

State of Colorado
Oil and Gas Conservation Commission

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402651465
Receive Date:
04/12/2021

Report taken by:
CHRIS CANFIELD

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 13348 Initial Form 27 Document #: 402015162

PURPOSE INFORMATION

- | | |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination | <input checked="" 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 Facilities (in accordance with Rule 909.c.)

Facility Type: <u>LOCATION</u>	Facility ID: <u>329863</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>MATHEWS 'B' UNIT-61N66W 14SWSE</u>		Latitude: <u>40.047219</u>	Longitude: <u>-104.740268</u>
		** correct Lat/Long if needed: Latitude: <u>40.046578</u>	Longitude: <u>-104.740144</u>
QtrQtr: <u>SWSE</u>	Sec: <u>14</u>	Twp: <u>1N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Idle field
 Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? No
 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:

- | | | |
|--|--|--|
| <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	GROUNDWATER	To be determined	Investigation pending
Yes	SOILS	impacts 7-26' bgs	Laboratory analytical results

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 geoprobe was utilized to advance a soil boring at the center of the former partially-buried produced water vessel to approximately 26 feet below ground surface (bgs). Increased moisture content was observed within the boring so a temporary 1" monitoring well was installed. No groundwater was observed during assessment activities, therefore, an additional soil sample was collected and submitted for laboratory analysis.

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):

A geoprobe will be utilized to advance additional soil borings around the former partially-buried produced water vessel location to determine lateral and vertical extent of historical soil impacts. Proposed soil borings are presented in the attached map. Additional step out soil borings will be advanced if required to laterally define soil impacts. A grab soil sample will be collected from the unsaturated interval exhibiting the highest photoionization detector (PID) reading from each soil boring. Each soil sample will be analyzed for BTEX, DRO, and GRO.

Proposed Groundwater Sampling

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

If groundwater is encountered during soil boring advancement activities, a 1" polyvinyl chloride (PVC) temporary monitoring well will be installed and a groundwater sample will be collected. The groundwater sample will be submitted for laboratory analysis of BTEX.

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):

Groundwater monitoring wells will be installed to investigate and delineate potential groundwater impacts.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 10
Number of soil samples exceeding 910-1 4
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 1200

NA / ND

-- Highest concentration of TPH (mg/kg) 15170
NA Highest concentration of SAR
BTEX > 910-1 Yes
Vertical Extent > 910-1 (in feet) 19

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?

Groundwater monitoring wells will be installed to investigate and delineate potential groundwater impacts.

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 geoprobe was utilized to determine the lateral and vertical extents of soil impacts at the site. The source removal will be completed via excavation in combination with ex-situ oxidation.

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.

Excavated soil will be screened in the field using a PID. Soil will be segregated based off these PID readings. Soil which exhibits a high value will be disposed of at an approved off-site disposal facility. Soil exhibiting a low PID reading will be treated onsite, via Ex-situ oxidation. Confirmation soil samples from the treated soil will be collected and submitted to a laboratory for analyses. If confirmation soil sample analytical results are below Table 910-1 limits for BTEX and TPH, treated soil will be used as backfill. It is estimated the excavation, treatment, and backfill will take 2-3 weeks. Once remediation is complete, a new Form 27 will be submitted containing soil laboratory analytical results, quantities, and all other related information.

Soil Remediation Summary

In Situ

Ex Situ

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

- _____ Excavate and offsite disposal
- _____ If Yes: Estimated Volume (Cubic Yards) _____
- _____ Name of Licensed Disposal Facility or COGCC Facility ID # _____
- Yes _____ Excavate and onsite remediation
- No _____ Land Treatment
- No _____ Bioremediation (or enhanced bioremediation)
- Yes _____ Chemical oxidation
- No _____ 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 monitoring wells will be installed to investigate and delineate potential groundwater impacts. Groundwater sample(s) will be collected submitted for BTEX and compared to COGCC Table 910-1 allowable limits according to the approved COGCC Table 915 extension request via document number 402572896.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other _____

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

Other _____ Monitoring Well Installation Approval Request

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.

Reclamation will be completed per the 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. 07/30/2019

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/29/2019

Date of commencement of Site Investigation. 04/29/2019

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

This form has been submitted to notify the COGCC of pending groundwater monitoring well installation at this site to characterize potential groundwater impacts uncovered during excavation activities. Soil excavation and treatment data will be presented in a subsequent Form 27 prior to the quarterly reporting deadline at the end of April 2021.

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

Signed: Chris Rice

Title: Environmental Technician

Submit Date: 04/12/2021

Email: Christopher.Rice@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: CHRIS CANFIELD

Date: 04/20/2021

Remediation Project Number: 13348

Condition of Approval

COA Type

Description

	Per Rule 913.d.(2) Operator shall submit a Supplemental Form 27 with an updated Implementation Schedule at least 14 days in advance of any schedule changes.
	In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule.
	Operator is required to comply with Rule 14 – Minimum Construction Standards for Monitoring and Observation Wells, Monitoring and Observation Holes, and Test Holes of the Colorado Division of Water Resources (“DWR”) (2 CCR 402-2).
	Operator will submit a scaled map showing the proposed locations of groundwater monitoring wells relative to existing or former layout of oil and gas facilities.
	Operator shall submit disposal documentation for contaminated soil and investigation derived waste removed from the subject location.
	Operator shall analyze samples collected from the area(s) most likely to be impacted by produced water for inorganics regardless of depth below ground surface.
	Operator shall submit GPS coordinates of soil sample locations in decimal degrees of latitude and longitude using the NAD83 reference and reported to five decimals pursuant to Rule 216.
	Operator will present analytical results for soil samples in a summary table, comparing those results to Table 915-1 soil concentrations.

	Operator will submit boring logs for all soil borings advanced at the site and well construction diagrams for all monitoring wells constructed at the site. All soil borings must be logged in accordance with the Unified Soil Classification System (“USCS”) and will include at a minimum: lithological description, PID readings (or other field screening results), sample collection depths, moisture content, depth to uppermost saturated interval if contacted, and well construction details.
	Operator will submit a scaled map showing the locations of all soil borings relative to existing or former layout of oil and gas facilities.
10 COAs	

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.

<u>Att Doc Num</u>	<u>Name</u>
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402651465	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
	The operator’s request to install groundwater monitoring wells is denied as they have not submitted adequate information for the COGCC to evaluate such a request.	04/20/2021
	Conditions of Approval (COAs) were previously applied to the subject remediation project (see Document No. 1949413 listed in the record for REM 13348). Those COAs still apply.	04/20/2021
	The subject partially buried produced water vessel was removed without prior approval of a Form 27 Site Investigation and Remediation Work Plan or conducting environmental sampling.	04/20/2021

Total: 3 comment(s)