

State of Colorado  
Energy & Carbon Management Commission

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403862531  
Receive Date:  
07/26/2024  
Report taken by:  
Chris Sanchez

Site Investigation and Remediation Workplan (Supplemental 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: <u>MULL DRILLING COMPANY INC</u>	Operator No: <u>61250</u>	Phone Numbers Phone: <u>(316) 895-1596</u> Mobile: <u>( )</u>
Address: <u>1700 N WATERFRONT PKWY B#1200</u>		
City: <u>WICHITA</u>	State: <u>KS</u>	Zip: <u>67206-6637</u>
Contact Person: <u>Dustin Damme</u>	Email: <u>dustin@mullcompanies.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 23974 Initial Form 27 Document #: 403094139

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

No Multiple Facilities

Facility Type: <u>LOCATION</u>	Facility ID: <u>314207</u>	API #: _____	County Name: <u>PROWERS</u>
Facility Name: <u>SANTA FE RANCH-621S46W 24SESW</u>	Latitude: <u>38.202845</u>	Longitude: <u>-102.534786</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESW</u>	Sec: <u>24</u>	Twp: <u>21S</u>	Range: <u>46W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

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

Cattle

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- X E&P Waste
Other E&P Waste
Non-E&P Waste
Produced Water
Workover Fluids
Oil
Tank Bottoms
Condensate
Pigging Waste
Drilling Fluids
Rig Wash
Drill Cuttings
Spent Filters
Pit Bottoms
Other (as described by EPA)

DESCRIPTION OF IMPACT

Table with 4 columns: Impacted?, Impacted Media, Extent of Impact, How Determined. Rows for No (GROUNDWATER) and Yes (SOILS).

INITIAL ACTION SUMMARY

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

Soil samples have been collected on 7/12/2022, 7/25/2023, 10/25/2023, 6/20/2024 and 6/25/2024. Excavation was conducted prior to the Wellhead 6/25/2024 Sampling; manifests attached in Site Investigation Report. There were exceedances above Table 915-1 of Boron EC, pH, SAR, and Chromium (VI) in 9 of 11 samples taken at the wellhead.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

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

Further excavation will be conducted at the wellhead and additional soil samples will be collected from both the wellhead and tank battery; samples will be analyzed for Boron, EC, pH, SAR, and Chromium (VI).

Proposed Groundwater Sampling

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

If encountered, a minimum of one grab sample will be collected as soon as practical. Groundwater sample(s) will be analyzed for Table 915-1 Groundwater Inorganic Parameters (total dissolved solids, sulfate, chlorides) and organic compounds in water.

Proposed Surface Water Sampling

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

[Empty box for surface water sampling details]

Additional Investigative Actions

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

[Empty box for additional investigative actions]

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 54

Number of soil samples exceeding 915-1 23

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 3000

### NA / ND

-- Highest concentration of TPH (mg/kg) 3380

-- Highest concentration of SAR 25.8

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 9

### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) \_\_\_\_\_

Number of groundwater monitoring wells installed \_\_\_\_\_

Number of groundwater samples exceeding 915-1 \_\_\_\_\_

ND Highest concentration of Benzene (µg/l) \_\_\_\_\_

ND Highest concentration of Toluene (µg/l) \_\_\_\_\_

ND Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_

ND Highest concentration of Xylene (µg/l) \_\_\_\_\_

ND 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?

8 background samples have been collected. Note Arsenic Local Clean Up level is 8.275 mg/kg.

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?

Further excavation will be conducted at the wellhead and additional soil samples will be collected from both the wellhead and tank battery; samples will be analyzed for Boron, EC, pH, SAR, and Chromium (VI).

## REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? No

### SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Waste has been removed and taken to Finney Co. Landfill in Garden City.

### REMEDIATION 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.

All sources shall be removed as required.

### Soil Remediation Summary

In Situ

Ex Situ

Bioremediation ( or enhanced bioremediation )  
 Chemical oxidation  
 Air sparge / Soil vapor extraction  
 Natural Attenuation  
 Other \_\_\_\_\_

Yes Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards)   
Name of Licensed Disposal Facility or ECMC Facility ID # \_\_\_\_\_  
 No Excavate and onsite remediation  
 Land Treatment  
 Bioremediation (or enhanced bioremediation)  
 Chemical oxidation  
 Other \_\_\_\_\_

**Groundwater Remediation Summary**

No Bioremediation ( or enhanced bioremediation )  
 No Chemical oxidation  
 No Air sparge / Soil vapor extraction  
 No Natural Attenuation  
 No Other \_\_\_\_\_

**GROUNDWATER MONITORING**

If groundwater has been impacted, describe proposed monitoring plan, including # of wells or sample points, monitoring schedule, analytical methods, points of compliance. Attach a groundwater monitoring location diagram.

NA

# REMEDIATION PROGRESS UPDATE

## PERIODIC REPORTING

### Approved Reporting Schedule:

Quarterly    Semi-Annually    Annually    Other

### Request Alternative Reporting Schedule:

Semi-Annually    Annually    Other

Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

**Report Type:**    Groundwater Monitoring    Land Treatment Progress Report    O&M Report  
 Other Site Investigation Update

## Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).  
If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

Mull Drilling has complied with General Liability Insurance requirements per Rule 705 and is fully bonded per Rule 702 to fully address the anticipated costs of remediation.

Operator anticipates the remaining cost for this project to be: \$ 10000

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

NA

Volume of E&P Waste (solid) in cubic yards 486

E&P waste (solid) description Hydrocarbon/Disposed Water  
Impacted soils

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: Garden City Kansas Waste  
Connections Landfill

Volume of E&P Waste (liquid) in barrels 0

E&P waste (liquid) description NA

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: NA

# REMEDIATION COMPLETION REPORT

## REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

If YES:

- Compliant with Rule 913.h.(1).  
 Compliant with Rule 913.h.(2).  
 Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? \_\_\_\_\_

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

Operator shall comply with the ECMC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

## 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.

The site will be reclaimed in accordance with ECMC 1000 Series Reclamation Rules or per surface owner direction.

Is the described reclamation complete? No \_\_\_\_\_

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? No \_\_\_\_\_

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

Did the local soil conservation district provide the seed mix? No \_\_\_\_\_

### SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 06/01/2025

Proposed date of completion of Reclamation. 06/30/2026

## 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. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/30/2022

Proposed site investigation commencement. 07/11/2022

Proposed completion of site investigation. 10/31/2024

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/31/2022

Proposed date of completion of Remediation. 12/31/2024

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:

Ongoing Investigation needs to occur to identify excavation stepouts and vertical extent of impact at wellhead; See attached sampling/current results plan.

**OPERATOR COMMENT**

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

Signed: Jessica Donahue

Title: Compliance Specialist

Submit Date: 07/26/2024

Email: jdonahue@ardorenvironmental.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: 09/03/2024

Remediation Project Number: 23974

**COA Type****Description**

	Operator will continue quarterly reporting until the site investigation is complete and Full Table 915-1 standards are met within the remediation area
1 COA	

**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.

**Att Doc Num****Name**

403862531	FORM 27-SUPPLEMENTAL-SUBMITTED
403868013	SITE INVESTIGATION REPORT

Total Attach: 2 Files

**General Comments****User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)