

**State of Colorado
Energy & Carbon Management Commission**

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Document Number:

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Receive Date:

Report taken by:

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: MYSTIQUE RESOURCES COMPANY	Operator No: 10348	Phone Numbers
Address: 27242 E EUCLID DR		
City: AURORA	State: CO Zip: 80016	
Contact Person: Dennis Staal	Email: dstaal@msn.com	
		Phone: (308) 430.0337
		Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION**PROJECT INFORMATION**

Remediation Project #: 39671 Initial Form 27 Document #: 404125645

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: WELL	Facility ID: _____	API #: 017-07666	County Name: CHEYENNE
Facility Name: SHIRLEY ROTHER 1		Latitude: 38.785900	Longitude: -102.122480
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: SESW	Sec: 33	Twp: 14S	Range: 42W Meridian: 6 Sensitive Area? Yes

Facility Type: LOCATION		Facility ID: 321974	API #:		County Name: CHEYENNE	
Facility Name: SHIRLEY ROTHER-614S42W 33SESW			Latitude: 38.785900		Longitude: -102.122480	
			** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SESW	Sec: 33	Twp: 14S	Range: 42W	Meridian: 6	Sensitive Area? Yes	

Facility Type: LOCATION		Facility ID: 470674	API #:		County Name: CHEYENNE	
Facility Name: SHIRLEY ROTHER-614S42W 33SESW			Latitude: 38.784145		Longitude: -102.122090	
			** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SESW	Sec: 33	Twp: 14S	Range: 42W	Meridian: 6	Sensitive Area? Yes	

Facility Type: OFF-LOCATION FLOWLINE		Facility ID: 470736	API #:		County Name: CHEYENNE	
Facility Name: SHIRLEY ROTHER-614S42W 33SESW			Latitude: 38.784145		Longitude: -102.122090	
			** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SESW	Sec: 33	Twp: 14S	Range: 42W	Meridian: 6	Sensitive Area? Yes	

SITE CONDITIONS

General soil type - USCS Classifications SW
 Most Sensitive Adjacent Land Use Agriculture:
 center pivot

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

There are two water wells within 1/4 mi. WDID 4950051/Permit 15490 is 934' west, and Receipt 3685133(no permit number) 851' southwest.

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
UNDETERMINED	GROUNDWATER	NA	Lab analytical (if encountered)
UNDETERMINED	SOILS	NA	Lab analytical (if necessary)
UNDETERMINED	SURFACE WATER	NA	Lab analytical (if necessary)

INITIAL ACTION SUMMARY

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

The proposed plugging and abandonment of the Shirley Rother 1 (API #05-017-07666) is not part of an emergency action. This is a routine, planned P&A operation. The Shirley Rother 1 (API #05-017-07666) well will be plugged and abandoned per the Form 6 (doc # 403060191). There are no known soil, groundwater, or surface water impacts that are known to be associated with this well or location, the associated off-location flowline that will be abandoned in place, or the associated facility that will be decommissioned. An initial visual inspection will be performed to assess any E&P waste impacts.

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):

Collection of grab soil samples and field screenings will be completed at the former wellhead, former flowline, and former tank battery to assess soil conditions beneath the site. Soil samples will be collected and submitted for laboratory analysis of the full Table 915-1 analytical suite. Soil samples will be collected for laboratory analysis from the base of the former wellhead excavation near the cut and cap, direction changes in the flowline, beneath the former ASTs, and beneath the former separator. Field screening of soils to assess soil conditions will be completed at the sidewalls of the former wellhead excavation, every ~250' of flowline, beneath the former ASTs, and beneath the former meter house. Proposed soil samples and field screening locations are presented in Figures 1 through 3 attached.

Proposed Groundwater Sampling

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

Groundwater contamination is not known to exist, nor is it anticipated to be encountered during plugging, flowline abandonment, or facility decommissioning. If groundwater is encountered, one grab sample will be collected from each area of groundwater accumulation and submitted for laboratory analysis of the full Table 915-1 analytical suite. Results will be compared to Table 915-1.

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):

Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if sampling and laboratory confirmation sampling is required. The ECMC Flowline Closure and Wellhead Closure Checklists will be utilized and filled out during the abandonment process. A photolog will be submitted with the Subsequent Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected _____ 0
Number of soil samples exceeding 915-1 _____
Was the areal and vertical extent of soil contamination delineated? _____
Approximate areal extent (square feet) _____

NA / ND

_____ Highest concentration of TPH (mg/kg) _____
_____ Highest concentration of SAR _____
_____ BTEX > 915-1 _____
_____ Vertical Extent > 915-1 (in feet) _____

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?

☐ 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.

Any impacted soils encountered during abandonment activities found to have concentrations greater than Table 915-1 limits in this investigation will be excavated and hauled to an appropriate waste disposal facility.

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.

Following source removal, new soil sample(s) will be collected and submitted for laboratory analysis. Results will be compared to Table 915-1 to confirm successful remediation.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

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

If Yes: Estimated Volume (Cubic Yards) _____

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.

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.

Mystique Resources Company is adequately bonded per Rule 702 and has complied with the insurance requirements of Rule 705.

Operator anticipates the remaining cost for this project to be: \$ 9000

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? ☐

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

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels

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?

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 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.

The Shirley Rother 1 well was plugged and abandoned per the details and procedures described in the Form 6 (doc #403060191). The Shirley Rother 1 well is located on an inactive well pad with no other producing wells. Upon successfully completing the plugging and abandonment of this well, the well cellar will be reclaimed and backfilled with clean fill as described in the abandonment procedures. Landowner has agreed to leaving all flowlines abandoned in place (Reference Doc# 403240248). Landowner has also requested recontouring and seeding by landowner so that the surface may be utilized for agricultural activities as soon as possible.

Is the described reclamation complete? _____

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. _____

Proposed date of completion of Reclamation. _____

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. 01/10/2023

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/30/2025

Proposed site investigation commencement. 06/30/2025

Proposed completion of site investigation. 07/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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

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

Signed: Dennis Staal

Title: President

Submit Date:

Email: dstaal@msn.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: 39671

COA Type**Description**

0 COA	

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**

404242301	SOIL SAMPLE LOCATION MAP
404242302	SOIL SAMPLE LOCATION MAP
404242304	SOIL SAMPLE LOCATION MAP

Total Attach: 3 Files

General Comments**User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)