

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
403341394  
Receive Date:  
06/28/2023

Report taken by:  
CHRIS CANFIELD

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 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: COLTON LIMITED LIABILITY CO	Operator No: 18795	<b>Phone Numbers</b>
Address: P.O. BOX 370549		Phone: (303) 297 0347
City: DENVER	State: CO	Zip: 80237
Contact Person: Tom Metzger	Email: tmetzger@bsegllc.com	Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26178 Initial Form 27 Document #: 403218021

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: LOCATION	Facility ID: 320124	API #: _____	County Name: ADAMS
Facility Name: LINNEBUR FARMS-62S60W 3NENW	Latitude: 39.911734	Longitude: -104.086366	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENW	Sec: 3	Twp: 2S	Range: 60W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SP Most Sensitive Adjacent Land Use Pasture  
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? No

## SITE INVESTIGATION PLAN

### TYPE OF WASTE:

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> E&P Waste       | <input type="checkbox"/> Other E&P Waste             | <input checked="" type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water  | <input type="checkbox"/> Workover Fluids             | No Waste Generated                                |
| <input type="checkbox"/> Oil             | <input type="checkbox"/> Tank Bottoms                |   |
| <input type="checkbox"/> Condensate      | <input type="checkbox"/> Pigging Waste               |   |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash                    |   |
| <input type="checkbox"/> Drill Cuttings  | <input type="checkbox"/> Spent Filters               |   |
|  | <input type="checkbox"/> Pit Bottoms                 |   |
|  | <input type="checkbox"/> Other (as described by EPA) |   |

### DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	NA	Lab Analysis if Encountered
UNDETERMINED	SOILS	NA	Lab Analysis

### 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 site assessment will be conducted pursuant to COGCC Rule 911 at the LINNEBUR FARMS 21-3 Location.

### 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 ):

Grab confirmation soil samples will be collected from beneath the tank, separator, pit walls and floor. Soil samples will be analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron. All samples collected will be analyzed by a certified laboratory using approved COGCC laboratory analysis methods.

#### Proposed Groundwater Sampling

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

If groundwater is encountered during the site investigation, a grab groundwater sample will be collected and analyzed for all organic compounds per COGCC Table 915-1.

#### 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 ):

Visual inspection of the location and flowlines will occur during abandonment activities. Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. The COGCC Tank Battery, Closure Checklist will be utilized and filled out during the abandonment process. A photolog will be submitted on the subsequent Form 27.

## SITE INVESTIGATION REPORT

### SAMPLE SUMMARY

**Soil**

Number of soil samples collected 15  
Number of soil samples exceeding 915-1 13  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 1190

**NA / ND**

Highest concentration of TPH (mg/kg) \_\_\_\_\_  
Highest concentration of SAR \_\_\_\_\_  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 8

**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?

Yes one background sample was collected to the north of the battery location

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.

Soils with elevated SAR and Boron are being excavated and hauled to disposal at 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.

Soils with elevated SAR and Boron are being excavated and hauled to disposal at an approved disposal facility. At the time of this submission, the excavation is a 45' x 35' square areal extent and 8 ft depth in the center. Current samples show further excavation will be required in each direction and deeper to reach the extent of the SAR and Boron impacts. Excavation will continue and confirmation sampling will be performed to determine the extent and ensure contamination is either completely removed or isolated and treated in place depending on the extent determined.  
Elevated TPH at the Tanks was investigated and re-sampled after removing about 1 yard of soil. The initial sample was taken at the load line and likely was the location of historic operating drips that were not detected by PID or olfactory. The second samples had no TPH, but had slightly elevated SAR. Since then, the entire pad was scraped of the road base used for the berm, which was hauled away, and a new confirmation sample in the area of the tank battery will be collected to confirm no further action is required.  
Due the the extreme amount of rain the area has received the Separator was re-sampled in the same spot to determine if the water was able to naturally remediate the previous SAR concentration. The confirmation sample showed almost no SAR impacts were present any more.

## 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) \_\_\_\_\_ 500  
Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_ 0  
No \_\_\_\_\_ 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    One-time within 90 days of laboratory analytical.

### 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.

\$60,000 in Blanket Bonds plus \$25,000 in Surface Bonds is beyond adequate for a project of this scale. Operator is insured as required per the 700 series rules.

Operator anticipates the remaining cost for this project to be: \$ 7500

## 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:

Cover for Landfill

Volume of E&P Waste (solid) in cubic yards 86

E&P waste (solid) description Contaminated Soil

COGCC Disposal Facility ID #, if applicable: 0

Non-COGCC Disposal Facility: \_\_\_\_\_

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

E&P waste (liquid) description \_\_\_\_\_

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

Non-COGCC 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 COGCC 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 completed accordance with the requests of the land owner, any agreements and contracts related to the surface use, and in accordance with COGCC 1000 Series Rules where applicable.

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. 11/21/2022

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. 09/29/2022

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

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/21/2022

Proposed site investigation commencement. 04/27/2023

Proposed completion of site investigation. 07/31/2023

### 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**

This Form 27 serves as an update on the decommissioning of the Linnebur Farms 21-3 Tank battery and facility.

Due to the lab turn times and extreme rainfall in the area progress is slower than was expected. Colton will continue to file updates as access is available and excavation is safe.

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

Signed: Ryan Dornbos

Title: Petroleum Engineer

Submit Date: 06/28/2023

Email: Ryan@PEOperating.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: CHRIS CANFIELD

Date: 06/30/2023

Remediation Project Number: 26178

**COA Type****Description**

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**

403341394	FORM 27-SUPPLEMENTAL-SUBMITTED
403448905	DISPOSAL MANIFESTS
403448912	MAP
403448913	SOIL SAMPLE LOCATION MAP
403448914	ANALYTICAL RESULTS
403448915	ANALYTICAL RESULTS
403448916	ANALYTICAL RESULTS
403448983	PHOTO DOCUMENTATION
403448984	SOIL SAMPLE LOCATION MAP

Total Attach: 9 Files

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

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)