FORM 27 Rev 3/16

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
Address: 555 17TH ST STE 3700
City: DENVER State: CO Zip: 80202
Contact Person: Rusty Frishmuth

Phone Numbers
Phone: (303) 312-8718
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PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 15963 Initial Form 27 Document #: 402470718

PURPOSE INFORMATION

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

SITE INFORMATION

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

Facility Type: PIT Facility ID: 119224 API #: County Name: WELD
Facility Name: UPRC FEDERAL 23-1 Latitude: 40.826241 Longitude: -104.521828
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWNW Sec: 23 Twp: 10N Range: 64W 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? Yes
Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Willow Creek is located approximately 480 feet south-southwest of the pit. No other potential receptors identified.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- ☐ **E&P Waste**
  - ☐ Produced Water
  - ☐ Oil
  - ☐ Condensate
  - ☐ Drilling Fluids
  - ☐ Drill Cuttings
- ☒ **Other E&P Waste**
  - ☐ Workover Fluids
  - ☐ Tank Bottoms
  - ☐ Pigging Waste
  - ☐ Rig Wash
  - ☐ Spent Filters
  - ☒ Pit Bottoms
  - ☐ Other (as described by EPA) _____
- ☐ **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	~1,400 square feet	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 31, 2020, LTE conducted soil sampling at the Site per the sampling plan submitted in COGCC Document # 402470718. No elevated PID readings, staining, or odor were observed on the sidewalls of the pit. Four samples (SS01@6' and SS03@6' through SS05@6') were collected from the sidewalls and one sample (SS02@8') was collected from the floor of the pit. All samples were collected into laboratory provided glass jars, placed on ice, and delivered to Summit Scientific for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), and TPH as diesel range organics (DRO). The floor sample was also submitted for analysis of electrical conductivity (EC), sodium adsorption ratio (SAR), and pH. Additionally, four samples (PB01@0-18" through PB04@0-18") were collected from beneath the pit berm on each side of the pit. PB01@0-18" through PB04@0-18" were submitted for analysis of EC, pH, and SAR.

Laboratory analytical results indicated that SS01@6' and SS02@8' exceeded the COGCC Table 910-1 standard for TPH with concentrations of 1,100 mg/kg and 523.9 mg/kg, respectively. EC and SAR in SS02@8' were also above the COGCC Table 910-1 standards with values of 5.08 millimhos per centimeter and 16.6, respectively. All other analytical results were compliant with applicable COGCC Table 910-1 standards.

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):

To investigate the potential lateral and vertical extent of the TPH impact identified in samples SS01@6' and SS02@8', on September 15, 2020, LTE advanced three borings to 10-feet bgs. Soil boring SB01 was located to delineate the western extent, soil boring SB02 was located delineate the downgradient extent, and SB03 was located at the center of the pit for vertical delineation. Soil was screened every 1-foot vertical interval with a PID and for sensory evidence of staining and/or odor. No elevated PID readings or staining/odor was observed in any of the borings. Based on field screening, samples were collected from approximately 2.5-feet bgs and 5-feet bgs in each boring (please note that SB03 is located at the pit floor and is located at approximately 8 feet bgs relative to the surrounding natural grade). All samples were submitted to Summit for analysis of BTEX and TPH-GRO/DRO.

Laboratory analytical results indicated that all samples were compliant with COGCC Table 910-1.

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: 15

Number of soil samples exceeeding 910-1: 2

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

Approximate areal extent (square feet): 1400

NA / ND

-- Highest concentration of TPH (mg/kg): 1100

-- Highest concentration of SAR: 16.6

BTEX > 910-1: No

Vertical Extent > 910-1 (in feet): 0

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.

Additional excavation will be conducted to remove the TPH impact identified in samples SS01@6' and SS02@8'. Based on the hand auger assessment results it is estimated that approximately 120 cubic yards of material will be removed. After source removal the pit is pushed in and recontoured and any remaining inorganic impacts (EC and SAR in SS02@8') will be buried under at least 3 feet of clean fill. All excavated material will be transported offsite to a properly permitted facitlity for final 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.

Additional confirmation samples will be collected to ensure source removal excavation adequately removes the identified TPH impacts. Confirmation samples will be submitted for analysis of BTEX and TPH-GRO/DRO.

Soil Remediation Summary

☐ **In Situ**

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

☐ **Ex Situ**

- ____ Excavate and offsite disposal
  - If Yes: Estimated Volume (Cubic Yards) _____
  - 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.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other One time

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

☒ Other Source Removal Excavation Summary

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: _____

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? _____

Does the previous reply indicate consideration of background concentrations? _____

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? _____

Is additional groundwater monitoring to be conducted? _____

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 will be reclaimed in accordance with COGCC 1000 series rules.

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). 08/31/2020

Date of commencement of Site Investigation. 08/31/2020

Date of completion of Site Investigation. 09/15/2020

REMEDIAL ACTION DATES

Date of commencement of Remediation. 10/19/2020

Date of completion of Remediation.

SITE RECLAMATION DATES

Date of commencement of Reclamation.

Date of completion of Reclamation.

OPERATOR COMMENT

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:` 10/16/2020

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: 10/22/2020

Remediation Project Number: 15963

COA Type	Description

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
402508322	FORM 27-SUPPLEMENTAL-SUBMITTED
402508705	ANALYTICAL RESULTS
402508706	ANALYTICAL RESULTS
402508709	ANALYTICAL RESULTS
402508712	SOIL SAMPLE LOCATION MAP

Total Attach: 5 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)