

State of Colorado
Oil and Gas Conservation Commission

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Report taken by:
PETER GINTAUTAS

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.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

| | | |
|--|---|------------------------------|
| Name of Operator: <u>CRESTONE PEAK RESOURCES OPERATING LLC</u> | Operator No: <u>10633</u> | Phone Numbers |
| Address: <u>1801 CALIFORNIA STREET #2500</u> | | Phone: <u>(303) 7743985</u> |
| City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u> | | Mobile: <u>(720) 2365525</u> |
| Contact Person: <u>David Tewkesbury</u> | Email: <u>David.Tewkesbury@CrestonePR.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 3945 Initial Form 27 Document #: 1175632

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.
- 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.
- Other: _____

SITE INFORMATION

No Multiple Facilities

| | | | |
|--|---|-------------------------------|---|
| Facility Type: <u>TANK BATTERY</u> | Facility ID: <u>477160</u> | API #: _____ | County Name: <u>WELD</u> |
| Facility Name: <u>Luhman 1 battery</u> | Latitude: <u>40.162971</u> | Longitude: <u>-104.891579</u> | |
| | ** correct Lat/Long if needed: Latitude: <u>40.163006</u> | Longitude: <u>-104.891797</u> | |
| QtrQtr: <u>SESE</u> | Sec: <u>4</u> | Twp: <u>2N</u> | Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Cropland
 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? Yes

Other Potential Receptors within 1/4 mile

Occupied structures

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- X E&P Waste
Other E&P Waste
Non-E&P Waste
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

Table with 4 columns: Impacted?, Impacted Media, Extent of Impact, How Determined. Row 1: Yes, SOILS, To be determined, 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 limited excavation was performed by Encana in 2007 to address impacted soil discovered during flowline maintenance. The excavation measured approximately 52 feet by 45 feet by 8 feet below ground surface (52' x 45' x 8' bgs). Soil samples were collected from the base of the excavation, West sidewall, and South sidewall and submitted for analysis of Total Recoverable Petroleum Hydrocarbons (TRPH) by U.S. Environmental Protection Agency (EPA) Method E418.1.

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):

Soil samples will be collected using a hand auger from multiple soil boring locations to determine whether soil impacts remain at the site. Soil borings will be advanced to approximately 10' bgs. See the attached Proposed Soil Boring map for soil boring locations. The highest PID sample from each boring will be submitted for Table 915-1 constituents of concern. One or more background soil samples may be collected.

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 boring activities, a groundwater sample will be collected.

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 5
Number of soil samples exceeding 915-1 1
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 2500

NA / ND

-- Highest concentration of TPH (mg/kg) 6700
NA Highest concentration of SAR
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 4

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?

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?

Potential remaining soil impacts will be characterized using soil borings.

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.

Impacted soils may be excavated, removed, and transported to a licensed disposal facility. Waste manifests will be available upon request.

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.

Remediation methodologies will be evaluated once soil characterization is completed.

Soil Remediation Summary

In Situ

Ex Situ

 Bioremediation (or enhanced bioremediation)

 Excavate and offsite disposal

Chemical oxidation
 Air sparge / Soil vapor extraction
 Natural Attenuation
 Other _____

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

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 Soil characterization proposal _____

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: _____

REMEDATION COMPLETION REPORT

REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No _____

If YES:

Compliant with Rule 913.h.(1).

Compliant with Rule 913.h.(2).

Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? _____

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? _____

Is additional groundwater monitoring to be conducted? _____

Operator shall comply with the COGCC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

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.

This facility is still in production. When the facility is decommissioned, it will be reclaimed in accordance with 1000 Series rules and regulations.

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 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. _____

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/19/2007

Proposed site investigation commencement. 04/19/2007

Proposed completion of site investigation. 09/30/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/19/2007

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

This form has been submitted to propose soil characterization investigation activities. Please find a topographic map and proposed soil boring location map attached. Soil boring activities are proposed for mid-September 2021.

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

Signed: David Tewkesbury

Title: Environmental Specialist

Submit Date: 08/27/2021

Email: David.Tewkesbury@CrestonePR.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: PETER GINTAUTAS

Date: 08/30/2021

Remediation Project Number: 3945

Condition of Approval

COA Type

Description

| 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

| | |
|-----------|--------------------------------|
| 402788915 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 402795372 | MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| User Group | Comment | Comment Date |
|------------|---------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)