FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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Document Number: 403573005
Receive Date: 12/20/2023
Report taken by: Jason Kosola

Site Investigation and Remediation Workplan (Initial 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 INFORMATON

Name of Operator: MARALEX RESOURCES INC Operator No: 53255
Address: P O BOX 338
City: IGNACIO State: CO Zip: 81137
Contact Person: Mollie O'Hare

Phone Numbers
Phone: (970) 5634000
Mobile: ( )
Email: mollieo@maralexinc.com

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 33421 Initial Form 27 Document #: 403573005

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.
- [X] 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: SPILL OR RELEASE Facility ID: 485052 API #: County Name: LA PLATA
Facility Name: Tanks Latitude: 37.136735 Longitude: -107.571685
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NENE Sec: 2 Twp: 33n Range: 7w Meridian: N Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 485053 API #: County Name: LA PLATA
Facility Name: Drilling Site (mouse hole/rat hole) Latitude: 37.137217 Longitude: -107.571556
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NENE Sec: 2 Twp: 33N Range: 7W Meridian: N Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications GM

Most Sensitive Adjacent Land Use Crop Land

Is domestic water well within 1/4 mile? No

Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [ ] Produced Water
  - [ ] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [X] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA) _____
- [X] **Non-E&P Waste**
  - Fresh water/oily soil

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
No	SOILS	NONE	Samples
No	SURFACE WATER	NONE	Samples

INITIAL ACTION SUMMARY

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

Bermed the tanks and stopped the leak.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

2 samples at 8-12" have been taken as indicated in the previously approved Soil Sample Map. When those sample results have been received, they will be communicated in a Form 27S.

Less than a bbl of fresh water (as proven by water analysis) was spilled from tank. ECMC was concerned that the water mixed with a coagulant. If the water actually did mix with the coagulant, scientifically it would not have penetrated the surface. Therefore, once the soil on the pad (including what was under the tanks) has been scraped, the remaining soil will not have been negatively impacted.

Proposed Groundwater Sampling

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

Proposed Surface Water Sampling

[X] Will surface water samples be collected as part of this investigation? (Number, analyses, and locations of samples):

1 water sample was taken below the site.

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 2 _____ Highest concentration of TPH (mg/kg) _____

Number of soil samples exceeeding 915-1: 0
Highest concentration of SAR:
Was the areal and vertical extent of soil contamination delineated?:
BTEX > 915-1:
Approximate areal extent (square feet): 0
Vertical Extent > 915-1 (in feet): 1

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

1 Number of surface water samples collected

0 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?

1 background sample will be taken if current samples exceed the Table 915-1. Results will be communicated when samples results are received from lab.

☐ 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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Tanks have been removed from location. Mouse Hole and Rat Hole were impacted with fresh water when the pump that was used to pump the water to drill failed. Once the well has been completed, Maralex intends to scrape contaminated soil off the top of the location and appropriately dispose of that soil. If stained soil remains, that soil will be removed as well.

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.

Discrete samples were taken from location as described in sample plan at a depth of 8". Water Sample was taken from pond below the location.

Once the well has been completed, Maralex intends to scrape contaminated soil off the top of the location and appropriately dispose of that soil. If stained soil remains, that soil will be removed as well.

The three initial sample results will be submitted when they are received from the lab. These samples are indicative of the areas that were impacted by the spill from the drilling operation. If they come back without exceedances, this will indicate that Maralex has effectively remediated the spill and did not affect waters of the state.

The site is still an active well site. The drilling activities have concluded and the new well is in the process of being completed. The well site will soon be turned back to operations and be maintained and operated as an active well site.

Soil Remediation Summary

☐ **In Situ**

Bioremediation (or enhanced bioremediation)

☐ **Ex Situ**

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 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

Approved Reporting Schedule:

[X] 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.

Operator has adequate financial assurance to address the anticipated costs of remediation.

Operator anticipates the remaining cost for this project to be: $ 3000

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

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:

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.

no reclamation needed as this is an active location.

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. 08/24/2023

Actual Spill or Release date, or date of discovery. 08/18/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/25/2023

Proposed site investigation commencement. 08/25/2023

Proposed completion of site investigation. 10/25/2023

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

This remediation plan will serve to close out the two From 19 spills on the Mollie Corynne 3C. Form 19 Doc# 403532570 (Rat Hole & Mouse Hole) and 403509665 (tanks). Request for closure Form 19s will be filed when this Form 27 is approved.

Both spill reports cannot be added to this form under the Project, Purpose and Site Information because they show as duplicate because both spills were on the same Facility/Location.

Once the well has been completed, Maralex intends to scrape contaminated soil off the top of the location and appropriately dispose of that soil. If stained soil remains, that soil will be removed as well.

Less than a bbl of fresh water (as proven by water analysis) was spilled from tank and was proven to not impact waters of the state. ECMC was concerned that the water mixed with a coagulant. If the water actually did mix with the coagulant, scientifically it would not have penetrated the surface. Therefore, once the soil on the pad (including what was under the tanks) has been scraped, the remaining soil will not have been negatively impacted.

The three initial sample results will be submitted when they are received from the lab. These samples are indicative of the areas that were impacted by the spill from the drilling operation. If they come back without exceedances, this will indicate that Maralex has effectively remediated the spill and did not affect waters of the state.

The site is still an active well site. The drilling activities have concluded and the new well is in the process of being completed. The well site will soon be turned back to operations and be maintained and operated as an active well site.

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

Signed: Mollie O'Hare Title: EA

Submit Date: 12/20/2023 Email: mollieo@maralexinc.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: Jason Kosola Date: 01/02/2024

Remediation Project Number: 33421

COA Type	Description
	Operator shall submit Form 19 Supplemental requesting closure of associated spills within 10 days of approval of this Form 27.
	Sampling plan is inadequate to delineate the vertical and horizontal impacts from observed impacts from spills. This was previously communicated to operator in an email dated 11/1/2023. Oberator shall obtain an adequate number of confirmation soil samples to demonstrate compliance with Table 915-1 Operator shall 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)). Soil samples should be obtained from surface on impacted area to document compliance with Table 915-1.
2 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
403573005	FORM 27-INITIAL-SUBMITTED
403573022	SOIL SAMPLE LOCATION MAP

Total Attach: 2 Files

General Comments

User Group	Comment	Comment Date
Environmental	ECMC added spill numbers 485052 and 485053 to this form.	01/02/2024
Environmental	Returned to DRAFT. Form does not contain enough information. Detailed email sent to operator on 11/1/2023.	11/01/2023

Total: 2 comment(s)