FORM 27 Rev 5/22

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 403300698
Receive Date: 01/24/2023
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 INFORMATON

Name of Operator: NOBLE ENERGY INC Operator No: 100322
Address: 2001 16TH STREET SUITE 900
City: DENVER State: CO Zip: 80202
Contact Person: Dan Peterson Email: RBUEUF27@chevron.com

Phone Numbers
Phone: (715) 562-0251
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12140 Initial Form 27 Document #: 401842011

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.
- [X] 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.
- [X] 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: 455000 API #: County Name: WELD
Facility Name: Wells Ranch AE32 Latitude: 40.444000 Longitude: -104.355200
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SWNW Sec: 32 Twp: 6N Range: 62W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW
Most Sensitive Adjacent Land Use Non-Crop Land
Is domestic water well within 1/4 mile? No
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

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [ ] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA)
- [ ] **Non-E&P Waste**

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	TBD	Laboratory Analytical
Yes	SOILS	50' X 50' X 20' bgs	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.

During production at the Wells Ranch AE30 tank battery, an unintentional release occurred from a produced water dumpline. The site was shut in.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

Twenty five soil samples were collected during the initial and subsequent site assessments of this location. The soil samples were analyzed by a certified laboratory for TPH-DRO, TPH-GRO, BTEX, and Naphthalene by EPA Methods 8015 and 8260B.

Proposed Groundwater Sampling

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

Five groundwater samples were collected from existing SVE wells. Groundwater samples were submitted for analysis of 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

Number of soil samples collected 25

Number of soil samples exceeeding 915-1 14

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

Approximate areal extent (square feet) 2500

NA / ND

-- Highest concentration of TPH (mg/kg) 11610

NA Highest concentration of SAR

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 20

Groundwater

Number of groundwater samples collected 66

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 13

Number of groundwater monitoring wells installed 18

Number of groundwater samples exceeding 915-1 21

-- Highest concentration of Benzene (µg/l) 14600

-- Highest concentration of Toluene (µg/l) 3710

-- Highest concentration of Ethylbenzene (µg/l) 523

-- Highest concentration of Xylene (µg/l) 1660

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?

☐ 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.

The source area has been delineated vertically and laterally through an environmental site assessment. The source area was initially treated in place using Soil Vapor Extraction (SVE) technology, until groundwater was observed in the SVE wells. TFR/vapor recovery activities will be utilized to address residual petroleum hydrocarbon imapcts at the site.

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.

An SVE system was installed and was operational at the site to address impacted soil above COGCC Table 915-1 standards through 1Q21. Air samples were collected and analyzed for GBTEX by EPA Method TO15M GC/MS to determine the mass reduction and system performance. Groundwater infiltrated the SVE wells (now utilized as monitoring wells) as of March 2021, and the SVE system was shutdown to evaluate changing subsurface conditions at the site. Residual soil and groundwater imapcts will be addressed by TFR and vapor recovery activities. Confirmation soil samples will be collected prior to a no further action request to ensure compliance with COGCC standards. A no further action recommendation will be considered when soil and groundwater concentrations at the site are in compliance with COGCC Table 915-1 regulatory limits.

Soil Remediation Summary

☒ **In Situ** ☒ **Ex Situ**

No	Bioremediation (or enhanced bioremediation)	Yes	Excavate and offsite disposal
No	Chemical oxidation		If Yes: Estimated Volume (Cubic Yards) 75
Yes	Air sparge / Soil vapor extraction		Name of Licensed Disposal Facility or COGCC Facility ID #
Yes	Natural Attenuation	No	Excavate and onsite remediation
No	Other		Land Treatment
			Bioremediation (or enhanced bioremediation)
			Chemical oxidation
			Other

Groundwater Remediation Summary

No	Bioremediation (or enhanced bioremediation)
No	Chemical oxidation
No	Air sparge / Soil vapor extraction
Yes	Natural Attenuation
No	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.

Eighteen monitoring wells have been installed at the site and will be monitored on a quarterly basis. Some wells are dry, which is consistent with previous field observations (upwards of 2 years needed to generate water). Current subsurface conditions are not consistent with historical or regional observations, and require further monitoring. Groundwater is observed as high as 11 feet bgs, and is not measured in adjacent monitoring wells installed to 35 feet bgs. Groundwater samples will be collected from monitoring wells on a quarterly basis and analyzed for COGCC Table 915-1 compliance (BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB. Noble proposes to remove inorganic groundwater monitoring from the sampling plan.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

[X] 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: [X] 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.

Operator anticipates the remaining cost for this project to be: $ 75000

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 100

E&P waste (liquid) description Hydro-Excavated Slurry

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Republic Landfill

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? 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.

Reclamation will be in accordance with COGCC 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.

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. 05/10/2018

Actual Spill or Release date, or date of discovery.

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/09/2018

Proposed site investigation commencement.

Proposed completion of site investigation. 07/10/2019

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/13/2020

Proposed date of completion of Remediation. 12/31/2024

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

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: 01/24/2023 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: 04/27/2023

Remediation Project Number: 12140

COA Type	Description
	Since MW-12 indicates that inorganics are slightly below thresholds, COGCC does not approve removing inorganic compounds from the analyte suite at this time.
1 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
403300698	FORM 27-SUPPLEMENTAL-SUBMITTED
403300700	MONITORING REPORT

Total Attach: 2 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)