

State of Colorado Oil and Gas Conservation Commission

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Report taken by:

Kari Brown

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) 774-4017</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>(720) 925-1820</u>
Contact Person: <u>Schuyler Hamilton</u>	Email: <u>shamilton@civiresources.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 21576 Initial Form 27 Document #: 402927140

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

Yes Multiple Facilities

Facility Type: <u>LOCATION</u>	Facility ID: <u>331492</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Ione 2N66W/8NWNE Battery</u>	Latitude: <u>40.158620</u>	Longitude: <u>-104.799520</u>	
** correct Lat/Long if needed: Latitude: <u>40.159264</u>		Longitude: <u>-104.799812</u>	
QtrQtr: <u>NWNE</u> Sec: <u>8</u> Twp: <u>2N</u> Range: <u>66W</u> Meridian: <u>6</u>	Sensitive Area?	<u>No</u>	
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>481376</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Ione 2N66W/8NWNE</u>	Latitude: <u>40.159264</u>	Longitude: <u>-104.799812</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWNE</u> Sec: <u>8</u> Twp: <u>2N</u> Range: <u>66W</u> Meridian: <u>6</u>	Sensitive Area?	<u>Yes</u>	

SITE CONDITIONS

General soil type - USCS Classifications SP

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? No

Other Potential Receptors within 1/4 mile

None observed.

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 checked="" 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	No known impacts	Investigation pending.

INITIAL ACTION SUMMARY

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

This form has been prepared to support replacement of the production equipment associated with this location. In accordance with COGCC Rule 911 and Rule 915, initial representative soil samples will be collected beneath the produced water vessel. Initial laboratory soil analysis will include only BTEX, 1,2,4 and 1,3,5 Trimethylbenzene, naphthalene, TPH, pH, EC, SAR, boron and metals in soils according to Table 915-1. If other equipment are replaced such as the ECDs, meter sheds, or other qualifying equipment, then the soils beneath each will be field screened, and a lab analysis submitted if impacts are identified. Groundwater, if present, will also be collected and analyzed. Identified impacts will be reported as required for each discovery, and a Form 19 will be submitted, and remedial investigation will be conducted with excavation equipment.

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):

In accordance with COGCC Rule 911 and Rule 915 soil samples will be collected during closure of each qualifying equipment type and/or field screened as described in the Initial Action Summary. Initial laboratory analysis will include only BTEX, 1,2,4 and 1,3,5 Trimethylbenzene, naphthalene, TPH, pH, EC, SAR, boron and metals in soils according to Table 915-1. If impacts are confirmed, the full Table 915-1 list of analysis will be tested for and additional excavation effort may be conducted to delineate horizontal and vertical extents. Background samples will be collected from nearby native soils in areas not impacted by oil and gas activities and analyzed for EC, SAR, pH, boron and metals in soils to establish background conditions for soil suitability. Overburden stockpiles, if present, will be sampled prior to use as backfill with a frequency of 1 composite sample per 500 cubic yards of material and submitted for analysis of BTEX, 1,2,4 and 1,3,5 Trimethylbenzene, naphthalene.

Proposed Groundwater Sampling

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

If groundwater is encountered during excavation activities, one sample will be collected and analyzed for Table 915-1 groundwater constituents BTEX, 1,2,4 and 1,3,5 Trimethylbenzene, and naphthalene.

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

NA / ND

Number of soil samples collected 14

Number of soil samples exceeding 915-1 6

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 500

-- Highest concentration of TPH (mg/kg) 320

-- Highest concentration of SAR 10

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 17

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 1

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?

REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Excavation activities to determine the extent of contamination are ongoing at the produced water vessel and the separator spill locations. Impacted or potentially impacted soils will be removed and transported to a disposal facility. Transport and disposal records will be kept on file under usual and customary practice and are available upon request. Soil samples will continue to be collected and until the areal and vertical extents of the excavation are within COGCC Table 915-1 allowable limits. Additionally, previously abandoned dumplines from 2014 were uncovered during the legacy release investigation. These dumplines will be removed, and the trenches field screened using at PID. If impacts are suspected from the previously abandoned dumplines, a remedial investigation will be performed and a Form 19 will be submitted.

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.

As needed, site specific soil and/or groundwater remediation plans will be developed and submitted to COGCC via supplemental Form 27.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

Bioremediation (or enhanced bioremediation)

Excavate and offsite disposal

Chemical oxidation

If Yes: Estimated Volume (Cubic Yards)

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

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

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 _____

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.

No reclamation will be performed on the site unless the entire facility is removed from service or the activities migrate outside the original facility footprint. If these occur, the disturbance will be reclaimed in accordance with 1000 Series Rules, in collaboration with the landowner, and reported in a Form 4 (Sundry Notice) with proper documentation to demonstrate compliance with requirements for final reclamation.

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. 01/07/2022

Actual Spill or Release date, or date of discovery. 01/07/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/19/2022

Proposed site investigation commencement. _____

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

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:

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OPERATOR COMMENT

This Form is being submitted to update the COGCC on the ongoing status of remediation activities related to Spill ID 481376 and Spill ID 481393. Previously abandoned dumlins from 2014 were uncovered during the legacy release investigation. These dumlins will be removed, and the trenches field screened using at PID. If impacts are suspected from the previously abandoned dumlins, a remedial investigation will be performed and a Form 19 will be submitted.

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

Signed: Maggie Graham _____

Title: Senior Project Manager _____

Submit Date: 04/07/2022 _____

Email: Maggie.graham@apexcos.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: Kari Brown _____

Date: 05/03/2022 _____

Remediation Project Number: 21576 _____

Condition of Approval

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

403008553	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)