

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	nAPP2200560379
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Hilcorp Energy Company	OGRID 372171
Contact Name Mitch Killough	Contact Telephone 713-757-5247
Contact email mkillough@hilcorp.com	Incident # nAPP2200560379
Contact mailing address 1111 Travis Street, Houston, Texas 77002	

### Location of Release Source

Latitude 36.878617 \_\_\_\_\_ Longitude -108.180276 \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Sandrock North Water Line (located approx. 1,090 ft northwest of the Payne 3E wellsite)	Site Type 4-inch Produced Water Line
Date Release Discovered 12/21/2021 @ 15:30 pm (MT)	API# 30-045-25953 (nearby Payne 3E wellsite)

Unit Letter	Section	Township	Range	County
D	26	31N	13W	San Juan

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 checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 1.56	Volume Recovered (bbls) 0
	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

A 4-inch produced water line froze and ruptured due to cold weather in the area, which allowed for spilled fluid to migrate outside of the pipeline ROW horizontally 570 ft to the west and 160 ft to the north. The spilled fluids that flowed to the west did enter an unnamed, ephemeral water feature that was dry at the time of the incident. However, the fluids did not enter any continuous flowing water features. The fluids that flowed to the north followed an existing lease road and terminated on the west side of the road. Immediately upon discovery, Hilcorp operators isolated nearby wells. The source of the release was shut-in and the line will not be returned to service until all necessary repairs have been addressed. OCD will be notified 48 hours prior to closure sampling.

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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?  Per 19.15.29.7.A, a major release includes an unauthorized release of a volume that may with reasonable probability reach a watercourse. During this event, the spilled fluids migrated outside of the pipeline ROW and flowed into an unnamed, ephemeral water feature. However, it should be noted that the water feature was dry at the time of the release.
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If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?  
 On December 22, 2021 at 14:32 pm (MT), Cory Smith (NMOCD), Ryan Joyner (BLM-FFO), and Abiodun Adeloye (BLM-FFO) were notified via email.

**Initial Response**

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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Mitch Killough Title: Environmental Specialist

Signature:  Date: 1/05/2022

email: mkillough@hilcorp.com Telephone: 713-757-5247

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	~50 (ft bgs)
Did this release impact groundwater or surface water?	<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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input 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.


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Printed Name: \_\_\_\_\_ Mitch Killough \_\_\_\_\_ Title: \_\_\_\_\_ Environmental Specialist \_\_\_\_\_

Signature: \_\_\_\_\_  \_\_\_\_\_ Date: \_\_\_\_\_ 2/11/2022 \_\_\_\_\_

email: \_\_\_\_\_ mkillough@hilcorp.com \_\_\_\_\_ Telephone: \_\_\_\_\_ 713-757-5247 \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Nelson Velez \_\_\_\_\_ Date: \_\_\_\_\_ 02/11/2022 \_\_\_\_\_

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## 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: \_\_\_\_\_ Mitch Killough \_\_\_\_\_ Title: \_\_\_\_\_ Environmental Specialist \_\_\_\_\_

Signature: \_\_\_\_\_  \_\_\_\_\_ Date: \_\_\_\_\_ 2/11/2022 \_\_\_\_\_

email: \_\_\_\_\_ mkillough@hilcorp.com \_\_\_\_\_ Telephone: \_\_\_\_\_ 713-757-5247 \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Nelson Velez \_\_\_\_\_ Date: \_\_\_\_\_ 02/11/2022 \_\_\_\_\_

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

Signature: \_\_\_\_\_  \_\_\_\_\_ Date: \_\_\_\_\_ 02/11/2022 \_\_\_\_\_



February 10, 2022

New Mexico Energy, Minerals and Natural Resources Department  
New Mexico Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

**Subject: Remediation and Sampling Work Plan  
Sandrock North Water Line  
San Juan County, New Mexico  
NMOCD Incident Number: nAPP2200560379**

To Whom It May Concern:

On behalf of Hilcorp Energy Company (Hilcorp), WSP USA Inc. (WSP) has prepared this *Remediation and Sampling Work Plan* for the Sandrock North Water Line release (Site) located on United States Bureau of Land Management (BLM) surface in San Juan County, New Mexico. A release of produced water was discovered by Hilcorp personnel on December 21, 2021 originating from a 4-inch produced water line. Based on initial assessments conducted by Hilcorp, the pipeline froze and ruptured due to cold weather in the area, which allowed the released fluids to migrate outside of the pipeline ROW horizontally to the west. Immediately upon discovery, Hilcorp operators isolated nearby wells and removed all possible pooled fluids from the ground surface. The unrecovered fluids soaked into the surface soils. Because the release impacted a nearby ephemeral wash, Hilcorp submitted immediate notice to the New Mexico Oil Conservation Division (NMOCD) and BLM. Hilcorp also submitted a *Form C-141 Release Notification* to the NMOCD on January 5, 2022. The NMOCD has assigned Incident Number nAPP2200560379 to the Site.

## INITIAL FIELD ASSESSMENT

WSP conducted a site visit on January 27, 2022 to perform initial field screening of soils impacted by the produced water release. Based on the site visit, it appears that the majority of the released fluids migrated approximately 100 linear feet to the northwest from the pipeline down a two-track road. The fluids then ponded in a depression to the north of the two-track road and impacted an area measuring approximately 1,160 square feet. Based on field screening using Hach® chloride test strips, elevated chloride concentrations are predominantly present in the depression from the ground surface to approximately 6 to 12 inches below ground surface (bgs). Additionally, a thin stream of produced water also flowed west of the depression and into a small ephemeral wash. The produced water flowed overland in a thin stream approximately 1-foot wide and, based on field screening, impacted shallow soils along the pathway of the release (up to approximately 3 inches bgs). The total flow path of the release is approximately 450 linear feet. The attached figure shows the approximate release flow path and location of the depression.

Based on the information provided above, approximately 25 cubic yards of soil have been impacted by the produced water release.

## SITE CHARACTERIZATION

The Site is located on Bureau of Land Management (BLM) managed land in Unit D of Section 26, Township 31 North, Range 13 West, San Juan County, New Mexico. The Site is approximately 3.4 miles south of La Plata, New Mexico. As part of the site investigation, local geology/hydrogeology and nearby sensitive receptors were accessed in accordance with 19.15.29.11 of the New Mexico Administrative Code (NMAC). This information is further discussed below.

Based on United States Geological Survey (USGS) geologic mapping, the Site is located within the Tertiary Nacimiento Formation. In the report titled "Hydrogeology and Water Resources of San Juan Basin, New Mexico" (Stone, et. al., 1983), the Nacimiento Formation as characterized by interbedded black carbonaceous mudstones and white, coarse-grained sandstones. This formation ranges in thickness from 418 to 2,232 feet. The Nacimiento Formation overlies the Ojo Alamo sandstone formation (Stone et. al., 1983).

WSP USA  
848 EAST 2ND AVENUE  
DURANGO CO 81301

Tel.: 970-385-1096  
wsp.com



Assessment of potential nearby receptors was conducted through desktop reviews of topographic maps, Federal Emergency Management Administration (FEMA) Geographic Information System (GIS) maps, United States Geological Survey (USGS) GIS maps, New Mexico Office of the State Engineer database, and aerial photographs, as well as site-specific observations.

An unnamed ephemeral wash is located directly adjacent to the Site and is a first order tributary to the La Plata River, located approximately 800 feet west of the release location, and is considered a “significant watercourse”. There are no known springs or fresh-water wells located within 500 feet of the Site. The nearest groundwater well (SJ 03611) is located approximately 3,500 feet north of the Site. Depth to water information from this well indicates that groundwater is approximately 14 feet below ground surface (bgs) at the location of the water well. The ground surface elevation at well SJ 03611 is approximately 5,620 feet above mean sea level (amsl). The Site is located at an elevation of approximately 5,670 feet amsl. Based on the elevation difference between the Site and depth to water in well SJ 03611, depth to water at the Site is assumed to be greater than 50 feet bgs.

The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake, and greater than 300 feet from any wetland. Surface land use surrounding the Site consists primarily of oil and gas development and livestock grazing. No occupied permanent residence or structures, including schools, hospitals, institutions, and/or churches, are located within 300 feet of the Site. The Site is not within the area of a subsurface mine or unstable area and is not within the 100-year floodplain.

#### **SITE CLOSURE CRITERIA**

WSP has characterized the Site according to *Table 1, Closure Criteria for Soils Impacted by a Release* of 19.15.29.12 NMAC. Due to the Site’s proximity to a significant watercourse, the following NMOC Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

#### **REMEDIATION AND SAMPLING WORK PLAN**

Based on the above information, WSP and Hilcorp propose to mechanically remove impacted soil at the site and collect confirmation soil samples. In the ponding area, 5-point composite samples will be collected at a frequency of one sample per 200 square feet. Because of the narrow and shallow nature of the release in the flow areas of the two track road and wash, WSP and Hilcorp propose to collect one 5- point composite sample every 100 linear feet along the path of the release (this equates to a total of five composite samples). The attached figure depicts the approximate sampling areas proposed for this work.

Prior to the start of work, Hilcorp will also engage with the BLM to assess the need for a cultural survey and/or any additional permitting required for this work. Remediation and confirmation soil sampling is anticipated to be completed within 60 days of BLM approval.

WSP appreciates the opportunity to provide this work plan to you. If you have any questions or comments, do not hesitate to contact Stuart Hyde at (970) 903-1607 or at [stuart.hyde@wsp.com](mailto:stuart.hyde@wsp.com), or Mitch Killough at (713) 757-5274 or at [mkillough@hilcorp.com](mailto:mkillough@hilcorp.com).

Kind regards,

A handwritten signature in black ink, appearing to read 'Stuart'.

Stuart Hyde, L.G.  
Environmental Geologist

#### **Enclosed:**

Figure: Proposed Confirmation Sampling

## FIGURES





## LEGEND

- RELEASE PATH, APPROX. 450 LINEAR FEET
- ↔ CONFIRMATION SAMPLING AREAS, APPROX. 90 LINEAR FEET

0 ft. 60 ft. 100 ft. 200 ft.

PROPOSED CONFIRMATION  
SAMPLING  
SANDROCK NORTH WATER LINE  
SAN JUAN COUNTY, NEW MEXICO  
HILCORP ENERGY COMPANY



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
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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 81037

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 81037
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	2/11/2022