

State of Colorado
Oil and Gas Conservation Commission

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Report taken by:
RICK ALLISON

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 INFORMATON

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION
Remediation Project #: 14358 Initial Form 27 Document #: 402161642

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 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 checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation	<input 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 Facilites (in accordance with Rule 909.c.)

Facility Type: SPILL OR RELEASE	Facility ID: 467038	API #: _____	County Name: WELD
Facility Name: CC 30-26 PRV	Latitude: 40.887372	Longitude: -104.393268	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 26	Twp: 11N	Range: 63W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Range

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

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
Yes	SOILS	14,200 ft ²	Soil sampling

INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

On August 26, 2019, a spray release of a mixture of approximately 50 bbls crude oil and produced water occurred at the site. Southeasterly winds were prevalent at the time of the release and which distributed a mist of the released liquids approximately 1,500 feet south-southeast of the site crossing county road 124. The approximate width of impact is 500 feet in the northeast-southwest direction. On August 27, 2019, LT Environmental mapped the release extent using a drone equipped with GPS and a camera to fly and record aerial imagery. On August 28, 2019, Highpoint conducted raking to remove impact from the roadside ditches along county road 124 where observed. Absorbent pads were placed along the roadside ditches downgradient of impacts to prevent any mobilization of residual impact should precipitation/runoff occur. Additionally, moving of impacted vegetation and scraping of impacted soil began on August 29, 2019, and is currently underway. The impacted vegetation and soil are being transported offsite to a permitted disposal facility.

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):

On September 19, 2019, LTE collected 37 soil samples throughout the impacted area on a diamond shaped grid. All samples collected were from ground surface to 6 inches below grade and submitted to a laboratory for analysis of BTEX by EPA Method 8260, TPH-GRO by EPA Method 8260, TPH-DRO and TPH-ORO by EPA Method 8015, EC by EPA Method 120.1, pH by EPA Method 9045D, and SAR by EPA 6020/USDA60 6(2, 3A). Soil samples SS02 and SS03, located immediately south of the pad, exceeded the COGCC Table 910-1 concentration levels for TPH at 1,741 mg/kg and 1,550 mg/kg respectively. All other samples were compliant with COGCC Table 910-1 concentration levels.

The soil sample location map, results summary table, and the laboratory analytical report are included as attachments.

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

Number of soil samples collected 39

Number of soil samples exceeding 910-1 2

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

Approximate areal extent (square feet) 14200

NA / ND

-- Highest concentration of TPH (mg/kg) 1741

-- Highest concentration of SAR 6.84

BTEX > 910-1 No

Vertical Extent > 910-1 (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 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?

The release extended south off the pad onto adjacent agricultural/range land as well as crossing County Road 124 onto private property. The only impacts identified were immediately south and adjacent to the pad. No impacts were identified south of County Road 124

Were background samples collected as part of this site investigation?

Two background samples were collected from presumably outside of the area of impact to describe the nature of the road base material.

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.

Mowing of impacted vegetation and scraping of impacted soil for offsite disposal occurred. Confirmation soil sampling was conducted for comparison to applicable COGCC Table 910-1 standards and to confirm impacts are adequately mitigated.

REMEDICATION 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.

See above.

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) _____ 50
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.

NA

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other Completion of soil remediation

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? Yes

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

None

Volume of E&P Waste (solid) in cubic yards _____ 50

E&P waste (solid) description Oil stained vegetation and hydrocarbon impacted soils

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Waste Management - N Colorado 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

Do all soils meet Table 910-1 standards? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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.

Site is an active production facility. Reclamation will be in accordance with series 1000 regulations. Vegetation monitoring will be completed in the spring of 2020 to ensure that all vegetation impacted by the release has been restored.

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. 08/26/2019

Actual Spill or Release date, if known. 08/26/2019

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/27/2019

Date of commencement of Site Investigation. 08/27/2019

Date of completion of Site Investigation. 11/20/2019

REMEDIAL ACTION DATES

Date of commencement of Remediation. 08/28/2019

Date of completion of Remediation. 11/19/2019

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Following additional mowing of vegetation and scraping of impacted surface soils, two surficial confirmation soil samples were collected at SS02 and SS03 where samples previous reported TPH exceedances. Samples were collected and submitted for analysis of TPH-GRO, TPH-DRO and TPH-ORO. Analytical results for these confirmation soil samples are compliant with table 910-1 standards. While Table 910 standards have been met at this location - we are keeping the project open until restoration of vegetation can be confirmed in the spring of 2020.

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: 12/24/2019

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: RICK ALLISON

Date: 01/03/2020

Remediation Project Number: 14358

COA Type

Description

<u>COA Type</u>	<u>Description</u>

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

402269499	FORM 27-SUPPLEMENTAL-SUBMITTED
402269522	ANALYTICAL RESULTS
402269523	SOIL SAMPLE LOCATION MAP
402269524	SOIL SAMPLE LOCATION MAP
402269525	ANALYTICAL RESULTS
402269534	ANALYTICAL RESULTS

Total Attach: 6 Files

General Comments

User Group

Comment

Comment Date

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)