

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Krystal Heibel

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 #: 18082 Initial Form 27 Document #: 402672665

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: Facility Closure

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>LOCATION</u>	Facility ID: <u>303271</u>	API #: _____	County Name: <u>YUMA</u>
Facility Name: <u>GROSECLOSE-64S43W 30SWNE</u>		Latitude: <u>39.682895</u>	Longitude: <u>-102.222671</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>SWNE</u>	Sec: <u>30</u>	Twps: <u>4S</u>	Range: <u>43W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use 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

The site lies within a Designated Groundwater Management Area and a Designated Basin. An intermittent tributary of Sand creek is 0.22 miles north of the site.

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	SOILS	TBD	Field screening and 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.

Foundation Energy Management (FEM) has conducted soil sampling to document conditions beneath former equipment locations at the Groseclose 32-30 well location (ID:303271) through observation, field screening, and laboratory analysis.

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):

A total of 5 samples were collected via hand auger at 5 locations on 6/29/23 (Figure 2). Samples were taken at multiple depths to delineate the affected area and analyzed for Table 915-1 soil suitability, metals, and TPH analyses. The ECMC approved the use of Residential Soil Standards and a reduced sampling and analysis plan (SAP) of only Soil Suitability and Metals constituents (Table 3) in previous Form 27S (#403571437).

FEM anticipates additional background soil sampling in a location sufficiently away from this site, unimpacted by oil & gas activities, and at a similar depth and lithology. Based on additional background sampling, FEM may request the removal of specific metals from the sampling plan, specifically arsenic, and a No Further Action determination will be requested for ECMC approval.

Proposed Groundwater Sampling

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

FEM does not anticipate performing groundwater monitoring at the Site. Groundwater has not been encountered onsite and an online DWR investigation into nearby monitoring wells showed depths to groundwater at over 200 feet.

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

NA / ND

NA Highest concentration of TPH (mg/kg) _____
NA 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
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?

A background sample has NOT been collected at this site. FEM anticipates collecting a background sample for this site.

All samples were below Table 915 Residential Standards for all Table 915-1 analytes except arsenic. The ECMC approved the use of Residential Soil Standards and a reduced SAP of only Soil Suitability and Metals constituents (Table 3) in previous Form 27S (#403571437).

Based on future additional background sample collection, FEM may request the removal of Table 915-1 Metals, specifically arsenic, from the sampling plan.

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 anticipates additional background soil sampling in a location sufficiently away from this site, unimpacted by oil & gas activities, and at a similar depth and lithology. The ECMC approved the use of Residential Soil Standards and a reduced SAP of only Soil Suitability and Metals constituents (Table 3) in previous Form 27S (#403571437). Based on additional background sampling, FEM may request the removal of specific metals from the sampling plan, specifically arsenic, and a No Further Action determination will be requested for ECMC approval.

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.

FEM has conducted soil sampling beneath former equipment locations at the Groseclose 32-30 well site with the goal of delineating any potential impacts at the Site. June 2023 analytical results indicate no impacts above Residential standards and/or local background concentrations for inorganic or organic results. The flowline on site was abandoned as documented on Form 42 (#402724436).

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.

Soil sampling conducted onsite indicated no impacts above Residential standards and/or local background concentrations, except arsenic. Following ECMC approval of an NFA determination, the Site will be reclaimed in accordance with 1000 series rules.

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

_____ Name of Licensed Disposal Facility or ECMC Facility ID # _____

_____ Natural Attenuation

_____ Excavate and onsite remediation

_____ Other _____

_____ 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.

FEM does not anticipate performing groundwater monitoring at the Site. Groundwater has not been encountered onsite and an online DWR investigation into nearby monitoring wells showed depths to groundwater at over 200 feet.

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.

Following ECMC approval of an NFA determination, final reclamation will be performed in accordance with the 1000 series rules. If warranted, FEM will mix in topsoil and reseed the location with a seed mix approved by the surface owner during the next favorable season, and weed spraying will be utilized for weed prevention until final reclamation has been achieved.

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. 10/31/2023

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. _____

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). _____

Proposed site investigation commencement. 05/19/2021

Proposed completion of site investigation. 12/31/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/19/2021

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

This Supplemental Form 27 is being submitted to outline the site plan for the no further action determination of the Groseclose 32-30 facility (Location ID:303271). A summary of the June 29, 2023 analytical results, as well as historical results, is presented in Tables 1-2 and shown in Figure 2. Photographs from the four cardinal directions during the September 29, 2023 Site visit were included in the previous Form 27S (#403571437).

In response to the COAs on the previous Form 27S, the sample location "Tank@12-24" was a confirmation sample of the location and showed no exceedances above Residential Standards, except arsenic. The flowline on site was removed as documented on Form 42 (#402724436). FEM has input the pertinent information regarding the soil remediation program.

The ECMC approved the use of Residential Soil Standards and a reduced SAP of only Soil Suitability and Metals constituents (Table 3) in previous Form 27S (#403571437). The five samples were below Table 915-1 Residential Standards for all organic and inorganic analytes, except for arsenic. Based on additional background collection, FEM would request removal of certain metals from the sampling plan, specifically arsenic, at which time a NFA determination will be requested from the ECMC.

If further information is needed, please don't hesitate to contact FEM. FEM will provide the onsite progress to the ECMC in subsequent Supplemental Form 27 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: 02/15/2024

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: Krystal Heibel

Date: 05/24/2024

Remediation Project Number: 18082

COA Type

Description

	<p>It appears that several soil sample locations from the June 29, 2023, sampling event did not sample for Benzene, Toluene (mg/kg), Ethylbenzene, Total Xylenes, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and Naphthalene.</p> <p>Operator shall provide the laboratory documents and the analytical results that document that these locations have been sampled, within the next submittal. Otherwise, Operator shall ensure that all sample locations at this site have been analyzed for all analytes within the reduced analyte sampling plan (BTEX, TPH, pH, SAR, EC, boron, naphthalene, 1,2,3 and 1,2,4 trimethylbenzene).</p>
	<p>Per Doc# 402672665, a reduced sampling plan of BTEX, TPH, pH, SAR, EC, boron, naphthalene, 1,2,3 and 1,2,4 trimethylbenzene was approved if no evidence of a release was discovered. If a release was discovered, then full Table 915-1 would be analyzed.</p> <p>Operator shall demonstrate that the Table 915-1 Metals in Soil and Soil Suitability analyte exceedances are native to the site.</p> <p>Since background sample(s) were not collected, ECMC cannot remove Table 915-1 Metals in Soils analytes from the analyte list. 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.</p>
	<p>Operator shall populate the "Soil Remediation Summary" within the Remedial Action Plan within the next submittal.</p>
	<p>Operator shall check the box for "Rule 913.c.(9): Decommissioning of Oil and Gas Facilities." within the next submittal.</p>
4 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.

<u>Att Doc Num</u>	<u>Name</u>
403677619	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403688505	OTHER
403803147	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	As stated in Doc# 403571437, ECMC agrees to the reduced analyte list of sampling for Table 915-1 Soil Suitability for Reclamation and Metals in Soils.	05/24/2024
Environmental	As stated in Doc# 403571437, ECMC approves Operator's request for use of Residential SSLs based on the depth to groundwater and the local lithology suggesting a pathway to groundwater at this location is not likely.	05/24/2024

Total: 2 comment(s)