

State of Colorado  
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
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Report taken by:

Kilian Collins

## 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
Address: 555 17TH STREET SUITE 3700		Phone: (303) 8293811
City: DENVER State: CO Zip: 80202		Mobile: (303) 8293811
Contact Person: Jacob Evans	Email: jevans@civiresources.com	

## PROJECT, PURPOSE &amp; 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

Number of soil samples exceeding 915-1 25

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

Approximate areal extent (square feet) 12500

-- Highest concentration of TPH (mg/kg) 5180

-- Highest concentration of SAR 14.1

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 13

#### Groundwater

Number of groundwater samples collected 1

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 15

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 0

-- Highest concentration of Benzene (µg/l) 1.3

-- Highest concentration of Toluene (µg/l) 1.67

ND Highest concentration of Ethylbenzene (µg/l)

-- Highest concentration of Xylene (µg/l) 7.3

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 May 30, 2024.

#### 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 ECOM 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. 05/30/2024

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**

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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: 05/09/2024

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: Kilian Collins

Date: 06/03/2024

Remediation Project Number: 20312

**COA Type****Description**

	Operator shall continue quarterly groundwater monitoring for the duration of the remediation project.
1 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**

403784919	FORM 27-SUPPLEMENTAL-SUBMITTED
403784927	MONITORING REPORT

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)