

State of Colorado
Energy & Carbon Management Commission

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Report taken by:

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		Mobile: ()
Contact Person: Jacob Harter	Email: jharter@cottonwoodconsulting.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 17898 Initial Form 27 Document #: 402647601

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

No Multiple Facilities

Facility Type: WELL	Facility ID: _____	API #: 067-06731	County Name: LA PLATA
Facility Name: FERGUSON NO. 2 (OWP) F-12	Latitude: 37.066770	Longitude: -108.130380	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 34	Twps: 33N	Range: 12W Meridian: N Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications MH Most Sensitive Adjacent Land Use Grazing
Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? No
Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Cinder Gulch

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- X 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

Table with 4 columns: Impacted?, Impacted Media, Extent of Impact, How Determined. Row 1: No, SOILS, NA, 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 Ferguson No. 2 (OWP) #F-12 well and decommissioned the associated on-location flowlines and production equipment during the summer of 2021. Initial soil samples were collected in accordance with the Initial Form 27 (Doc # 402647601) for the project and ECMC Rule 915.e(2)B. Initial soil sampling occurred on June 17, 2021. One soil sample was collected from the P&A wellhead excavation, one sample was collected from the removed meter house, one sample was collected from the former above ground storage tank (AST), one sample was collected from the former pumping unit, and four soil samples were collected from excavated flowline paths. No other production equipment was located on the wellsite at the time of plugging and site decommissioning. All samples were submitted for laboratory analysis of Table 915-1 constituents and indicated impacts (TPH, Benzene, Ethylbenzene, Total Xylenes, and certain PAHs) above ECMC Table 915-1 standards. A reduced set of analytes was requested via a Supplemental Form 27 (Doc #403532881) to include only analytes that exceeded ECMC Table 915-1 during the initial sampling event (TPH, Benzene, Ethylbenzene, Total Xylenes, and certain PAHs). Following the approval of this Form 27, areas surrounding the plugged and abandoned (P&A) wellhead, flowline, and AST were excavated and impacted material was transported and disposed of offsite. Following excavation, confirmation soil samples were collected at each excavation and submitted for laboratory analysis of the reduced Table 915-1 analyte suite.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

X Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

Following the initial site assessment and soil sampling, excavation of the impacted soils occurred in September 2023. Confirmation soil samples were collected from each excavation area. Soil samples were submitted for laboratory analysis of the approved reduced suite of analytes as described in the Site Investigation Report below. The attached project map provides the location of all samples and excavation areas.

Proposed Groundwater Sampling

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

No groundwater or pathways to groundwater were discovered during the plugging and decommissioning activities. No groundwater samples were collected for this project.

Proposed Surface Water Sampling

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

No surface water was discovered in the vicinity of the wellsite during the plugging and decommissioning activities. No surface water samples were collected for this project.

Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan (summary):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 15
Number of soil samples exceeding 915-1 3
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 165

NA / ND

-- Highest concentration of TPH (mg/kg) 89650
-- Highest concentration of SAR 2.33
BTEX > 915-1 Yes
Vertical Extent > 915-1 (in feet) 5

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 concentrations 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) 38 Volume of liquid waste (barrels) 0

Is further site investigation required?

Initial assessment and sampling occurred on June 17, 2021, and indicated soil impacts above ECMC Table 915-1 standards. Soil sample SS01 (wellhead), collected at a depth of six feet below ground surface (bgs) indicated TPH values exceeding ECMC Table 915-1 standards, sample SS07 (flowline), collected at a depth of three feet below ground surface (bgs) indicated TPH, Benzene, Ethylbenzene, Total Xylenes, and certain PAHs values exceeding ECMC Table 915-1 standards, sample SS08 (AST), collected at a depth of six inches below ground surface (bgs) indicated TPH, Benzene, Ethylbenzene, Total Xylenes, and certain PAHs values exceeding ECMC Table 915-1 standards.

Following the initial sampling event, excavation occurred at the P&A wellhead, former flowline, and former AST (~38 yards) and confirmation soil samples were collected following excavation.

Within the flowline excavation, four sidewall samples and one base sample were collected. Confirmation soil samples were submitted for laboratory analysis of TPH, Benzene, Ethylbenzene, Total Xylenes, certain PAHs. Results did not indicate impacts above ECMC Table 915-1 standards.

Within the AST excavation, one sample was collected from the base of the excavation at a depth of five feet bgs and was submitted for laboratory analysis of TPH, Benzene, Ethylbenzene, Total Xylenes, certain PAHs. Results did not indicate impacts above ECMC Table 915-1 standards.

Within the wellhead excavation, one sample was collected from the base of the excavation at a depth of eight feet bgs and was submitted for laboratory analysis of TPH, Benzene, Ethylbenzene, Total Xylenes, certain PAHs. Results did not indicate impacts above ECMC Table 915-1 standards.

It does not appear further remediation is necessary at this time. It is requested that background concentrations be considered and that this site be approved for final closure.

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.

Approximately 38 yard of impacted soil was excavated and transported offsite to an approved 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.

Remediation activities consisted of removal of impacted soil and backfilling with clean soils in the area of the P&A wellhead, AST and former flowline.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 38

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or COGCC Facility ID # _____ 0

_____ 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.

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 Facility Closure

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.

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

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:

Impacted soil was excavated and transported offsite to an approved disposal facility.

Volume of E&P Waste (solid) in cubic yards _____ 38

E&P waste (solid) description Impacted Soils

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Envirotech Landfarm (NM Permit # NM01-011)

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

E&P waste (liquid) description No liquid E&P waste was generated during remediation activities.

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? Yes

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? Yes

Does Groundwater meet Table 915-1 standards? Yes

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 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. 05/01/2024

Proposed date of completion of Reclamation. 12/31/2024

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. _____

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/03/2021

Proposed site investigation commencement. 06/01/2021

Proposed completion of site investigation. 09/30/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 09/18/2023

Proposed date of completion of Remediation. 10/01/2023

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

Initial soil sampling events indicated TPH, Benzene, Ethylbenzene, Total Xylenes, and certain PAHs above ECMC Table 915-1 standards. Impacted material was excavated and disposed of at an approved disposal facility. Confirmation soil sampling was conducted following excavation and did not indicate soil impacts above ECMC Table 915-1 standards in the area of the P&A wellhead, AST and former flowline.

Final reclamation will be conducted per ECMC reclamation rules and prioritized based on OWP funding and staff availability. The OWP requests closure based on results of remediation and confirmation soil sampling.

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: 03/14/2024

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: _____

Date: _____

Remediation Project Number: 17898

COA Type**Description**

<u>COA Type</u>	<u>Description</u>
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**

403655583	PHOTO DOCUMENTATION
403655584	ANALYTICAL RESULTS
403655585	ANALYTICAL RESULTS
403661737	SOIL SAMPLE LOCATION MAP
403661738	ANALYTICAL RESULTS
403700170	ANALYTICAL RESULTS

Total Attach: 6 Files

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

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)