

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403990706

Receive Date:

Report taken by:

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>	Phone Numbers
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 #: 21623 Initial Form 27 Document #: 402912170

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>073-06757</u>	County Name: <u>LINCOLN</u>
Facility Name: <u>Moonraker 6-27</u>	Latitude: <u>39.150730</u>	Longitude: <u>-103.654100</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENW</u>	Sec: <u>27</u>	Twp: <u>10S</u>	Range: <u>56W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>TANK BATTERY</u>	Facility ID: <u>459718</u>	API #: _____	County Name: <u>LINCOLN</u>
Facility Name: <u>Moonraker 6-27</u>	Latitude: <u>39.150720</u>	Longitude: <u>-103.654100</u>	
** correct Lat/Long if needed: Latitude: <u>39.149740</u>		Longitude: <u>-103.659090</u>	
QtrQtr: <u>SENW</u>	Sec: <u>27</u>	Twp: <u>10S</u>	Range: <u>56W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: OFF-LOCATION FLOWLINE Facility ID: 481403 API #: _____ County Name: LINCOLN
Facility Name: Production Line 6-27 Latitude: 39.149740 Longitude: -103.659090
** correct Lat/Long if needed: Latitude: _____ Longitude: _____
QtrQtr: SENW Sec: 27 Twp: 10S Range: 56W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

Dry Long Branch Creek, Aquatic Native Species Conservation Waters (dry), CR 22 25' W

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
No	GROUNDWATER	0	not encountered
No	SOILS	0	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.

On 9/6/24, a hand auger was used to re-sample grab soil sample FL-B04-1@4'. The grab soil sample was submitted to Origins Laboratory in Denver, CO for Arsenic only analysis. The laboratory result confirmed elevated Arsenic concentration remains at FL-B04-1@4' above background local cleanup level. See attached figures, tables, photos, and lab reports for all work completed to-date.

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):

Murfin plans to move forward with excavation and removal of Arsenic at FL-B04-1@4'. Confirmation grab soil samples will be collected from the 4 sidewalls and floor of the excavation. Confirmation soil samples will be submitted to Origins for Arsenic analysis only per approved SF27 document number 403890111.

Proposed Groundwater Sampling

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

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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>23</u>	-- Highest concentration of TPH (mg/kg) <u>35.1</u>

Number of soil samples exceeding 915-1 2 -- Highest concentration of SAR 5.4

Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 No

Approximate areal extent (square feet) 1 Vertical Extent > 915-1 (in feet) 4

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 4/23/24, 6 grab background soil samples were collected from various locations and depths and submitted to Origins for Table 915-1 Metals analysis. On 6/25/24 2 additional background samples were collected near the county road from 4' bgs and submitted to Origins for Arsenic analysis only. On 9/6/24, 4 additional background samples were collected in the field surrounding the former production facility location from 4' bgs and submitted to Origins for Arsenic analysis only.

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 has been plugged

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 is planned

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____

_____ Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or ECMC Facility ID # _____

_____ Natural Attenuation

Other _____

Excavate and onsite remediation

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? No _____

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

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

E&P waste (solid) description _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

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

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? No _____

Does the previous reply indicate consideration of background concentrations? Yes _____

Does Groundwater meet Table 915-1 standards? Yes _____

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.

Excavation will be backfilled with clean material and topsoil and returned to the farmer upon completion.

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. _____

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. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 02/03/2023

Proposed site investigation commencement. 02/03/2023

Proposed completion of site investigation. 02/28/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/29/2024

Proposed date of completion of Remediation. 02/28/2025

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

Form 6 document number 402972863 is related to this form.

Form 44 document number 402933830 is related to this form.

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

Signed: David CastroTitle: Senior Project Scientist

Submit Date: _____

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: _____

Date: _____

Remediation Project Number: 21623**COA Type****Description**

<u>COA Type</u>	<u>Description</u>
0 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**

403990828	SITE INVESTIGATION REPORT
403990829	ANALYTICAL RESULTS
403990830	ANALYTICAL RESULTS
403990832	ANALYTICAL RESULTS
403990833	ANALYTICAL RESULTS
403990834	ANALYTICAL RESULTS

Total Attach: 6 Files

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

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)