

State of Colorado
Oil and Gas Conservation Commission

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Document Number:
402941665

Receive Date:

Report taken by:

Site Investigation and Remediation Workplan (Initial 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) 315-8934</u>
Contact Person: <u>Luke Kelly</u>	Email: <u>lkelly@civiresources.com</u>	Mobile: <u>(970) 573-3163</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: _____ Initial Form 27 Document #: 402941665

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: wellhead cut/cap and associated production facilities closure

SITE INFORMATION

Yes Multiple Facilities

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-32748</u>	County Name: <u>WELD</u>
Facility Name: <u>Antelope 13-17</u>	Latitude: <u>40.397860</u>	Longitude: <u>-104.353800</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSW</u>	Sec: <u>17</u>	Twp: <u>5N</u>	Range: <u>62W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

Facility Type: <u>LOCATION</u>	Facility ID: <u>420920</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Antelope 13-17</u>	Latitude: <u>40.397860</u>	Longitude: <u>-104.353800</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSW</u>	Sec: <u>17</u>	Twp: <u>5N</u>	Range: <u>62W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

Facility Type: WELL Facility ID: API #: 123-33020 County Name: WELD
Facility Name: Antelope 12-17 Latitude: 40.397890 Longitude: -104.353840
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWSW Sec: 17 Twp: 5N Range: 62W Meridian: 6 Sensitive Area? No

Facility Type: WELL Facility ID: API #: 123-34906 County Name: WELD
Facility Name: Antelope D-17 Latitude: 40.397810 Longitude: -104.353720
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWSW Sec: 17 Twp: 5N Range: 62W Meridian: 6 Sensitive Area? No

Facility Type: WELL Facility ID: API #: 123-34907 County Name: WELD
Facility Name: Antelope H-17 Latitude: 40.397830 Longitude: -104.353760
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWSW Sec: 17 Twp: 5N Range: 62W Meridian: 6 Sensitive Area? No

Facility Type: FLOWLINE SYSTEM Facility ID: 478703 API #: County Name: WELD
Facility Name: BCEI Flowline System Latitude: 40.371670 Longitude: -104.396120
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SENE Sec: 26 Twp: 5N Range: 63W Meridian: 6 Sensitive Area? No

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

No surface water within 1/4 of a mile.
The Monitoring Well (DWR Receipt 3663275D) approx 640-ft to the E is the nearest permitted water well. This well was never constructed. The planned construction depth was 1340-ft, no static water level recorded.
Groundwater less than 20 ft is not expected at the disturbance location.
This location is within 1/4 mile of a HPH Pronghorn Winter Concentration Area.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|--|--|---|
| <input type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input checked="" type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | No waste has been generated to date |
| <input type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input 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	SOILS	N/A	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 Antelope 13-17 (420920) oil and gas location pertaining to the cut/cap of the Antelope 13-17 wellhead (05-123-32748), Antelope D-17 wellhead (05-123-34906), Antelope 12-17 wellhead (05-123-33020), and Antelope H-17 (05-123-34907). On-location flowlines and off-location gas line will be abandoned. 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 will be collected from beneath the above ground oil tank, water vaults, separator, wellhead, and flowline start/end points. A grab confirmation soil sample will be collected from beneath the produced water vault as well as from the side wall that indicated the highest field screening levels. Soil samples will be 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, metals, and EC, SAR, pH, and boron. All samples collected will be 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):

If groundwater is encountered during the site investigation a grab groundwater sample will be collected and analyzed for all organic compounds per COGCC Table 915-1.

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):

Visual inspection of the location will occur during abandonment activities. Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. The COGCC Flowline Closure, Tank Battery Closure, and Wellhead Closure Checklists will be utilized and filled out during the abandonment process. A photolog will be submitted on the Subsequent Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>0</u>	<u> </u> Highest concentration of TPH (mg/kg) <u> </u>
Number of soil samples exceeding 915-1 <u> </u>	<u> </u> Highest concentration of SAR <u> </u>

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?

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

N/A

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.

N/A

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____

_____ 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.

REMEDIATION 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 _____

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? _____

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Volume of E&P Waste (solid) in cubic yards _____

E&P waste (solid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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. 02/07/2022

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/13/2022

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:
