

State of Colorado
Energy & Carbon Management Commission

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



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Receive Date:

Report taken by:

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		Mobile: ()
Contact Person: Dan Peterson	Email: danpeterson@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 35368 Initial Form 27 Document #: 403763691

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: LOCATION	Facility ID: 427074	API #: _____	County Name: WELD
Facility Name: GRIGSBY AC19-62HN	Latitude: 40.551470	Longitude: -104.471280	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 30	Twp: 7N	Range: 63W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 486087	API #: _____	County Name: WELD
Facility Name: Grigsby AC19-62HN Tank Battery	Latitude: 40.551843	Longitude: -104.470751	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 30	Twp: 7N	Range: 63W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Rangeland

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

Within Mule Deer Severe Winter Range and Pronghorn Winter Concentration
374 feet southwest to nearest wetland (8.4 acre freshwater emergent wetland)
959 feet southwest to un-named pond, 374 feet southwest to un-named stream
2,196 feet east to nearest occupied building

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 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
Yes	SOILS	74'x70'x10' deep	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.

A release was discovered at the Grigsby AC19-62HN tank battery. An oil dump line developed a leak releasing an unknown volume of crude oil. The facility has been shut in and clean-up operations are underway.

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):

One waste characterization sample, Waste Char, was collected on 1/29/2024 and indicated organic exceedances were present after analytical data was received. Twenty-two confirmation soil samples were collected between 1/31/2024 and 4/4/2024 following the removal of all visual and olfactory indications of contamination. Ten confirmation samples were subsequently collected post additional excavation to resolve remaining organic exceedances on 4/10/2024 and 4/11/2024. All soil samples were analyzed for ECOM Table 915-1 constituents. Laboratory results for confirmation samples indicated that all petroleum constituents were less than their respective Table 915-1 standards. However, elevated pH, SAR, arsenic, barium, cadmium, lead and selenium remain in exceedance of ECOM standards. Laboratory data is summarized in Tables 2 to 5 and illustrated on Figures 3 and 4 of the attached Remediation Progress Report.

Proposed Groundwater Sampling

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

If groundwater is encountered during the site investigation a grab groundwater sample(s) will be collected and analyzed for all organic and inorganic compounds per ECOM 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	NA / ND
Number of soil samples collected 43	-- Highest concentration of TPH (mg/kg) 43000

Number of soil samples exceeding 915-1 43 -- Highest concentration of SAR 31

Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 Yes

Approximate areal extent (square feet) 6830 Vertical Extent > 915-1 (in feet) 10

Groundwater

Number of groundwater samples collected 0 Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? Yes Highest concentration of Toluene (µg/l) _____

Depth to groundwater (below ground surface, in feet) _____ Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed _____ Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 _____ 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?

Ten background samples were collected on 4/10/2024. The elevated EC concentration of 8.30 in sample "BG02 3Ft" has resolved the EC exceedances in the confirmation samples. Further, the background concentrations of metals has resolved arsenic and barium; however, cadmium, lead and selenium must still be resolved.

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?

Operator proposes to advance 16 soil borings as shown on the attached Figure 8 to resolve pH and SAR exceedances. Soil samples will be collected from each of these borings at depths of 6 ft, 10 ft and 14 ft. These samples will be analyzed for Suitability for Soil Reclamation (SSR) and Table 915-1 metals constituents.

In addition, confirmation soil borings will be advanced adjacent to the previous sample points of SS-23 and SS-24. Soil samples will be collected at a depth of 6 ft and will be analyzed for the full Table 915-1 list of analytes.

Operator is evaluating remedial alternatives to resolve cadmium, lead and selenium exceedances.

Operator anticipates this work will be completed during 2Q 2025.

REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Impacted soil was removed from the Grigsby release area by excavation. The impacted soil was disposed of at an N. Weld County landfill as non-hazardous waste 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.

Approximately 1,555 cubic yards of impacted soil were excavated from the Grigsby release location in April 2024. Confirmation soil samples were collected and analyzed for the full Table 915-1 analytical suite. Groundwater was not encountered during the excavation of impacted soil. No additional active remediation is required following source removal at the location. The soil data are illustrated and summarized in the attached tables and figures.

As shown in Tables 2 and 3, organic impacts have been adequately remediated at the site.

As shown in Table 4, elevated pH and SAR are present. Operator proposes to advance 16 soil borings to collect background samples to determine if these pH and SAR exceedances are consistent with the imported backfill used in the pad's construction or due to native concentrations of these SSRs. The locations of these proposed borings are shown on the attached Figure 8.

Soil Remediation Summary

In Situ

Ex Situ

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

- Yes _____ Excavate and offsite disposal
- _____ If Yes: Estimated Volume (Cubic Yards) _____ 1555
- _____ 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.

Groundwater was not encountered.

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 Supplemental Site Investigation

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. 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.

- A remedial excavation was conducted to remove organic impacts
- Additional background soil sampling will be conducted in an effort to resolve pH, SAR, cadmium, lead and selenium exceedances.

Operator anticipates the remaining cost for this project to be: \$ 15000

WASTE DISPOSAL INFORMATION

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

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

No beneficial use

Volume of E&P Waste (solid) in cubic yards 1555

E&P waste (solid) description Hydrocarbon impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: North Weld Landfill, Ault, CO

Volume of E&P Waste (liquid) in barrels 0

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? _____

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 Grigsby AC19-62HN is an active facility. The operator does not plan to decommission the facility in the near future.

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. 01/26/2024

Actual Spill or Release date, or date of discovery. 01/26/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/26/2024

Proposed site investigation commencement. 01/26/2024

Proposed completion of site investigation. 07/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 02/02/2024

Proposed date of completion of Remediation. 10/31/2024

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:

Additional sampling of produced fluids is needed to address elevated metals lead and selenium. Further, additional background and confirmation soil sampling is required.

OPERATOR COMMENT

This supplemental Form 27 is submitted as an update to the release that occurred at the Grigsby AC19-62HN separator on 1/26/2024. A remedial excavation removed approximately 1,555 cubic yards of impacted soil and was completed in April 2024.

As shown in Tables 2 and 3, organic impacts have been adequately remediated at the site.

As shown in Table 4, elevated pH and SAR are present. Operator proposes to advance 16 soil borings to collect background samples to determine if these pH and SAR exceedances are consistent with imported backfill used in the pad's construction or due to native concentrations of these Table 915-1 SSRs. The locations of these proposed borings are shown on Figure 8 of the attached.

Operator is evaluating remedial alternatives to resolve cadmium, lead and selenium exceedances.

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

Signed: Michelle Bartoszek

Title: HSE Advisor

Submit Date: _____

Email: michelle.bartoszek@chevron.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: _____

Date: _____

Remediation Project Number: 35368

COA Type

Description

0 COA	

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

404164646	SITE INVESTIGATION REPORT
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Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)