

State of Colorado  
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
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Document Number:

403597315

Receive Date:

11/22/2023

Report taken by:

Jason Kosola

## Site Investigation and Remediation Workplan (Initial 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 COGCC 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: ENDURING RESOURCES LLC	Operator No: 10663	Phone Numbers
Address: 6300 S SYRACUSE WAY, SUITE 525		Phone: (720) 768-3575
City: CENTENNIAL	State: CO	Zip: 80111
Contact Person: Kayla White	Email: kwhite@cdhconsult.com	Mobile: (720) 768-3575

## PROJECT, PURPOSE &amp; SITE INFORMATION

## PROJECT INFORMATION

Remediation Project #: 33437 Initial Form 27 Document #: 403597315

## 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: Historic Pit from Previous Operator

## SITE INFORMATION

No Multiple Facilities

Facility Type: PIT	Facility ID: 288242	API #:	County Name: LA PLATA
Facility Name: WEST ANIMAS CARTER 7U-4	Latitude: 37.209086	Longitude: -107.859739	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NENE	Sec: 7	Twp: 34N	Range: 9W
Meridian: M	Sensitive Area? No		

## SITE CONDITIONS

General soil type - USCS Classifications SP

Most Sensitive Adjacent Land Use Commercial

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

## 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	None	Soil sample taken

**INITIAL ACTION SUMMARY**

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

During the desktop analysis, CDH reviewed operating documents from Enduring, reviewed historically filed document on the ECMC database, and viewed historic imagery from available resources including Google Earth and recently collected drone data to determine the presence or absence of previously permitted pits. For the West Animas Carter 7U-4 pit location, it was determined based on the desktop review that a pit likely existed at one point and was since reclaimed by another operator prior to Enduring owning the assets.

**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 ):

Please see attached diagram. On June 28, and again on August 11, 2023, CDH collected representative soil samples at the facility as close to the pit location based on historical records and current site conditions. Due to the previous reclamation of the sites, samples were collected with a hand auger at a depth of 1-2 feet below surface grade. Soil samples were collected and sent to Origins Laboratory in Denver, Colorado for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), metals, sodium adsorption ratio (SAR), pH, and specific conductivity (EC). Analytical results were compared to ECMC Table 915-1 levels to comply with current pit closure regulations.

**Proposed Groundwater Sampling**

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

No impact to groundwater is anticipated from this historic pit based on the field observation and depth to ground water in the area being on average greater than 20 feet below grade surface. No ground water was observed during field activities.

**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 6  
Number of soil samples exceeding 915-1 0  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square 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

### 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) 1.23  
ND Highest concentration of SAR   
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 0  
ND Highest concentration of Benzene (µg/l)   
ND Highest concentration of Toluene (µg/l)   
ND Highest concentration of Ethylbenzene (µg/l)   
ND Highest concentration of Xylene (µg/l)   
ND 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?

Five background samples were taken in an undisturbed area adjacent to the pit location. The first background sample was collected June 28th, and the other four were collected August 11th. The samples were collected and tested for EC, SAR, pH, and arsenic. The background samples were used to establish site specific background levels for arsenic and/or SAR.

☐ 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

### SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Please see the attached letter narrating that this is an historic pit per the administrative record. Enduring is seeking to administratively close the pit to finalize the ECMC's records.

### 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.

Background samples were collected to characterize site specific soil concentrations. The results indicate that pit content concentrations are within acceptable ECMC closure criteria of less than established background samples.

### 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  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Name of Licensed Disposal Facility or COGCC 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.

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

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility:

Volume of E&P Waste (liquid) in barrels

E&P waste (liquid) description

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility:

## 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.

For the West Animas Carter 7U-4 pit location, it was determined based on the desktop review that a pit likely existed at one point and was since reclaimed by another operator prior to Enduring owning the assets. The entire oil and gas location will be reclaimed during final reclamation following plugging and abandoning activities at the end of the life of the well.

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

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. \_\_\_\_\_

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). 06/28/2023

Proposed site investigation commencement. 06/28/2023

Proposed completion of site investigation. 08/11/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. \_\_\_\_\_

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**

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

Signed: Danielle Gavito

Title: Senior Regulatory Analyst

Submit Date: 11/22/2023

Email: dgavito@cdhconsult.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: Jason Kosola

Date: 01/03/2024

Remediation Project Number: 33437

**COA Type****Description**

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**

403597315	FORM 27-INITIAL-SUBMITTED
403600682	CORRESPONDENCE
403600683	SOIL SAMPLE LOCATION MAP
403600684	ANALYTICAL RESULTS
403600685	ANALYTICAL RESULTS
403600686	ANALYTICAL RESULTS

Total Attach: 6 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)