

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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Document Number:

403873092

Receive Date:

08/05/2024

Report taken by:

Chris Sanchez

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 ECOM 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: FOUNDATION ENERGY MANAGEMENT LLC	Operator No: 10112	Phone Numbers
Address: 5057 KELLER SPRINGS RD STE 650		Phone: (972) 707-2523
City: ADDISON	State: TX	Zip: 75001
Contact Person: Afton Iiams		Mobile: ()
Email: aiiams@foundationenergy.com		

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36674 Initial Form 27 Document #: 403873092

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: Historic Release

SITE INFORMATION

No Multiple Facilities

Facility Type: WELL	Facility ID:	API #: 017-06403	County Name: CHEYENNE
Facility Name: LAS ANIMAS MINERALS 1-10		Latitude: 38.928640	Longitude: -102.989910
		** correct Lat/Long if needed: Latitude:	Longitude:
QtrQtr: NESW	Sec: 10	Twp: 13S	Range: 50W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications CH Most Sensitive Adjacent Land Use Non Cropland

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

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) Unknown

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	SOILS	500	Laboratory sampling

INITIAL ACTION SUMMARY

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

ECMC reclamation specialist Ryan Costa inspected the Las Animas Minerals 1-10 location on 2/7/2024 and discovered what appeared to be impacted soils from a historic release at the well site. Foundation was notified on 2/9/2024 via Field Inspection Report, document #713600722.

Initial actions and completed remedial measures have previously been submitted to the ECMC in Form 19I (#403684150), in the Form 19S (#403691980 and #403782744). The site was sampled on 2/21/2024, with soil samples taken at 5 locations, in addition to 2 background samples. Soil samples were analyzed for the full Table 915-1 and presented to the ECMC in the most recently approved Supplemental Form 19 document #403782744.

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):

On 2/21/2024, soil samples were taken at 5 locations on the site with the purpose of delineating any potential impacts laterally and vertically. Soil samples were field screened with a PID at every foot of depth, and confirmation samples with the highest PID readings were taken and analyzed for full Table 915-1 analysis at Summit Scientific.

Sample location HA2@1' exhibited a SAR value greater than the ECMC standard, however, the SAR was delineated vertically at a depth of 5' with a result below the standard. Arsenic at HA-5@3' was also above the ECMC standard and greater than 1.25 times the background sample. With the recently approved F19-S, FEM proposes additional soil sampling at and around the site to delineate potential impacts laterally and vertically as warranted, including background sample(s), which are shown on Figure 2.

Proposed Groundwater Sampling

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

Groundwater has not been encountered at this site. FEM does not anticipate collecting groundwater samples at this site.

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):

FEM is proposing additional soil borings to further define the lateral extent of impacts to soil and determine if arsenic concentrations are indicative of natural conditions with additional background samples. Up to six additional locations are proposed around the site and each soil boring will be logged for lithologic conditions and submitted to the laboratory for specific analysis accordingly. The results will be presented in a subsequent Form 27 report.

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?

Two background samples were collected during the sampling event on 2/21/24. All samples analyzed were within 1.25x background concentrations for all metals except arsenic at HA-5@3'.
FEM anticipates collecting additional background samples during the next sampling event.

☐ 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?

FEM is proposing additional soil sampling at and around sample location HA-2 to further delineate the SAR exceedance laterally. In addition, vertical delineation of arsenic at sample location HA-5 is including two background samples to confirm natural site conditions.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

ECMC reclamation specialist Ryan Costa inspected the Las Animas Minerals 1-10 location on 2/7/2024 and discovered what appeared to be impacted soils from a historic release at the well site. Foundation was notified on 2/9/2024 via Field Inspection Report, document #713600722. One round of soil sampling was completed on 2/21/24 and evaluation of potential remediation approaches is ongoing, as necessary.

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.

FEM is proposing additional soil sampling to define the SAR around HA-2 and arsenic concentrations onsite. Once the area has been delineated laterally potential impacts of these specific constituents, FEM will evaluate remediation alternatives and present them to the ECMC in a subsequent Form 27-S report.

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 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.

Groundwater has not been encountered at this site. FEM does not anticipate performing groundwater monitoring at this site.

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 Site Progress Update

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.

FEM carries both pollution liability insurance and an umbrella policy over that for a total of \$11,000,000. Cost provided below is an estimate and may be adjusted based on the site observations.

Operator anticipates the remaining cost for this project to be: \$ 10000

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

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:

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.

Sites will be regraded and reclaimed in accordance with ECMC 1000 series rules. Sites will be reseeded with a seed mix approved by the surface owner. If applicable, FEM will discuss remedial options with the landowner and evaluate alternatives, including but not limited to providing a reclamation plan for ECMC approval.

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. 10/01/2024

Proposed date of completion of Reclamation. 12/31/2024

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. 02/09/2024

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 02/21/2024

Proposed site investigation commencement. _____

Proposed completion of site investigation. 08/31/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/01/2024

Proposed date of completion of Remediation. 12/31/2024

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

A topographic map is included as Figure 1, and a site overview map with existing and proposed soil sample locations is included as Figure 2. Soil sample analytical results are presented in Tables 1-3. The laboratory report was included in Appendix A of previous F19S #403782744.

Upon approval of this document and the assignment of a remediation number to this site, FEM will submit a Form 19 Supplemental requesting closure of the spill/release to continue under Form 27 reporting.

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

Signed: Afton Iiams

Title: HSE/Regulatory Specialist

Submit Date: 08/05/2024

Email: regulatory@foundationenergy.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: Chris Sanchez

Date: 08/19/2024

Remediation Project Number: 36674

COA Type

Description

	Upon approval of this Form 27i the Operator shall submit a Supplemental Form 19 Requesting Closure of Spill Facility ID 486084. Operator is 78 days late requesting closure for Spill Facility ID 486084. Operator will provide explanation for late report on the next Form 19 Supplemental including actions implemented to prevent late reporting in the future.
	Operator shall continue Quarterly Reporting until the Site Assessment is completed and the remediation area demonstrates Compliance with Table 915-1 Standards.
	If encountered operator will analyze groundwater samples for Table 915-1 Groundwater Inorganic Parameters (total dissolved solids, sulfate, chloride) in addition to the Organic Compounds
	Operator shall fully populate the implementation schedule in accordance with Rule 913.d on the subsequent Supplemental Form 27. Operator did not populate the Actual Spill or Release date or date of discovery under the Implementation Schedule. Operator shall populate the Actual Spill or Release date or date of discovery in the next Supplemental Form 27 Due in 90 Days
	Background sampling locations should be sufficiently away from the impacted area to reflect conditions not impacted by oil and gas activity, and should be obtained from similar depths and soil horizons or lithologic materials for comparison to confirmation soil samples.
	Operator shall added Spill ID 486084 to Site Information on the next supplemental Form filing.
	Operator shall submit Quarterly Updates for this remediation project every 90 days as required by Rule 913.e. Quarterly updates shall include a current map of the subject location including current excavation limits and/or sample locations, proposed/actual soil boring locations and monitoring well locations. GPS data used to create the map must comply with ECMC Rule 216. Operator will include historical and recent soil analytical data in a table format in Quarterly updates. Operator shall submit photo logs and field notes of all field activities reported during a Quarterly Update.

7 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.

Att Doc Num

Name

403873092	INVESTIGATION/REMEDIATION WORKPLAN (INITIAL)
403873144	OTHER

Total Attach: 3 Files

General Comments

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

Total: 0 comment(s)