

State of Colorado
Oil and Gas Conservation Commission

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Document Number:
401402390

Receive Date:
09/14/2017

Report taken by:
CARLOS LUJAN

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.

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

OPERATOR INFORMATON

| | | |
|---|---------------------------|---|
| Name of Operator: <u>BLACK HILLS PLATEAU PRODUCTION LLC</u> | Operator No: <u>10150</u> | Phone Numbers Phone: <u>(720) 210-1333</u> Mobile: <u>(303) 888-4862</u> |
| Address: <u>1515 WYNKOOP ST STE 500</u> | | |
| City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u> | | |
| Contact Person: <u>Jessica Donahue</u> Email: <u>Jessica.Donahue@blackhillscorp.com</u> | | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION
Remediation Project #: 10493 Initial Form 27 Document #: 401402390

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 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: <u>PIT</u> | Facility ID: <u>432419</u> | API #: _____ | County Name: <u>GARFIELD</u> |
| Facility Name: <u>Homer Deep Unit 9-11</u> | Latitude: <u>39.380511</u> | Longitude: <u>-108.338659</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>NWNW</u> | Sec: <u>9</u> | Twp: <u>8S</u> | Range: <u>98W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

SITE CONDITIONS

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use Rangeland

Is domestic water well within 1/4 mile? Yes 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

Dry Fork lies approxmiately 500ft to the south

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 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 | TBD | field screening & confirmation 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.

At the location(s) of the pit which are the furthest downgradient, lowest in elevation and/or have the potential for pooling of liquid, field-screening will be performed and will utilize appropriate field equipment which may include, but is not limited to the following.
 a PetroFlag unit,
 a photoionization gas detector (PID),

Confirmation sample(s), Rule 905.b.(4), will be collected and submitted for lab analysis and verification to confirm compliance with Rule 910 and Table 910-1 relative to the aforementioned field screen activity.

Other areas of the pit walls and floor will be inspected for evidence of impact via field screening and visual observation. Grab samples will be collected, as appropriate, to demonstrate diligence and thoroughness of investigation activities performed as directed in Rule 905.b.(1). In addition, all field screening activities and results will be documented and compiled into a summary report, table and/or map to be provided with notice of completion (NOC) reporting. Grab sample(s) will be submitted for laboratory analysis to confirm field screening activities. Sub-liner sample analytes will include considerations identified by Rule 910 and all contaminants of concern for soils from Table 910-1

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):

Confirmation sample(s), Rule 905.b.(4), will be collected and submitted for lab analysis and verification to confirm compliance with Rule 910 and Table 910-1. Samples will be collected from the pit side walls and bottom to validate field screening and provide confirmation analysis.

Proposed Groundwater Sampling

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

It is not anticipated to collect groundwater samples at this time as no impacts are believed to have impacted groundwater

Proposed Surface Water Sampling

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

TBD

Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan (summary):

Pit subsoils will be evaluated for impacts prior closure request.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 6
Number of soil samples exceeding 910-1 0
Was the areal and vertical extent of soil contamination delineated? _____
Approximate areal extent (square feet) 0

NA / ND

NA Highest concentration of TPH (mg/kg) _____
NA Highest concentration of SAR _____
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) 59'
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 910-1 0

_____ 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
0 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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

TBD

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.

TBD (if needed)

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.

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other _____

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.

The pit will be reclaimed to the present grade of the location or to the approximate original contour of the landscape and consistent with the 1000-series Rule. Material used to backfill the pit will consist of clean native soils from the surrounding pad, as well as cuttings that have undergone bioremediation treatment throughout 2016 & 2017 and satisfy constituents outlined in COGCC Table 910-1 standards. Seeding of the disturbed area will be performed in accordance with its intended use. The seed mix will be prescribed by the landowner. There are no known noxious weeds in the immediate area of the disturbance

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 approve the seed mix? Yes _____

If NO, does the seed mix comply with local soil conservation district recommendations? Yes _____

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). 10/09/2017

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Please forward onto Carlos Lujan for review.

Initial Form 27 to obtain a REM # and being pit closure activities for the Fall of 2017

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

Signed: Jessica Donahue

Title: Regulatory Technician

Submit Date: 09/14/2017

Email: Jessica.Donahue@blackhillscorp.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: CARLOS LUJAN

Date: 09/14/2017

Remediation Project Number: 10493

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

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|---|
| 401402390 | INVESTIGATION/REMEDATION WORKPLAN (INITIAL) |
| 401404114 | FORM 27-INITIAL-SUBMITTED |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|---|---------------------|
| Environmental | Compact material to minimize subsidence but not excessively. | 09/14/2017 |
| Environmental | If impact is identified at the bottom of the pit (>1 bbl estimated release), submit a Form 19 Spill Report. Otherwise, proceed to back fill with material in compliance with Table 910-1. | 09/14/2017 |
| Environmental | Liner shall be taken to an authorized landfill or for recycling. | 09/14/2017 |

Total: 3 comment(s)