

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 ECOM 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) 304-5000 |
| City: DENVER State: CO Zip: 80202 | | Mobile: () |
| Contact Person: Dan Peterson | Email: RBUEUF27@chevron.com | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 19598 Initial Form 27 Document #: 402771632

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: 480186 | API #: _____ | County Name: WELD |
| Facility Name: Hayes Federal 31-8H5 | Latitude: 40.357388 | Longitude: -104.699701 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: SENE | Sec: 31 | Twtp: 5N | Range: 65W Meridian: 6 Sensitive Area? Yes |

SITE CONDITIONS

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

Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Wetlands are located 0.18 miles north of the Location. Residential structures are located approximately 260 feet and 0.11 miles southeast, 0.14 miles through 0.24 miles southwest, 445 feet and 0.14 miles north, and 0.14 miles northeast of the Location. An agricultural structure is located approximately 310 feet north of the Location. Commercial structures are located approximately 0.12 miles southeast, and 0.13 miles, 0.15 miles, 0.16 miles, 0.17 miles, 0.22 miles, and 0.24 miles south of the location. Division of Water Resources (DWR) well permits 224201- and 34204-, and a well with no assigned permit number, are residential water wells and are located approximately 250 feet east, 0.20 miles southeast, and 0.22 miles southeast of the Location, respectively. A floodplain is present 0.21 miles north and high priority habitats (HPH), Mule Deer Winter Corridor and Mule Deer Severe Winter Range are located 0.15 miles northwest and 50 feet north of the Location.

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 | Refer to Tables and Figures | Field-Screening and Laboratory Analysis |
| Yes | SOILS | Refer to Tables and Figures | Field-Screening and Laboratory 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 final reclamation of the Hayes Federal 31-8H5 tank battery (Location), historical impacts were discovered. On June 14, 2021, five soil samples were collected by a previous consultant from the pad surface due to intermittent black discoloration observed during reclamation activities. The samples were submitted for analysis of Energy & Carbon Management Commission (ECMC) Table 915-1 organics. Laboratory results indicated exceedances of benzo(a)anthracene (SS-02 and SS-03) and benzo(a) pyrene (SS-03). Additionally, hallow groundwater was encountered and two grab groundwater samples were collected from temporary wells and were submitted for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene. Laboratory results indicated compliance with applicable standards.

On June 30, 2021, a supplemental site investigation (SSI) was completed by a previous consultant to address organic impacts identified during the initial investigation. Ten soil samples were collected to delineate organic exceedances observed in SS-02 and SS-03. Samples were collected from 2 feet below ground surface (bgs) and were submitted for analysis of Table 915-1 organics and Soil Suitability for Reclamation (SSR) constituents in all samples and additionally, Table 915-1 metals in sample SB-05 only. Laboratory results indicated exceedances of benzo(a)anthracene, sodium adsorption ratio (SAR), and arsenic.

All 2021 samples been included in Chevron's data integrity review and the impacted area will be characterized with the approved Form 27 investigation plan. The 2021 sampling results will not be used for site compliance. See Documents 402771632 and 403780957 for details.

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):

The previously approved Form 27 Document 404274026 proposed supplemental source mass removal (SSMR) via mechanical excavation to address the residual impacted soil and potential groundwater impacts identified at the Location. While the availability of a qualified excavation crew is pending, continued characterization and delineation is planned to develop a more targeted excavation plan. Soil samples will be collected to obtain valid and current data associated with the historical impacts, and to delineate identified impacts. Soil samples will be submitted for analysis of all Table 915-1 soil constituents of concern. Background samples will be collected to establish the range of values for naturally occurring inorganic constituents in the project area. A proposed supplemental site investigation plan (SSIP) is attached.

Proposed Groundwater Sampling

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

Shallow groundwater was identified in 2021. If groundwater is encountered during supplemental site investigation (SSI) activities, a grab groundwater sample will be collected and analyzed for full 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):

Visual inspection at the pad surface occurred during site investigation activities. Field personnel assessed all disturbed areas for indications of past spills, such as staining or salt accumulation, with direction to collect samples and report any areas of concern. Black staining and organic odor were observed during initial sampling efforts, indicating potential hydrocarbon impacts.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 15
Number of soil samples exceeding 915-1 8
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 800

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 10.6
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 2

Groundwater

Number of groundwater samples collected 2
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 2
Number of groundwater monitoring wells installed 2
Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l) _____
ND Highest concentration of Toluene (µg/l) _____
ND Highest concentration of Ethylbenzene (µg/l) _____
ND Highest concentration of Xylene (µg/l) _____
NA 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?

On June 30, 2021, one background soil sample was collected from 2 feet bgs and submitted for analysis of sodium adsorption ratio (SAR), arsenic, and hexavalent chromium. This sample has been included Chevron's data integrity review and will not be used for site compliance.

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?

As part of Chevron's Data Integrity review, all point-of-compliance samples will be recollected in accordance with the approved Form 27 investigation plan and analyzed for full Table 915-1. Background samples will also be collected to establish the range of values for naturally occurring inorganic constituents in the project area. SSI results will be submitted on a subsequent Form 27. A proposed SSIP is attached.

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.

Site investigation and delineation efforts are still underway for this project. When investigation efforts have concluded, if source removal is deemed to be necessary, a removal summary will be provided

REMEDICATION 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.

Site investigation and delineation efforts are still underway for this project. When investigation efforts have concluded, if remediation is deemed to be necessary, a remedial approach will be proposed, and subsequent efforts and results will be reported here.

Soil Remediation Summary

In Situ

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

Ex Situ

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

On June 30, 2021, two grab groundwater samples were collected for analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene on June 14, 2021. Laboratory results indicated all analytes below detection limits. However, these samples have been included in Chevron's data integrity review and will not be used for site compliance. If groundwater is encountered during SSI activities, a grab groundwater sample will be collected and analyzed for full 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 Quarterly Update and SSIP

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 (policies MWZZ316714 and MWZX316724) 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: \$ 50000

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? _____

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.

Reclamation will be completed in accordance with ECMC 1000 Series Rules.

Is the described reclamation complete? Yes _____

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. 10/31/2026

Proposed date of completion of Reclamation. 10/31/2028

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. 06/19/2021

Actual Spill or Release date, or date of discovery. 06/18/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/14/2021

Proposed site investigation commencement. 06/14/2021

Proposed completion of site investigation. 03/31/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/31/2026

Proposed date of completion of Remediation. 10/01/2026

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:

The implementation schedule has been adjusted to reflect the status of site investigation efforts and anticipated dates for completion. Additional site investigation to characterize and delineate identified impacts, and to characterize native soil conditions is tentatively scheduled to be completed by the end of the first quarter of 2026. Results will be reported in a subsequent Form 27.

OPERATOR COMMENT

This form has been submitted as a replacement form in response to ECMC's denial of Form 27 dated October 7, 2025 (Document 404379807), to satisfy the quarterly reporting schedule for the Hayes Federal 31-8H5 location (Remediation Project 19598), and to propose a SSIP. Additional site investigation to characterize potential soil impacts identified during initial investigations and to further establish the range of values for naturally occurring inorganic constituents in the project area is tentatively scheduled to be completed by the end of the first quarter of 2026.

As previously approved in Document 404274026, excavation of identified impacted soil appears to be the preferred pathway towards closure. However, impacts have yet to be horizontally or vertically delineated. While the availability of a qualified excavation is pending, continued characterization and delineation is planned to allow for a more targeted excavation plan.

Remediation and site investigation, previously directed by a former consultant, is now under the direction of Confluence Compliance Companies, LLC (Confluence). The delineation and background sampling SSI will be completed in accordance with the attached SSIP. Results of the SSI will be submitted in a subsequent Form 27. Pursuant to Rule 913.e., quarterly reporting will be conducted until closure criteria are achieved for the remediation project.

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

Signed: Miranda Beard

Title: Program Scientist

Submit Date: _____

Email: CVX-REMS@confluence-cc.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: 19598

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

| | |
|-----------|-------------------------|
| 404492482 | SITE INVESTIGATION PLAN |
|-----------|-------------------------|

Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

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

Total: 0 comment(s)