

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Nick Cholas

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 ECOM 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: CRESTONE PEAK RESOURCES OPERATING LLC	Operator No: 10633	Phone Numbers Phone: (303) 8293811 Mobile: (303) 8293811
Address: 555 17TH STREET SUITE 3700		
City: DENVER	State: CO	Zip: 80202
Contact Person: Jacob Evans	Email: jevans@civiresources.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20312 Initial Form 27 Document #: 402825488

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: WELL	Facility ID: _____	API #: 123-11087	County Name: WELD
Facility Name: OSTER 1	Latitude: 40.279088	Longitude: -104.661474	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 28	Twp: 4N	Range: 65W Meridian: 6 Sensitive Area? Yes

Facility Type: LOCATION	Facility ID: 319336	API #: _____	County Name: WELD
Facility Name: OSTER-64N65W 28SESE	Latitude: 40.279016	Longitude: -104.661437	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 28	Twp: 4N	Range: 65W Meridian: 6 Sensitive Area? No

Facility Type: OFF-LOCATION FLOWLINE		Facility ID: 473071	API #: _____	County Name: WELD	
Facility Name: Wellhead Line 28SESE		Latitude: 40.279364	Longitude: -104.661535		
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 28	Twp: 4N	Range: 65W	Meridian: 6	Sensitive Area? Yes

Facility Type: SPILL OR RELEASE		Facility ID: 481330	API #: _____	County Name: WELD	
Facility Name: OSTER-64N65W /28SESE		Latitude: 40.279088	Longitude: -104.661474		
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 28	Twp: 4N	Range: 65W	Meridian: 6	Sensitive Area? Yes

Facility Type: SPILL OR RELEASE		Facility ID: 481675	API #: _____	County Name: WELD	
Facility Name: OSTER-64N65W 28SESE		Latitude: 40.279088	Longitude: -104.661474		
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 28	Twp: 4N	Range: 65W	Meridian: 6	Sensitive Area? Yes

SITE CONDITIONS

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

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? Yes

Other Potential Receptors within 1/4 mile

Occupied structures.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- 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

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	See Excavation Report	Laboratory Analysis
No	SOILS	TBD	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.

This form has been prepared to support removal 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 following equipment, if present onsite: wellheads, separators, above ground surface tanks, and produced water vessels. Initial laboratory soil analysis will include only BTEX, 1,2,4 and 1,3,5 Trimethylbenzene, naphthalene, TPH, pH, EC, SAR and boron. Other equipment such as the ECDs, meter sheds, or other qualifying equipment 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 and boron. 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. 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 VOCs.

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 for BTEX, naphthalene, 1,2,3 and 1,3,5, trimethylbenzene analysis. If impacts are confirmed, additional groundwater samples may be collected and analyzed for the full Table 915-1 groundwater constituents.

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 58 -- Highest concentration of TPH (mg/kg) 5180
 Number of soil samples exceeding 915-1 25 -- Highest concentration of SAR 14.1
 Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 Yes
 Approximate areal extent (square feet) 12500 Vertical Extent > 915-1 (in feet) 13

Groundwater

Number of groundwater samples collected 1 -- Highest concentration of Benzene (µg/l) 1.3
 Was extent of groundwater contaminated delineated? Yes -- Highest concentration of Toluene (µg/l) 1.67
 Depth to groundwater (below ground surface, in feet) 15 ND Highest concentration of Ethylbenzene (µg/l) _____
 Number of groundwater monitoring wells installed 0 -- Highest concentration of Xylene (µg/l) 7.3
 Number of groundwater samples exceeding 915-1 0 NA 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?
 Two background samples were collected from shallow areas within native soils undisturbed by oil and gas activities. Background samples were analyzed for soil suitability and 915-1 Metals and results were averaged to generate baseline levels for native soil conditions. These results show that native soil conditions vary across the site.

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.
 Once a release was discovered during the closure of the on-location flowlines, additional excavations were conducted, and impacted soil was removed and transported to a disposal facility.

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.
 Groundwater samples will be collected on quarterly basis. The estimated timeframe to achieve a no further action will be December 30, 2025.

Soil Remediation Summary

In Situ Ex Situ

_____ Bioremediation (or enhanced bioremediation) Yes _____ Excavate and offsite disposal
 _____ Chemical oxidation If Yes: Estimated Volume (Cubic Yards) 4654
 _____ Air sparge / Soil vapor extraction Name of Licensed Disposal Facility or ECMC Facility ID # _____

Natural Attenuation
 Other _____

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.

Four monitoring wells were installed and will be sampled on a quarterly basis. Organic parameters in groundwater have been compliant with ECMC Table 915-1 standards for four consecutive quarters. Per form 27 doc#403617413, the ECMC approved analysis plan will include TDS, chlorides, and sulfates only. Background monitoring wells may be installed.

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 _____

Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).

If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

The General Liability coverage within the Civitas Resources insurance program includes coverage for bodily injury, property damage, and pollution clean-up costs arising from qualifying pollution events of a sudden and accidental nature subject to a \$1,000,000 per occurrence limit and \$2,000,000 aggregate limit. The Civitas Resources insurance program includes Excess Liability coverage of \$110,000,000 per occurrence and in the aggregate which sits over the sudden and accidental pollution within the General Liability coverage. It is the opinion of Civitas Resources that this total tower of limit is adequate to address the costs of remediation associated with any qualifying pollution event.

Operator anticipates the remaining cost for this project to be: \$ 15000 _____

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

No beneficial use

Volume of E&P Waste (solid) in cubic yards _____ 4654

E&P waste (solid) description E&P waste derived from excavation activities.

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Waste Connections, Waste Management, and Republic.

Volume of E&P Waste (liquid) in barrels _____ 0

E&P waste (liquid) description _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

REMEDIATION COMPLETION REPORT

REMEDIATION 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? Yes

Does the previous reply indicate consideration of background concentrations? No

Does Groundwater meet Table 915-1 standards? No

Is additional groundwater monitoring to be conducted? Yes

Operator shall comply with the ECMC 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.

Reclamation will be in accordance with COGCC 1000 series rules.

Is the described reclamation complete? Yes

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? No

If YES, does the seed mix comply with local soil conservation district recommendations? _____

Did the local soil conservation district provide the seed mix? No

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 10/11/2021

Proposed date of completion of Reclamation. 05/30/2024

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. 09/20/2021

Actual Spill or Release date, or date of discovery. 12/28/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/27/2021

Proposed site investigation commencement. 10/11/2021

Proposed completion of site investigation. 10/11/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/11/2021

Proposed date of completion of Remediation. 12/30/2025

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:

Additional groundwater sampling is required.

OPERATOR COMMENT

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

Signed: Jacob Evans

Title: Environmental Advisor

Submit Date: 08/23/2024

Email: jevans@civiresources.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: Nick Cholas

Date: 10/25/2024

Remediation Project Number: 20312

COA Type**Description**

0 COA	

ATTACHMENT 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**

403899164	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403899170	MONITORING REPORT
403971244	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

General Comments**User Group****Comment****Comment Date**

Environmental	MW-01/ MW-02 have consecutive quarters of Sulfate exceedances.	10/25/2024
Environmental	ECMC has reviewed the quarterly sampling plan and attachments within this document.	10/25/2024

Total: 2 comment(s)