

State of Colorado Oil and Gas Conservation Commission

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Document Number:

402988596

Receive Date:

11/22/2022

Report taken by:

Laurel Anderson

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: NOBLE ENERGY INC | Operator No: 100322 | Phone Numbers |
| Address: 2001 16TH STREET SUITE 900 | | Phone: (715) 562-0251 |
| City: DENVER State: CO Zip: 80202 | | Mobile: () |
| Contact Person: Dan Peterson | Email: danpeterson@chevron.com | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26659 Initial Form 27 Document #: 402988596

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: PIT | Facility ID: 110642 | API #: _____ | County Name: LOGAN |
| Facility Name: SMART A | Latitude: 40.477780 | Longitude: -103.300896 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NWNE | Sec: 21 | Twp: 6N | Range: 53W Meridian: 6 Sensitive Area? Yes |

| | | | |
|--|---------------------|------------------------|--|
| Facility Type: PIT | Facility ID: 110643 | API #: _____ | County Name: LOGAN |
| Facility Name: SMART A | Latitude: 40.477780 | Longitude: -103.300896 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NWNE | Sec: 21 | Twp: 6N | Range: 53W Meridian: 6 Sensitive Area? Yes |

| | | | |
|--|---------------------|------------------------|--------------------|
| Facility Type: PIT | Facility ID: 110644 | API #: | County Name: LOGAN |
| Facility Name: SMART A | Latitude: 40.477780 | Longitude: -103.300896 | |
| ** correct Lat/Long if needed: Latitude: | | Longitude: | |
| QtrQtr: NWNE | Sec: 21 | Twp: 6N | Range: 53W |
| | Meridian: 6 | Sensitive Area? Yes | |

SITE CONDITIONS

General soil type - USCS Classifications SW Most Sensitive Adjacent Land Use Cropland

Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Platte Ditch - currently located approximately 800' NW of proposed assessment area - rerouted between 1998 and 2004.
 Riverine "wetlands" - plots as of 1975 adjacent to the proposed assessment area. Wetlands have since been removed and are no longer present at the location - see 2021 aerial.
 HPH - Yes - Mule Deer Severe Winter Range - Consult will be Colorado Parks and Wildlife will be completed as needed.

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 | GROUNDWATER | TBD | Laboratory analytical if encountered |
| UNDETERMINED | SOILS | TBD | Laboratory Analytical |

INITIAL ACTION SUMMARY

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

A desktop review was conducted in regards to historical pits located in close proximity to the Smart A plugged and abandoned wellheads. Based on information available on COGIS and historical aerial review, three (3) unlined pits were previously at the location. A site assessment per consultation with COGCC, Rule 911.c., and historical aerial review is proposed. See the proposed assessment map and aerials attached for reference.

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):

Five (5) soil bores will be advanced to max depth of approximately 20' bgs within the footprint of the former pits (3). Samples will be collected for lab analysis from 2.5-5', 5-7.5', and the bottom of the bore/or the interval with the highest degree of possible "impact" above groundwater (if observed). Two additional bores will be advanced to approximately 5 feet bgs within the footprint of the former berm(s). Sample will be collected from 0-2.5' and 2.5-5'. Four background samples are proposed for inorganic and/or metals comparisons, as needed.

All soil samples will be analyzed for COGCC Full Table 915 suite (TPH (C6-C36), organics, boron, EC, SAR, pH, and metals) by a certified laboratory using COGCC approved methods.

Proposed Groundwater Sampling

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

If groundwater is encountered the soil bores will be converted to monitoring wells. Groundwater samples will be collected for analysis by a certified laboratory for BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.

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 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?

A site assessment will be completed at this location per consultation with COGCC and Rule 911.c. Five (5) soil bores will be advanced to max depth of approximately 20' bgs within the footprint of the former pits (3). Samples will be collected for lab analysis from 2.5-5', 5-7.5', and the bottom of the bore/or the interval with the highest degree of possible "impact" above groundwater (if observed). Two additional bores will be advanced to approximately 5 feet bgs within the footprint of the former berm(s). Sample will be collected from 0-2.5' and 2.5-5'. Four background samples are proposed for inorganic and/or metals comparisons, as needed.

All soil samples will be analyzed for COGCC Full Table 915 suite (TPH (C6-C36), organics, boron, EC, SAR, pH, and metals). If groundwater is encountered during the assessment, monitoring wells will be completed and groundwater samples will be collected for analysis of BTEX, Naphthalene, 1,2,4-TMB, and 1,3,5-TMB.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

NA

REMEDIAL 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.

NA

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

Bioremediation (or enhanced bioremediation)

Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

If Yes: Estimated Volume (Cubic Yards) _____
Name of Licensed Disposal Facility or COGCC 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.

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.

Noble intends to directly address the costs of remediation at the locations as part of our asset retirement obligation process and operations. Noble has general liability insurance (policy MWZZ 316714) and financial assurance in compliance with COGCC rules. Records are available on the COGCC's website.

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

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.

If disturbance occurs reclamation will be in accordance with COGCC 1000 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). 12/22/2022

Proposed site investigation commencement. 12/22/2022

Proposed completion of site investigation. 01/31/2023

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:

OPERATOR COMMENT

Landowner consult/notification in progress. Date will be provided in supplemental 27 and assessment will not be completed prior to consultation/access approval.

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

Signed: Andrew Newberry

Title: Environmental Consultant

Submit Date: 11/22/2022

Email: anewberry@eagle-enviro.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: Laurel Anderson

Date: 01/05/2023

Remediation Project Number: 26659

COA Type**Description**

| | |
|--------|--|
| | Proposes background soil samples shall be sufficiently away from the impacted area to reflect conditions not impacted by oil and gas activity, and should be obtained from similar depths and soil horizons or lithologic materials for comparison to confirmation soil samples. |
| | Operator is directed to provide the most recent date of surface owner notification/consultation on the next Form 27 Subsequent report. |
| | Operator shall conduct a closure investigation in accordance with Rule 911.c. Pit Closure Guidance Document. |
| | If impacted soils are encountered during closure activities, the impacted soil will be segregated for proper off site disposal and the lateral and vertical extent of impact determined with appropriate confirmation soil sampling. |
| | Location lies within the following mapped High Priority Habitats: Mule Deer Severe Winter Range Please note that Approval of this Form 27 does not supersede any Federal, State or Local regulations. COGCC recommends consultation with Colorado Parks and Wildlife. |
| 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**

| | |
|-----------|---------------------------|
| 402988596 | FORM 27-INITIAL-SUBMITTED |
| 403237426 | SITE INVESTIGATION PLAN |

Total Attach: 2 Files

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

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

Total: 0 comment(s)