

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
403303556  
Receive Date:  
01/26/2023  
Report taken by:  
Kyle Waggoner

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26659 Initial Form 27 Document #: 402988596

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: PIT	Facility ID: 110642	API #: _____	County Name: LOGAN
Facility Name: SMART A	Latitude: 40.477780	Longitude: -103.300896	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNE	Sec: 21	Twp: 6N	Range: 53W Meridian: 6 Sensitive Area? Yes

Facility Type: PIT	Facility ID: 110643	API #: _____	County Name: LOGAN
Facility Name: SMART A	Latitude: 40.477780	Longitude: -103.300896	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNE	Sec: 21	Twp: 6N	Range: 53W Meridian: 6 Sensitive Area? Yes

Facility Type: PIT Facility ID: 110644 API #: County Name: LOGAN  
Facility Name: SMART A Latitude: 40.477780 Longitude: -103.300896  
\*\* correct Lat/Long if needed: Latitude: Longitude:  
QtrQtr: NWNE Sec: 21 Twp: 6N Range: 53W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

General soil type - USCS Classifications SW Most Sensitive Adjacent Land Use Cropland  
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? Yes

**Other Potential Receptors within 1/4 mile**

Platte Ditch - currently located approximately 800' NW of proposed assessment area - rerouted between 1998 and 2004.  
Riverine "wetlands" - plots as of 1975 adjacent to the proposed assessment area. Wetlands have since been removed and are no longer present at the location - see 2021 aerial.  
HPH - Yes - Mule Deer Severe Winter Range - Consult will be Colorado Parks and Wildlife will be completed as needed.

# 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 checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input checked="" type="checkbox"/> Oil            | <input type="checkbox"/> Tank Bottoms                |                                        |
| <input checked="" 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
UNDETERMINED	GROUNDWATER	TBD	Laboratory analytical if encountered
UNDETERMINED	SOILS	TBD	Laboratory Analytical

## 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 desktop review was conducted in regards to historical pits located in close proximity to the Smart A plugged and abandoned wellheads. Based on information available on COGIS and historical aerial review, three (3) unlined pits were previously at the location. A site assessment per consultation with COGCC, Rule 911.c., and historical aerial review is proposed. See the proposed assessment map and aerials attached for reference.

## 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 ):

Five (5) soil bores will be advanced to max depth of approximately 20' bgs within the footprint of the former pits (3). Samples will be collected for lab analysis from 2.5-5', 5-7.5', and the bottom of the bore/or the interval with the highest degree of possible "impact" above groundwater (if observed). Two additional bores will be advanced to approximately 5 feet bgs within the footprint of the former berm(s). Sample will be collected from 0-2.5' and 2.5-5'. Four background samples are proposed for inorganic and/or metals comparisons, as needed.

All soil samples will be analyzed for COGCC Full Table 915 suite (TPH (C6-C36), organics, boron, EC, SAR, pH, and metals) by a certified laboratory using COGCC approved methods.

### Proposed Groundwater Sampling

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

If groundwater is encountered the soil bores will be converted to monitoring wells. Groundwater samples will be collected for analysis by a certified laboratory for BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.

### 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 0

Highest concentration of TPH (mg/kg) \_\_\_\_\_

Number of soil samples exceeding 915-1 \_\_\_\_\_

Highest concentration of SAR \_\_\_\_\_

Was the areal and vertical extent of soil contamination delineated? \_\_\_\_\_

BTEX > 915-1 \_\_\_\_\_

Approximate areal extent (square feet) \_\_\_\_\_

Vertical Extent > 915-1 (in feet) \_\_\_\_\_

**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?

\_\_\_\_\_

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?

A site assessment will be completed at this location per consultation with COGCC and Rule 911.c. Five (5) soil bores will be advanced to max depth of approximately 20' bgs within the footprint of the former pits (3). Samples will be collected for lab analysis from 2.5-5', 5-7.5', and the bottom of the bore/or the interval with the highest degree of possible "impact" above groundwater (if observed). Two additional bores will be advanced to approximately 5 feet bgs within the footprint of the former berm(s). Sample will be collected from 0-2.5' and 2.5-5'. Four background samples are proposed for inorganic and/or metals comparisons, as needed.  
  
All soil samples will be analyzed for COGCC Full Table 915 suite (TPH (C6-C36), organics, boron, EC, SAR, pH, and metals). If groundwater is encountered during the assessment, monitoring wells will be completed and groundwater samples will be collected for analysis of BTEX, Naphthalene, 1,2,4-TMB, and 1,3,5-TMB.

**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.

NA

**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.

NA

**Soil Remediation Summary**

In Situ

Ex Situ

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

\_\_\_\_\_ Excavate and offsite disposal  
\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_  
\_\_\_\_\_ Name of Licensed Disposal Facility or COGCC 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.



Is additional groundwater monitoring to be conducted? \_\_\_\_\_

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.

If disturbance occurs reclamation will be in accordance with COGCC 1000 series rules.

Is the described reclamation complete? \_\_\_\_\_

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. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/22/2022

Proposed site investigation commencement. 12/22/2022

Proposed completion of site investigation. 03/31/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. \_\_\_\_\_

Proposed date of completion of Remediation. \_\_\_\_\_

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:

Landowner consult/notification still in progress. Date will be provided in supplemental 27 and assessment will not be completed prior to consultation/access approval.

**OPERATOR COMMENT**

Landowner consult/notification still in progress. Date will be provided in supplemental 27 and assessment will not be completed prior to consultation/access approval.

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

Signed: Andrew Newberry

Title: Environmental Consultant

Submit Date: 01/26/2023

Email: anewberry@eagle-enviro.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: Kyle Waggoner

Date: 04/14/2023

Remediation Project Number: 26659

**COA Type****Description**

	If groundwater is encountered Table 915-1 inorganic parameters shall be analyzed in addition to the organic compounds.
	Operator shall attach the proposed assessment map and aerials attached in the next Form 27 submittal.
	In accordance with Rule 913.b.(2) proposed monitoring wells are required to define the horizontal extent of impacts to groundwater. Additional step out wells may be required to obtain point of compliance.
	In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule. COGCC selected Quarterly under Remediation Progress Update.
	Due to shallow groundwater (~20' bgs) reported in previously installed soil borings on location - Operator shall comply with complete Table 915-1 Protection of Groundwater Soil Screening Level Concentrations.
	Operator shall provide the Global Positioning System data that meets the requirements of Rule 216 if latitude and longitude data provided pursuant to Rule 912.b.(2).A did not meet the requirements of Rule 216.
6 COAs	

**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**

403303556	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

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

Environmental	Form 19-IS (Document #403372215) reports organics, soil suitability, and TPH exceedances.	04/13/2023
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Total: 1 comment(s)