

State of Colorado  
Energy & Carbon Management Commission

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Report taken by:  
Candice (Nikki) Graber

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>MAGPIE OPERATING INC</u>	Operator No: <u>52530</u>	<b>Phone Numbers</b>
Address: <u>2707 SOUTH COUNTY RD 11</u>		Phone: <u>(970) 669-6038</u>
City: <u>LOVELAND</u> State: <u>CO</u> Zip: <u>80537</u>		Mobile: <u>( )</u>
Contact Person: <u>Ross Warner</u>	Email: <u>ross.magpieoil@gmail.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 17868 Initial Form 27 Document #: 402669597

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>451015</u>	API #: _____	County Name: <u>LARIMER</u>
Facility Name: <u>Hein &amp; Hart Tank Battery Location</u>	Latitude: <u>40.371894</u>	Longitude: <u>-105.057320</u>	
	** correct Lat/Long if needed: Latitude: <u>40.371456</u>	Longitude: <u>-105.057261</u>	
QtrQtr: <u>SWNW</u> Sec: <u>30</u> Twp: <u>5N</u> Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>480866</u>	API #: _____	County Name: <u>LARIMER</u>
Facility Name: <u>Former separator</u>	Latitude: <u>40.371762</u>	Longitude: <u>-105.057320</u>	
	** correct Lat/Long if needed: Latitude: _____	Longitude: _____	
QtrQtr: <u>SWNW</u> Sec: <u>30</u> Twp: <u>5N</u> Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			

## SITE CONDITIONS

General soil type - USCS Classifications CL

Most Sensitive Adjacent Land Use crop land,  
residential

Is domestic water well within 1/4 mile? Yes

Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? Yes

### **Other Potential Receptors within 1/4 mile**

Residence 145' NW, county road 200' S, surface water 770' NW, wetland 1,300' NW

# 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
No	GROUNDWATER	0	not encountered
Yes	SOILS	30'x25'	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.

Further excavation took place after the 4/11/23 confirmation samples confirmed impacts remained. On 8/10/23, 2 new sidewall confirmation samples (EX-SS-07@4' and EX-SS-08@3') and 3 new floor samples (EX-FS-03@5', EX-FS-03@8', and EX-FS-02@10') were collected after further excavation towards the WNW, and deeper in the floor. See attached summary report with all figures, tables, photo log, and laboratory analytical report.

## 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 ):

Recent soil sample results confirm impacted material remains. Further impacted material removal and confirmation soil sampling is needed in the NW corner of the excavation. Magpie would like to request approval for all future confirmation soil samples to be analyzed at Origins Laboratory in Denver, Colorado for Table 915-1 Benzene, TPH-DRO/GRO/RRO, 1,2,4 Trimethylbenzene, 1,3,5 Trimethylbenzene, 1-Methylnaphthalene, 2-Methylnaphthalene, Benzo(a)anthracene, Naphthalene, Arsenic, Barium, and Selenium only.

### Proposed Groundwater Sampling

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

If groundwater is encountered during the site investigation, a grab groundwater sample will be collected and analyzed for all Table 915-1 Organic Compounds in Groundwater at Origins Laboratory. Groundwater has not been encountered.

### 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 5

Number of soil samples exceeding 915-1 4

### NA / ND

-- Highest concentration of TPH (mg/kg) 1663

NA Highest concentration of SAR \_\_\_\_\_

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

BTEX > 915-1 No

Approximate areal extent (square feet) 500

Vertical Extent > 915-1 (in feet) 9

**Groundwater**

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) \_\_\_\_\_

Was extent of groundwater contaminated delineated? No

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?

Previously reported.

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

Volume of solid waste (cubic yards) 155

Volume of liquid waste (barrels) 0

Is further site investigation required?

Recent soil sample results confirm impacted material remains. Further impacted material removal and confirmation soil sampling is needed in the NW corner of the excavation. Magpie would like to request approval for all future confirmation soil samples to be analyzed at Origins Laboratory in Denver, Colorado for Table 915-1 Benzene, TPH-DRO/GRO/RRO, 1,2,4 Trimethylbenzene, 1,3,5 Trimethylbenzene, 1-Methylnaphthalene, 2-Methylnaphthalene, Benzo(a)anthracene, Naphthalene, Arsenic, Barium, and Selenium only.

**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.

Facility has been decommissioned. Excavation and offsite disposal of impacted soil.

**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.

Excavation and assessment is ongoing.

**Soil Remediation Summary**

In Situ

Ex Situ

       Bioremediation ( or enhanced bioremediation )

       Yes Excavate and offsite disposal

       Chemical oxidation

       If Yes: Estimated Volume (Cubic Yards) 155

       Air sparge / Soil vapor extraction

       Name of Licensed Disposal Facility or COGCC 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.

# 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.

Maggie has complied with General Liability Insurance requirements per Rule 705 and is fully bonded per Rule 702 to fully address the anticipated costs of remediation.

Operator anticipates the remaining cost for this project to be: \$ 5000 \_\_\_\_\_

## 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:

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 155

E&P waste (solid) description impacted soil \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: Pawnee Waste \_\_\_\_\_

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? 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 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 will be completed in accordance with the 1000 Series or per Surface Owner direction.

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. 11/30/2023

Proposed date of completion of Reclamation. 11/30/2025

## 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. 09/28/2021

Actual Spill or Release date, or date of discovery. 09/28/2021

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/16/2021

Proposed site investigation commencement. 11/16/2021

Proposed completion of site investigation. 10/31/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/16/2021

Proposed date of completion of Remediation. 10/31/2023

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**

Magpie would like to request approval for all future confirmation soil samples to be analyzed at Origins Laboratory in Denver, Colorado for Table 915-1 Benzene, TPH-DRO/GRO/RRO, 1,2,4 Trimethylbenzene, 1,3,5 Trimethylbenzene, 1-Methylnaphthalene, 2-Methylnaphthalene, Benzo(a)anthracene, Naphthalene, Arsenic, Barium, and Selenium only.

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: 09/01/2023

Email: dcastro@eagle-enviro.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: Candice (Nikki) Graber

Date: 10/10/2023

Remediation Project Number: 17868

**COA Type****Description**

	In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule. Note: the last submitted Form 27 for this project 5/1/2023, this form was submitted 33 days late.
	Operator shall provide all waste manifests as required by Rule 905.b.(3) for oily waste (soil and groundwater) hauled off site for disposal.
	Sample Summary indicates that BTEX is not greater than Table 915-1 which conflicts with provided analytical.  Operator shall correct the Form and conduct a thorough QAQC on the next Supplemental Form 27.
	This Form 27 Supplemental is being approved as submitted. However, the next Form Supplemental must be populated with the Adequacy of Operator's General Liability Insurance and Financial Assurance data field under the Remediation Progress Update tab as required by Rules 703.b. and 705.b. Note: Based on the scope of work proposed ECMC does not believe Operator anticipated the remaining cost for this project is adequate.
	If analytes are detected in the characterization sample, even if they are at a concentration below the Table 915-1 SSLs, confirmation samples should still include those detected analytes. For future reference, the Rule 915.e.(2)C. states ".....If an Operator believes it is appropriate to modify the list of contaminants of concern, the Operator will submit, and obtain the Director's approval of, a modified list of contaminants of concern through a Form 19 or Form 27, as applicable. The list will be based on site specific E&P Waste profile and process knowledge. Operators will analyze samples for additional contaminants of concern upon the Director's request."  Based on provided analytical results the detected contaminant of concerns all Table 915-1 organics have been detected at this location as well as exceedances of lead. Therefore Operator will analyze soil samples for full Table 915-1 organics, Arsenic, Barium, Selenium, and Lead.
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**

403516528	FORM 27-SUPPLEMENTAL-SUBMITTED
403519104	SITE INVESTIGATION REPORT

Total Attach: 2 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)