

**State of Colorado**  
**Energy & Carbon Management Commission**

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Report taken by:  
KRIS NEIDEL

**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: <u>FULCRUM ENERGY OPERATING LLC</u>	Operator No: <u>10805</u>	<b>Phone Numbers</b>
Address: <u>240 SAINT PAUL STREET SUITE 502</u>		Phone: <u>(970) 896-5665</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80206</u>		Mobile: <u>( )</u>
Contact Person: <u>Rikki Ross</u>	Email: <u>rikki.ross@fulcrumeo.com</u>	

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 34604 Initial Form 27 Document #: 403632483

**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: <u>SPILL OR RELEASE</u>	Facility ID: <u>485489</u>	API #: _____	County Name: <u>JACKSON</u>
Facility Name: <u>SU 0680 #6-4H</u>	Latitude: <u>40.510030</u>	Longitude: <u>-106.384070</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENW</u>	Sec: <u>9</u>	Twp: <u>6N</u>	Range: <u>80W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

**SITE CONDITIONS**

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Agricultural crop land  
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? No

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

The spill area lies within the Greater Sage-Grouse Priority Habitat Management Area. It is also located approximately .5 miles from a Greater Sage-Grouse Lek Site High Priority Habitat and .67 miles from the Aquatic Sportfish Management Water High Priority Habitat which buffers Coyote Creek. The nearest water well, Permit #16307, Receipt #9118799 is .47 miles north of the spill area with a depth of 60' and static water level of 52'.

**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
UNDETERMINED	SOILS	Within the facility.	Visual observation.

**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 Form 19 Initial Report was submitted on 11/09/2023. On 11/08/2023 at roughly 11:00 AM on the Surprise S9 Pad, Surprise 06-04 well, the rig crew removed a Kelly hose to inspect it for a suspected ice plug while the well was not pumping. During the process, oil and water came from the well head. The cause is being investigated further. A vacuum truck was on location and immediately sucked up about 10 bbl of the liquid and the crew was instructed to use spill pads to clean up the remaining liquid from the rig after discovery. The contaminated soil will be removed and disposed of per ECMC regulations as weather allows. Some additional contamination may need to be removed after the rig leaves as well.

**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 ):

The extent of the impacted area will be delineated using an auger and soil probe and photoionization detector (PID). Soil samples will be collected as needed to characterization and/or demonstrate confirmation of impacts. All soil samples will be analyzed for all ECMC Table 915-1 parameters to determine regulatory compliance. At least 1 background sample will also be collected in the adjacent undisturbed landscape to the approximate soil depth as site samples.

**Proposed Groundwater Sampling**

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

**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

Number of soil samples collected 34

Number of soil samples exceeding 915-1 8

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 1650

### 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         

### 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.

### NA / ND

         Highest concentration of TPH (mg/kg)         

         Highest concentration of SAR         

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 14

ND          Highest concentration of Benzene (µg/l)         

         Highest concentration of Toluene (µg/l)         

         Highest concentration of Ethylbenzene (µg/l)         

         Highest concentration of Xylene (µg/l)         

NA          Highest concentration of Methane (mg/l)         

## OTHER INVESTIGATION INFORMATION

Were impacts to adjacent property or offsite impacts identified?

Were background samples collected as part of this site investigation?

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.

Impacted material was excavated and hauled via trucks to the Eastern Laramie County Landfill, Burns WY. Waste manifests are provided in this Supplemental Report.

### 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 involved removal of site equipment, delineation based upon field screening and observations, excavation of impacted soils and transport of impacted materials to a permitted disposal facility. Grab samples were collected to confirm successful remediation. If confirmation samples indicated impacts, the area was further screened and resampled until no impacts were observed. Excavated areas were backfilled with clean soil.

### Soil Remediation Summary

In Situ

Ex Situ

         Bioremediation ( or enhanced bioremediation )

         Yes          Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 200  
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 \_\_\_\_\_

## 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.

Fulcrum has a general liability insurance coverage of \$2,000,000.

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:

Transportation to landfill.

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 320

E&P waste (solid) description E&P impacted soils.

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: Eastern Laramie County Landfill,  
Burns WY

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? \_\_\_\_\_

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.

The facility is presently in use and reclamation activities are not warranted at this time onsite.

Is the described reclamation complete? \_\_\_\_\_

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. 11/09/2023

Actual Spill or Release date, or date of discovery. 11/08/2023

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/08/2023

Proposed site investigation commencement. 05/01/2024

Proposed completion of site investigation. 09/30/2024

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/20/2024

Proposed date of completion of Remediation. 10/31/2024

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:

Further investigations/remediation is scheduled to commence in late August / September.

**OPERATOR COMMENT**

The extent of the impacted area was delineated using a soil hand auger and photoionization detector (PID) during excavation. Focus was given to locations where there was visible staining. Excavation, delineation, and confirmation soil sampling started on 10/10/2024 and was completed on 10/24/2024. Soil samples were collected as needed to characterize and/or demonstrate confirmation of impact removal. All soil samples were analyzed for all ECMC Table 915-1 parameters to determine regulatory compliance. If inorganic parameters were in compliance at a sample location, but not organic constituents in samples, subsequent samples were only analyzed for Table 915-1 organics to confirm compliance. Four (4) background samples were collected in the adjacent undisturbed landscape at two locations, west and southeast of the pad, at varying soil depths BGS. Background samples failed to meet pH and Arsenic regulatory levels in ECMC Table 915-1. All samples were submitted to Origins Laboratories in Denver for Table 915-1 analyses.

A total of 34 samples were collected from 10/8-24/2024 in the excavation area surrounding the wellhead and cellar locations where the spill occurred. Several samples had organic concentrations over the ECMC 915-1 regulatory limit surrounding the cellars and further excavation of each location was completed until confirmation samples were collected to adequately demonstrate impact removal.

Three soil samples collected on 10/10/2024 (SS\_S9\_02@4FT, SS\_S9\_03@4FT, SS\_S9\_08@6FT) indicated SAR levels above Table 915-1 concentrations. One of the locations was below a pumpjack making it unfeasible for further excavation. Therefore, a reclamation plan will be developed to address SAR impacts within the excavation area upon final reclamation.

Almost all samples collected were above Table 915-1 concentration levels for Arsenic, but background samples demonstrate the exceedances are from naturally occurring conditions within the North Park Basin.

Fulcrum will provide the ECMC with a reclamation plan for SAR impacts left in place within the excavation area, to be addressed upon final reclamation of the location. This will be provided on the Form 27 Quarterly (2Q2025) Report.

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

Signed: Joel Mason

Title: Agent

Submit Date: 02/26/2025

Email: joel.mason@absarokasolutions.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: KRIS NEIDEL

Date: 07/01/2025

Remediation Project Number: 34604

**COA Type**

**Description**

0 COA	
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**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**

404098605	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404104426	SOIL SAMPLE LOCATION MAP
404104427	OTHER
404104428	ANALYTICAL RESULTS
404104431	ANALYTICAL RESULTS
404104432	ANALYTICAL RESULTS
404104433	ANALYTICAL RESULTS
404104434	ANALYTICAL RESULTS
404104435	ANALYTICAL RESULTS
404104436	ANALYTICAL RESULTS
404104437	ANALYTICAL RESULTS
404104439	ANALYTICAL RESULTS
404104440	ANALYTICAL RESULTS
404104441	ANALYTICAL RESULTS
404104442	ANALYTICAL RESULTS
404104495	DISPOSAL MANIFESTS

Total Attach: 17 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	It appears that other than SAR soil is compliant with Table 915-1. As proposed this project will remain open until a 915.b plan is approved for reclamation of SAR.	07/01/2025
Environmental	It appears that the contaminates of concern are TPH and possibly SAR based on the waste characterization samples.	07/01/2025

Total: 2 comment(s)