

State of Colorado  
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
403510714  
Receive Date:  
09/01/2023

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 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 INFORMATION

Name of Operator: <u>FOUNDATION ENERGY MANAGEMENT LLC</u>	Operator No: <u>10112</u>	<b>Phone Numbers</b>
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: \_\_\_\_\_

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? No  
 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.

**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 10 samples were collected via hand auger at 5 locations on 6/29/23. Sample locations are shown in Figure 2 and sample location coordinates are attached in Appendix D. Samples were taken at multiple depths to delineate the affected area and analyzed for Table 915-1 soil suitability, metals, and TPH analyses. Previous results did not indicate VOCs were present onsite and therefore not analyzed. Groundwater was not encountered onsite & the lab results were all below Table 915 Residential standards, except arsenic (ranging from 0.891-1.09 mg/kg). However, arsenic is believed to be indicative of natural conditions around the site. The 6/29/23 analytical results are attached in Tables 1 and 2, and the historical analytical results are attached as Appendix A.

Based on results and ECMC approval, further site investigation is not anticipated at this time. Based on the information provided within this report, FEM is requesting a No Further Action (NFA) determination from the ECMC.

**Proposed Groundwater Sampling**

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

Groundwater has not been encountered onsite and is believed to be deeper than 20 feet below ground surface.

**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 5  
Number of soil samples exceeding 915-1 5  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 0

### NA / ND

ND 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  
\_\_\_\_\_ 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?

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?

With ECMC approval of the proposed analysis plan, further investigation is not anticipated at this time. FEM is requesting an NFA determination from the ECMC based on the information provided in this report.

## 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.

### 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. Following ECMC approval of an NFA determination, the Site will be reclaimed in accordance with 1000 series rules.

### 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 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.

Groundwater was not encountered onsite.

# 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 FEM is requesting an NFA determination for this Site. \_\_\_\_\_

## 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.

Foundation 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 Site observations.

Operator anticipates the remaining cost for this project to be: \$ 0 \_\_\_\_\_

## 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: \_\_\_\_\_

# REMEDIATION COMPLETION REPORT

## REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No \_\_\_\_\_

If YES:

Compliant with Rule 913.h.(1).

Compliant with Rule 913.h.(2).

Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? No \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? Yes \_\_\_\_\_

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

Operator shall comply with the COGCC 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. 10/01/2023

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. 06/29/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/19/2021

Proposed date of completion of Remediation. 06/29/2023

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 of the Groseclose 32-30 facility (Location ID:303271). A summary of the June 29, 2023 analytical results is presented in Tables 1 and 2 and shown in Figure 2, and Site historical analytical results are included as Appendix A. Photographs from the four cardinal directions at the Site are included in Appendix B and sample location coordinates are included in Appendix D.

A background sample was not collected during this sampling event.

All samples were below Table 915 residential standards for organic and inorganic analysis, except for arsenic, in which all 5 samples were above the standard and ranged from 0.891-1.09 mg/kg and less than the CDPHE's lower range of background concentrations for native grassland, rangeland, or agriculture (3-14 mg/kg).

In addition to groundwater not being encountered and the overall results, FEM believes that the metals are representative of native conditions and requests that inorganics and TPH be removed from the future analysis plan at this Site since they do not pose a risk to human health or the environment. Based on results and ECMC approval, further site investigation or background sampling is not anticipated at this time. Based on the information provided within this report, FEM is requesting a No Further Action (NFA) determination from the ECMC.

With ECMC approval of Residential standards and removal of arsenic from the analysis plan, FEM is requesting a NFA determination from the ECMC.

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: 09/01/2023

Email: aiiams@foundationenergy.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: Krystal Heibel

Date: 09/29/2023

Remediation Project Number: 18082

### COA Type

### Description

	In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule. ECMC selected Quarterly under Remediation Progress Update.
	Operator shall indicate if the flowlines at this location will be abandoned-in-place or removed. Additional soil sampling and documentation may be required depending on the Operators plan with the flowlines.  Operators will collect and submit for laboratory analysis a soil sample collected from the areas most likely to have been impacted during the operational life of the flowline. These areas include, but are not limited to: where Flowlines connect to the wellhead, surface equipment, risers, valves, or manifolds; where Flowlines bend or were repaired in the past and at joints and hammer unions; where Flowlines connect to Flowlines or equipment of different material; and where Flowlines crossed drainages or surface water or are in contact with shallow groundwater.
	Operator shall submit the analytics results from the wellhead in the supplemental Form 27 submittal.
	Closure Request removed. 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.  The arsenic and barium analytical results located at sample locations "Separator @ 12-24" - Groseclose", "Tank @ 12-24" - Groseclose", "HA-1 @ 12-24" - Groseclose", "HA-2 @ 12-24" - Groseclose", and "HA-3 @ 12-24" - Groseclose" exceed Table 915-1: Metals in Soil SSLs and Operator did not collect a background sample, so there is no evidence that arsenic and barium exceedances are native to this Site.  Per Doc# 402672665, "A background sample will also be collected" but a background sample was not collected. Operator shall collect and analyze all sample locations for full Table 915-1 and provide the analytical results (historic and new) within the next Form 27 submittal.
	Operator shall mark "YES" to the question "Is surface water within ¼ mile?" since an intermittent tributary of Sand creek is 0.22 miles north of the site.
	Operator shall provide justification for use of Residential SSL including but not limited to depth to groundwater and the local lithology.

### 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.

<u>Att Doc Num</u>	<u>Name</u>
403510714	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403517865	OTHER
403545690	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

### General Comments

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

Total: 0 comment(s)