Ethylbenzene	ND	0.049		mg/Kg	1	12/4/2019 1:03:11 PM	49121
Xylenes, Total	ND	0.098		mg/Kg	1	12/4/2019 1:03:11 PM	49121
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	12/4/2019 1:03:11 PM	49121

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

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

Analytical Report

Lab Order **1912059**

Date Reported: **12/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 2

Project: CDU 10 Fed

Collection Date: 12/2/2019 6:00:00 AM

Lab ID: 1912059-002

Matrix: SOIL

Received Date: 12/3/2019 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	100	60		mg/Kg	20	12/6/2019 10:17:57 AM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	12/5/2019 1:51:08 PM	49139
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	12/5/2019 1:51:08 PM	49139
Surr: DNOP	112	70-130		%Rec	1	12/5/2019 1:51:08 PM	49139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/4/2019 2:14:11 PM	49121
Surr: BFB	79.8	77.4-118		%Rec	1	12/4/2019 2:14:11 PM	49121
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/4/2019 2:14:11 PM	49121
Toluene	ND	0.049		mg/Kg	1	12/4/2019 2:14:11 PM	49121
Ethylbenzene	ND	0.049		mg/Kg	1	12/4/2019 2:14:11 PM	49121
Xylenes, Total	ND	0.098		mg/Kg	1	12/4/2019 2:14:11 PM	49121
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	12/4/2019 2:14:11 PM	49121

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

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

Analytical Report

Lab Order **1912059**

Date Reported: **12/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW 1

Project: CDU 10 Fed

Collection Date: 12/2/2019 6:15:00 AM

Lab ID: 1912059-003

Matrix: SOIL

Received Date: 12/3/2019 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	250	60		mg/Kg	20	12/6/2019 2:13:00 PM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	37	9.7		mg/Kg	1	12/5/2019 2:15:23 PM	49139
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/5/2019 2:15:23 PM	49139
Surr: DNOP	129	70-130		%Rec	1	12/5/2019 2:15:23 PM	49139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/4/2019 3:24:34 PM	49121
Surr: BFB	91.7	77.4-118		%Rec	1	12/4/2019 3:24:34 PM	49121
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/4/2019 3:24:34 PM	49121
Toluene	ND	0.048		mg/Kg	1	12/4/2019 3:24:34 PM	49121
Ethylbenzene	ND	0.048		mg/Kg	1	12/4/2019 3:24:34 PM	49121
Xylenes, Total	ND	0.096		mg/Kg	1	12/4/2019 3:24:34 PM	49121
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	12/4/2019 3:24:34 PM	49121

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

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

Analytical Report

Lab Order **1912059**

Date Reported: **12/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW 2

Project: CDU 10 Fed

Collection Date: 12/2/2019 7:00:00 AM

Lab ID: 1912059-004

Matrix: SOIL

Received Date: 12/3/2019 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1900	61		mg/Kg	20	12/6/2019 2:25:21 PM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	12/5/2019 2:39:38 PM	49139
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/5/2019 2:39:38 PM	49139
Surr: DNOP	150	70-130	S	%Rec	1	12/5/2019 2:39:38 PM	49139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/4/2019 3:48:04 PM	49121
Surr: BFB	85.8	77.4-118		%Rec	1	12/4/2019 3:48:04 PM	49121
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	12/4/2019 3:48:04 PM	49121
Toluene	ND	0.046		mg/Kg	1	12/4/2019 3:48:04 PM	49121
Ethylbenzene	ND	0.046		mg/Kg	1	12/4/2019 3:48:04 PM	49121
Xylenes, Total	ND	0.093		mg/Kg	1	12/4/2019 3:48:04 PM	49121
Surr: 4-Bromofluorobenzene	98.0	80-120		%Rec	1	12/4/2019 3:48:04 PM	49121

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1912059

09-Dec-19

Client: Souder, Miller & Associates

Project: CDU 10 Fed

Sample ID: MB-49195	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 49195	RunNo: 65000								
Prep Date: 12/6/2019	Analysis Date: 12/6/2019	SeqNo: 2230260	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-49195	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 49195	RunNo: 65000								
Prep Date: 12/6/2019	Analysis Date: 12/6/2019	SeqNo: 2230261	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.0	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 Quantitative 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#: 1912059

09-Dec-19

Client: Souder, Miller & Associates

Project: CDU 10 Fed

Sample ID: MB-49139	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 49139	RunNo: 64962								
Prep Date: 12/4/2019	Analysis Date: 12/5/2019	SeqNo: 2227843	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	13		10.00		128	70	130			

Sample ID: LCS-49139	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 49139	RunNo: 64962								
Prep Date: 12/4/2019	Analysis Date: 12/5/2019	SeqNo: 2227881	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	63.9	124			
Surr: DNOP	5.4		5.000		108	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 Quantitative 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#: 1912059

09-Dec-19

Client: Souder, Miller & Associates

Project: CDU 10 Fed

Sample ID: mb-49121	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 49121		RunNo: 64923							
Prep Date: 12/3/2019	Analysis Date: 12/4/2019		SeqNo: 2227078		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	810		1000		81.4	77.4	118			

Sample ID: ics-49121	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 49121		RunNo: 64923							
Prep Date: 12/3/2019	Analysis Date: 12/4/2019		SeqNo: 2227079		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	95.2	80	120			
Surr: BFB	1000		1000		101	77.4	118			

Sample ID: 1912059-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH 1	Batch ID: 49121		RunNo: 64923							
Prep Date: 12/3/2019	Analysis Date: 12/4/2019		SeqNo: 2227083		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	22.98	0	93.2	69.1	142			
Surr: BFB	880		919.1		95.6	77.4	118			

Sample ID: 1912059-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH 1	Batch ID: 49121		RunNo: 64923							
Prep Date: 12/3/2019	Analysis Date: 12/4/2019		SeqNo: 2227084		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.6	22.81	0	102	69.1	142	8.56	20	
Surr: BFB	950		912.4		104	77.4	118	0	0	

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 Quantitative 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#: 1912059

09-Dec-19

Client: Souder, Miller & Associates**Project:** CDU 10 Fed

Sample ID: mb-49121	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 49121	RunNo: 64923								
Prep Date: 12/3/2019	Analysis Date: 12/4/2019	SeqNo: 2227102			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	0.95		1.000		94.8	80	120			

Sample ID: LCS-49121	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 49121	RunNo: 64923								
Prep Date: 12/3/2019	Analysis Date: 12/4/2019	SeqNo: 2227103			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.3	80	120			
Toluene	0.94	0.050	1.000	0	93.6	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.7	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: 1912059-002ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH 2	Batch ID: 49121	RunNo: 64923								
Prep Date: 12/3/2019	Analysis Date: 12/4/2019	SeqNo: 2227110			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.024	0.9681	0	98.1	76	123			
Toluene	0.99	0.048	0.9681	0.01171	101	80.3	127			
Ethylbenzene	1.0	0.048	0.9681	0	103	80.2	131			
Xylenes, Total	3.0	0.097	2.904	0.01654	103	78	133			
Surr: 4-Bromofluorobenzene	0.99		0.9681		102	80	120			

Sample ID: 1912059-002amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH 2	Batch ID: 49121	RunNo: 64923								
Prep Date: 12/3/2019	Analysis Date: 12/4/2019	SeqNo: 2227111			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.024	0.9615	0	97.2	76	123	1.62	20	
Toluene	0.98	0.048	0.9615	0.01171	100	80.3	127	1.21	20	
Ethylbenzene	0.99	0.048	0.9615	0	102	80.2	131	1.03	20	
Xylenes, Total	3.0	0.096	2.885	0.01654	104	78	133	0.101	20	
Surr: 4-Bromofluorobenzene	0.96		0.9615		100	80	120	0	0	

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 Quantitative 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
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: SMA-CARLSBAD Work Order Number: 1912059 RcptNo: 1

Received By: Yazmine Garduno 12/3/2019 9:23:00 AM
Completed By: Desiree Dominguez 12/3/2019 9:55:32 AM
Reviewed By: YG 12/3/19

Chain of Custody

- 1. Is Chain of Custody sufficiently complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: ENM 12/3/19

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

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

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 4.4, Good, Not Present, , ,

Chain-of-Custody Record

Client: SWA - Canstand

Turn-Around Time:

Standard Rush 5 day

Project Name:

CDU 10 Fed

Mailing Address:

Project #:

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Project Manager:

Ashley Maxwell

Sampler:

MKS

On Ice: Yes No

of Coolers:

4

Cooler Temp (including CF): 44 (2) 44 (2) (°C)

Container Type and #

9oz

Preservative Type

HEAL No. 1912059

-001

-002

-003

-004

Date

12/2

Time

6:30

Matrix

Soil

Sample Name

BH1

BH2

SW1

SW2

Date:

12/19

Time:

1500

Relinquished by:

[Signature]

Date:

12/21/19

Relinquished by:

[Signature]

Received by:

[Signature]

Date

12/19

Via:

CDU

Date

12/23

Received by:

[Signature]

Remarks:

direct bill to MMX email results to mlyodic.sanjain@sondermiller.com & ashley-maxwell@sondermiller.com

Analysis Request

BTEX / MTBE / TMB's (8021)

TFH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	On Ice	# of Coolers	Cooler Temp (including CF)	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)	
12/2	6:30	Soil	BH1	9oz	HEAL No. 1912059	-001	<input checked="" type="checkbox"/>	4	44 (2) 44 (2) (°C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
12/2	6:00	Soil	BH2	9oz	HEAL No. 1912059	-002	<input checked="" type="checkbox"/>	4	44 (2) 44 (2) (°C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
12/2	6:15	Soil	SW1	9oz	HEAL No. 1912059	-003	<input checked="" type="checkbox"/>	4	44 (2) 44 (2) (°C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
12/2	7:00	Soil	SW2	9oz	HEAL No. 1912059	-004	<input checked="" type="checkbox"/>	4	44 (2) 44 (2) (°C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

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.

Appendix D: Liner Inspection & Excavation Photo Logs

Photo of excavation facing northeast



9/30/2019 Liner Inspection Photo Log





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

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

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

Incident ID	NAB1803749983
District RP	2RP-4604
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 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

State of New Mexico
Oil Conservation Division

Page 2

Incident ID	NAB1803749983
District RP	2RP-4604
Facility ID	
Application ID	

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.

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: Amanda Davis Title: EHS Professional

Signature: *Amanda Davis* Date: _____

email: Amanda.Davis@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1803749983
District RP	2RP-4604
Facility ID	
Application ID	

Remediation Plan

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

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- 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: Amanda Davis Title: EHS Professional

Signature: Amanda Davis Date: _____

email: Amanda.Davis@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

Incident ID	NAB1803749983
District RP	2RP-4604
Facility ID	
Application ID	

Closure

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Amanda Davis Title: EHS Professional

Signature: Amanda Davis Date: _____

email: Amanda.Davis@dvn.com Telephone: 575-748-0176

OCD Only

Received by: Victoria Venegas Date: 04/28/2020

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: CLOSURE DENIED Date: 06/05/2020

Printed Name: Victoria Venegas Title: Engineering Tech. III

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

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

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

Incident ID	NAB1916435152
District RP	2RP-5481
Facility ID	
Application ID	pAB1916434865

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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- 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

Incident ID	NAB1916435152
District RP	2RP-5481
Facility ID	
Application ID	pAB1916434865

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.

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Printed Name: Amanda Davis Title: EHS Professional

Signature: Amanda Davis Date: _____

email: Amanda.Davis@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1916435152
District RP	2RP-5481
Facility ID	
Application ID	pAB1916434865

Remediation Plan

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

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- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
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- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

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- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Printed Name: Amanda Davis Title: EHS Professional

Signature: Amanda Davis Date: _____

email: Amanda.Davis@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

Incident ID	NAB1916435152
District RP	2RP-5481
Facility ID	
Application ID	pAB1916434865

Closure

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

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

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

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Printed Name: Amanda Davis Title: EHS Professional

Signature: Amanda Davis Date: _____

email: Amanda.Davis@dvn.com Telephone: 575-748-0176

OCD Only

Received by: Victoria Venegas Date: 04/28/2020

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: CLOSURE DENIED Date: 06/05/2020

Printed Name: Victoria Venegas Title: Engineering Tech. III