

State of Colorado
Energy & Carbon Management Commission

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Report taken by:

John Heil

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: UNKNOWN	Operator No: 1	Phone Numbers Phone: (970) 946-3761 Mobile: ()
Address: XXXXXXXXXXXXXXXXX		
City: XXXXX State: XX Zip:		
Contact Person: Jacob Harter	Email: jharter@cottonwoodconsulting.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26713 Initial Form 27 Document #: 403266991

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 #: 103-07199	County Name: RIO BLANCO
Facility Name: SILVER KING-PAN AM-HAYES (OWP) 5-27		Latitude: 40.107276	Longitude: -108.825874
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SWSE	Sec: 27	Twp: 2N	Range: 102W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications MH Most Sensitive Adjacent Land Use Oil and gas development

Is domestic water well within 1/4 mile? No 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

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
No	SOILS	TBD	Field screening and 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 Silver King Pan Am Hayes #5-27(OWP) well and decommissioned the wellsite during the summer of 2024. Soil samples were collected in accordance with the Initial Form 27 for the project and ECMC Rule 915.e(2)B. One soil sample was collected from the wellhead excavation. No other production equipment or flowlines were located on the wellsite at the time of plugging and site decommissioning. All samples were submitted for laboratory analysis of Table 915-1 constituents.

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):

All areas suspected of having potential impacts including the wellhead, associated flowline(s), and production equipment (if present) were visually inspected and field screened with a PID. Using these observations and field screening results, soil samples were collected from areas most likely to be impacted. One discrete soil sample was collected from the Silver King Pan Am Hayes #5-27 (OWP) wellhead excavation. No other production equipment or flowlines were located on the wellsite at the time of plugging and site decommissioning. The sample was submitted for laboratory analysis of Table 915-1 constituents. The attached project map provides the location of all samples collected.

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.

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.

Additional Investigative Actions

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

Field personnel performed a visual/olfactory inspection of the site.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 1

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

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 29

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?

Six background soil samples were collected for the Rangely Well Plugging Project. Background samples were collected from nearby, non-impacted native soil to establish background concentrations. Background samples were analyzed for Table 915-1 inorganic constituents. A background document including soil sampling results, photo log, and maps are provided in the attachments. All background samples indicated Arsenic above the ECMC Table 915-1 standards. Background samples BG04 & BG05 indicated SAR, boron, and conductivity above the ECMC Table 915-1 standards and pH was outside the range of the ECMC Table 915-1 standard. It is requested that background concentrations be considered when evaluating this site for final closure.

Additionally, the soil around the wellsite were mapped as Chipeta silty clay loam, 3-25% slopes. According to the NRCS this soils is considered moderately saline to strongly saline (8.0-16.0 mmhos/cm) and has SAR values of up to 15.0. NRCS soil description attached.

☐ 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?

Soil sample SS01, collected from the Silver King Pan Am Hayes #5-27 (OWP) P&A wellhead at a depth of 8 inches below ground surface (bgs) had conductivity (10.60), pH (8.58), SAR (29.0) and boron (2.95) values exceeding ECMC Table 915-1 standards.

Given that all other analytes were below the ECMC Table 915-1 standards, it appears the elevated SAR, Conductivity, pH, and boron concentrations are not necessarily associated with exploration and production (E+P) operations. These concentrations are consistent with some of the background samples and with the NRCS soil class description for the Chipeta silty clay loam, 3-25% slopes which is the mapped soil at the wellsite. It is requested that background concentrations and the NRCS soil description be considered when evaluating this site and that the 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.

If approved, no material is anticipated to be removed from the site.

REMEDIAL 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.

If approved, no remediation is anticipated at the site.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

_____ Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____

Name of Licensed Disposal Facility or ECMC Facility ID # _____

_____ 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 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.

The scope of work described in this Initial Site Investigation and Remediation Workplan will be completed by the ECMC Orphaned Well Program. The ECMC 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? No _____

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? 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.

Final reclamation will be conducted per ECMC reclamation rules and prioritized based on OWP funding and staff availability. Any exceedances defined under "Soil Suitability for Reclamation" within Table 915-1 are addressed during a later reclamation phase of the project. The scope of reclamation planning for this site will include a plan to address and avoid any effect on reclamation from 915-1 inorganic exceedances that are documented on this form; and will be accessible to ECMC staff upon request once developed. ECMC remains responsible for monitoring, maintenance, and management of all sites until passing final reclamation. This includes; but is not limited to, tasks such as weed control, installation and maintenance of storm water controls, and re-seeding until the site meets ECMC final reclamation standards. For questions regarding reclamation activities please contact ECMC OWP Reclamation Project Manager at (970) 946-9107

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? 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. 05/01/2025

Proposed date of completion of Reclamation. 12/31/2025

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). 03/15/2023

Proposed site investigation commencement. 04/01/2023

Proposed completion of site investigation. 08/01/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/01/2025

Proposed date of completion of Remediation. 05/01/2025

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:

OPERATOR COMMENT

This Site Investigation and Remediation Work Plan is being submitted on behalf of the ECMC Orphaned Well Program

Final closure requested.

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: 11/01/2024

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: John Heil

Date: 12/05/2024

Remediation Project Number: 26713

COA Type**Description**

	Based on a review of the information provided, it appears that no further action is necessary at this time and ECMC approves the closure request. Should conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards, or, if groundwater is found to be significantly impacted, further investigation and/or remediation activities may be required at the site.
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**

403839147	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403839192	ANALYTICAL RESULTS
403839193	PHOTO DOCUMENTATION
403839195	SOIL SAMPLE LOCATION MAP
403839197	ANALYTICAL RESULTS
403966143	MAP
403966145	OTHER
403966148	OTHER
404016917	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)