

State of Colorado
Energy & Carbon Management Commission

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404016382
Receive Date:
12/31/2024
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 ECMC 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>MAGPIE OPERATING INC</u>	Operator No: <u>52530</u>	Phone Numbers
Address: <u>2707 SOUTH COUNTY RD 11</u>		Phone: <u>(970) 669-6308</u>
City: <u>LOVELAND</u>	State: <u>CO</u>	Zip: <u>80537</u>
Contact Person: <u>Ross Warner</u>	Email: <u>ross.magpieoil@gmail.com</u>	Mobile: <u>()</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 13484 Initial Form 27 Document #: 402026653

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>PIT</u>	Facility ID: <u>111980</u>	API #: _____	County Name: <u>LOGAN</u>
Facility Name: <u>WARNECKE LEASE</u>	Latitude: <u>40.624978</u>	Longitude: <u>-103.334998</u>	
	** correct Lat/Long if needed: Latitude: <u>40.625044</u>	Longitude: <u>-103.335102</u>	
QtrQtr: <u>SESE</u>	Sec: <u>30</u>	Twp: <u>8N</u>	Range: <u>53W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>
Facility Type: <u>LOCATION</u>	Facility ID: <u>312143</u>	API #: _____	County Name: <u>LOGAN</u>
Facility Name: <u>WARNECKE-68N53W 30SESE</u>	Latitude: <u>40.625638</u>	Longitude: <u>-103.337188</u>	
	** correct Lat/Long if needed: Latitude: <u>40.625285</u>	Longitude: <u>-103.335214</u>	
QtrQtr: <u>SESE</u>	Sec: <u>30</u>	Twp: <u>8N</u>	Range: <u>53W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications CL

Most Sensitive Adjacent Land Use Non-crop land

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

Domestic water well (Division of Water Resources Permit Number 36326) is located 0.26 miles south of the Location.

DENIED

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 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	SOILS	To be determined	Soil Sampling and Laboratory 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.

Initial site investigation was completed June 13, 2019. Analytical results of initial investigation indicated levels of inorganic constituents in exceedance of ECMC Table 915-1 allowable limits. See Form 27 Document 403904950 and the attached supporting documentation for results of site investigation to date. No additional site investigation has been completed since July 2024.

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):

Additional soil samples will be collected as needed to delineate the vertical and horizontal extent of soil impacts. Magpie proposes results of soil analysis be compared to Table 915-1 Residential Soil Screening Levels (RSSLs). See Operator Comments for additional information.

Proposed Groundwater Sampling

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

If groundwater is encountered during site investigation activities, a sample will be collected for characterization of Table 915-1 groundwater constituents of concern. Groundwater is not expected to be encountered as the closest Division of Water Resources (DWR) well (Permit Number 36326), located 0.26 miles south of the investigation area, indicates a static groundwater level of 200 feet below ground surface (bgs). DWR well permit number 35744, located 0.79 miles southwest of the investigation area, was previously referenced by ECMC staff as potential evidence of groundwater as shallow as 19 feet bgs. Further review of the DWR record associated with this well indicate a static water level of 61 feet bgs.

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 191	-- Highest concentration of TPH (mg/kg) 290.5
Number of soil samples exceeding 915-1 140	-- Highest concentration of SAR 215

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

BTEX > 915-1 No

Approximate areal extent (square feet) 28000

Vertical Extent > 915-1 (in feet) 20

Groundwater

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? Yes

Highest concentration of Toluene (µg/l) _____

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

Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed _____

Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 _____

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?

On October 11, 2022, 3 background samples were collected from 0-3 feet bgs and submitted to Origins for analysis of EC, pH, and SAR. On January 12, 2023, an additional 13 background samples were collected from 3, 6, and 10 feet bgs and submitted to Origins for analysis of ECMC Table 915-1 Soil Suitability for Reclamation (SSR) constituents and metals.

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?

See Proposed Sampling Plan

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.

The well is plugged and abandoned, production equipment has been removed, and the pit has been excavated to approximately 4 feet bgs. Approximately 2,800 cubic yards of inorganic-impacted soil was removed and transported to Washington County Landfill for disposal.

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.

On September 19, 2023, approximately 2,800 cubic yards of inorganic-impacted soil was removed from the area of the former pit and transported to Washington County Landfill for disposal.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 2800

_____ 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.

Groundwater is not expected to be encountered. The closest DWR permitted well, located approximately 0.26 miles south of the investigation area, indicates a static groundwater level of 200 feet below ground surface (bgs). DWR well permit number 35744 located approximately 0.79 miles southwest of the investigation area was previously referenced by ECMC staff as potential evidence of groundwater as shallow as 19 feet bgs. Further review of DWR records associated with this well indicate a static water level of 61 feet bgs.

REVISED

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.

Magpie has financial assurance bonding per Rule 702 in excess of \$1.2 million and carries General Liability Insurance in the amount of \$5,000,000 per occurrence in compliance with Rule 705. No claim is anticipated for this cleanup effort. Magpie has its own roustabout crew, heavy machinery, and hauling trucks in-house to eliminate vendor costs. Project is 75% complete.

Operator anticipates the remaining cost for this project to be: \$ 25000 _____

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:

none _____

Volume of E&P Waste (solid) in cubic yards _____ 2800

E&P waste (solid) description _____ Inorganic impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____ Washington County Landfill, Pawnee Waste

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

E&P waste (liquid) description _____

ECMC Disposal Facility ID #, if applicable: _____

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? No _____

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? Yes

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.

Reclamation will be in accordance with EMCC 1000 series rules and in coordination with the Surface Owner land use plans. In July and August 2024, Maggie completed final reclamation of the wellhead and access road per the attached reclamation summary. The former pit excavation is proposed to be backfilled with clean fill material and topsoil brought in per landowner direction after delineation is complete. A 915.b. Reclamation Plan will be prepared and submitted at a later date.

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. 05/31/2025

Proposed date of completion of Reclamation. 12/31/2025

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. 04/08/2019

Actual Spill or Release date, or date of discovery. 07/11/2019

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/13/2019

Proposed site investigation commencement. 06/13/2019

Proposed completion of site investigation. 03/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/03/2020

Proposed date of completion of Remediation. 05/31/2025

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 serves to satisfy quarterly reporting obligations and to provide evidence that there is no reasonable pathway to groundwater from the permitted unlined pit. A sensitive area determination was completed in July 1997 in association with the unlined pit and findings were submitted to the ECMC via Form 4 Document 1742738. The evaluation concluded the pit was not within an area classified for domestic use or a local wellhead protection area, was not located within 1/8 mile of a domestic water well or within 1/4 mile of a public water supply using the same aquifer, and that the base of the pit is more than 250 feet above the average high water table including irrigation influence. Based on the subsequent ECMC issuance of Facility ID 111980 to the pit, ECMC concurred no reasonable pathway to groundwater existed beneath the pit and authorized the discharge of produced water into the unlined percolation/evaporation pit.

Furthermore, the closest DWR well (Permit Number 36326), located approximately 0.26 miles south of the investigation area, indicates a static groundwater level of 200 feet bgs. DWR well Permit Number 35744, located approximately 0.79 miles southwest of the investigation area, was previously referenced by ECMC staff as potential evidence of groundwater as shallow as 19 feet bgs. Further review of the attached DWR statement for water well filing record associated with Permit Number 35744 indicates a static water level of 61 feet bgs. Drilling records from both wells indicate a confining layer of shale starting between 50 and 67 feet bgs with a minimum thickness of 20 feet. Such lithology would be sufficiently impervious to protect groundwater resources in the area. Should any water perched above the shale layer be identified directly beneath the pit, there is no evidence this water could not be attributed to the ECMC-authorized disposal of produced water into the permitted, unlined pit rather than native groundwater. Based on the information provided regarding depth to groundwater, the shale confining layer, and the original ECMC approval to discharge produced water into the unlined pit, Magpie requests that results of pit investigation be compared to RSSLs.

Once the pit is backfilled and reclaimed, the landowner plans to plant and farm Millet which has a very shallow root zone of only 2 to 6 inches bgs per the attached University of Nebraska document on the species.

In July and August 2024, Magpie completed final reclamation of the wellhead and access road per the attached reclamation summary.

Regarding COA #2 on previously approved SF27 document number 403904950, Figure 4 was a historical map dated 11/11/22 in the series of maps provided to show chronological history of site investigation. The proposed soil borings on that figure were completed on 1/12/23 and have since been revisited, as evident in the attached site investigation report.

No work has been completed since previously approved SF27 document number 403904950 was submitted. The same attachments that were submitted with previously approved SF27 document number 403904950 are attached to this form for convenient review.

Please note, Confluence Compliance Companies will be handling this remediation project on behalf of Magpie moving forward. Point of contact: Sage Maher (404) 641-8912 / sage.maher@confluence-cc.com

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

Signed: Amber Barnett

Title: Compliance Specialist

Submit Date: 12/31/2024

Email: abarnett@ardorenvironmental.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: _____

Date: _____

Remediation Project Number: 13484

COA Type

Description

0 COA	
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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
404016382	FORM 27 DENIED
404018040	OTHER
404018044	SITE INVESTIGATION REPORT
404018046	RECLAMATION PLAN
404043870	OTHER
404078484	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	ECMC has denied this Form 27 for data validation. Operator will provide laboratory analytical report(s) as a stand-alone attachment(s) on the replacement Supplemental Form 27. The Laboratory Report PDF(s) must be secured by the issuing laboratory; If there is a difference between the creation date and secured date of the PDF, Operator shall provide an explanation in the case narrative of the associated report. ECMC will not review combined PDFs with lab reports.	02/03/2025
Environmental	ECMC does not approve of Operator's request to use Table 915-1 Residential Soil Screening Levels.	01/13/2025

Total: 2 comment(s)

