

# State of Colorado Oil and Gas Conservation Commission

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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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

### OPERATOR INFORMATION

Name of Operator: <u>HIGHPOINT OPERATING CORPORATION</u>	Operator No: <u>10071</u>	<b>Phone Numbers</b>
Address: <u>555 17TH ST STE 3700</u>		Phone: <u>(303) 312-8718</u>
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>
Contact Person: <u>Rusty Frishmuth</u>	Email: <u>rfrishmuth@hpres.com</u>	Mobile: <u>(305) 518-2290</u>

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 12247Initial Form 27 Document #: 401850935

#### PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water                   |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure                  | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation                            | <input checked="" type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project                       |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste                      | <input type="checkbox"/> Rule 906.c.: Director request   |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____   |

#### SITE INFORMATION

N Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-09265</u>	County Name: <u>WELD</u>
Facility Name: <u>VIC 1</u>		Latitude: <u>40.132992</u>	Longitude: <u>-104.331266</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>SESW</u>	Sec: <u>16</u>	Twp: <u>2N</u>	Range: <u>62W</u>
		Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>

#### SITE CONDITIONS

General soil type - USCS Classifications SMMost Sensitive Adjacent Land Use RangeIs domestic water well within 1/4 mile? NoIs surface water within 1/4 mile? NoIs groundwater less than 20 feet below ground surface? No

#### Other Potential Receptors within 1/4 mile

None identified.

## SITE INVESTIGATION PLAN

### TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             |  |
| <input checked="" 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	GROUNDWATER	NA	NA
UNDETERMINED	SOILS	57' x 29' to 22' bgs	Confirmation soil samples

### 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 partially buried 40 bbl produced water tank was removed in accordance with the approved F27 (COGCC Doc: 401850935). On July 11, 2019, LTE screened the soils in the tank grave for evidence of hydrocarbon impact with a Photoionization detector and observed no elevated volatile organic compounds concentrations, but did observe staining on the north wall, south wall, east wall, and the floor of the tank grave. Based on field observations, soil samples SS01@6' and SS02@5' were collected from the floor and east sidewall, respectively, of the water vault tank grave. Laboratory analytical results indicated that both samples exceeded applicable COGCC Table 910-1 concentration levels. Source removal excavation activities were conducted between 7/23/2019 and 7/30/2019 to remove impacted soil identified by the samples collected from the water vault tank grave. The final extent of the excavation was approximately 57 feet east-west by 29 feet north-south to a total depth of 22 feet bgs.

### 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 ):

Seven grab confirmation soil samples were collected from the sidewalls of the final extent of the excavation and two grab confirmation soil samples were collected from the floor of the final extent of the excavation to verify the identified impacted soil was removed. The samples were collected from locations where field screening using a Photoionization detector indicated the greatest potential for petroleum hydrocarbon impact. All samples were analyzed for TPH-GRO and BTEX by USEPA method 8260 and TPH-DRO by USEPA Method 8015. Laboratory analytical results of the confirmation samples collected from the final extent of excavation were compliant with applicable COGCC Table 910-1 concentration levels. The soil sample analytical results are summarized in the attached table and presented on the attached figure.

#### Proposed Groundwater Sampling

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

Groundwater was not encountered

#### 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 12

Number of soil samples exceeding 910-1 3

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

Approximate areal extent (square feet) 1653

### NA / ND

-- Highest concentration of TPH (mg/kg) 16300

-- Highest concentration of SAR 2.1

BTEX > 910-1 Yes

Vertical Extent > 910-1 (in feet) 22

### 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 910-1

-- 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 910-1

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.

A partially buried 40 bbl produced water tank was removed in accordance with the approved F27 (COGCC Doc: 401850935). LTE screened the soils in the tank grave for evidence of hydrocarbon impact with a PID detector and observed no elevated VOC concentrations, but did observe staining on the north wall, south wall, east wall, and the floor of the tank grave. The two soil samples collected exceeded COGCC Table 910-1 concentration levels for benzene and TPH. Source removal excavation activities were conducted between 7/23/2019 and 7/30/2019 to remove the impacted soil. The final extent of the excavation was approximately 57 feet east-west by 29 feet north-south to a total depth of 22 feet bgs. Seven grab confirmation soil samples were collected from the sidewalls of the final extent of the excavation and two grab confirmation soil samples were collected from the floor of the final extent of the excavation. All soil samples were compliant with applicable COGCC Table 910-1 concentration levels.

## 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.

The confirmation soil samples representative of the final extent of excavation were compliant with applicable COGCC Table 910-1 concentration levels.

## 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) \_\_\_\_\_ 1350  
Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_  
\_\_\_\_\_ Excavate and onsite remediation  
\_\_\_\_\_ 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.

Groundwater not encountered.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other FINAL REPORT

**Report Type:** ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report

☒ Other Partially Buried Vessel Removal and Site Investigation Results

### 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:

NA

Volume of E&P Waste (solid) in cubic yards 1350

E&P waste (solid) description Petroleum hydrocarbon impacted soil

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? Yes

Do all soils meet Table 910-1 standards? Yes

Does the previous reply indicate consideration of background concentrations? No

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? \_\_\_\_\_

Does Groundwater meet Table 910-1 standards? Yes

Is additional groundwater monitoring to be conducted? No

## 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 activities will be completed once the wellbore has been plugged and abandoned.

Is the described reclamation complete? \_\_\_\_\_

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

☐ Interim? ☐ Final?

Did the Surface Owner approve the seed mix? \_\_\_\_\_

If NO, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

### **PRIOR DATES**

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, if known. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). \_\_\_\_\_ 07/11/2019

Date of commencement of Site Investigation. \_\_\_\_\_ 07/11/2019

Date of completion of Site Investigation. \_\_\_\_\_ 07/30/2019

### **REMEDIAL ACTION DATES**

Date of commencement of Remediation. \_\_\_\_\_ 07/23/2019

Date of completion of Remediation. \_\_\_\_\_ 07/30/2019

### **SITE RECLAMATION DATES**

Date of commencement of Reclamation. \_\_\_\_\_

Date of completion of Reclamation. \_\_\_\_\_

**OPERATOR COMMENT**

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

Signed: ` Rusty Frishmuth \_\_\_\_\_

Title: Director EHS \_\_\_\_\_

Submit Date: ` 10/02/2019 \_\_\_\_\_

Email: rfrishmuth@hpres.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: 10/04/2019 \_\_\_\_\_

Remediation Project Number: 12247 \_\_\_\_\_

**COA Type****Description**

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**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**

402135112	FORM 27-SUPPLEMENTAL-SUBMITTED
402137379	ANALYTICAL RESULTS
402137382	ANALYTICAL RESULTS
402137384	ANALYTICAL RESULTS
402137385	ANALYTICAL RESULTS
402137386	ANALYTICAL RESULTS
402137387	ANALYTICAL RESULTS
402137388	ANALYTICAL RESULTS
402137403	MAP

Total Attach: 9 Files

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

Environmental	<p>Based on the information presented 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. In addition, the surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules.</p> <p>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>	10/04/2019
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Total: 1 comment(s)