

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404204687  
Receive Date:  
05/14/2025  
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>MURFIN DRILLING COMPANY INC</u>	Operator No: <u>61650</u>	<b>Phone Numbers</b>
Address: <u>250 N WATER ST STE 300</u>		Phone: <u>(316) 858-8664</u>
City: <u>WICHITA</u> State: <u>KS</u> Zip: <u>67202</u>		Mobile: <u>( )</u>
Contact Person: <u>Cristina Goodrich</u>	Email: <u>cgoodrich@murfininc.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 34358 Initial Form 27 Document #: 403702928

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: <u>WELL</u>	Facility ID: _____	API #: <u>009-06440</u>	County Name: <u>BACA</u>
Facility Name: <u>SE CAMPO UNIT 101</u>	Latitude: <u>37.034547</u>	Longitude: <u>-102.581359</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESE</u>	Sec: <u>34</u>	Twp: <u>34S</u>	Range: <u>46W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>LOCATION</u>	Facility ID: <u>321093</u>	API #: _____	County Name: <u>BACA</u>
Facility Name: <u>SE CAMPO UNIT-634S46W 34SESE</u>	Latitude: <u>37.034547</u>	Longitude: <u>-102.581359</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESE</u>	Sec: <u>34</u>	Twp: <u>34S</u>	Range: <u>46W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>



# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input checked="" 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 type="checkbox"/> Other (as described by EPA) | _____                                  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	NA	lab analysis if encountered
Yes	SOILS	TBD	lab analysis

## INITIAL ACTION SUMMARY

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

CPW and USFS granted Murfin special access to complete wellhead excavation and confirmation soil sampling only during USFS archeological review and CPW Lesser Prairie Chicken hold. On 4/16/25, the additional material was removed from the wellhead cut/cap excavation where initial assessment soil sample WH-FS-01@4' failed. Confirmation grab soil samples were collected from the 4 sidewalls and the floor of the new excavation and submitted to Origins Laboratory in Denver, Colorado for full ECMC Table 915-1 analysis. Lab results confirm that impacted soil remains and additional excavation and confirmation sampling is needed. See attached figures, tables, photo log, and laboratory analytical report for all work completed since previous SF27 document number 404085452 was submitted on 2/6/25, which has not yet been reviewed by ECMC.

## 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 ):

Additional excavation and confirmation grab soil sampling is needed at the wellhead. Murfin would like to request ECMC approval for a reduced soil analysis of TPH (C6-C36), pH, SAR, Benzo(a)anthracene, and Lead only for all confirmation soil samples at the wellhead excavation moving forward.

### Proposed Groundwater Sampling

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

If groundwater is encountered during site assessment, a grab groundwater sample will be collected and analyzed for ECMC Table 915-1 Organic Compounds in Groundwater and Groundwater Inorganic Parameters.

### 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 ):

Per approved SF27 document number 403890168.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 6

-- Highest concentration of TPH (mg/kg) 1686

Number of soil samples exceeding 915-1 4

-- Highest concentration of SAR 23.2

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

BTEX > 915-1 No

Approximate areal extent (square feet) 130

Vertical Extent > 915-1 (in feet) 6

**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?

On 6/26/24, background soil samples were collected from 0.5', 3', and 4' bgs from 2 separate locations away from the pad in native areas. Background soil samples were submitted to Origins for Table 915-1 Soil Suitability for Reclamation and Metals analysis.

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?

See Proposed Sampling Plan

**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.

Well is P&A'd

**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.

Excavation for offsite disposal

**Soil Remediation Summary**

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) 25

\_\_\_\_\_ 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 \_\_\_\_\_

### **Groundwater Remediation Summary**

Bioremediation ( or enhanced bioremediation )

Chemical oxidation

Air sparge / Soil vapor extraction

Natural Attenuation

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.

# 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 \_\_\_\_\_

## 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.

Murfin is adequately bonded as shown by submitted Form 3A Doc: 403418364 and has General Liability insurance.

Operator anticipates the remaining cost for this project to be: \$ 5000

## 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:

none

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 25

E&P waste (solid) description impacted soil \_\_\_\_\_

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

Non-ECMC Disposal Facility: Twisted Barrell LLC \_\_\_\_\_

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

E&P waste (liquid) description \_\_\_\_\_

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

Non-ECMC Disposal Facility: \_\_\_\_\_

# 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.

Reclamation will be completed in accordance with ECMC 1000 Series Rules or as agreed upon with the Surface Owner.

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? \_\_\_\_\_

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. 07/29/2024

Actual Spill or Release date, or date of discovery. 07/29/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/26/2024

Proposed site investigation commencement. 07/22/2024

Proposed completion of site investigation. 12/31/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/16/2025

Proposed date of completion of Remediation. 12/31/2025

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**

Murfin would like to request ECMC approval for a reduced soil analysis of TPH (C6-C36), pH, SAR, Benzo(a)anthracene, and Lead only for all confirmation soil samples at the wellhead excavation moving forward.

Previous SF27 document number 404085452 submitted on 2/6/25 has not yet been reviewed by ECMC. This form is being submitted to satisfy Rule 913.e quarterly requirement.

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

Signed: David Castro

Title: Senior Project Scientist

Submit Date: 05/14/2025

Email: dcastro@eagle-enviro.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: 01/07/2026

Remediation Project Number: 34358

**COA Type****Description**

	ECMC acknowledges the request for a reduced analyte suite and does not approve it at this time.  Operator shall collect samples for Full Table 915-1 Contaminants of Concern
	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  Operator shall collect confirmation soil samples for Full Table 915-1 Contaminants of Concern
	If Operator requests to use off location background samples Operator shall provide a NRCS map showing all sample points, the distance from the site that the background samples were taken, soil type, and a confirmation of same land use. Operator shall also provide original laboratory analytical.
	All ongoing/unaddressed comments/COAs from previous Forms remain applicable.
	Operator shall continue Quarterly Reporting until the Site Assessment is completed, and the remediation area demonstrates Compliance with Full Table 915-1 Standards.
5 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.

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

404204687	FORM 27-SUPPLEMENTAL-SUBMITTED
404204737	ANALYTICAL RESULTS
404204738	MAP
404204742	SOIL SAMPLE LOCATION MAP
404204743	PHOTO DOCUMENTATION
404204744	SITE INVESTIGATION REPORT
404204745	ANALYTICAL DATA SUMMARY TABLE(S)
404204746	ANALYTICAL DATA SUMMARY TABLE(S)
404204747	ANALYTICAL DATA SUMMARY TABLE(S)

Total Attach: 9 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)