

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Chris Sanchez

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

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

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

Other Potential Receptors within 1/4 mile

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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), and in Form 19S (#403691980 and #403782744). The site was initially sampled on 2/21/2024, with eight (8) soil samples collected from seven (7) locations, including two (2) background locations. Soil samples were analyzed for the full Table 915-1 except for HA2@5' which was analyzed for SAR only. The results were presented to the ECMC in the approved Supplemental Form 19 document #403782744. An initial Form 27 (#403873092) was conditionally approved by the ECMC and remediation number #36674 was assigned to the project. The spill (#486084) was closed with approval from the ECMC in a Form 19-S (#403894109) for work to proceed under REM# 36674.

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):

Initial site investigation activities were conducted on 2/21/2024, as presented in Form 19 document #403782744.

Additional confirmation soil sampling was conducted on 8/28/2024 at the previous sample location HA5, at new sample locations HA-6, HA-7, and HA-8, and additional background locations BG-3 and BG-4. Samples were analyzed for SAR and/or arsenic.

Soil sample analytical results exhibited SAR values greater than the ECMC standard at HA2@1', HA-6@1', HA-6@2', and HA-8@1', but were delineated vertically below the standard at each location at 5', 3', and 2', respectively.

Arsenic at HA-5@3' was greater than 1.25 times the highest background sample but was delineated vertically to be within background concentrations at 5' bgs at that location.

FEM proposes additional soil sampling to delineate SAR concentrations laterally to the north of HA-6 and east of HA-8, delineate arsenic laterally at HA5, and add one additional background location, as illustrated 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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 13
Number of soil samples exceeding 915-1 3
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 10000

NA / ND

NA Highest concentration of TPH (mg/kg) _____
Highest concentration of SAR _____
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 2

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?

A total of eight (8) background soil samples have been collected from four locations (Figure 2) and the analytical results for background samples collected on 8/28/2024 are summarized on Table 1 and in the attached laboratory analytical report.

FEM proposes to collect additional background sample(s) from the location illustrated on Figure 2 for laboratory analysis of arsenic.

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 near sample locations HA2, HA-6, and HA-8 to further delineate SAR exceedance laterally, and delineate arsenic around HA5. In addition, one background sample to be analyzed for arsenic is proposed to confirm natural site conditions. Proposed sampling locations are shown on Figure 2.

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.

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. An initial round of soil sampling was completed on 2/21/24, a subsequent round of soil sampling was conducted on 8/28/2024, and evaluation of potential remediation is ongoing, contingent on additional investigation activities proposed herein.

REMEDATION 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 laterally near HA2, HA-6, and HA-8 and to define arsenic concentrations onsite. The results of additional investigation will be presented to the ECMC in a subsequent Form 27-S report with proposed remediation alternatives, if warranted.

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.

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.

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. 03/18/2024

SITE INVESTIGATION DATES

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

Proposed site investigation commencement. 02/21/2024

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 samples collected during the initial 2/21/2024 event were analyzed for the full Table 915-1 list of analytes except for HA2@5' which was analyzed for SAR only. All samples analyzed from that event were below laboratory detection limits for all volatile organic compounds (VOC) and polycyclic aromatic hydrocarbon (PAH) analytes. VOC and PAH results were presented in previous Form 27 Initial report #403873092. Soil suitability and metals analytical results are presented in Table 1. Soil sample location coordinates are presented in Table 2. Field notes and photo logs from the 8/28/2024 sampling event are attached as Appendices A and B, respectively.

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. The date of discovery has been populated as 3/18/2024, when laboratory results from the initial sampling event were received with samples above ECMC soil standards.

The Summit Scientific laboratory report 2408375R2 is provided as an attachment. Site updates and results will be provided in future Form 27 Supplemental reports.

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: 12/06/2024

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: 01/07/2025

Remediation Project Number: 36674

COA Type

Description

	The impacted soil will be segregated for proper offsite disposal and the lateral and vertical extent of impacts shall be determined with appropriate confirmation soil sampling.
	Operator shall continue quarterly reporting until the site investigation is complete and Full Table 915-1 standards are met within the remediation area
	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.
3 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
404000789	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404000819	OTHER
404000820	ANALYTICAL RESULTS
404049958	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)