

State of Colorado
Oil and Gas Conservation Commission

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Receive Date:
06/28/2022
Report taken by:
BOB CHESSON

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: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u> | Phone: <u>(720) 925-1820</u> |
| Contact Person: <u>Schuyler Hamilton</u> | Email: <u>shamilton@civiresources.com</u> | Mobile: <u>()</u> |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 23330 Initial Form 27 Document #: 403059284

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: <u>WELL</u> | Facility ID: _____ | API #: <u>123-41370</u> | County Name: <u>WELD</u> |
| Facility Name: <u>State Antelope 14-21-16XRLNB</u> | Latitude: <u>40.379353</u> | Longitude: <u>-104.334938</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>SWSW</u> | Sec: <u>21</u> | Twp: <u>5N</u> | Range: <u>62W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

| | | | |
|---|----------------------------|-------------------------------|---|
| Facility Type: <u>SPILL OR RELEASE</u> | Facility ID: <u>481691</u> | API #: _____ | County Name: <u>WELD</u> |
| Facility Name: <u>State Antelope #14-21-16XRLNB</u> | Latitude: <u>40.379354</u> | Longitude: <u>-104.334937</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>SWSW</u> | Sec: <u>21</u> | Twp: <u>5N</u> | Range: <u>62W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

SITE CONDITIONS

General soil type - USCS Classifications SW _____

Most Sensitive Adjacent Land Use Rangeland _____

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? No _____

Other Potential Receptors within 1/4 mile

A groundwater monitoring well (Permit # 188374) was constructed in 1994 at approximately 1440 feet NNW of the spill location. Groundwater elevation was reported at 25' bgs.
There are 2 water wells (monitoring) within 1/2 mile of the spill location.
There are no livestock, wetlands, surface water, springs, occupied buildings, or HPH within 1 mile 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 |
|-----------|----------------|----------------------------------|---------------------|
| Yes | SOILS | Additional Investigation Pending | 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 routine inspections, a pinhole leak was found on a 2" motor valve on the wellhead tree releasing approximately 4.5 barrels of production fluids onto the pad surface. The release was immediately isolated and stopped. Cleanup is currently in progress.

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):

Excavation activities to determine the extent of impacts are ongoing. Soil samples will be collected until the areal and vertical extents of the excavation are within COGCC Table 915-1 allowable limits.

Proposed Groundwater Sampling

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

If groundwater is encountered during excavation activities, one sample will be collected and analyzed for Table 915-1 groundwater constituents BTEX, 1,2,4 and 1,3,5 Trimethylbenzene, and naphthalene.

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 7

Number of soil samples exceeding 915-1 6

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 75

NA / ND

-- Highest concentration of TPH (mg/kg) 1161

-- Highest concentration of SAR 69

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 1

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?

A background sample was collected from shallow soil in an area undisturbed by oil and gas activities. The background sample was analyzed for soil suitability and 915-1 Metals and results were used to generate baseline levels for background soil conditions. The results were reported with elevated concentrations of Arsenic in native soils. Additional background samples may be collected as needed to establish background conditions for soils onsite.

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.

Excavation activities to determine the extent of contamination are ongoing. Impacted or potentially impacted soils will be removed and transported to a disposal facility. Soil samples will continue to be collected until the lateral and vertical extents of the excavation are within COGCC Table 915-1 allowable limits.

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.

Source removal has occurred, contingent on laboratory analytical results an estimated timeframe for a no further action request is August 1, 2022.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 10

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or COGCC Facility ID # _____

_____ Natural Attenuation

No _____ 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.

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

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.

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

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 _____ 10

E&P waste (solid) description E&P solid waste derived from excavation activities

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Waste Management; Buffalo Ridge Landfill

Volume of E&P Waste (liquid) in barrels _____ 0

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC 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 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.

The location will remain an active oil and gas facility. Any disturbance created will be reclaimed 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. 03/02/2022

Actual Spill or Release date, or date of discovery. 03/02/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/02/2022

Proposed site investigation commencement. 03/21/2022

Proposed completion of site investigation. 03/22/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/02/2022

Proposed date of completion of Remediation. 08/01/2022

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:

site access/remediation completion prior to confirmation sampling

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: 06/28/2022

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: BOB CHESSON

Date: 06/28/2022

Remediation Project Number: 23330

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

| | |
|-------|---|
| | This supplemental is being approved as submitted. However, the next supplemental must be populated with the Adequacy of Operator's General Liability Insurance and Financial Assurance data field under the Remediation Progress Update tab as required by Rules 703.b and 750.b. |
| 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**

| | |
|-----------|--------------------------------|
| 403091220 | FORM 27-SUPPLEMENTAL-SUBMITTED |
|-----------|--------------------------------|

Total Attach: 1 Files

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

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

Total: 0 comment(s)