FORM 27 Rev 4/21

State of Colorado
Oil and Gas Conservation Commission

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Report taken by: RICK ALLISON

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 INFORMATON

Name of Operator: HIGHPOINT OPERATING CORPORATION Operator No: 10071
Address: 555 17TH ST STE 3700
City: DENVER State: CO Zip: 80202
Contact Person: Luke Kelly Email: lkelly@bonanzacrk.com

Phone Numbers
Phone: (720) 315-8934
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 19900 Initial Form 27 Document #: 402801072

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.
- [ ] 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.
- [X] Other: Subsurface Assessment Proposal

SITE INFORMATION

No Multiple Facilities

Facility Type: SPILL OR RELEASE Facility ID: 480055 API #: County Name: WELD
Facility Name: CC 17SWSE Produced Water Release Latitude: 40.916157 Longitude: -104.455348
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SWSE Sec: 17 Twp: 11N Range: 63W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications GP
Most Sensitive Adjacent Land Use non-crop
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

SITE INVESTIGATION PLAN

TYPE OF WASTE:

[X] **E&P Waste**	[ ] **Other E&P Waste**	[ ] **Non-E&P Waste**
[X] 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
UNDETERMINED	GROUNDWATER	TBD	Laboratry analysis - if encountered
Yes	SOILS	17'x18'x2'	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.

A fitting on a produced water dumpline washed out inside the separator dog house resulting in approximately 2 bbls of produced water being released to the ground surface. The impacted soil was removed and hauled to a COGCC approved disposal facility. Thirteen (13) Confirmation soil samples were collected and analyzed in accordance with COGCC Table 915-1.

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):

Thirteen (13) grab confirmation soil samples were collected. Soil samples were analyzed by a certified laboratory. Three initial samples were submitted 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. Based on soil analytical results, additional soil removal was required. Ten (10) additional samples were collected for EC, SAR, pH, and/or boron. Six (6) additional samples were collected for analysis of metals per Table 915-1. All samples collected will be analyzed by a certified laboratory using approved COGCC lab analysis methods.

A site investigation will be completed to laterally and vertically define residual metals in soil that exceed COGCC Table 915-1 protection of groundwater soil screening levels. TPH, organics, and inorganics have been laterally and vertically defined, therefore, confirmation samples should be collected for metals. 5 locations are proposed for sample colle

Proposed Groundwater Sampling

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

If groundwater is encountered during assessment activities, a sample will be collected for BTEX, naphthalene, 1,2,4-TMB, 1,3,5-TMB, Chloride, Sulfate, and Total Dissolved Solids.

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):

Soil borings will be advanced until vertical delineation is complete. Due to the surficial nature of the releae, Bonanza Creek does not anticipate encountering groundwater, and proposes a total depth on the source point adjacent to the release location of 30 feet. If groundwater is not encountered, and residual metals concentrations do not exceed COGCC Table 915-1 residential soil screening levels, no further action for the release will be requested

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 13

Number of soil samples exceeeding 915-1: 11

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

Approximate areal extent (square feet): 140

NA / ND

ND — Highest concentration of TPH (mg/kg):

-- — Highest concentration of SAR: 77.2

BTEX > 915-1: No

Vertical Extent > 915-1 (in feet): 2

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?

[X] Were background samples collected as part of this site investigation?

A background sample was collected for arsenic and hexavalent chromium analysis

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

Volume of solid waste (cubic yards):

Volume of liquid waste (barrels):

[X] Is further site investigation required?

A site investigation will be completed to laterally and vertically define residual metals in soil that exceed COGCC Table 915-1 protection of groundwater soil screening levels. TPH, organics, and inorganics have been laterally and vertically defined, therefore, Bonanza Creek proposes confirmation samples will be collected for analysis of metals, only. 5 locations are proposed for sample collection adjacent to the release area.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

As of 8/12/21, soil identified to exceed COGCC Table 915-1 was removed and transported offsite for disposal.

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.

As of 8/12/21, soil identified to exceed COGCC Table 915-1 was removed and transported offsite for disposal. Residual soil concentrations in metals exceed COGCC Table 915-1 protection of groundwater soil screening levels (GSLs), only. A site investigation will be completed to determine the applicability of GSLs at the site. If groundwater is not encountered and residual concentrations in soil are laterally and vertically defined during site assessment activities, Bonanza Creek proposes to close the remediation using residential soil screening levels on Table 915-1.

Soil Remediation Summary

☐ **In Situ**

- ____ Bioremediation (or enhanced bioremediation)
- ____ Chemical oxidation
- ____ Air sparge / Soil vapor extraction
- ____ Natural Attenuation
- ____ Other _____

☒ **Ex Situ**

- Yes Excavate and offsite disposal
  - If Yes: Estimated Volume (Cubic Yards) 20
  - Name of Licensed Disposal Facility or COGCC Facility ID # _____
- No Excavate and onsite remediation
  - ____ 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
- No 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.

NA

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 Initial Assessment Summary

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 20

E&P waste (solid) description Soil > COGCC Table 915-1 standards

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Pawnee Waste

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

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 release location is an active O&G facility. Reclamation will be in accordance with COGCC 1000 Series Rules following decommissioning activities at a much later date.

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. 05/22/2021

Actual Spill or Release date, or date of discovery. 05/21/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/22/2021

Proposed site investigation commencement. 09/08/2021

Proposed completion of site investigation. 09/08/2021

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:` 09/02/2021 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: RICK ALLISON Date: 09/08/2021

Remediation Project Number: 19900

Condition of Approval

COA Type	Description
0 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
402801072	FORM 27-INITIAL-SUBMITTED
402801227	REMEDIATION PROGRESS REPORT
402801281	PHOTO DOCUMENTATION
402801305	SITE INVESTIGATION PLAN

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)