

State of Colorado
Oil and Gas Conservation Commission

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 30104 Initial Form 27 Document #: 403389209

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: SPILL OR RELEASE	Facility ID: 480281	API #: _____	County Name: WELD
Facility Name: Wildhorse 06-0634H	Latitude: 40.785565	Longitude: -104.019345	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: LOR 2	Sec: 6	Twp: 9N	Range: 59W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Agriculture
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

Other Potential Receptors within 1/4 mile

There are no residents, or habitable structures within a quarter mile of the release location. There are no marked bodies of surface waters within a quarter mile. Livestock has not been witnessed during any site visits, if they do get seen the receptors will be updated. There are no marked roads within a quarter mile however the lease road is 315 feet Southeast of the release. There are no water wells within a quarter mile of the release. This location is within the Mule Deer severe winter range and CPW has been notified of the release.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- E&P Waste
- Produced Water
- Oil
- Condensate
- Drilling Fluids
- Drill Cuttings
- Other E&P Waste
- Workover Fluids
- Tank Bottoms
- Pigging Waste
- Rig Wash
- Spent Filters
- Pit Bottoms
- Other (as described by EPA)
- Non-E&P Waste

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	255	Excavation sampling

INITIAL ACTION SUMMARY

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

Upon discovery of the release crews were dispatched to the site and remedial activities began to remove the source and eliminate impacts from traveling on site. The surface excavation was completed and sampling was never conducted at the site. Further investigation recommenced March 8,2023 to complete the remedial excavation and ensure all impacts are properly removed.

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):

Upon initial investigation and screening additional excavation was necessary. Samples were collected on 4/17/2023 in accordance with the 915 guidance, and were analyzed for full table 915-1 constituents. Analytical results indicated that all impacts were removed except for EC in SS-5@2'. Additional remedial excavation ocured in the area where SS-5 was located, and it was resampled as SS-5@3'. Confirmation sample SS-5 was collected in accordance with the 915 guidance, and was analyzed for full table 915-1 constituents. Analytical results indicated all impacts are below site specific background or table 915-1 limits. Residential soil screening is the default comparison when the pathway to groundwater is eliminated. Groundwater at this site based off of DWR data is located at a depth of 85 feet bgs. That combined with the known siltstone geology eliminates the pathway to groundwater.

Proposed Groundwater Sampling

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

Groundwater at this site based off of DWR data is located at a depth of 85 feet bgs. That combined with the known siltstone geology eliminates the pathway to groundwater.

Proposed Surface Water Sampling

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

[Empty text box for surface water sampling details]

Additional Investigative Actions

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

[Empty text box for additional investigative actions]

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 23
Number of soil samples exceeding 915-1 23
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 255

NA / ND

-- Highest concentration of TPH (mg/kg) 8901
-- Highest concentration of SAR 186
BTEX > 915-1 Yes
Vertical Extent > 915-1 (in feet) 6

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?

A total of 8 site specific backgrounds were collected in accordance with 915 guidance.

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? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Upon discovery of the release crews were dispatched to the site and remedial activities began to remove the source and eliminate impacts from traveling on site. The surface excavation was completed and sampling was never conducted at the site. Further investigation recommenced March 8, 2023 to complete the remedial excavation and ensure all impacts are properly removed

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.

Upon initial investigation and screening additional excavation was necessary. Samples were collected on 4/17/2023 in accordance with the 915 guidance, and were analyzed for full table 915-1 constituents. Analytical results indicated that all impacts were removed except for EC in SS-5@2'. Additional remedial excavation ocured in the area where SS-5 was located, and it was resampled as SS-5@3'. Confirmation sample SS-5 was collected in accordance with the 915 guidance, and was analyzed for full table 915-1 constituents. Analytical results indicated all impacts are below site specific background or table 915-1 limits. Residential soil screening is the default comparison when the pathway to groundwater is eliminated. Groundwater at this site based off of DWR data is located at a depth of 85 feet bgs. That combined with the known siltstone geology eliminates the pathway to groundwater. Fundare is requesting backfill and closure of this release.

Soil Remediation Summary

In Situ

Ex Situ

- _____ Bioremediation (or enhanced bioremediation)
- _____ Chemical oxidation
- _____ Air sparge / Soil vapor extraction
- _____ Natural Attenuation
- _____ Other _____

- Yes _____ Excavate and offsite disposal
- _____ If Yes: Estimated Volume (Cubic Yards) _____ 60
- _____ Name of Licensed Disposal Facility or COGCC Facility ID # _____
- 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

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 has the required sufficient insurance to fully address the anticipated costs of Remediation, including the remaining estimated costs for this project. Fundare has general liability insurance and financial assurance as required by COGCC rules.

Operator anticipates the remaining cost for this project to be: \$ 5200

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:

There is no beneficial use of the E&P waste derived from remediation.

Volume of E&P Waste (solid) in cubic yards 60

E&P waste (solid) description Hydrocarbon Impacted soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Pawnee Landfill

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? 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 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 at this site will be conducted in accordance with COGCC 1000 series reclamation rules.

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. 08/03/2023

Proposed date of completion of Reclamation. 08/18/2023

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. 07/11/2021

Actual Spill or Release date, or date of discovery. 07/11/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/12/2021

Proposed site investigation commencement. 07/12/2021

Proposed completion of site investigation. 03/30/2023

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/20/2023

Proposed date of completion of Remediation. 06/08/2023

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

Fundare is submitting the closure request as all impacts from the site have been removed below background specific or COGCC limits. Exceedances in SS-10 for TPH were excavated further and BH-1, along with SW-1 through 4 were collected in its place following further excavation. Exceedances for SS-5@2' , were further removed and SS-5@3' was collected in its place. Residential screening limits have been utilized, because the pathway to groundwater has been eliminated with its depth of 85', and the siltstone geology. Fundare is requesting backfill and no further action at the site. Upon approval of this backfill will be completed and the site will be reclaimed following the 1003 series reclamation rules, and will be returned to production.

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: 06/28/2023

Email: ssmith@fundareresources.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: Krystal Heibel

Date: 07/11/2023

Remediation Project Number: 30104

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**

403447946	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403448208	REMEDATION PROGRESS REPORT
403448211	ANALYTICAL RESULTS
403448213	ANALYTICAL RESULTS
403448214	ANALYTICAL RESULTS
403448215	ANALYTICAL RESULTS
403448217	ANALYTICAL RESULTS
403448225	SITE MAP
403448226	SOIL SAMPLE LOCATION MAP
403448228	SITE MAP
403448231	SOIL SAMPLE LOCATION MAP
403459818	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 12 Files

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

Environmental	COGCC approves Operator's request for use of Residential SSLs based on the depth to groundwater and the local lithology suggesting a pathway to groundwater at this location is not likely.	06/30/2023
Environmental	Based on the information presented, it appears that no further remedial action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.	06/30/2023

Total: 2 comment(s)