



January 31, 2023

**New Mexico Oil Conservation Division**

New Mexico Energy, Minerals, and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Remediation Work Plan  
Zia Hills 19-1  
Incident Number NAPP2215827276  
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of ConocoPhillips Company (COP), has prepared this *Remediation Work Plan* (RWP) for the Zia Hills 19-1 (Site). This RWP proposing additional data collection in response to information requested in the denial of a *Deferral Request* submitted to the New Mexico Oil Conservation Division (NMOCD) on November 21, 2022. COP received the denial notice from the NMOCD on December 19, 2022. In the denial, NMOCD stated:

*Deferral Request Denied. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. Please submit dtw data before OCD can evaluate the deferral. Please submit a revised Deferral Request by January 19, 2023.*

The following RWP proposes the installation of a soil boring to investigate depth to groundwater and confirm the Closure Criteria applied in the November 2022 *Deferral Request*.

This RWP is being submitted in lieu of a revised *Deferral Request* due to land access delays along with permitting, and driller availability issues. The requested depth to groundwater data was unable to be obtained within the requested 30-day timeframe. As such, COP is proposing the submission of the revised *Deferral Request* within 60 days of approval of this RWP.

## BACKGROUND

The Site is located in Unit E, Section 19, Township 26 South, Range 32 East, in Lea County, New Mexico (32.028532°, -103.721276°) and is associated with oil and gas exploration and production operations on federally owned surface managed by the Bureau of Land Management (BLM). On May 23, 2022, a flowline failed causing the release of approximately 18 barrels (bbls) of crude oil and 26 bbls of produced water onto the well pad. The Site was previously characterized in the *Deferral Request* and the following NMOCD Table I Closure Criteria were applied:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

ConocoPhillips Company  
Remediation Work Plan  
Zia Hills 19-1



- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

Remediation and delineation activities at the Site were summarized in the *Deferral Request* submitted to the NMOCD on November 21, 2022. Due to shallow subsurface active pipelines within the remediation area, COP requested a deferral for the remaining impacted soil until final reclamation of the well pad or major construction, whichever comes first.

## PROPOSED REMEDIATION WORK PLAN

In order to confirm depth to groundwater is greater than 100 feet below ground surface (bgs) beneath the Site and confirm the applied Closure Criteria, COP proposes to drill a soil boring within ½-mile of the release. The soil boring will be advanced until groundwater is encountered or to a maximum depth of approximately 110 feet bgs. An Ensolum geologist will log and describe soil continuously and will document observations on a lithologic/soil sampling log. The borehole will be left open for a minimum of 72 hours to allow for the potential slow infill of groundwater. Following the 72-hour waiting period, depth to groundwater will be measured or the Ensolum geologist will confirm groundwater is absent in the boring. The borehole will be properly abandoned following New Mexico Office of the State Engineer (NMOSE) procedures.

The soil boring will be completed as soon as possible following approval from the surface landowner and scheduling with a New Mexico licensed driller. COP will provide an addendum to the original *Deferral Request* documenting additional data collected. The addendum will be submitted within 60 of approval of this RWP.

If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or [kjennings@ensolum.com](mailto:kjennings@ensolum.com).

Sincerely,  
**Ensolum, LLC**

A handwritten signature in black ink, appearing to read "Josh Adams".

Josh Adams, PG  
Project Geologist

A handwritten signature in black ink, appearing to read "Kalei Jennings".

Kalei Jennings  
Senior Scientist

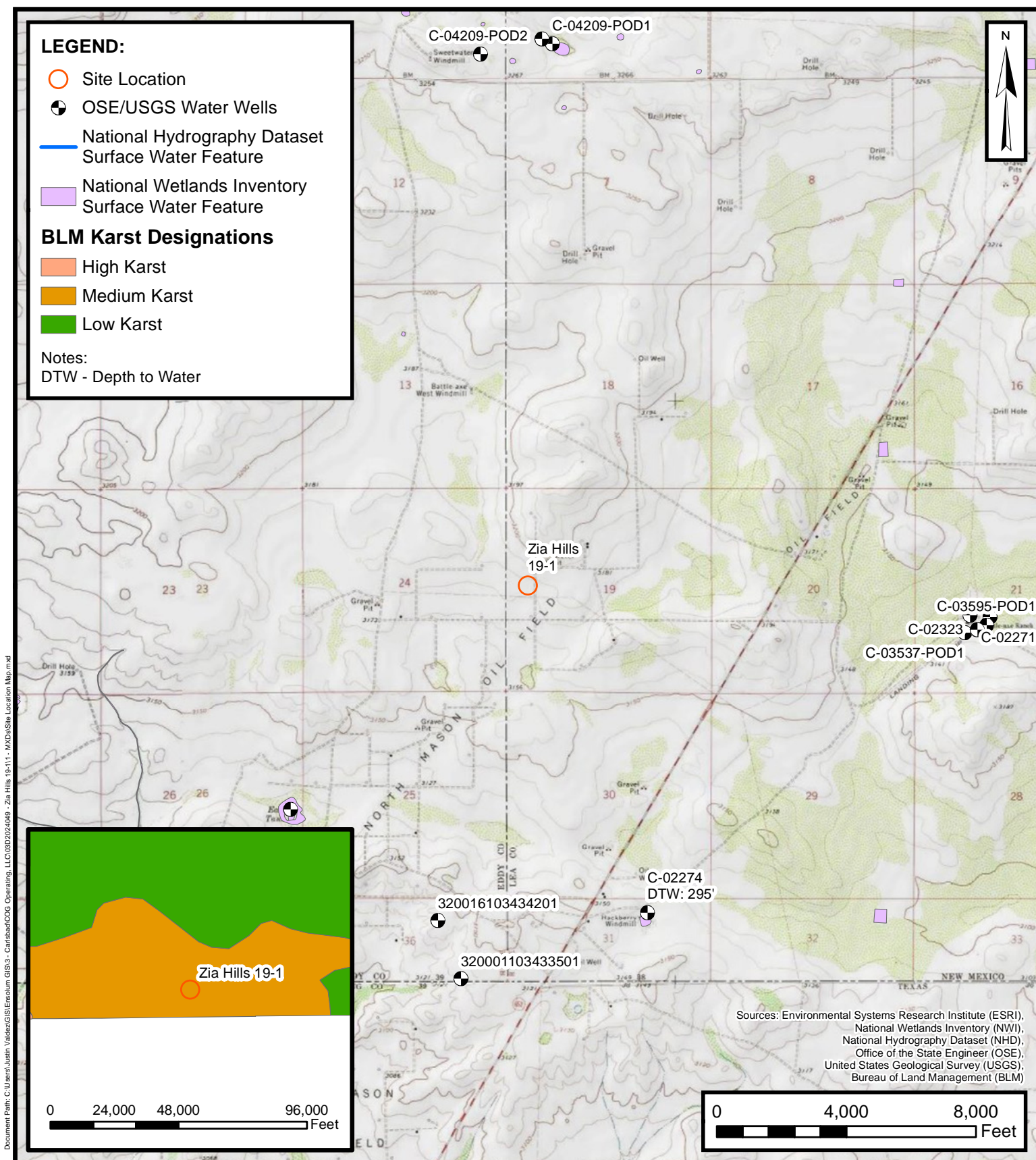
cc: Charles Beauvais, ConocoPhillips Company  
Bureau of Land Management

### Appendices:

Figure 1 Site Receptor Map  
Appendix A Final C-141



FIGURES



## Site Location Map

COG OPERATING, LLC  
Zia Hills 19-1  
NAPP2216037138  
Unit E Sec 19 T26S R32E  
Lea County, New Mexico

FIGURE  
**1**



APPENDIX A

FINAL 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 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	NAPP2215827276
District RP	
Facility ID	fAPP2129428702
Application ID	

## Release Notification

### Responsible Party

Responsible Party	ConocoPhillips Company	OGRID	217817
Contact Name	Charles Beauvais	Contact Telephone	(575) 988-2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2215827276
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

### Location of Release Source

Latitude 32.02853 Longitude -103.72126  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Zia Hills 19-1	Site Type	Tank Battery
Date Release Discovered	May 23, 2022	API# (if applicable)	

Unit Letter	Section	Township	Range	County
E	19	26S	32E	Lea

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 checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)	18	Volume Recovered (bbls)	18
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls)	26	Volume Recovered (bbls)	25
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" 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

The release was caused by a leak in a flow line due to corrosion.

The release was on the pad.

Evaluation will be made at the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Incident ID	NAPP2215827276
District RP	
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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <b>This release was greater than 25 barrels.</b>
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? <b>Immediate notification was made by Charles Beauvais via email on May 23, 2022 at 4:14 pm to blm_nm_cfo_spill@blm.gov and ocd.enviro@state.nm.us.</b>	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" 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 <b>Brittany N. Esparza</b>	Title: <b>Environmental Technician</b>
Signature: 	Date: <b>6/7/2022</b>
email: <b>Brittany.Esparza@ConocoPhillips.com</b>	Telephone: <b>(432) 221-0398</b>
<b><u>OCD Only</u></b>	
Received by: <b>Jocelyn Harimon</b>	Date: <b>06/07/2022</b>

## L48 Spill Volume Estimate Form

Received by OCD: 6/7/2022 7:37:29 AM					Facility Name & Number: Zia Hills 19-1 B - 105					NAPP2215827276					Page 3 of 4	
Asset Area: DBE																
Release Discovery Date & Time: 5/25/2022																
Release Type: Oil Mixture																
Provide any known details about the event: (32.0285320, -103.7212761) - Lat Lon																
Spill Calculation - On Pad Surface Pool Spill																
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated Pool Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)				
Rectangle A	12.0	6.0	66.00	4	72.000	1.375	17.622	0.069	18.834		0.000	18.834				
Rectangle B	16.0	6.0	66.00	4	96.000	1.375	23.496	0.069	25.111		0.000	25.111				
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Released to Imaging: 6/7/2022 8:19:17 AM					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!				
Total Volume Release:									43.945		0.000	43.945				

**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 114298

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 114298
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/7/2022

Incident ID	NAPP2215827276
District RP	
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 <b>not</b> 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

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

State of New Mexico  
Oil Conservation Division

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Printed Name: Charles Beauvais Title: Senior Environmental Engineer  
Signature: *Charles R. Beauvais II* Date: 2/1/2023  
email: Charles.R.Beauvais@conocophillips.com Telephone: 575-988-2043

**OCD Only**

Received by: Jocelyn Harimon Date: 02/03/2023

Incident ID	NAPP2215827276
District RP	
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: Charles Beauvais Title: Senior Environmental Engineer  
Signature: Charles R. Beauvais II Date: 2/1/2023  
email: Charles.R.Beauvais@conocophillips.com Telephone: 575-988-2043

**OCD Only**

Received by: Jocelyn Harimon Date: 02/03/2023

☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Jennifer Nobui Date: 02/21/2023

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

CONDITIONS  
  
Action 182573

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 182573
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan Approved.	2/21/2023