

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: <u>MCCARTNEY ENGINEERING LLC</u>	Operator No: <u>55030</u>	Phone Numbers
Address: <u>4251 KIPLING ST STE 575</u>		
City: <u>WHEAT RIDGE</u>	State: <u>CO</u>	Zip: <u>80033</u>
Contact Person: <u>Jack McCartney</u>	Email: <u>jack@mccartneyengineering.com</u>	Phone: <u>(303) 830-7208</u>
		Mobile: <u>(303) 916-4070</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26022 Initial Form 27 Document #: 403191534

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>WELL</u>	Facility ID: _____	API #: <u>125-05105</u>	County Name: <u>YUMA</u>
Facility Name: <u>SEEDORF 1</u>	Latitude: <u>40.131000</u>	Longitude: <u>-102.744780</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWNE</u>	Sec: <u>21</u>	Twp: <u>2N</u>	Range: <u>48W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>
Facility Type: <u>LOCATION</u>	Facility ID: <u>302966</u>	API #: _____	County Name: <u>YUMA</u>
Facility Name: <u>SEEDORF-62N48W 21NWNE</u>	Latitude: <u>40.130957</u>	Longitude: <u>-102.744856</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWNE</u>	Sec: <u>21</u>	Twp: <u>2N</u>	Range: <u>48W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications ML _____

Most Sensitive Adjacent Land Use Agriculture farm
land, albinas
loam _____

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 _____

Other Potential Receptors within 1/4 mile

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 checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <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
Yes	SOILS	Small area below and near wtr tank	visual, soil sample
Yes	VEGETATION	No vegetation on gravel area.	Visual

INITIAL ACTION SUMMARY

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

We plugged and capped the Seedorf #1 well, removed the flowline, and remove water tank and separator. Field screening and sampling described below. Water contaminated soil removed and buried approximately 3' - 4' below surface. Replaced soil removed with native soil. Ripped and disked flowline route and compacted areas. Added fertilizer and soil enhancement chemical to area impacted by produced water. Will reassess after spring/fall crop is planted and growth established.

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 screening was performed on each wall of well excavation, adjacent to flowline risers, at approximate 270' intervals along flowline, under and around meter shed, under and adjacent to separator skid, beneath and adjacent to above ground water tank. Soil samples were taken at the base of well excavation, beneath water tank hatch, at water inlet to tank, and beneath and adjacent to separator skid. All samples were analyzed for Soil Suitability (Electrical conductivity, sodium adsorption ratio, pH by saturated paste method, boron (DTPA Sorbitol). Photos were taken and submitted for all excavations, below water tank, separator site, and meter site.

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

NA / ND

Number of soil samples collected 7

NA Highest concentration of TPH (mg/kg) _____

Number of soil samples exceeding 915-1 3

Highest concentration of SAR _____

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

BTEX > 915-1 No

Approximate areal extent (square feet) 100

Vertical Extent > 915-1 (in feet) 1

Groundwater

Number of groundwater samples collected 0

NA Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No

NA Highest concentration of Toluene (µg/l) _____

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

NA Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed _____

NA Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 _____

NA 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?

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?

Water contaminated soil removed. Site will be investigated after next crop is planted to determine if plant growth has been materially impaired. If impairment is observed, additional reclamation steps will be employed to correct the situation.

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.

Road base was removed and surface remediated suitable for farming operations. Contaminated soil was removed and buried 3' 4'. Affected areas was ripped, disked, and fertilized and expected to be suitable for farming operations.

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.

There is no groundwater contamination. Removed road base/gravel around water tank, separator, and gas meter. Area is in active farm land. Will return disturbed area to agriculture use.

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

 Name of Licensed Disposal Facility or COGCC Facility ID # _____

 Natural Attenuation

 Excavate and onsite remediation

Yes Other Buried water contamination soil
3' - 4' below surface and
replaced removed soil with
native soil.

Yes Land Treatment

No Bioremediation (or enhanced bioremediation)

No Chemical oxidation

Yes Other Moved road base/gravel off agriculture
land to enhance drive entry. Excavated
contaminated soil.

Groundwater Remediation Summary

No 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.

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.

The disturbed area is agriculture land. Land owner will seed with appropriate crop in 2023.

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? Yes

If YES, does the seed mix comply with local soil conservation district recommendations? Yes

Did the local soil conservation district provide the seed mix? No

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 11/21/2022

Proposed date of completion of Reclamation. 10/15/2024

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. 10/11/2022

Actual Spill or Release date, or date of discovery. 11/18/2022

SITE INVESTIGATION DATES

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

Proposed site investigation commencement. 11/21/2022

Proposed completion of site investigation. 11/21/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/21/2022

Proposed date of completion of Remediation. 10/15/2024

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:

Actual dates shown. Two growing seasons required for finalizing reclamation.

OPERATOR COMMENT

Slight subsidence where lines were removed filled and leveled. Removed motor oil stained soil. This is submitted as first quarterly report. Land will be planted this spring with growth monitored in the fall.

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

Signed: Jack McCartney

Title: Manager

Submit Date: 05/25/2023

Email: jack@mccartneyengineering.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: 06/28/2023

Remediation Project Number: 26022

COA Type**Description**

	Per Doc# 403301204, either provide an explanation as to why the full Table 915-1 analyses were not tested on the soil samples; or, the operator will need to collect confirmation soil samples as described in the Rule 915.e.(2). Operator will analyze soil samples for TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble)).
	Operator needs to demonstrate compliance with Rule 905.f. by disposing waste at an authorized landfill.
	Per Doc# 403301204, If the Operator proposes to leave material with elevated levels of SAR in situ, the Operator define the vertical and lateral extent of impacts and provide a detailed Reclamation plan that includes, but is not limited to, soil analysis from adjacent undisturbed lands, revegetation techniques, site stabilization, and details of seeded species. Operator will submit the Reclamation plan on a Form 27 Supplemental Report for Director review.
	Per Doc# 403301204, Operator shall provide a summary table(s) of soil and/or groundwater laboratory analytical results compared to Table 915-1 standards on subsequent Supplemental Form 27s.
	Operator shall provide a comprehensive list of all potential receptors within ¼ mile on the subsequent Supplemental Form 27. Location lies within the following mapped High Priority Habitat(s): - Designated Groundwater Management Area - Designated Basin Please note that Approval of this Form 27 does not supersede any Federal, State or Local regulations. COGCC recommends consultation with Colorado Parks and Wildlife.
5 COAs	

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**

403400782	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403400804	PHOTO DOCUMENTATION
403400805	PHOTO DOCUMENTATION
403400806	PHOTO DOCUMENTATION
403447878	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	Per Doc# 403301204, Operator has removed Water contaminated soil and buried it approximately 3' - 4' below surface.	06/23/2023

Total: 1 comment(s)