

State of Colorado
Energy & Carbon Management Commission

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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: (847) 254-8796
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Michelle Bartoszek	Email: michelle.bartoszek@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
No	GROUNDWATER	Not encountered	Not encountered
Yes	SOILS	74'x70'x10' deep	Field Screening and 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. Clean up operations are complete as of 7/21/2025.

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):

Operator will collect confirmation soil samples as described in the Rule 915.e.(2). Operator will analyze soil samples for TPH (C6-C36), Table 915-1 organic compounds in soil, Table 915-1 metals, and Table 915-1 soil suitability for reclamation (electrical conductivity, sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble)).

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 <u>1</u>	ND Highest concentration of TPH (mg/kg) _____
Number of soil samples exceeding 915-1 <u>1</u>	-- Highest concentration of SAR <u>1.59</u>

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

BTEX > 915-1 No _____

Approximate areal extent (square feet) 3211 _____

Vertical Extent > 915-1 (in feet) 9 _____

Groundwater

Number of groundwater samples collected 0 _____

Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No _____

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?

21 background samples were collected from outside of the area disturbed by Oil and Gas Operations, of comparable, nearby, non-impacted, native soil as well as from imported, non-impacted pad material comparable to the soil where the release occurred. Background samples were collected at similar depths and lithologies as confirmation samples and analyzed for Table 915-1 Metals in Soils and Suitability for Soil Reclamation parameters. Analytical results indicated elevated concentrations of several parameters, including pH, electrical conductivity (EC), sodium adsorption ratio (SAR), boron (B), arsenic (As), barium (Ba), cadmium (Cd), hexavalent chromium (Cr VI), lead (Pb), and selenium (Se).

Background Soil Sample Analysis (mg/kg)

pH: Max = 9.28

EC: Max = 12.5

SAR: Max = 31.9

B: Max = 2.83

As: Max*1.25 = 26.3

Ba: Max*1.25 = 735

Cd: Max*1.25 = 1.09

Cr: Max*1.25 = 0.824

Pb: Max*1.25 = 26.5

Se: Max*1.25 = 9.69

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

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.

Approximately 1,560 cubic yards of petroleum-impacted soil had been excavated and transported for disposal to the Waste Management North Weld Landfill in Ault, Colorado. The excavated soil was disposed of at an approved 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.

Throughout remedial excavation, 37 confirmation soil samples were collected between 1/29/2024 and 7/21/2025 at depths ranging from ground surface to 10' below ground surface. Samples were analyzed for full ECMC Table 915-1 constituents. Upon receipt of analytical data, further remedial excavation was conducted where exceedances were observed and additional confirmation samples were collected until analytical data indicated compliance with ECMC Table 915-1 organic standards.

SS-24 6FT was resampled on 4/23/2025 (SS24-6.0(2)) to confirm SAR values. Final analytical results indicated that SS-24 6FT was compliant with SSR standards, however, a benzo(a)anthracene exceedance of 0.075 mg/kg was identified. Additional excavation of impacted material was subsequently conducted to remediate organic exceedances observed at SS24-6.0(2). SEPFLOOR-7.0 (SS24) was sampled on 5/29/2025 and Base-9.0 (SS24) on 7/21/2025 until all organic data was compliant with ECMC Table 915-1 standards.

SS-23 6FT was also resampled on 4/23/2025 (SS23-6.0(2)) to confirm SAR values. Final analytical data indicates full compliance with ECMC Table 915-1 standards and/or below background data.

EC, pH, SAR, arsenic, barium, cadmium, hexavalent chromium, lead, and selenium remain in exceedance of ECMC Table 915-1 standards. 21 background samples were collected between 4/10/24 and 4/28/25 at comparable lithologies and depths to confirmation samples - ranging between 3' and 14'. Final analytical data for inorganic constituents in background samples indicated EC, pH and SAR values were greater than all values observed in confirmation samples. Final analytical data for metals in soil constituents in background samples indicated As, Ba, Cd, Cr, Pb and Se values greater than all values observed in confirmation samples with a 1.25 multiplier applied. Therefore indicating that EC, pH, SAR, As, Ba, Cd, Cr, Pb and Se are naturally occurring thus eliminating such constituents as contaminants of concern.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 1560

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or ECMC 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.

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 _____

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.

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

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 _____ 1560

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? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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.

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. 04/28/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 02/02/2024

Proposed date of completion of Remediation. 07/21/2025

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

Remediation and site investigation efforts pertaining to REM #35368 for the Grigsby AC19-62HN separator release are complete as of 7/21/2025.

All ECMC Table 915-1 constituents have been remediated below background soil sample values or their respective ECMC Table 915-1 reporting limits via source mass removal and site investigation.

Based on currently available data, this project is not affected by data integrity irregularities and is not associated with Operator's data integrity review process and its Rule 525.e. Voluntary Disclosure.

In the event additional responsive information is received or discovered that would suggest this project should be incorporated into the ongoing data integrity review process associated with Operator's Rule 525.e. Voluntary Disclosure, Operator will update and/or amend the statements in this submission and provide any new or revised data or other information.

Based on information presented in the Site Investigation Report and Remedial Action Plan sections of this form and the attached Remediation Progress Report, Noble asserts that the extent of impacts have been fully delineated and all contaminated material has been adequately remediated at this site.

Noble respectfully requests closure of Remediation Project Number: 35368.

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**

404315025	ANALYTICAL RESULTS
404315026	ANALYTICAL RESULTS
404315028	ANALYTICAL RESULTS
404315029	ANALYTICAL RESULTS
404315031	ANALYTICAL RESULTS
404315032	ANALYTICAL RESULTS
404315033	ANALYTICAL RESULTS
404315034	ANALYTICAL RESULTS
404315035	REMEDIATION PROGRESS REPORT
404315036	ANALYTICAL RESULTS

Total Attach: 10 Files

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

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

Total: 0 comment(s)