

State of Colorado
Energy & Carbon Management Commission

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Report taken by:

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: 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	Email: aiiams@foundationenergy.com	Mobile: ()

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

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

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).

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.

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

_____ 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.

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.

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 Progress Report

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? _____

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. 10/31/2023

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: _____

Email: regulatory@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: _____

Date: _____

Remediation Project Number: 18082

COA Type

Description

0 COA	

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.

Att Doc Num

Name

403688505	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)