

# State of Colorado Oil and Gas Conservation Commission

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403136639

Receive Date:

08/15/2022

Report taken by:

CHRIS CANFIELD

## 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 COGCC 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 Phone: (715) 562-0251 Mobile: ( )
Address: 2001 16TH STREET SUITE 900		
City: DENVER	State: CO Zip: 80202	
Contact Person: Dan Peterson	Email: danpeterson@chevron.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 8440 Initial Form 27 Document #: 2148980

#### 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: 376820	API #: _____	County Name: ADAMS
Facility Name: FRI-61S67W 18CSE		Latitude: 39.960989	Longitude: -104.926653
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: CSE	Sec: 18	Twp: 1S	Range: 67W Meridian: 6 Sensitive Area? Yes

#### SITE CONDITIONS

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use CROP LAND

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**

SURFACE WATER 640' E, WATER WELL 836' N.

**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
Yes	GROUNDWATER	~53,500 SQUARE FEET	Lab Analytical
Yes	SOILS	~367,500 CUBIC FEET	Lab Analytical

**INITIAL ACTION SUMMARY**

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&amp;P Waste.

SEE FORM 19, COGCC DOCUMENT #2147193.

**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 ):

Soil samples were collected as part of the site investigation and analyzed for TPH-GRO, TPH-DRO, Naphthalene, and BTEX.

**Proposed Groundwater Sampling**☒ Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

Groundwater samples were collected as part of the site investigation and analyzed for BTEX. Groundwater monitoring will be scheduled on a quarterly basis. Point of compliance has been achieved at the location.

**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**

Number of soil samples collected 33  
Number of soil samples exceeding 915-1 6  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 52000

**NA / ND**

-- Highest concentration of TPH (mg/kg) 1859  
NA Highest concentration of SAR           
BTEX > 915-1 Yes  
Vertical Extent > 915-1 (in feet) 53

**Groundwater**

Number of groundwater samples collected 42  
Was extent of groundwater contaminated delineated? Yes  
Depth to groundwater (below ground surface, in feet) 29  
Number of groundwater monitoring wells installed 42  
Number of groundwater samples exceeding 915-1 24

-- Highest concentration of Benzene (µg/l) 15000  
-- Highest concentration of Toluene (µg/l) 33000  
-- Highest concentration of Ethylbenzene (µg/l) 1200  
-- Highest concentration of Xylene (µg/l) 18000  
NA Highest concentration of Methane (mg/l)         

**Surface Water**

0 Number of surface water samples collected  
0 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?

☐ 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? No

**SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

Source removal is being addressed by LNAPL recovery wells, total fluid extraction wells, and soil vapor extraction.

**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.

LNAPL recovery wells were installed and are operational. Additional total fluid recovery pumps have also been installed and are operational. The soil vapor extraction system has been activated and is currently removing mass.

**Soil Remediation Summary**

☒ In Situ

☐ Ex Situ

No Bioremediation ( or enhanced bioremediation )          Excavate and offsite disposal

No Chemical oxidation          If Yes: Estimated Volume (Cubic Yards)

Yes Air sparge / Soil vapor extraction

Yes Natural Attenuation

No Other \_\_\_\_\_

Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_

Excavate and onsite remediation

No Land Treatment

No Bioremediation (or enhanced bioremediation)

No Chemical oxidation

No Other \_\_\_\_\_

### **Groundwater Remediation Summary**

No Bioremediation ( or enhanced bioremediation )

No Chemical oxidation

Yes Air sparge / Soil vapor extraction

Yes Natural Attenuation

Yes Other LNAPL Recovery wells/Total  
Fluid Recovery

### **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.

Monitoring wells SB04R SB05, SB07 through SB10, SB13 through SB17R, SB19 through SB25R2, SB27R through SB33, SB37 and SB39R will be sampled on a quarterly basis for BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene. Monitoring wells with measurable LNAPL will not be sampled.

## REMEDATION 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 COGCC rules. Records are available on the COGCC'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? 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 0

E&P waste (solid) description

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility:

Volume of E&P Waste (liquid) in barrels 2300

E&P waste (liquid) description E&P liquid waste derived from total fluid and LNAPL recovery

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: NGL

## REMEDATION COMPLETION REPORT

### REMEDATION 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? No

Is additional groundwater monitoring to be conducted? Yes

Operator shall comply with the COGCC 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.

Final reclamation will be in accordance with COGCC 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. 04/21/2014

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. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. 11/04/2013

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). \_\_\_\_\_

Proposed site investigation commencement. 11/04/2013

Proposed completion of site investigation. 04/21/2014

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/12/2013

Proposed date of completion of Remediation. 12/31/2035

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**

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

Signed: Allan Engelhardt

Title: Environmental Consultant

Submit Date: 08/15/2022

Email: chevroneform@tasman-geo.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: CHRIS CANFIELD

Date: 08/16/2022

Remediation Project Number: 8440

**Condition of Approval****COA Type****Description**

0 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**

403136639	FORM 27-SUPPLEMENTAL-SUBMITTED
403136640	MONITORING REPORT

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)