

State of Colorado  
Oil and Gas Conservation Commission

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Report taken by:  
ROB YOUNG

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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

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) 669-6308</u>
City: <u>LOVELAND</u> State: <u>CO</u> Zip: <u>80537</u>		Mobile: <u>(720) 233-0875</u>
Contact Person: <u>Ryan Warner</u>	Email: <u>magpieoil@yahoo.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

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

PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water                   |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure                  | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation                 | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project                                  |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste                      | <input type="checkbox"/> Rule 906.c.: Director request   |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____   |

SITE INFORMATION

Y Multiple Facilities ( in accordance with Rule 909.c. )

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:

- |  |  |  |
|--|--|--|
| <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	SOILS	NA	Laboratory Analytical

## INITIAL ACTION SUMMARY

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

Prior to decommissioning the entire facility, site assessment activities must be completed. Soil samples will be collected from beneath a produced water vessel AST and within a produced water pit onsite (Facility ID 111980). Produced water vessel sampling will be completed per COGCC Rule 905b. Additionally, during a field inspection (Doc. # 688000311), oil stained soil was identified adjacent to the separator onsite, and will need to be removed/soil sampled to confirm below COGCC table 910-1.

## 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 ):

6 soil samples were collected and analyzed for BTEX, TPH-GRO, and TPH-DRO following EPA Methods 8260 and 8015. 9 soil samples were collected and analyzed for EC, SAR, and pH following USDA Method 3, USDA Method 20B, and EPA Method 9045D, respectively. See attachments for sample locations.

### 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 10

Number of soil samples exceeding 910-1 9

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

Approximate areal extent (square feet) 32000

### NA / ND

--            Highest concentration of TPH (mg/kg) 82.4

--            Highest concentration of SAR 58.59

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 0

### 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 910-1           

           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 910-1

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?

4 soil samples (SS-08 through SS-11) were collected outside of the berm footprint to determine if soil at final grade would comply with Table 910-1

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? No \_\_\_\_\_

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

There was no E&P waste generated. Previously stained soil was sampled and submitted for laboratory analysis and the sample was below 910-1.

## 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 June 13, 2019, one location was investigated for potential impacts subsequent to a produced water vessel to be removed - in accordance with COGCC Rule 905 b. The soil sample was analyzed for BTEX, TPH-GRO, and TPH-DRO following EPA Methods 8260 and 8015. In addition, the soil sample was analyzed for EC, SAR, and pH following USDA Method 3, USDA Method 20B, and EPA Method 9045D, respectively. The sample exceeded 910-1 for SAR only.

Additionally, four locations were investigated for potential impacts subsequent to a produced water pit (Facility ID 111980) onsite prior to backfill. The soil samples were analyzed for BTEX, TPH-GRO, and TPH-DRO following EPA Methods 8260 and 8015. In addition, the soil samples were analyzed for EC, SAR, and pH following USDA Method 3, USDA Method 20B, and EPA Method 9045D, respectively. The samples were above 910-1 for pH and/or SAR only. 4 additional background samples were collected outside the footprint of the berm and analyzed for EC, SAR, and pH following USDA Method 3, USDA Method 20B, and EPA Method 9045D, respectively. These samples were above 910-1 for EC, SAR, and/or pH.

One confirmation soil sample was collected from oil stained soil adjacent to the separator, identified during inspections activities (COGCC Doc. # 688000311). The soil sample was analyzed for BTEX, TPH-GRO, and TPH-DRO following EPA Methods 8260c and 8015. The sample did not exceed 910-1.

Soils with elevated inorganic readings will be taken into account during reclamation processes. Confirmation samples will be collected as deemed necessary.

## Soil Remediation Summary

### In Situ

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

### Ex Situ

- \_\_\_\_\_ Excavate and offsite disposal
- \_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_
- \_\_\_\_\_ Name of Licensed Disposal Facility or COGCC 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.

# REMEDIATION PROGRESS UPDATE

## PERIODIC REPORTING

**Frequency:**  Quarterly  Semi-Annually  Annually  Other \_\_\_\_\_  
**Report Type:**  Groundwater Monitoring  Land Treatment Progress Report  O&M Report  
 Other Site Assessment Report and/or Production Vessel Closure \_\_\_\_\_

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

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

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

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

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

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

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

Do all soils meet Table 910-1 standards? No

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? No

Does Groundwater meet Table 910-1 standards? \_\_\_\_\_

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

## 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.

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 approve the seed mix? \_\_\_\_\_

If NO, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, if known. \_\_\_\_\_

### SITE INVESTIGATION DATES

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

Date of commencement of Site Investigation. 06/13/2019

Date of completion of Site Investigation. 06/13/2019

### REMEDIAL ACTION DATES

Date of commencement of Remediation. \_\_\_\_\_

Date of completion of Remediation. \_\_\_\_\_

### SITE RECLAMATION DATES

Date of commencement of Reclamation. \_\_\_\_\_

Date of completion of Reclamation. \_\_\_\_\_

### OPERATOR COMMENT

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

Signed: Ryan Warner

Title: Vice President

Submit Date: 07/11/2019

Email: magpieoil@yahoo.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: ROB YOUNG

Date: 07/23/2019

Remediation Project Number: 13484

### COA Type

### Description

	Collect a minimum of four confirmation soil samples for pH, EC and SAR laboratory analysis after the pit has been backfilled to final grade.
	Ensure soil impacted above Table 910-1 allowable concentrations of inorganics in soil are covered with a minimum of three feet of clean cover fill.

### 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

402104379	FORM 27-SUPPLEMENTAL-SUBMITTED
402104708	SITE INVESTIGATION REPORT

Total Attach: 2 Files

### General Comments

#### User Group

#### Comment

#### Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)