

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

Jason Kosola

## 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: RED MESA HOLDINGS/O&G LLC	Operator No: 10254	Phone Numbers
Address: 5619 DTC PARKWAY - STE 800		Phone: (970) 946 3761
City: GREENWOOD VILLAGE	State: CO	Zip: 80111
Contact Person: Jacob Harter	Email: jharter@cottonwoodconsulting.com	Mobile: ( )

## PROJECT, PURPOSE &amp; SITE INFORMATION

## PROJECT INFORMATION

Remediation Project #: 27399 Initial Form 27 Document #: 403205165

## 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: Plug and abandon well and decommission on site production equipment and flow line (s).

## SITE INFORMATION

No Multiple Facilities

Facility Type: WELL	Facility ID:	API #: 067-09356	County Name: LA PLATA
Facility Name: DYE HARD (OWP) 3A	Latitude: 37.109790	Longitude: -108.103910	
** correct Lat/Long if needed: Latitude: Longitude:			
QtrQtr: NENW	Sec: 13	Twp: 33N	Range: 12W Meridian: N Sensitive Area? Yes

## SITE CONDITIONS

General soil type - USCS Classifications MH

Most Sensitive Adjacent Land Use Rangeland

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?

**Other Potential Receptors within 1/4 mile**

There are no other potential receptors within 1/4 mile of this location.

**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	SOILS	TBD	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.

The ECMC Orphan Well Program plugged the Dyehard (OWP) #3A well and decommissioned the well site in fall 2023. Soil samples were collected in accordance with the initial form 27 (DOC#403205165) and ECMC Rule 915.e(2)B. Samples were collected from the plugged and abandoned (P&A) wellhead excavation, flow line path(s), as well as any other E&P equipment and areas likely to have been impacted. Samples were submitted for laboratory analysis of Table 915-1 constituents. Initial assessment and sampling occurred on August 30, 2023, and November 2, 2023, and indicated soil impacts (SAR and conductivity) above ECMC table 915-1. Proposed impact removal and confirmation sampling is described in the Proposed Sampling Plan below.

**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 ):

Soil samples were collected for laboratory analysis of ECMC Table 915-1 constituents. Three discrete soil samples were collected; one sample from the P&A wellhead excavation, one sample from the above ground storage tank (AST), and one samples from the excavated flowline. Prior to collecting soil samples, soil was field screened using a PID and visual/olfactory observations. The attached project map provides the location of all samples.

**Proposed Groundwater Sampling**

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

No obvious pathways to groundwater were observed and no groundwater was encountered during the initial assessment and sampling conducted on August 30, 2023, and November 2, 2023.

**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 ):

Field personnel performed a visual/olfactory inspection of the site. Additional investigation may be need to fully define the extent of E&P impacts.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 3

Number of soil samples exceeding 915-1 1

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

Approximate areal extent (square feet) 0

### NA / ND

-- Highest concentration of TPH (mg/kg) 169.9

-- Highest concentration of SAR 27.3

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

### 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 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?

Background soil samples were collected from nearby, non-impacted native soil to establish background concentrations. Background samples were analyzed for Table 915-1 constituents. Background soil samples were collected in the Red Mesa area. A background soil sampling tables is provided in the attachments. Background samples indicated Arsenic values above the ECMC Table 915-1 standards. It is requested that background concentration be considered when evaluating this site for final closure.

☐ 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?

Initial assessment and sampling occurred on August 30, 2023, and November 2, 2023, and indicated soil impacts above ECMC standards. Field personnel visually inspected and field screened the areas surrounding each piece of equipment and the area surrounding each flowline. If signs of impact were observed a soil sample was collected from the area of greatest impact. If no signs of impacts were observed one discrete soil sample was collected from the removed flowline. The area around the former separator (spherical vessel) was field screened and had no staining, no odor, and a photoionization detector (PID) reading of 0.7 parts per million (ppm).

Laboratory results of sample SS03 (AST) indicated levels of SAR and conductivity above ECMC table 915-1. Further site investigation is required to fully define the horizontal and vertical extent of impacts at the site. Additionally, based on initial assessment and sampling results, a reduced list of analytes is requested for future sampling/investigations. It is requested that analytes that did not exceed ECMC Table 915-1 standards be removed from future sampling.

## 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.

Based on results from the initial site investigation, a remediation plan will be created to address site impacts and will be documented on a supplemental Form 27.

## REMEDICATION 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.

Remediation will consist of removal of impacted soil and disposal at an approved disposal facility.

Soil Remediation Summary

☐ In Situ

Bioremediation ( or enhanced bioremediation )

Chemical oxidation

Air sparge / Soil vapor extraction

Natural Attenuation

Other

☒ Ex Situ

Yes

Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards)

50

Name of Licensed Disposal Facility or ECMC Facility ID #

0

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.

## 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 Plug and abandon well and decommission on site production equipment and flow line(s).

### 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 scope of work described in this Initial Site Investigation and Remediation Workplan will be completed by the COGCC Orphaned Well Program. The COGCC is not an oil and gas operator. This document will be used, in part, to bid out various phases of this facility closure.

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

### 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

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels

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?

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 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, and will be addressed during a separate phase of the OWP work.

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. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). \_\_\_\_\_

Proposed site investigation commencement. 03/15/2023

Proposed completion of site investigation. \_\_\_\_\_

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 06/01/2024

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:

**OPERATOR COMMENT**

It is requested that analytes that did not exceed ECMC Table 915-1 standards, including arsenic, be removed from future sampling and that background concentrations be considered when evaluating this site for final closure.

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

Signed: Jacob Harter

Title: Consultant

Submit Date: 01/11/2024

Email: jharter@cottonwoodconsulting.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: Jason Kosola

Date: 04/18/2024

Remediation Project Number: 27399

**COA Type****Description**

	ECMC approves reduced analyte request as described.
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**

403610152	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403621424	ANALYTICAL RESULTS
403621425	ANALYTICAL RESULTS
403621426	ANALYTICAL RESULTS
403621427	SOIL SAMPLE LOCATION MAP
403621430	PHOTO DOCUMENTATION
403621431	ANALYTICAL RESULTS
403623101	PHOTO DOCUMENTATION
403760261	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 9 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)