

State of Colorado Oil and Gas Conservation Commission

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Document Number:

402912170

Receive Date:

01/19/2022

Report taken by:

Jason Kosola

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 COGCC 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: MURFIN DRILLING COMPANY INC | Operator No: 61650 | Phone Numbers Phone: (316) 858-8659 Mobile: (316) 644-1650 |
| Address: 250 N WATER ST STE 300 | | |
| City: WICHITA | State: KS Zip: 67202 | |
| Contact Person: Tom Melland | Email: tmelland@murfininc.com | |

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

| | | | |
|--|---------------------|------------------------|--|
| 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 Agriculture

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

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Long Branch Creek located between wellhead and facility

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- ☒ 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

| Impacted? | Impacted Media | Extent of Impact | How Determined |
|--------------|----------------|------------------|----------------------------|
| UNDETERMINED | SOILS | TBD | Confirmation Soil Sampling |

INITIAL ACTION SUMMARY

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

In accordance with COGCC Rule 911, this form serves as notification for decommissioning and/or abandonment of the production facility, the off-location wellhead, and flowline. The ground and sub-surfaces will be visually inspected for hydrocarbon impacts during equipment decommissioning.

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):

Grab soil samples will be collected below and/or adjacent to applicable facility equipment, as defined in the Rule 911.a.(4) guidance document (1/4/21), for field screening purposes. Discrete soil samples will be collected for laboratory analysis either in any area of observed hydrocarbon impacts, or in the sample locations designated by the COGCC. GPS data will be collected for all soil sample locations. Soil samples will be analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron. Refer to the Proposed Sample Location Maps.

Proposed Groundwater Sampling

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

If groundwater is encountered during decommissioning and/or abandonment activities, a grab sample will be collected as soon as practical. If contaminated soil is in contact with groundwater or if free product/hydrocarbon sheen are observed, the release will be reported in accordance with Rule 912.b. Groundwater samples will be submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene by EPA Method 8260.

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):

Following the above ground produced water tank removal, discrete soil samples will be collected for laboratory analysis from beneath the removed tank. The soil sample will be submitted for laboratory analysis of EC, pH, SAR, and boron by saturated paste and hot water soluble extraction methods. An assessment will be conducted during the removal of this off-location flowline (estimated to be 1,628 feet in length), with an emphasis in the areas where the flowline is in close proximity to Long Branch Creek. The flowline and adjacent sub-surface will be inspected for any visual and olfactory indicators of potential failure and hydrocarbon impacts. Soils will be field screened below the flowline and if suspected impacts are observed, a soil sample will be submitted for laboratory analysis of BTEX and TPH (C6-C36) by EPA Methods 8260B and 8015.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 0

Number of soil samples exceeding 915-1

Was the areal and vertical extent of soil contamination delineated?

Approximate areal extent (square feet)

Highest concentration of TPH (mg/kg)

Highest concentration of SAR

BTEX > 915-1

Vertical Extent > 915-1 (in feet)

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?

☐ 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?

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Any hydrocarbon impacted material will be transported off-site to a licensed disposal facility in accordance with Rules 905 and 906

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.

If reportable hydrocarbon impacts, as defined in Rule 912.b., are discovered, a site-specific remediation plan will be developed and submitted via a Supplemental Form 27. If reportable impacts are not encountered, a Supplemental Form 27 closure request will be submitted within 90 days of abandonment and/or decommissioning activities.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

Bioremediation (or enhanced bioremediation)

Chemical oxidation

Air sparge / Soil vapor extraction

Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards)

Name of Licensed Disposal Facility or COGCC 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.

REMEDATION 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 _____

WASTE DISPOSAL INFORMATION

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

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 _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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 conducted in accordance with COGCC 1004 Series 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. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/07/2022

Proposed site investigation commencement. _____

Proposed completion of site investigation. 03/22/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

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:

This Form 27 serves as notification for the decommissioning and abandonment of the Moonraker 6-27 tank battery, wellhead, and removal of the associated flowline. Abandonment activities are planned to begin the week of March 7, 2022. This schedule may be adjusted due to unforeseen circumstances, delays, and/or changes in weather. The applicable Form 42 or 44 document number will be provided with the Supplemental Form 27.

OPERATOR COMMENT

Wellhead cut/cap, off-site flowline removal, associated production facility removal

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

Signed: Tom Melland

Title: Production Engineer

Submit Date: 01/19/2022

Email: tmelland@murfininc.com

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

COGCC Approved: Jason Kosola

Date: 01/20/2022

Remediation Project Number: 21623

Condition of Approval**COA Type****Description**

| | |
|--------|--|
| | Facility Closure Supplemental Report Timing A supplemental Form 27 must be submitted within 90 days of the completion of this environmental investigation |
| | Flowline Pre-abandonment Notice Required Operator will submit a Form 44 Pre-abandonment notice pursuant to Rule 1105.d. A Form 44 will be filed prior to starting flowline abandonment, and will be included in the Related Forms in a supplemental Form 27. Abandonment will occur per the requirements of Rule 1105. During flowline abandonment, any liquids evacuated from the flowline will be contained and disposed per the requirements of Rule 905. Approval of this Form 27 does not imply approval of pre-abandonment in place notice required by Rule 1105.d.(2) |
| | Flowline Release Discovered Upon discovery of flowline release during removal, the operator must investigate the extent of release and provide a supplemental form 27 with proposed investigation sample sites for COGCC staff approval. |
| | On the Form 27 Supplemental Report, include Form 44 Flowline Report document number that contains pressure test results required by Rules 1105.e.(6) and 1105.f.(2)C. |
| | 913.d Implementation Schedule In accordance with 913.d.(1) Operator will investigate impacts to soil, Groundwater, and surface water as soon as the impacts are discovered. |
| 5 COAs | |

Attachment Check 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**

| | |
|-----------|---------------------------|
| 402912170 | FORM 27-INITIAL-SUBMITTED |
| 402930660 | SOIL SAMPLE LOCATION MAP |
| 402930663 | SITE MAP |

Total Attach: 3 Files

General Comments

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

Total: 0 comment(s)