

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404256542  
Receive Date:  
06/25/2025

Report taken by:  
Chris Sanchez

Site Investigation and Remediation Workplan (Initial Form)

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. However, this shall not preclude the Operator from taking immediate action to protect public health or safety, the environment, wildlife, or livestock.

This Form 27 describes site conditions as currently understood by the Operator; approval of this Form 27 by ECMC is based on the site conditions accurately described herein; any changes in site conditions identified during or subsequent to the performance of the approved workplan may necessitate additional investigation or remediation which shall be described on a supplemental Form 27. This Form 27 is intended to provide basic information regarding the proposed site investigation and remediation actions, but the workplan may be more fully described in attached documentation.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

|  |                                |                        |
|--|--------------------------------|------------------------|
| Name of Operator: WILLIFORD ENERGY COMPANY | Operator No: 96730             | <b>Phone Numbers</b>   |
| Address: 6060 AMERICAN PLAZA SUITE 760     |                                | Phone: (918) 495-2700  |
| City: TULSA State: OK Zip: 74135           |                                | Mobile: (918) 629-6547 |
| Contact Person: Doug Storts                | Email: pds@willifordenergy.com |                        |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 41129 Initial Form 27 Document #: 404256542

PURPOSE INFORMATION

- Rule 913.c.(1): Pit or Cuttings Trench closure.
- Rule 913.c.(2): Buried or partially buried vessel closure, which will be by removal.
- Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912.
- Rule 913.c.(4): Land treatment of Oily Waste pursuant to Rule 905.e.
- Rule 913.c.(5): Closure of Centralized E&P Waste Management Facilities pursuant to Rule 907.h.
- Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1.
- Rule 913.c.(7): Investigation and remediation of natural gas in soil or Groundwater.
- Rule 913.c.(8): When requested by the Director due to any potential risk to soil, Groundwater, or surface water.
- Rule 913.c.(9): Decommissioning of Oil and Gas Facilities.
- Rule 913.g: Changes of Operator.
- Rule 915.b: Request to leave elevated inorganics in situ.
- Other: \_\_\_\_\_

SITE INFORMATION

Yes Multiple Facilities

|   |                     |                        |  |
|---|---------------------|------------------------|--|
| Facility Type: LOCATION                                 | Facility ID: 476137 | API #:                 | County Name: CHEYENNE                      |
| Facility Name: RHOADES UNIT TUBING FLOWLINE<br>3213S48W | Latitude: 38.878230 | Longitude: -102.814565 |  |
| ** correct Lat/Long if needed: Latitude:                |                     | Longitude:             |  |
| QtrQtr: NWNW  | Sec: 32             | Twp: 13S               | Range: 48W Meridian: 6 Sensitive Area? Yes |

|   |                     |                        |  |
|---|---------------------|------------------------|--|
| Facility Type: SPILL OR RELEASE             | Facility ID: 486490 | API #:                 | County Name: CHEYENNE                      |
| Facility Name: RHOADES UNIT TUBING FLOWLINE | Latitude: 38.878230 | Longitude: -102.814565 |  |
| ** correct Lat/Long if needed: Latitude:    |                     | Longitude:             |  |
| QtrQtr: NWNW                                | Sec: 32             | Twp: 13S               | Range: 48W Meridian: 6 Sensitive Area? Yes |

|   |                            |  |   |
|---|----------------------------|--|---|
| Facility Type: <u>SPILL OR RELEASE</u>                        | Facility ID: <u>489566</u> | API #: _____                                   | County Name: <u>CHEYENNE</u>                                    |
| Facility Name: <u>RHOADES UNIT TUBING<br/>FLOWLINE/3213S4</u> |                            | Latitude: <u>38.878230</u>                     | Longitude: <u>-102.814565</u>                                   |
|   |                            | ** correct Lat/Long if needed: Latitude: _____ | Longitude: _____  |
| QtrQtr: <u>NWNW</u>   | Sec: <u>32</u>             | Twp: <u>13S</u>                                | Range: <u>48W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

  

|   |                            |  |   |
|---|----------------------------|--|---|
| Facility Type: <u>SPILL OR RELEASE</u>                        | Facility ID: <u>490098</u> | API #: _____                                   | County Name: <u>CHEYENNE</u>                                    |
| Facility Name: <u>RHOADES UNIT TUBING<br/>FLOWLINE/3213S4</u> |                            | Latitude: <u>38.878174</u>                     | Longitude: <u>-102.814689</u>                                   |
|   |                            | ** correct Lat/Long if needed: Latitude: _____ | Longitude: _____  |
| QtrQtr: <u>NWNW</u>   | Sec: <u>32</u>             | Twp: <u>13S</u>                                | Range: <u>48W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

**SITE CONDITIONS**

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Agricultural  
Graze Land

Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? No

**Other Potential Receptors within 1/4 mile**

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> E&P Waste       | <input checked="" type="checkbox"/> Other E&P Waste  | <input type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water  | <input type="checkbox"/> Workover Fluids   | _____                                  |
| <input type="checkbox"/> Oil             | <input type="checkbox"/> Tank Bottoms  |  |
| <input type="checkbox"/> Condensate      | <input type="checkbox"/> Pigging Waste   |  |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash  |  |
| <input type="checkbox"/> Drill Cuttings  | <input type="checkbox"/> Spent Filters   |  |
|  | <input type="checkbox"/> Pit Bottoms   |  |
|  | <input checked="" type="checkbox"/> Other (as described by EPA) Soil impacted by produced oil and water from heater treater and piping (hydrocarbon impacted soil) |  |

## DESCRIPTION OF IMPACT

| Impacted? | Impacted Media | Extent of Impact | How Determined |
|-----------|----------------|------------------|----------------|
| Yes       | SOILS          | ~2,500 sq ft     | Estimated      |

## INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Shut-in, stopped flow, ensured inside containment, repaired broken line

## PROPOSED SAMPLING PLAN

### Proposed Soil Sampling

Will soil samples be collected as part of this investigation? ( Number, type (grab/composite), analyses, and locations of samples ):

Initial soil sample of worst case area was taken, sampling plan being developed

### Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

No groundwater was encountered. If groundwater is encountered, a ground water sample will be taken and evaluated.

### Proposed Surface Water Sampling

Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

## Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

Additional sampling will be done to determine extent of impacts, impacted soils will be stock piled on plastic inside the berm at the RU Tank Battery, when appropriate soils will be hauled to Kit Carson Landfill for disposal.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

| Soil  | NA / ND  |
|---|--|
| Number of soil samples collected <u>1</u>                                     | -- Highest concentration of TPH (mg/kg) <u>70860</u> |
| Number of soil samples exceeding 915-1 <u>1</u>                               | -- Highest concentration of SAR <u>1</u>             |
| Was the areal and vertical extent of soil contamination delineated? <u>No</u> | BTEX > 915-1 <u>No</u>                               |
| Approximate areal extent (square feet) <u>2500</u>                            | Vertical Extent > 915-1 (in feet) <u>1</u>           |

**Groundwater**

Number of groundwater samples collected 0 Highest concentration of Benzene (µg/l) \_\_\_\_\_  
 Was extent of groundwater contaminated delineated? No Highest concentration of Toluene (µg/l) \_\_\_\_\_  
 Depth to groundwater (below ground surface, in feet) \_\_\_\_\_ Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
 Number of groundwater monitoring wells installed \_\_\_\_\_ Highest concentration of Xylene (µg/l) \_\_\_\_\_  
 Number of groundwater samples exceeding 915-1 \_\_\_\_\_ Highest concentration of Methane (mg/l) \_\_\_\_\_

**Surface Water**

0 Number of surface water samples collected  
 \_\_\_\_\_ Number of surface water samples exceeding 915-1  
 If surface water is impacted, other agency notification may be required.

**OTHER INVESTIGATION INFORMATION**

Were impacts to adjacent property or offsite impacts identified?  
 \_\_\_\_\_

Were background samples collected as part of this site investigation?  
 \_\_\_\_\_

Was investigation derived waste (IDW) generated as part of this investigation?  
 Volume of solid waste (cubic yards) \_\_\_\_\_ Volume of liquid waste (barrels) \_\_\_\_\_

Is further site investigation required?  
 Sampling plan is being developed and additional sampling will be used to delineate impacted soils.  
 \_\_\_\_\_

**REMEDIAL ACTION PLAN**

**SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

Impacted soil will be excavated, interim storage on heavy plastic onsite, once adequate volumes are accumulated, soil will be hauled to Kit Carson Landfill.

**REMEDATION SUMMARY**

Describe how remediation of existing impacts to soil and groundwater is to be accomplished (i.e. summarize remedial action plan). Provide a brief narrative description including: technical justification, schedule for implementation, estimated time to attain NFA status, plus plans and specifications for the selected remedial action technology.

Impacted soil will be removed, clean soil will be used to replace impacted soil, no other remediation will occur as this is an active oil and gas site.

**Soil Remediation Summary**

|   |  |
|---|--|
| <input type="checkbox"/> In Situ                    | <input checked="" type="checkbox"/> Ex Situ                          |
| _____ Bioremediation ( or enhanced bioremediation ) | _____ Yes Excavate and offsite disposal                              |
| _____ Chemical oxidation                            | _____ If Yes: Estimated Volume (Cubic Yards) <u>100</u>              |
| _____ Air sparge / Soil vapor extraction            | _____ Name of Licensed Disposal Facility or ECMC Facility ID # _____ |
| _____ Natural Attenuation                           | _____ Excavate and onsite remediation                                |
| _____ Other _____                                   | _____ Land Treatment   |
|   | _____ Bioremediation (or enhanced bioremediation)                    |
|   | _____ Chemical oxidation   |
|   | _____ Other _____  |



# RECLAMATION PLAN

## RECLAMATION PLANNING

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

Site is an existing tank battery, it will not be remediated until final closure of the site

Is the described reclamation complete? \_\_\_\_\_

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

Interim  Final

Did the Surface Owner provide the seed mix? \_\_\_\_\_

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? \_\_\_\_\_

## SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. \_\_\_\_\_

Proposed date of completion of Reclamation. \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. 12/06/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 02/03/2025

Proposed site investigation commencement. 06/01/2025

Proposed completion of site investigation. 08/31/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/11/2025

Proposed date of completion of Remediation. 10/31/2025

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

\_\_\_\_\_

**OPERATOR COMMENT**

Facility ID 476137 (Rhoades Unit Tank Battery) is located in Cheyenne County, Colorado. This Form 27 Initial will be used to close Spill ID 486490, Spill ID 489566, and Spill 490098.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Ty Smith

Title: Consultant

Submit Date: 06/25/2025

Email: tysmith@lesair.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: Chris Sanchez

Date: 07/01/2025

Remediation Project Number: 41129

**COA Type****Description**

|        |  |
|--------|--|
|        | Upon approval of this Form 27-i the Operator shall submit a Supplemental Form 19 Requesting Closure of Spill Facility ID 486490, 489566, and 490098  |
|        | Operator shall submit Quarterly Updates for this remediation project every 90 days as required by Rule 913.e. Quarterly updates shall include a current map of the subject location including current excavation limits and/or sample locations, proposed/actual soil boring locations and monitoring well locations. GPS data used to create the map must comply with ECMC Rule 216. Operator will include historical and recent soil analytical data in a table format in Quarterly updates. Operator shall submit field notes of all field activities reported during a Quarterly Update. |
|        | If groundwater is encountered, the Operator shall sample for Inorganic Parameters (total dissolved solids, sulfate, chloride) in addition to Organic Compounds   |
|        | Operator shall define the vertical and lateral extent of impacts to soil. Additional sampling is required to fully delineate the vertical and lateral impacts to soil<br><br>Operator shall collect confirmation soil samples for Full Table 915-1 Contaminants of Concern   |
|        | Background sampling locations should be sufficiently away from the impacted area to reflect conditions not impacted by oil and gas activity, and should be obtained from similar depths and soil horizons or lithologic materials for comparison to confirmation soil samples  |
|        | E&P waste shall be managed in accordance with Rule 905.  |
| 6 COAs |  |

**ATTACHMENT LIST**

Upon approval, the approved Form 27 and all listed attachments will be indexed to the Remediation Project file. Only the approved Form 27 will also be indexed to the related Facilities.

| <b>Att Doc Num</b> | <b>Name</b>                                 |
|--------------------|---|
| 404256542          | INVESTIGATION/REMEDATION WORKPLAN (INITIAL) |
| 404256612          | ANALYTICAL RESULTS                          |
| 404256613          | AERIAL IMAGE                                |
| 404256625          | ANALYTICAL DATA SUMMARY TABLE(S)            |
| 404263225          | FORM 27-INITIAL-SUBMITTED                   |

Total Attach: 5 Files

**General Comments**

| <b>User Group</b> | <b>Comment</b>   | <b>Comment Date</b> |
|-------------------|--|---------------------|
| Environmental     | ECMC added Spill Facility ID 486490, 489566, and 490098 to Related Facilities. | 07/01/2025          |

Total: 1 comment(s)