

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403872736
Receive Date:
07/31/2024

Report taken by:
Krystal Heibel

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: <u>FUNDARE RESOURCES OPERATING COMPANY LLC</u>	Operator No: <u>10773</u>	Phone Numbers Phone: <u>(303) 910-4511</u> Mobile: <u>()</u>
Address: <u>5251 DTC PKWY STE 950</u>		
City: <u>GREENWOOD VILLAGE</u>	State: <u>CO</u>	Zip: <u>80111</u>
Contact Person: <u>Sydney Smith</u>	Email: <u>ssmith@fundareresources.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 15397 Initial Form 27 Document #: 402363826

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

Yes Multiple Facilities

Facility Type: <u>LOCATION</u>	Facility ID: <u>460754</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Terrace Gas Plant</u>	Latitude: <u>40.845550</u>	Longitude: <u>-103.908040</u>	
** correct Lat/Long if needed: Latitude: _____ Longitude: _____			
QtrQtr: <u>NENW</u>	Sec: <u>18</u>	Twp: <u>10N</u>	Range: <u>58W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>468836</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Terrace Gas Plant</u>	Latitude: <u>40.845550</u>	Longitude: <u>-103.908040</u>	
** correct Lat/Long if needed: Latitude: _____ Longitude: _____			
QtrQtr: <u>NENW</u>	Sec: <u>18</u>	Twp: <u>10N</u>	Range: <u>58W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications GM _____

Most Sensitive Adjacent Land Use Rangeland _____

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

A review of Colorado's DWR Well Permit Resource data identified one (1) geophysical log well approximately 410 feet southeast from the Site. The indicating depth to non-alluvial groundwater based on this well is 104 feet bgs. Surface water is present in the area in the form of ephemeral streams and small reservoirs, but notable drainages are more than ¼ mile from the Site. There are no residence within a quarter mile. Mule Deer severe winter range is within a quarter mile buffer and CPW was notified of the release.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input checked="" 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
Yes	GROUNDWATER	Full extent unknown; known MW1	Monitor well
Yes	SOILS	~100'x100'	soil borings

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 (Release Point ID 468836) was previously submitted. Hydrocarbon impacted soils was discovered during decommissioning of the facility. The historical impacts were removed via mechanical excavation. Due to the depth of the impacts, soil borings were advanced to delineate the impacts.

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):

Soil samples were collected on all Boring completed, and provided in previous forms.

Proposed Groundwater Sampling

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

Quarterly groundwater monitoring will be conducted at this sites that includes gauging and sampling all the monitor wells that do not contain phase separated hydrocarbons (PSH). Groundwater samples will be analyzed for Full Table 915-1, groundwater constituents. The additional proposed monitoring well was installed during the 4th quarter of 2023. Analytical results continue to remain similar with impacts present within MW-1. Quarterly Groundwater monitoring will continue.

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):

At this time Fundare will continue to conduct quarterly groundwater monitoring. Monitoring of the newly installed well will assist in continued investigation, and fully defining the extent of the impacts.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>41</u>	-- Highest concentration of TPH (mg/kg) <u>4300</u>
Number of soil samples exceeeding 915-1 <u>4</u>	NA Highest concentration of SAR _____

Was the areal and vertical extent of soil contamination delineated? No

BTEX > 915-1 Yes

Approximate areal extent (square feet) 10000

Vertical Extent > 915-1 (in feet) 35

Groundwater

Number of groundwater samples collected 54

-- Highest concentration of Benzene (µg/l) 5500

Was extent of groundwater contaminated delineated? No

-- Highest concentration of Toluene (µg/l) 8600

Depth to groundwater (below ground surface, in feet) 49

-- Highest concentration of Ethylbenzene (µg/l) 1900

Number of groundwater monitoring wells installed 6

-- Highest concentration of Xylene (µg/l) 4800

Number of groundwater samples exceeding 915-1 19

NA Highest concentration of Methane (mg/l) _____

Surface Water

0 Number of surface water samples collected

0 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?

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 0

Volume of liquid waste (barrels) 1

Is further site investigation required?

The COGCC requested on Form 27 Doc# 403159053 the COAs to install additional monitoring wells to fully define the horizontal extent of impacts to groundwater and to also collect soil samples from intervals displaying the highest degree of impacts during monitoring well installation. Fundare has completed that request, and has provided all of the required maps, sample analytical results, and findings in previous forms. Quarterly Groundwater monitoring will continue.

REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Impacted soils were excavated to a depth of 20 feet below ground surface (bgs) and remediated on site. Impacted soils continued deeper than 20 feet bgs and beyond what could be safely excavated. so it was determined remediated would commence in-situ. Stockpiled soils from the excavation were sampled and used to backfill the excavation. Six (6) groundwater monitoring wells have been installed.

REMEDICATION 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.

Quarterly groundwater monitoring will be conducted at this sites that includes gauging and sampling all the monitor wells that do not contain phase separated hydrocarbons (PSH). Groundwater samples will be analyzed for Full Table 915-1, groundwater constituents. The additional proposed monitoring well was installed during the 4th quarter of 2023. Analytical results continue to remain similar with impacts present within MW-1. Quarterly Groundwater monitoring will continue.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) 300

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or ECMC Facility ID # _____

_____ 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.

Quarterly monitoring will continue to occur and samples will be analyzed for full table 915-1 groundwater constituents.

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.

Fundare Resources has the following listed bonds in place with the COGCC.
20210060 ACTIVE SURFACE \$25,000.00 BLANKET 8/31/2021 INSURANCE B013680
20210061 ACTIVE PLUGGING \$100,000.00 BLANKET 8/31/2021 INSURANCE B013670
20210062 ACTIVE GAS FACILITY \$50,000.00 BLANKET 8/31/2021 INSURANCE B013675
20210063 ACTIVE PLUGGING \$240,000.00 EXCESS INACTIVE 8/31/2021 INSURANCE B013671

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:

NA

Volume of E&P Waste (solid) in cubic yards _____ 2700

E&P waste (solid) description Impacted Soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Pawnee Waste

Volume of E&P Waste (liquid) in barrels _____ 1

E&P waste (liquid) description Purge water

ECMC Disposal Facility ID #, if applicable: _____ 440165

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.

A reclamation plan will be prepared pending the outcome of site and remediation investigation.

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. _____

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. 10/21/2019

Actual Spill or Release date, or date of discovery. 10/21/2019

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/21/2019

Proposed site investigation commencement. 10/21/2019

Proposed completion of site investigation. 06/30/2023

REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/01/2023

Proposed date of completion of Remediation. 07/01/2026

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 is being submitted to provide the findings from the 3rd quarter 2024 groundwater monitoring. Impacts levels within MW-1 remain stable. Quarterly groundwater monitoring will continue

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

Signed: Sydney Smith

Title: Director EHSR

Submit Date: 07/31/2024

Email: ssmith@fundareresources.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: Krystal Heibel

Date: 09/19/2024

Remediation Project Number: 15397

COA Type**Description**

COA Type	Description
0 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**

403872736	FORM 27-SUPPLEMENTAL-SUBMITTED
403872776	ANALYTICAL RESULTS
403872791	MONITORING REPORT
403872792	ANALYTICAL RESULTS
403872794	GROUND WATER SAMPLE LOCATION

Total Attach: 5 Files

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

Environmental	"Operator shall include the Name of Licensed Disposal Facility or ECMC Facility ID # in the relevant sections and provide future waste manifests for all activities performed during the respective Quarterly Update."	09/19/2024
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Total: 1 comment(s)