

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403873092
Receive Date:

Report taken by:

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 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: 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 Mobile: ()
Contact Person: Afton Iiams Email: aiiams@foundationenergy.com

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 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

Other Potential Receptors within 1/4 mile

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SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|--|---|--|
| <input type="checkbox"/> E&P Waste | <input checked="" type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input 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 checked="" type="checkbox"/> 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.

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.

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

Ex Situ

_____ Bioremediation (or enhanced bioremediation) _____ Excavate and offsite disposal
_____ Chemical oxidation _____
If Yes: Estimated Volume (Cubic Yards) _____

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

_____ 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: _____

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: _____

Date: _____

Remediation Project Number: _____

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

403873144	OTHER
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Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)