

# State of Colorado Energy & Carbon Management Commission

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Report taken by:  
Laurel Anderson

## 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	<b>Phone Numbers</b>
Address: 1099 18TH STREET SUITE 1500		Phone: (970) 730-7281
City: DENVER	State: CO	Zip: 80202
Contact Person: Dan Peterson	Email: Dan.Peterson@chevron.com	Mobile: ( )

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 25142 Initial Form 27 Document #: 403169054

#### 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: LOCATION	Facility ID: 327389	API #: _____	County Name: WELD
Facility Name: UPRR 53 PAN AM UT/T/-63N65W 25SENW	Latitude: 40.199617	Longitude: -104.615717	
** correct Lat/Long if needed: Latitude: 40.199146		Longitude: -104.616033	
QtrQtr: SENW	Sec: 25	Twp: 3N	Range: 65W Meridian: 6 Sensitive Area? Yes

#### SITE CONDITIONS

General soil type - USCS Classifications SW Most Sensitive Adjacent Land Use Grassland  
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**

HPH Burrowing Owl Active Nest Site  
Riverine 0.03mi W, 0.08mi SW, 0.04mi N  
Industrial 0.25mi E

**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	NA	Lab analysis if encountered
Yes	SOILS	Refer to Tables & Figures	Lab analysis and field screening

**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 site investigation was conducted pursuant to ECMC Rule 911 at the DECHANT COHN CROWE UPRR T3N-R65W-S25 L01 Tank Battery location.

**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 ):

Grab confirmation soil samples were collected from the produced water vessel excavation, beneath the ground oil tanks, and at the separators. Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, and boron. All samples collected were analyzed by a certified laboratory using approved ECMC 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 during the site investigation, grab groundwater samples will be collected and analyzed for all organic and inorganic compounds per ECMC 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 of the tank battery area occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. A detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, is attached to this Form 27.

**SITE INVESTIGATION REPORT**

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 45  
Number of soil samples exceeding 915-1 22  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 100

### NA / ND

-- Highest concentration of TPH (mg/kg) 2860  
-- Highest concentration of SAR 5.38  
BTEX > 915-1 Yes  
Vertical Extent > 915-1 (in feet) 10

### 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?

Twenty-seven background soil samples were collected from ten boreholes (BG02 - BG11) near the tank battery and analyzed for metals in soil per ECOM Table 915-1, twenty background soil samples were analyzed for pH, EC, SAR, and boron. Background soil samples were collected from depths ranging between 0.5 to 5 feet below ground surface (ft bgs) and the lithology between the site and background locations were observed to be silty sands. The maximum background concentrations with a 1.25x multiplier applied for arsenic, barium, chromium (VI), and lead were calculated to be 28.8 mg/kg, 171 mg/kg, 0.38 mg/kg, and 23.5 mg/kg, respectively. All arsenic, barium, chromium (VI), and lead concentrations observed during decommissioning and supplemental site investigation (SSI) activities were below background levels.

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?

Concurrently with the remedial excavation that is proposed in the Remedial Action Plan section of this Form 27, additional background soil samples will be collected to confirm that arsenic, barium, chromium, and lead are attributed to native soil conditions at the site.

## 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.

The organic compound exceedances observed at sample locations BH04R@0.5' and BH07@5.5' will be removed through a remedial excavation.

### 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.

A Site Assessment was conducted on 10/21/2024 to delineate impacted media, during which nine soil borings were advanced. BH01R-BH05R were advanced to resample BH01-BH05 and confirm metals exceedances at the tank battery location. BH07-BH09 were advanced surrounding BH01R-BH05R to further vertically and laterally delineate the exceedances observed at BH01-BH05. Soil samples were collected and analyzed for full ECMC Table 915-1 constituents. Groundwater was not encountered during this assessment. During the SSI, elevated PIDs and hydrocarbon staining and odor were encountered at soil boring BH07. Following the receipt of preliminary analytical results on 10/22/2024, a historic release was reported to the ECMC. Final analytical results indicated that organic impacts were observed in soil samples BH04R@0.5' and BH07@5.5'.

Based on the preliminary analytical results and site investigation observations, Chevron is proposing to conduct remedial excavation activities to remove remaining hydrocarbon impacts identified in initial decommissioning and site investigation activities. Following excavation activities, confirmation soil samples will be collected from the final excavation extent and submitted for laboratory analysis for full ECMC Table 915-1 constituents.

### 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

\_\_\_\_\_ 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 during decommissioning or site investigation activities.

# 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 SSI Report, Supplemental Source Mass Removal Proposal

## 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: \$ 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 reseeded program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

Reclamation will be in accordance with ECMC 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. 01/06/2023

Proposed date of completion of Reclamation. 08/05/2026

## 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. 07/26/2022

Actual Spill or Release date, or date of discovery. 10/22/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/06/2023

Proposed site investigation commencement. 11/05/2024

Proposed completion of site investigation. 05/05/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/05/2025

Proposed date of completion of Remediation. 02/05/2026

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 changed due to the completion of the October 2024 supplemental site investigation (SSI) at the Dechant D21-25 tank battery and necessity for remedial excavation activities adjacent to the tank battery. The proposed remedial excavation will be completed following the approval of this form, landowner negotiations, and crew availability.

## OPERATOR COMMENT

On October 21, 2024, a supplemental site investigation was conducted to delineate hydrocarbon impacts recorded during initial decommissioning activities and evaluate native soil concentrations for arsenic, barium, chromium (VI), and lead. Based on the preliminary results, Chevron is proposing to conduct a remedial excavation to remove the the organic impacts identified during decommissioning and site investigation activities (soil samples BH04R@0.5' and BH07@5.5') is presented in the Remedial Action Plan section of this Form 27.

Twenty-seven background soil samples were collected near the tank battery and analyzed for metals in soil per ECMC Table 915-1, twenty of these were analyzed for pH, EC, SAR, and boron. Background soil samples were collected from depths ranging between 0.5 to 5 feet below ground surface (ft bgs) and the lithology between the site and background locations were observed to be silty sands. The maximum background concentrations with a 1.25x multiplier applied for arsenic, barium, chromium, and lead were calculated to be 28.8 mg/kg, 171 mg/kg, 0.38 mg/kg, and 23.5 mg/kg, respectively. All arsenic, barium, chromium, and lead concentrations observed during decommissioning and supplemental site investigation (SSI) activities were below background levels.

Quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the remedial excavation will be submitted on a subsequent Form 27.

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

Signed: Jake Whritenour

Title: Environmental Consultant

Submit Date: 11/08/2024

Email: tas-chevron-4@tasman-geo.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: 25142

## COA Type

## Description

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
403965941	FORM 27 DENIED
403982427	ANALYTICAL RESULTS
403982428	ANALYTICAL RESULTS
403982430	ANALYTICAL RESULTS
403982431	ANALYTICAL RESULTS
403982432	ANALYTICAL RESULTS
403982433	ANALYTICAL RESULTS
403982434	ANALYTICAL RESULTS
403982594	MONITORING REPORT
404039546	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 10 Files

## General Comments

User Group	Comment	Comment Date
Environmental	The Laboratory Analytical PDF Document #403982433 attached to this form indicates it has been altered after lab delivery. ECMC has not conducted a complete technical review of this form, data, or attachments but is returning this form to draft. Operator will conduct a thorough review of all laboratory analytical reports and data and contact ECMC Regional Environmental Protection Specialist (EPS) to report findings.	12/24/2024

Total: 1 comment(s)