

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403660489
Receive Date:
02/28/2024
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 Phone: <u>(970) 669-6308</u> Mobile: <u>()</u>
Address: <u>2707 SOUTH COUNTY RD 11</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>	

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 Well - Permit #36326 - 1300' SSW

SITE INVESTIGATION PLAN

TYPE OF WASTE:

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

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	180' x 200'	Inorganics Only - Lab

INITIAL ACTION SUMMARY

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

On 8/30/23 Jody Kost of Magpie met with the landowner to discuss next steps of surface excavation and sampling to address inorganic soils that still remain. On 9/13/23 Sunstate Equipment delivered an excavator to the location. On 9/14/23 a track was thrown from the excavator and Sunstate sent out maintenance to repair. On 9/15/23 Washington County Landfill was closed half day, work ceased at noon. On 9/18/23 Jody Kost had a phone conversation with Krystal Heibel of ECOM to discuss remediation report and status of ongoing remedial activities. On 9/19/23 a front loader was delivered to location to assist with loading trucks to haul the removed top 3' of inorganic impacted soil from the area of the former pit to Washington County Landfill. Manifests can be found in document number 403625692 that was submitted with approved SF27 document number 403612100. Approximately 2,800 cubic yards of material was removed. From 10/4/23 to 10/6/23, further horizontal and vertical delineation took place using a hand auger. Results show further horizontal and vertical delineation of Table 915-1 Soil Suitability for Reclamation impacts is needed in certain areas. See below proposed sampling plan and Figure 5 in the attached site investigation report for proposed additional delineation. On 11/9/23, the site was visited to sample the pit bottom (Pit-SS@4'), a landowner manure stockpile (Manure) and a dirt stockpile (Stockpile). The samples were submitted to Origins for full Table 915-1 analysis, however the Manure sample did not have Table 915-1 Metals run. Results confirmed no organics impacts in any of the 3 samples. See attached site investigation report for all figures, tables, photo log, boring logs, manifests, and laboratory analytical reports.

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):

Using a track mounted Geoprobe 7822DT direct push rig, Magpie proposes to go back to SB-01 through SB-04, SB-07 through SB-10, SB-12 through SB-14, SB-16, and SB-17 to collect confirmation soil samples from 15' and 20' bgs for additional vertical delineation. For additional horizontal delineation, Magpie proposes 6 new soil boring locations as presented on Figure 5 and collecting confirmation soil samples from 4' and 7' bgs. All soil samples will be submitted to Origins Laboratory for Boron, EC, pH, and SAR analysis only. Where previous soil borings are re-visited for deeper confirmation samples, the previously logged column will not be logged. However, the boring columns below what was previously logged will be logged and submitted to ECOM. The new horizontal delineation soil borings will be fully logged and submitted to ECOM.

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

Number of soil samples collected 128
Number of soil samples exceeding 915-1 99
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 28000

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 215
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 11

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?

On 10/11/22, 3 background samples were collected from 0-3' and submitted to Origins for analysis of EC, pH, and SAR. On 1/12/23, an additional 13 background samples were collected from 3', 6', and 10' bgs and submitted to Origins for analysis of ECMC Table 915-1 Soil Suitability for Reclamation 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 soil 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.

Well is plugged and abandoned, equipment has been removed, pit has been excavated to approximately 3' bgs.

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.

On 9/19/23 a front loader was delivered to location to assist with loading trucks to haul the removed top 3' of inorganic impacted soil from the area of the former pit to Washington County Landfill. Approximately 2,800 cubic yards of material was removed.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Yes Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

If Yes: Estimated Volume (Cubic Yards) _____ 1848
Name of Licensed Disposal Facility or ECMC Facility ID # _____
_____ 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.

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.

Reclamation will be in accordance with COGCC 1000 series rules and in coordination with the Surface Owner land use plans.

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. 05/31/2024

Proposed date of completion of Reclamation. 05/31/2026

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. 05/31/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/03/2020

Proposed date of completion of Remediation. 05/31/2024

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:

OPERATOR COMMENT

Magpie respectfully requests staff approve Magpie's previous application of Residential Soil Screening Level limits at the Location and allow them to test for outstanding constituents only. Water well receipt number 9044653, permit number 36326, is approximately 1,300' away. Colorado Division of Water Resources documents show that static groundwater level is 200' below ground surface. COA #3 on approved SF27 Doc. No. 403568061 alleges, "It appears a soil confirmation sample was not collected beneath the tank located to the northwest of the eastern pit. Operator shall collect and analyze a sample for Full Table 915-1 analytes at this location and submit it within the next Form 27 submittal." This statement is erroneous. On 1/12/23 Magpie collected a soil sample from underneath the former AST location (AST-01@6'), as well as from below the former separator location (SEP-01@6'). Both were analyzed for the full suite of Table 915-1 concentrations, otherwise satisfying the COA. All results showed the soil to be compliant with Table 915-1 limits. The analysis was completed at the direction of ECMC staff, Laurel Anderson, who was physically present overseeing the work. The samples were discussed in approved SF27 Doc. No. 403400235. The samples were also discussed in site investigation report Doc. No. 403400392. Thus, ECMC had prior knowledge and approval of the samples and the results of testing at the Location. ECMC has since acknowledged in writing on 1/9/24 they overlooked the samples. Further, initial pit assessment soil samples SS-04@0-0.5', SS-05@0-0.5', SS-06@0-0.5', and SS-07@0-0.5', collected from throughout the pit bottom on 6/13/19, also confirmed there are no organic impacts in or underneath the pit. Laboratory analytical results of those samples show the Location is fully compliant with current Table 915-1 limits. Those soil sample locations and lab analytical reports that show the pit in compliance were submitted as a site investigation report, Doc. No. 402104708, along with an approved SF27 (Doc. No. 402104379). We have also attached them hereto. Magpie's compliance was subsequently approved three times: By staff member Rob Young, COA #1 on approved SF27 Doc. No. 402104379 in 2019; SF27 Doc No. 403180663 approved by Greg Deranleau on 10/18/22; which was after the new rules went into effect on 1/15/21; and Laurel Anderson in 2023 as discussed above. The ECMC is charged with regulating oil and gas operations in a reasonable manner to protect and minimize adverse impacts. Colo. Rev. Stat. Ann. § 34-60-106. The concept of "reasonable and necessary" is a limiting principle. In other words, courts have suggested that the term "reasonable" goes beyond what is technically "feasible" to include a notion of practicality. Magpie feels it is unwarranted to analyze soil samples for full Table 915-1 when it has already done so on numerous occasions with oversight and approval of Commission staff. Magpie relied on the consent of Commission staff, along with the supporting documentation, to prove compliance. ECMC Rule 915.f. provides that if Remediation at a site subject to an open Form 19 or Form 27 is not completed by January 15, 2022, then the Operator will comply with the current version of Table 915-1. The rule does not specify a timeframe for compliance, rather it notes that Operators are required to comply with the current version of Table 915-1 and show that locations meet the standards. Magpie agrees with this rule and requests they be required to test for any constituents in Table 915-1 not previously assessed. However, they do not believe they should be required to re-test for those constituents that have already been analyzed and shown to meet the standards in Table 915-1. Magpie therefore respectfully requests ECMC staff honor their previous approvals and allow Magpie to proceed with testing for inorganic constituents still exceeding Table 915-1 standards not previously analyzed.

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

Signed: David Castro

Title: Senior Project Scientist

Submit Date: 02/28/2024

Email: dcastro@eagle-enviro.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: 05/29/2024

Remediation Project Number: 13484

COA Type

Description

	Per CA on Doc #s 696105548, 403227439 & 403400235: "Operator shall comply with 900 Series Rules. Determine vertical and horizontal extent of spill to establish points of compliance and conduct soil analysis with discrete sampling and photo documentation to provide in future Supplemental Form 27s and FIRR."
	Operator shall provide justification for use of Residential SSL including but not limited to depth to groundwater and the local lithology.
	As stated in Doc# 403568061, ECMC denies the reduced analyte list of Boron, EC, pH, and SAR analysis only. As stated in Doc #403227439, Operator is required to comply with the current Rule 911 for facility closure and with Table 915-1 for concentration standards. Operator shall conduct additional investigation for tank battery and pit closure and collect confirmation soil samples as described in the Rule 915.e.(2) Guidance Document. 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)). It appears that samples were collected and analyzed for only Table 915-1 Soil Suitability for Reclamation analytes. Operator shall collect and analyze samples for full Table 915-1 going forward. Going forward, Operator shall analyze all soil boring and soil sample locations (including historic soil sample locations) for all Table 915-1 analytes. Please note that analytes already collected and sampled for (such as BTEX) do not need to be re-analyzed, if it's below Table 915-1 standards.

3 COAs

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.

<u>Att Doc Num</u>	<u>Name</u>
403660489	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403698019	SITE INVESTIGATION REPORT
403807196	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	"The analysis was completed at the direction of ECMC staff, Laurel Anderson, who was physically present overseeing the work." This statement is erroneous as ECMC Staff does not direct Operators and does not oversee work.	05/29/2024
Environmental	Pit Facility ID 111980, Location ID 312143; Active Pit Facility ID 111979; Closed 2014; Rem Project #7677 (Circular, skim pit) Pit Facility ID 111981; Active	05/29/2024

Total: 2 comment(s)