

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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403666348

Receive Date:

01/25/2024

Report taken by:

Krystal Heibel

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: NOBLE ENERGY INC	Operator No: 100322	Phone Numbers
Address: 1099 18TH STREET SUITE 1500		Phone: (970) 730-7281
City: DENVER	State: CO	Zip: 80202
Contact Person: Dan Peterson	Email: rbueuf27@chevron.com	Mobile: ()

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

Facility Type: <u>SPILL OR RELEASE</u>		Facility ID: <u>484268</u>		API #: _____		County Name: <u>LOGAN</u>	
Facility Name: <u>Smart A</u>				Latitude: <u>40.477667</u>		Longitude: <u>-103.301672</u>	
** correct Lat/Long if needed: Latitude: <u>40.477556</u> Longitude: <u>-103.301567</u>							
QtrQtr: <u>NWNE</u>	Sec: <u>21</u>	Twp: <u>6N</u>	Range: <u>53W</u>	Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>		

SITE CONDITIONS

General soil type - USCS Classifications SC 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? No

Other Potential Receptors within 1/4 mile

Platte Ditch - currently located approximately 680' NW of proposed assessment area - rerouted between 1998 and 2004.
 Riverine "wetlands" - plots as of 1975 adjacent to the 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.
 Municipality - No
 Livestock - ~1,100' NW
 Occupied Building - Home/Farm - ~995' NW
 10 water wells identified within 1/2 mile. Permit #38707 (stock) - located ~950' NW; Permit #196214 (domestic) - located ~3360' NW

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
No	GROUNDWATER	N/A	not encountered
Yes	SOILS	~70'x~40'x~7.5'	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 ECMC, Rule 911.c., and historical aerial review was completed. Historical impacts were indentified and warrant active remediation.

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 were advanced to approximately 20' bgs within the footprint of the former pits (3). Samples were 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". Two additional bores were advanced to approximately 5 feet bgs within the footprint of the former berm(s). Sample were collected from 0-2.5' and 2.5-5'. Sixteen (16) background samples were collected for inorganic and metals comparisons, as needed.

Nineteen (19) soil samples were analyzed for ECMC Full Table 915 suite (TPH (C6-C36), organics, boron, EC, SAR, pH, and metals) by a certified laboratory using ECMC approved methods.

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 35

Number of soil samples exceeding 915-1 32

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

Approximate areal extent (square feet) 2800

-- Highest concentration of TPH (mg/kg) 10800

-- Highest concentration of SAR 98.1

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 20

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?

Sixteen background soil samples were collected for pH, SAR, boron, and table 915-1 metals (sans Cr VI) analysis. Residual boron, pH, and metals observed at the site are consistent and/or less than background comparison and do not appear to warrant additional assessment or remediation.

☐ 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?

Vertical delineation of SAR observed in SB-01 @ 17.5-20' will require vertical delineation to prep/submit a detailed reclamation 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.

A subsurface assessment was completed to identify any potential impacts associated with historical pit activities at the site. Samples were collected for Full ECMC Table 915-1 analysis. Historical TPH, Protection of Groundwater Soil Screening Levels (GSSL), and SAR impacts were identified exceeding ECMC regulatory limits and background comparisons. During the assessment, groundwater was not observed. Source excavation activities will be completed to remove accessible impacts adjacent to SB-01, SB-02, and SB-06. Noble proposes confirmation soil samples be collected for TPH, organic, and SAR analysis.

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.

Source excavation activities will be completed to remove accessible historical TPH, GSSL, and SAR impacts identified at the site. Confirmation soil samples will be collected from the sidewalls and floor of the excavation for compliance with ECMC Table 915-1 regulatory limits and/or background clean-up levels, where applicable. Source excavation activities are tentatively scheduled to commence February-March 2024, but may be delayed to Fall 2024 pending land owner consultant/approval given the remediation location is situated in crop. No further action will be considered when soil is in compliance with ECMC Table 915-1 regulatory limits and/or background clean-up levels.

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.

N/A

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 Investigation Summary

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 ECMC rules. Records are available on the ECMC's website.

Operator anticipates the remaining cost for this project to be: \$ 100000

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?

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.

Post-remediation, reclamation will be in accordance with ECMC 1000 series rules and LO consultation. Residual SAR will be vertically defined, and a detailed reclamation plan will be presented to ensure no adverse effects on human health or the environment.

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. _____

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. 04/13/2023

Actual Spill or Release date, or date of discovery. 04/12/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/22/2023

Proposed site investigation commencement. 12/22/2022

Proposed completion of site investigation. 03/31/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 02/01/2024

Proposed date of completion of Remediation. 03/31/2024

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: Andrew Newberry

Title: Environmental Consultant

Submit Date: 01/25/2024

Email: anewberry@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: Krystal Heibel

Date: 03/13/2024

Remediation Project Number: 26659

COA Type**Description**

	If groundwater is encountered Table 915-1 inorganic parameters shall be analyzed in addition to the organic compounds.
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**

403666348	INVESTIGATION/REMEDIATION WORKPLAN (SUPPLEMENTAL)
403666483	SITE INVESTIGATION REPORT
403666484	OTHER
403718000	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 4 Files

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

Environmental	ECMC approves the reduced analyte suite of TPH, organics in soil analytes, and SAR, only.	03/13/2024
Environmental	"Residual SAR will be vertically defined, and a detailed reclamation plan will be presented to ensure no adverse effects on human health or the environment."	03/13/2024
Environmental	Due to shallow groundwater (~20' bgs) reported in previously installed soil borings on location - Operator shall comply with complete Table 915-1 Protection of Groundwater Soil Screening Level Concentrations.	03/13/2024

Total: 3 comment(s)