

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:
403690127
Receive Date:
03/21/2024

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 ECOM 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 Phone: <u>(316) 858-8664</u> Mobile: <u>()</u>
Address: <u>250 N WATER ST STE 300</u>		
City: <u>WICHITA</u>	State: <u>KS</u>	Zip: <u>67202</u>
Contact Person: <u>Cristina Goodrich</u>	Email: <u>cgoodrich@murfininc.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 29666 Initial Form 27 Document #: 403409061

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>LOCATION</u>	Facility ID: <u>450166</u>	API #: _____	County Name: <u>LINCOLN</u>
Facility Name: <u>Skyfall 2-5</u>	Latitude: <u>39.298800</u>	Longitude: <u>-103.573500</u>	
	** correct Lat/Long if needed: Latitude: <u>39.301802</u>	Longitude: <u>-103.574051</u>	
QtrQtr: <u>NWNE</u>	Sec: <u>5</u>	Twp: <u>9S</u>	Range: <u>55W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>073-06719</u>	County Name: <u>LINCOLN</u>
Facility Name: <u>Skyfall 2-5</u>	Latitude: <u>39.298800</u>	Longitude: <u>-103.573500</u>	
	** correct Lat/Long if needed: Latitude: _____	Longitude: _____	
QtrQtr: <u>NWNE</u>	Sec: <u>5</u>	Twp: <u>9S</u>	Range: <u>55W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

Facility Type: OFF-LOCATION FLOWLINE Facility ID: 477002 API #: _____ County Name: LINCOLN
Facility Name: Skyfall 2-5 Latitude: 39.301820 Longitude: -103.573750
** correct Lat/Long if needed: Latitude: _____ Longitude: _____
QtrQtr: NWNE Sec: 5 Twp: 9S Range: 55W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications ML 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? Yes

Other Potential Receptors within 1/4 mile

Water Well: none
Surface Water: none
Wetlands: none
Springs: none
Livestock: none
Occupied Building: none
High Priority Habitat (HPH): none

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	TBD	Groundwater samples/laboratory analytical results
Yes	SOILS	15' (N-S) x 13' (E-W) x 13' bgs	Inspection/soil samples/laboratory analytical results

INITIAL ACTION SUMMARY

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

Wellhead cut and cap operations and facility decommissioning were completed at the Skyfall 2-5 location on 9/7/23 - 10/25/23. Groundwater was not encountered in the wellhead cut and cap excavation area or during facility decommissioning activities. Visual inspection and field screening of soils around the well and associated equipment was conducted following wellhead cut and cap and facility decommission operations, and a soil sample (WH-B01@8') was submitted for laboratory analysis to determine if a release occurred. The flowline associated with this wellhead will be abandoned in place per the landowner's request. Soil samples were collected from the locations where the flowline risers were disconnected at the wellhead (FL-B01@6') and separator (FL-B02@4'), and from beneath the former ASTs and separator (AST-B01@3", AST-B03@3", AST-B05@3", AST-B07@3", and SEP-B01@4', and submitted for laboratory analysis to determine if a release occurred. Laboratory analytical results for soil sample WH-B01@8 indicated that TPH and 1,2-methylnaphthalene impacts exceeding ECOMC Table 915-1 were present at the former wellhead location. As such, a Form 19-Initial/Supplemental Spill/Release Report (ECMC Document No. 403532228) was submitted on September 18, 2023, and the ECOMC issued Spill/Release Point ID 485136. The remaining analytical results for the soil samples collected during wellhead cut and cap and facility decommissioning operations were in compliance with ECOMC standards. A topographic Site Location Map showing the geographic setting of the site location is provided as Figure 1. Soil sample location and field screening data are presented in Table 1. The soil sample and field screening locations are illustrated on Figures 2,3, and 4. The field notes and a photographic log are provided as Attachment B.

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):

On September 15, 2023, historical soil impacts were discovered following wellhead cut & cap operations at the Skyfall 2-5 wellhead. Excavation and assessment activities are ongoing. Soil analytical results are summarized in Tables 2 through 5. The laboratory analytical report is provided as Attachment A.

Proposed Groundwater Sampling

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

Groundwater was not encountered during wellhead cut and cap or flowline removal activities. If groundwater is encountered during remaining excavation activities, a minimum of one grab sample will be collected as soon as practical. Groundwater samples will be submitted to an accredited laboratory for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, using standard methods appropriate for detecting the target analytes in ECOMC Table 915-1.

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):

On 9/7/23 - 10/25/23, visual inspection and field screening of soils was conducted at four sidewall locations within the wellhead excavation area, four locations at the ground surface adjacent to the excavation, beneath the former ASTs, ECDs, and dumpline. Based on the inspection and screening results, no soil samples were submitted from these areas in accordance with ECOMC Operator Guidance. The laboratory analytical report is provided as Attachment A. The field notes and a photographic log are provided as Attachment B.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 24

Number of soil samples exceeding 915-1 12

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 195

NA / ND

-- Highest concentration of TPH (mg/kg) 782

-- Highest concentration of SAR 4.27

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 13

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 _____

Highest concentration of Benzene (µg/l) _____

Highest concentration of Toluene (µg/l) _____

Highest concentration of Ethylbenzene (µg/l) _____

Highest concentration of Xylene (µg/l) _____

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?

Background soil samples WH-BG01@3", WH-BG01@4', WH-BG02@3", WH-BG02@4', WH-BG03@10, and WH-BG04@10' were collected from native material adjacent to the wellhead cut and cap excavation. The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and Table 915-1 metals using standard methods appropriate for detecting the target analytes in Table 915-1. Analytical results for the background soil samples are presented in Tables 3 and 5.

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?

Excavation and assessment activities are ongoing.

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.

Excavation and assessment activities are ongoing. Soils will be removed and transported to a licensed disposal facility. Disposal records will be kept on file and available upon request.

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 and assessment activities are ongoing.

Soil Remediation Summary

In Situ

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

Ex Situ

- _____ Excavate and offsite disposal
- _____ If Yes: Estimated Volume (Cubic Yards) _____
- _____ Name of Licensed Disposal Facility or ECMC Facility ID # _____
- _____ 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.

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.

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. 09/15/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/07/2023

Proposed site investigation commencement. 09/07/2023

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/25/2023

Proposed date of completion of Remediation. _____

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

--

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

Signed: Cristina Goodrich

Title: Production Engineer

Submit Date: 03/21/2024

Email: cgoodrich@murfininc.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: 04/17/2024

Remediation Project Number: 29666

COA Type**Description**

	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 will continue quarterly reporting until the site investigation is complete and Table 915-1 standards are met within the remediation area
2 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**

403690127	FORM 27-SUPPLEMENTAL-SUBMITTED
403727227	ANALYTICAL RESULTS

Total Attach: 2 Files

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

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)