

State of Colorado Oil and Gas Conservation Commission

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Document Number:

403152303

Receive Date:

09/02/2022

Report taken by:

RICK ALLISON

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 Phone: (715) 562-0251 Mobile: ()
Address: 2001 16TH STREET SUITE 900		
City: DENVER	State: CO Zip: 80202	
Contact Person: Dan Peterson	Email: danpeterson@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 25074 Initial Form 27 Document #: 403152303

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

No Multiple Facilities

Facility Type: SPILL OR RELEASE	Facility ID: 482023	API #: _____	County Name: WELD
Facility Name: Lilli Unit 14-5		Latitude: 40.685929	Longitude: -103.888174
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: SESW	Sec: 5	Twp: 8N	Range: 58W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Range 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

Structures 0.03mi NNW

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
Yes	SOILS	61' x 49' x 24' bgs	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.

During tank battery decommissioning activities on, 04/01/2022, one soil sample collected from beneath a separator dumpline exceeded COGCC standards for TPH at 890 mg/kg. A site investigation was conducted to delineate the extent of impacts at the site on, 05/24/2022. Five soil borings were advanced and impacts were observed up to 24' bgs.

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 soil boring are necessary to define the horizontal and vertical extent of impacts. 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. All samples collected will be analyzed by a certified laboratory using approved COGCC laboratory analysis methods.

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

If groundwater is encountered a grab sample will be collected and analyzed for all organic compounds per COGCC 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):**SITE INVESTIGATION REPORT****SAMPLE SUMMARY**

Soil

Number of soil samples collected 27

Number of soil samples exceeding 915-1 21

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

Approximate areal extent (square feet) 2990

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

NA / ND

-- Highest concentration of TPH (mg/kg) 21300

-- Highest concentration of SAR 5.47

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 24

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 samples were collected and analyzed for arsenic, barium, and selenium to compare to concentrations above COGCC standards observed in decommissioning samples. Background samples also indicated concentrations greater than COGCC standards.

☐ 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?

Additional investigation is required to define the horizontal and vertical extent of impacts.

REMEDIAL ACTION PLAN**SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

The source is to be removed through remedial excavation and disposal at a certified disposal facility. Confirmation soil samples will be collected and analyzed at a certified laboratory.

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.

An initial site assessment for this location was conducted on 5/24/22. Five soil borings were advanced in the area of impacts identified during decommissioning (SEP01-DL02). Soil samples were collected and analyzed for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil, metals in soil per COGCC Table 915-1, and EC, SAR, pH, and boron. Groundwater was not encountered during this assessment. BTEX and TPH exceedances were identified down to 24-ft bgs where the Geoprobe encountered refusal. We have a supplemental site assessment scheduled for October 26-27, 2022 with a larger drill rig to horizontally and vertically delineate impacts.

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

_____ Natural Attenuation

_____ Other _____

_____ 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.

If groundwater is encountered in any soil boring it will be converted to a monitoring well. All monitoring wells will be sampled quarterly and analyzed for all organic compounds per COGCC Table 915-1.

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 Site Assessment Report and Remedial Plan

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. The cost for remediation is an estimate only, costs may change upwards or downward based on site-specific information. Noble makes no representation or guarantees as to the accuracy of the estimate.

Operator anticipates the remaining cost for this project to be: \$ 50000

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 in accordance with COGCC 1000 Series Rules.

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. 01/09/2023

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. 04/15/2022

Actual Spill or Release date, or date of discovery. 04/15/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/01/2022

Proposed site investigation commencement. _____

Proposed completion of site investigation. _____

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

This location was originally included on REM# 20862. Initial decommissioning data was included on Supplement Form 27 document number: 403093229 submitted on 6/29/22. It was decided opening a new REM# was the best course of action due to the extent of impacts observed at this location and the distance between this release location and the rest of the facility included on the original REM#.

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

Signed: Kilian Collins

Title: Environmental Contractor

Submit Date: 09/02/2022

Email: chevroneform@tasman-geo.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: RICK ALLISON

Date: 09/20/2022

Remediation Project Number: 25074

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

	Operator has presented one background sample for comparison. Operator shall obtain a minimum of 5 background samples from depths and/or lithologies comparable to the confirmation samples to support a contaminant of concern reduction request.
1 COA	

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**

403152303	FORM 27-INITIAL-SUBMITTED
403152882	SITE INVESTIGATION REPORT

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)