

State of Colorado  
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



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Report taken by:  
Alexander Ahmadian

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 ECMC 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 #: 34305 Initial Form 27 Document #: 403666824

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 #: 013-06104	County Name: BOULDER
Facility Name: DONIPHAN-SHIELDS 2	Latitude: 40.069674	Longitude: -105.086651	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENW	Sec: 11	Twp: 1N	Range: 69W Meridian: 6 Sensitive Area? Yes

Facility Type: WELL	Facility ID: _____	API #: 013-06541	County Name: BOULDER
Facility Name: DONIPHAN SHIELDS 12-11	Latitude: 40.069660	Longitude: -105.086690	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENW	Sec: 11	Twp: 1N	Range: 69W Meridian: 6 Sensitive Area? Yes

Facility Type: LOCATION	Facility ID: 336380	API #:	County Name: BOULDER
Facility Name: DONIPHAN-SHIELDS-61N69W 11NENW	Latitude: 40.069660	Longitude: -105.086690	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NENW	Sec: 11	Twp: 1N	Range: 69W Meridian: 6 Sensitive Area? Yes

  

Facility Type: SPILL OR RELEASE	Facility ID: 487161	API #:	County Name: BOULDER
Facility Name: Doniphan-Shields-61N69W 11NENW	Latitude: 40.069418	Longitude: -105.086268	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NENW	Sec: 11	Twp: 1N	Range: 69W 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**

There is an Un-Named Lake 630-ft to the S. The Boulder Creek is 730-ft to the SE. There is an Un-Named Lake 1185-ft to the SE. The Residential Well (DWR Receipt 0204090, Permit 114403-) approx 1055-ft to the NW is the nearest permitted water well. This well was constructed to 210-ft, static water level recorded at 40-ft. Residential Well (DWR Receipt 9012046, Permit 56190-) is approx 1250-ft to the NW. This well was constructed to 45-ft, static water level recorded at 23-ft. Residential Well (DWR Receipt # 3678465, Permit 184820--A) is approx 1240-ft NW. This well was constructed to 300-ft, static water level recorded at 40-ft.

Groundwater has potential to be less than 20 ft at the disturbance location.

This location is not within a HPH area. CPW consultation not required.

# 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
Yes	GROUNDWATER	Base of Excavations	Laboratory Analytical
Yes	SOILS	180' X 120' X 6' bgs	Laboratory Analytical

## 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 site investigation will be conducted pursuant to COGCC rule 911 at the DONIPHAN-SHIELDS-61N69W 11NENW (336380) oil and gas location pertaining to the cut/cap of the DONIPHAN-SHIELDS 2 (05-013-06104), cut/cap of the DONIPHAN SHIELDS 12-11 (05-013-06541), decommission of production facilities and decommission of all on-location flowlines. See site map exhibit for details.

## 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 ):

Fifteen grab soil samples were collected from the decommissioned wellhead, flowline, and tank battery areas and three composite soil sample were collected from the stockpiled overburden. All soil samples were submitted to a certified laboratory for analysis of Table 915-1 metals and organic compounds, TPH C6-36, EC, SAR, pH, and boron.

### Proposed Groundwater Sampling

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

Two grab groundwater sample was collected from the base of the excavation and submitted to a certified laboratory for analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, chlorides, sulfates, TDS.

### 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      18

--      Highest concentration of TPH (mg/kg)      1200

Number of soil samples exceeding 915-1 18 -- Highest concentration of SAR 7.92

Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 Yes

Approximate areal extent (square feet) 21600 Vertical Extent > 915-1 (in feet) 6

**Groundwater**

Number of groundwater samples collected 2 -- Highest concentration of Benzene (µg/l) 2.8

Was extent of groundwater contaminated delineated? No -- Highest concentration of Toluene (µg/l) 0.348

Depth to groundwater (below ground surface, in feet) 6 -- Highest concentration of Ethylbenzene (µg/l) 8.7

Number of groundwater monitoring wells installed 0 -- Highest concentration of Xylene (µg/l) 7.06

Number of groundwater samples exceeding 915-1 1 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?

[Empty text box]

Were background samples collected as part of this site investigation?

Four background samples were collected from homogenous soil horizons and/or corresponding excavation confirmation soil sample depths.

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?

[Empty text box]

**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.

The source will be removed through mechanical excavation. Grab confirmation soil samples will be collected and submitted to a certified laboratory for analysis of Table 915-1 metals and organic compounds, TPH C6-36, EC, SAR, pH, and boron to determine the lateral and vertical extent of impacts. Additional background samples will be collected from homogenous soil horizons and/or corresponding excavation sample depths.

**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.

Once source removal is complete a groundwater assessment will be scheduled to delineate impacted groundwater above ECMC standards. The estimated timeframe to achieve a no further action will be December 31, 2026, this date takes into account source removal, monitoring well installation, possible active remediation, and four consecutive quarters of ECMC compliant groundwater.

**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

Name of Licensed Disposal Facility or ECMC Facility ID #

Natural Attenuation

Excavate and onsite remediation

Other \_\_\_\_\_

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.

6. A groundwater site assessment will be conducted. Groundwater samples will be collected on a quarterly basis and submitted to a certified laboratory for analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, chlorides, sulfates, TDS. A groundwater elevation figure and bore logs will be submitted on a supplemental form 27. Monitoring well installation will be scheduled prior to January 31, 2025, pending landowner access approval.



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 ECMC 1000 Series Rules.

Is the described reclamation complete? No

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. 06/19/2024

Actual Spill or Release date, or date of discovery. 06/19/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/31/2024

Proposed site investigation commencement. 05/31/2024

Proposed completion of site investigation. 06/19/2024

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/20/2024

Proposed date of completion of Remediation. 12/31/2026

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: 09/26/2024

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: Alexander Ahmadian

Date: 12/20/2024

Remediation Project Number: 34305

**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**

403935202	FORM 27-SUPPLEMENTAL-SUBMITTED
403936265	ANALYTICAL RESULTS
403936271	ANALYTICAL RESULTS
403936273	SITE INVESTIGATION REPORT

Total Attach: 4 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)