

**HRL**
COMPLIANCE
SOLUTIONSP.O. Box 1708 • Artesia, NM 88211
www.hrlcomp.com

April 29, 2020

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

Subject: Liner Inspection and Closure Report
Cotton Draw Unit #252H
Lea County, New Mexico

Dear Mr. Bynum:

Devon Energy Production Company (Devon) (Client) retained HRL Compliance Solutions, Inc. (HRL) to conduct a liner inspection and prepare this closure report for the release at the Cotton Draw Unit #252H well pad (Site). The Site is located in Lea County, New Mexico (Figure 1).

Release Summary and Initial Response

On July 24, 2016, a release of 785 barrels (bbls) of produced water was observed at the Site. The release occurred when a produced water tank was struck by lightning. The produced water impacted the area within the lined steel secondary containment. Initial response activities included stopping the source of the release, securing the impacted area, containing the released materials, and removing free liquids within the secondary containment. The volume released exceeded 25 barrels; therefore, this is considered a major release. On July 15, 2016 the C-141 (Attachment A) was submitted to the New Mexico Oil Conservation Division (NMOCD).

Item	Discussion
Site Name	Cotton Draw Unit #252H
Latitude	32.151457
Longitude	-103.715213
Township/Range/Section/Unit	25 South/ 32 East/ Section 7/ Unit B
Date Release Discovered	July 15, 2016
Cause of Release	A water tank was struck by lightning.
Type of Material Released	Produced Water
Volume	785 barrels

INNOVATIVE SOLUTIONS DELIVERED



Mr. Tom Bynum
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Item	Discussion
Volume Recovered	785 barrels of produced water 1 barrel of storm water

Liner Inspection

On April 16, 2020, after the released fluid was removed from the lined containment, HRL conducted an inspection to evaluate the integrity of the liner (Attachment B, Photographs). No tears or holes were observed in the liner and the liner showed evidence of retaining precipitation. Based on this inspection, HRL has determined that the liner remains intact and had the ability to contain the release (Attachment C, Inspection Form).

New Mexico Administrative Code (NMAC) Site Characterization Criteria

Title 19, Chapter 15, Part 29, Section 11 of the New Mexico Administrative Code (19.15.29.11 NMAC) provides requirements for release characterization once the free liquids and recoverable materials have been removed from the Site.

Site Map

A scaled diagram depicting the Site and nearby significant features has been prepared (Figure 1).

Depth to Groundwater

Based on research from the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS), depth to groundwater is estimated to be greater than 150 feet below ground surface (bgs) (Figure 2).

Wellhead Protection Area

There are no sources of water, including springs, wells, or other sources of fresh water, within one-half mile of the Site.

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). There are no significant watercourses within one-half mile of the Site.

Additional Site Characterization Criteria

The following additional site characterization criteria were evaluated for the release.

Cotton Draw Unit #252H
April 29, 2020



Mr. Tom Bynum
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Additional Site Characterization Criteria	Response/Discussion
Is the Site within 300 feet of a continuously flowing water or other significant watercourse?	No
Is the Site within 200 feet of a lakebed, sinkhole, or playa lake?	No
Is the Site within 300 feet of an occupied permanent residence, school, hospital institution, or church?	No
Is the Site 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
Is the Site within 1,000 feet of any fresh water well or spring?	No
Is the Site within 300 feet of a wetland?	No
Is the Site within the area overlying a subsurface mine?	No
Is the Site within an unstable area?	No
Is the Site within the 100-year floodplain?	No

Conclusions and Recommendations

The July 15, 2016 release of 785 barrels of produced water at the Site remained within the lined containment area. HRL has determined that the liner integrity remains intact and had the ability to contain the release; therefore, additional characterization of the soil and/or groundwater at the Site is not necessary. HRL recommends closure of this release.

Scope and Limitations

The scope of HRL's services consists of performing the liner integrity inspection 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.

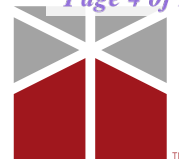
If you have any questions or concerns, please do not hesitate to contact me at (970) 243-3271 or via email at amccawley@hrlcomp.com.

Sincerely,

HRL Compliance Solutions, Inc.

Annie McCawley
Environmental Scientist

Cotton Draw Unit #252H
April 29, 2020



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Copy: Julie Linn, PG, RG, HRL Compliance Solutions, Inc.

Figures:

Figure 1: Site Location Map

Figure 2: Depth to Groundwater Map

Attachments:

Attachment A: NMOCD Form C-141

Attachment B: Photographs

Attachment C: Liner Inspection Field Form

Cotton Draw Unit #252H
April 29, 2020



Figures

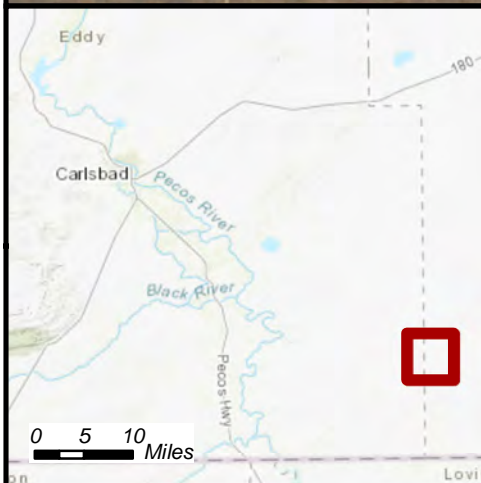
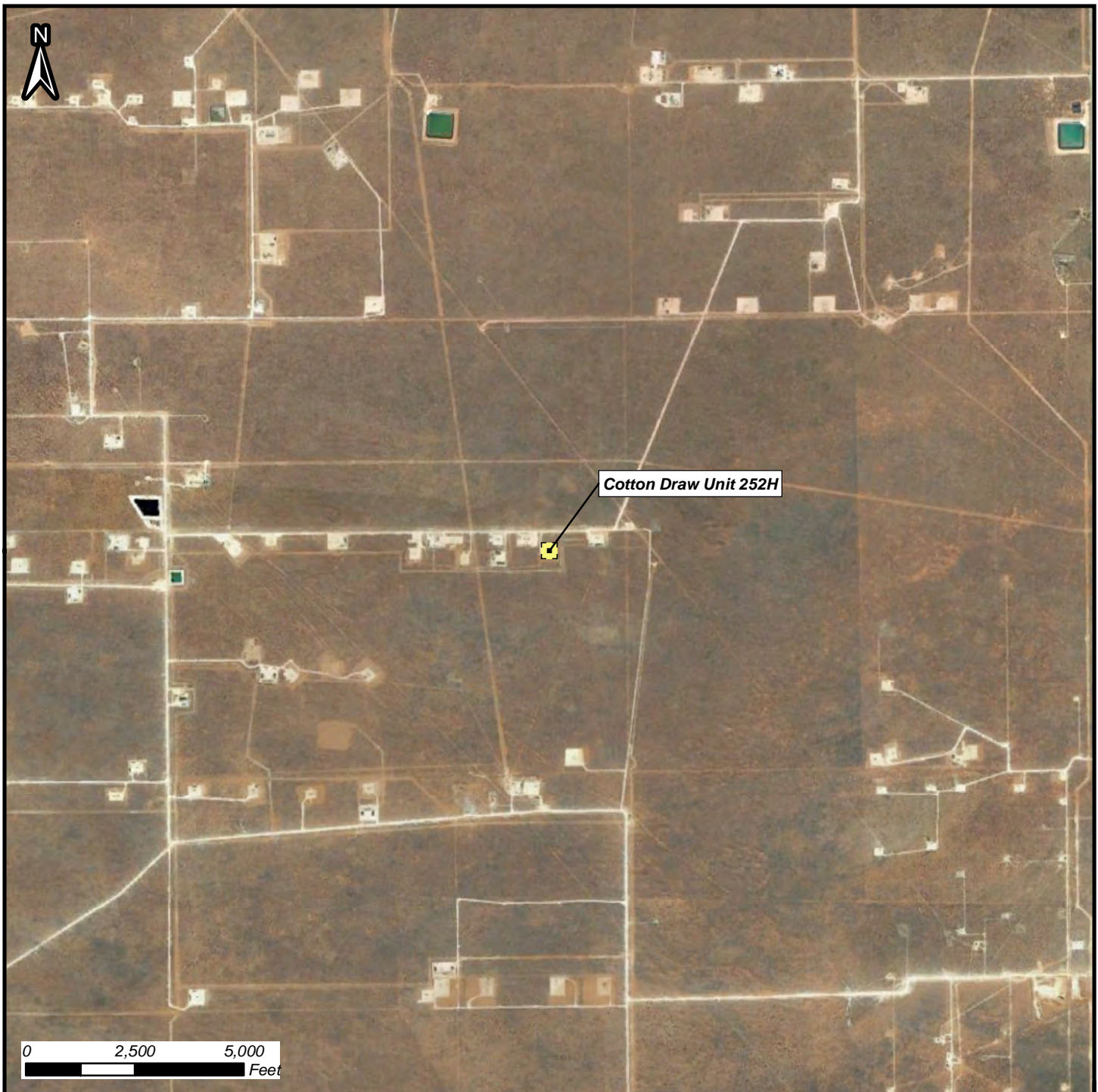


Figure 1: Site Location Map


Cotton Draw Unit 252H

July 2016 Spill

32.1517521209268, -103.711592528012
Section 7, Township 25 South, Range 32 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.



Author: A. Asay

Revision: 0

Date: 4/20/2020

T:\CLIENTS\DEVON ENERGY\2020\Cotton Draw Unit 252H\Map\Cotton Draw Unit 252H Site Location Map (July 2016 Spill) 042020.mxd

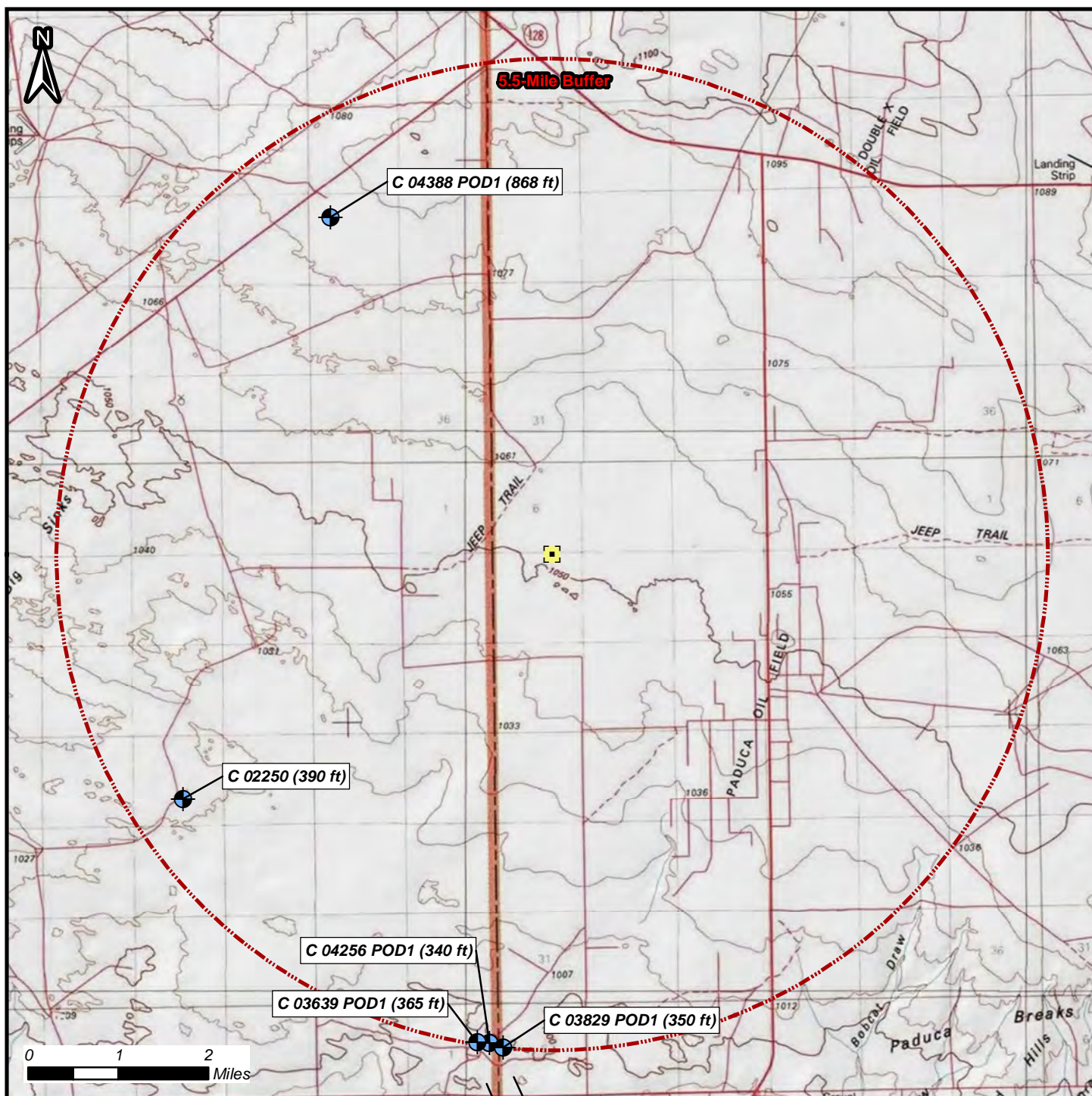
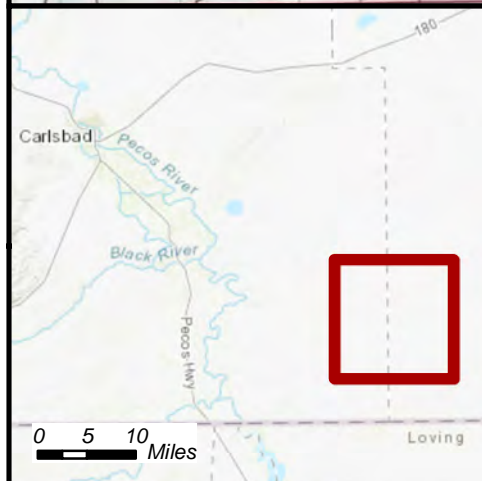


Figure 2: Depth to Groundwater Map

Cotton Draw Unit 252H

July 2016 Spill

32.151752 1209268, -103.711592528012
Section 7, Township 25 South, Range 32 East

Mapped Features

- Point of Release
- Groundwater Monitoring Well
- 5.5-Mile Buffer

Well Number	Water Level Below Ground Surface (ft)	Distance from Source (mi)
C 04388 POD1	868.00	4.48
C 02250	390.00	4.91
C 04256 POD1	340.00	5.47
C 03639 POD1	365.00	5.47
C 03829 POD1	350.00	5.49

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Author: A. Asay

Revision: 0

Date: 4/20/2020

T:\CLIENTS\DEVON ENERGY\2020\Cotton Draw Unit 252H\Maps\Cotton Draw Unit 252H DTGW Map (July 2016 Spill) 042020.mxd



Attachment A
NMOCD Form C-141

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

RECEIVED

By JKeyes at 7:19 am, Jul 19, 2016

Form C-141
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action**OPERATOR**
☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company	Contact Jake Harrington , Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 432-214-5175
Facility Name Cotton Draw Unit #252H	Facility Type Oil
Surface Owner Federal	Mineral Owner Federal
API No 30-025-42619	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	7	25S	32E	100	North	1780	East	Lea

Latitude: 32.1517521209268 Longitude: -103.711592528012

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 785 BBLS	Volume Recovered 785 BBLS
Source of Release Water tank	Date and Hour of Occurrence 7/15/2016 @ 7:20pm	Date and Hour of Discovery 7/15/2016 @ 7:20pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OCD- Jamie Keyes BLM- Shelly Tucker	
By Whom? Hubert Perry, Night Production Foreman	Date and Hour OCD- 7/15/2016 @ 11:48pm BLM- 7/18/2016 @ 2:14pm	
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.*

A water tank was struck by lightning resulting in a release of 785 BBLS produced water. All wells that produce to this facility were shut in immediately to prevent further release. Repairs will be made.

Describe Area Affected and Cleanup Action Taken.*

Produced water was released when lighting struck one of the water tanks rupturing the tank. This resulted in the connected equalizing lines to release additional produced water; totaling a release of 785BBLS of produced water. The produced water was released into the surrounding lined containment and secondary lined containment. Both liners were checked for holes, no holes were found in both the liners. Due to the fact that no holes were found in the liners, it is assumed all the released fluid remained in the lined containment and did not leave location. This assumption could be incorrect due to the wet ground from the rain. Vacuum truck recovered approximately 786 BBLS of fluid; 785 BBLS produced water, 1 BBL of rain water. 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	
Printed Name: Sarah Gallegos-Troublefield	Approved by Environmental Specialist: 	
Title: Field Admin Support	Approval Date: 07/19/2016	Expiration Date: 09/19/2016
E-mail Address: Sarah.Gallegos-Troublefield@dv.com	Conditions of Approval:	Attached <input type="checkbox"/> 1RP 4352
Date: 7/18/2016 Phone: 575.748.1864	Discrete samples only. Delineate and remediate per NMOCD guidelines. Ensure BLM concurrence/ approval.	

* Attach Additional Sheets If Necessary

nJXK1620126153
pJXK1620126303

Cotton Draw Unit #252H

785 BBLs PW 7-15-2016

devon

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

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Sarah
Map is current as of 6/1/2020

↑
N

Miles

00.000.010.02

1: 889

An aerial photograph of a large, rectangular, light-colored land parcel, likely a field or cleared area, surrounded by darker, vegetated land. The parcel is labeled "Sec 7, T25S, R32E" in blue text. A blue dot is located within the parcel, labeled "785 BBLs PW" in blue text. The map is part of a larger document, as indicated by the header and footer information.

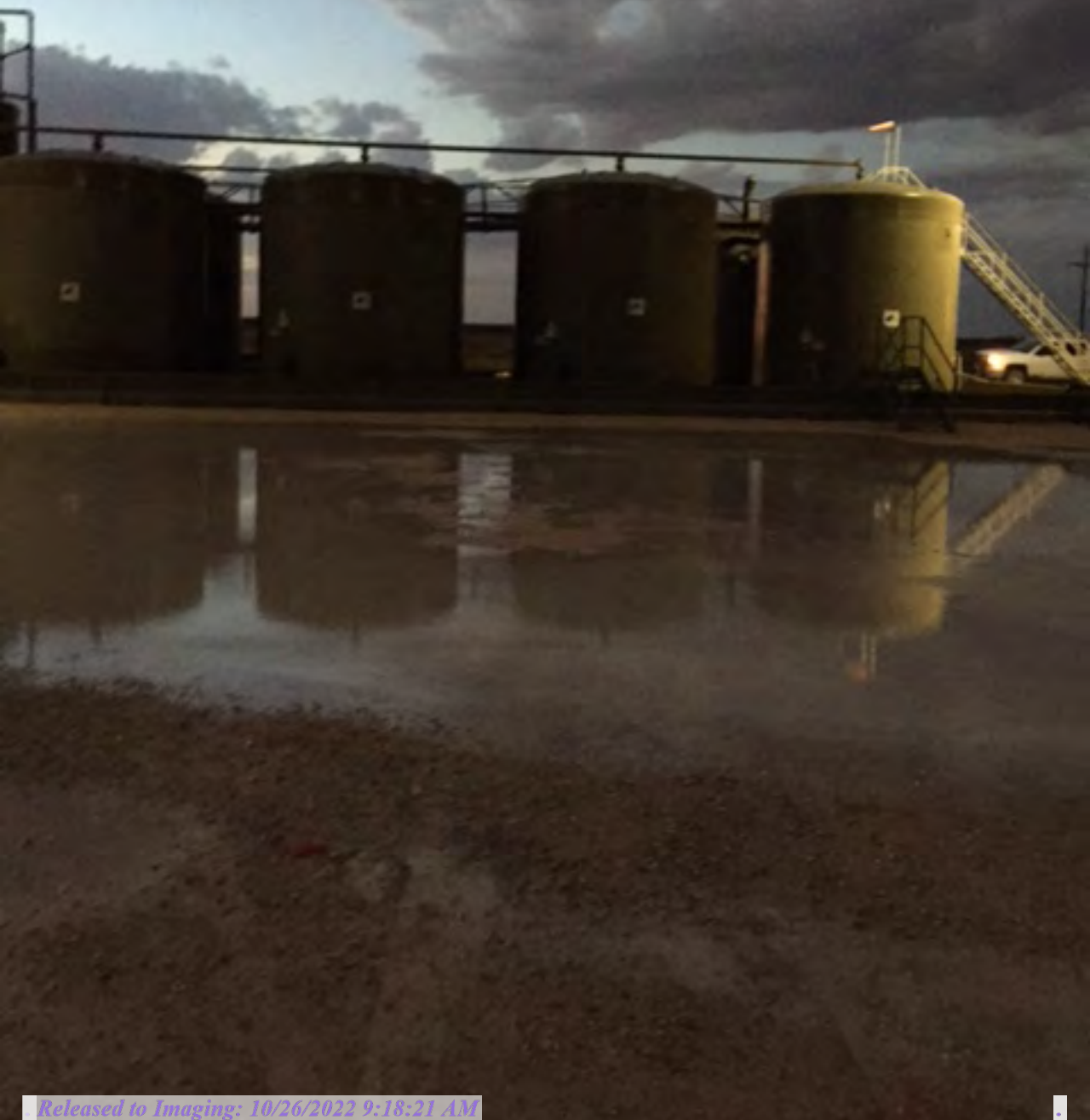
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Attachment B
Photographs



View of the liner on the southern side of the tanks. Staining visible on the liner. Rust visible on the base of the tanks.



View of the liner on the west side of the containment. Facing south. Rust visible on the base of stair supports.





View of the liner on the southern side of the tanks. Rust is visible on the base of the tanks and on some piping.



View between tanks. Visible rust on the base of the tank. Staining visible on the liner.





View of the liner on the southern side of the tanks. Visible rust on the base of the tank. Staining visible on the liner.



View of the liner on the northern side of the tanks.





Attachment C
Liner Inspection Form

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Liner Inspection Form

Client Devon Energy

Date of Inspection 4/16/2020

Site Name CDU 252H

Latitude 32.1514161

Longitude -103.7153098

Observations	Yes	No	Comments
Is the liner present?	✓		
Is the liner torn?		✓	
Are there visible holes in the liner?		✓	
Is the liner retaining any liquids?		✓	
Does it appear the liner had the ability to contain the leak?	✓		

Type of Liner: Poly Earthen Metal Other (describe below):

Other Concerns or Observations:

Visible staining from the liner holding liquid
Rust on the base of the tanks
↳ evidence of the liner holding liquid
Metal Containment → Poly Liner

Inspector Name Annie McCawley

Inspector Signature Annie McCawley

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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	NJXK1620126153
District RP	1RP-4352
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

Incident ID	NJXK1620126153
District RP	1RP-4352
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 4/29/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

Incident ID	NJXK1620126153
District RP	1RP-4352
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 4/29/2020

email: tom.bynum@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	NJXK1620126153
District RP	1RP-4352
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 OCD District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 4/29/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

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: 10/26/2022

Printed Name: Brittany Hall Title: Environmental Specialist

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 8546

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 8546
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	10/26/2022