

State of Colorado Oil and Gas Conservation Commission

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Report taken by:

Kari Brown

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> | | Phone: <u>(720) 3158934</u> |
| City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u> | | Mobile: <u>()</u> |
| Contact Person: <u>Luke Kelly</u> | Email: <u>lkelly@bonanzacrk.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 17894 Initial Form 27 Document #: 402652182

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: Facility Decommission and Flowline Removal

SITE INFORMATION

Yes ☐ Multiple Facilities ☐

| | | | |
|---|----------------------------|-------------------------------|--|
| Facility Type: <u>LOCATION</u> | Facility ID: <u>470676</u> | API #: <u></u> | County Name: <u>WELD</u> |
| Facility Name: <u>NORTH PLATTE 21-24 Prod Fac</u> | Latitude: <u>40.389209</u> | Longitude: <u>-104.388250</u> | |
| ** correct Lat/Long if needed: Latitude: <u></u> | | Longitude: <u></u> | |
| QtrQtr: <u>NENW</u> | Sec: <u>24</u> | Twp: <u>5N</u> | Range: <u>63W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u> |
| Facility Type: <u>FLOWLINE SYSTEM</u> | Facility ID: <u>478703</u> | API #: <u></u> | County Name: <u>WELD</u> |
| Facility Name: <u>Bonanza Creek Flowlines</u> | Latitude: <u>40.371670</u> | Longitude: <u>-104.396120</u> | |
| ** correct Lat/Long if needed: Latitude: <u>40.389209</u> | | Longitude: <u>-104.388250</u> | |
| QtrQtr: <u>SENE</u> | Sec: <u>26</u> | Twp: <u>5N</u> | Range: <u>63W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u> |

SITE CONDITIONS

General soil type - USCS Classifications SM

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

There are two water wells within 1/4 of a mile of the location.

DWR Receipt # 9065625 (Permit 81435) is a stock water well approx 590-ft N of the location. Well was constructed to 78-ft, no static water level recorded.

DWR Receipt # 9063577 (Permit 31069) is a residential well approx 1520-ft N of the location. Well was constructed to 172-ft, 112-ft static water level. DWR

Receipt # 0014361 (Permit 14361-MH) is a monitoring well approx 1020-ft S of the location. Well was never drilled, no static water level recorded. DWR

Receipt # 42866 (Permit 42866-MH) is a monitoring hole approx 2400-ft E of the location. Well's planned depth was 20-ft. Well was never drilled, no static water level recorded. Groundwater less than 20 ft is not expected at the disturbance location.

No surface water within 1/4 of a mile.

This location is within a HPH Pronghorn Winter Concentration Area.

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 | 5'x5'x0.5' | 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 site investigation will be conducted pursuant to COGCC rule 911 at the North Platte 21-24 Prod Fac (470676) oil and gas location for the removal of the production facilities and NP 21-24/3/GP Line. This flowline, approximately 1460-ft, will be removed. See site map exhibit for details.

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 beneath the above ground oil tanks, water vault, separators, and flowline start/end points. Additional soil samples were field screened for possible impacts. Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron.

Two confirmation samples were collected for pH analysis adjacent to pH values greater than COGCC Table 915-1 standards. One confirmation sample was analyzed for Table 915-1 organics, inorganics, and metals adjacent to historical petroleum hydrocarbon impacts observed during the facility decommissioning assessment.

All samples collected were analyzed by a certified laboratory using approved COGCC laboratory analysis methods.

Proposed Groundwater Sampling

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

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 14

-- Highest concentration of TPH (mg/kg) 522

Number of soil samples exceeding 915-1 3

-- Highest concentration of SAR 1.39

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

BTEX > 915-1 No

Approximate areal extent (square feet) 25

Vertical Extent > 915-1 (in feet) 0

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?

a background sample for arsenic and hexavalent chromium analysis was collected from native soil adjacent to the former facility.

☒ Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 1

Volume of liquid waste (barrels) 0

☐ 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.

Soil exceeding applicable COGCC Table 915-1 regulatory limits was removed and hauled to the COGCC approved disposal facility. Confirmation soil samples were collected and submitted for laboratory analysis, and are in compliance with COGCC standards

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.

No further remediation is necessary

Soil Remediation Summary

☐ In Situ

☒ Ex Situ

Bioremediation (or enhanced bioremediation)

Yes Excavate and offsite disposal

Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 1

Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC 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.

N/A

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

☐ Quarterly

☐ Semi-Annually

☐ Annually

☒ Other

Closure Report

☐ 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 Closure Data

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 1

E&P waste (solid) description soil > COGCC table 915-1

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Buffalo Ridge Landfill

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

E&P waste (liquid) description NA

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: NA

REMEDATION COMPLETION REPORT

REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes _____

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? Yes _____

Does the previous reply indicate consideration of background concentrations? No _____

Does Groundwater meet Table 915-1 standards? Yes _____

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.

Reclamation occurred 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? Yes _____

If YES, does the seed mix comply with local soil conservation district recommendations? Yes _____

Did the local soil conservation district provide the seed mix? Yes _____

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 07/28/2021

Proposed date of completion of Reclamation. 08/05/2021

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. 02/02/2021

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/27/2021

Proposed site investigation commencement. _____

Proposed completion of site investigation. _____

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:

OPERATOR COMMENT

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

Signed: ` Luke Kelly _____

Title: Senior Env. Specialist _____

Submit Date: ` 10/04/2021 _____

Email: lkelly@bonanzacrk.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: Kari Brown _____

Date: 10/11/2021 _____

Remediation Project Number: 17894 _____

Condition of Approval

COA Type

Description

| | |
|-------|--|
| | <p>Based on the information presented, it appears that no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.</p> <p>The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements.</p> |
| 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

| | |
|-----------|--------------------------------|
| 402829256 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 402829269 | SITE INVESTIGATION REPORT |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

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

Total: 0 comment(s)