

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

402574976

Receive Date:

01/15/2021

Report taken by:

John Heil

## 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 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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

### 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>(303) 244-8114</u>
City: <u>ADDISON</u>	State: <u>TX</u>	Zip: <u>75001</u>
Contact Person: <u>Alyssa Beard</u>	Email: <u>abeard@foundationenergy.com</u>	Mobile: <u>( )</u>

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 16957Initial Form 27 Document #: 402574976

#### PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water                   |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure                  | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation                            | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project                                  |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste                      | <input type="checkbox"/> Rule 906.c.: Director request   |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____   |

#### SITE INFORMATION

N Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: <u>PIT</u>	Facility ID: <u>119492</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>Federal #2-34-7-104 119492</u>		Latitude: <u>39.407015</u>	Longitude: <u>-108.978280</u>
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESW</u>	Sec: <u>34</u>	Twp: <u>7S</u>	Range: <u>104W</u>
Meridian: <u>6</u>		Sensitive Area? <u>Yes</u>	

#### SITE CONDITIONS

General soil type - USCS Classifications SMMost Sensitive Adjacent Land Use RangelandIs domestic water well within 1/4 mile? NoIs surface water within 1/4 mile? YesIs groundwater less than 20 feet below ground surface? No

#### Other Potential Receptors within 1/4 mile

West Salt Creek located 0.04 miles west of location.

# 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 plans to collect soil samples from the Federal 2-34 pit (Facility ID 119492) from the proposed sample locations in the attached map with a hand auger decontaminated between each sample.

## 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 ):

Foundation proposed to collect 5 samples by hand auger for the pit closure investigation-- 1 base sample and 4 sidewall samples. The sidewall samples will be collected and analyzed for BTEX, TPH, pH, EC and SAR. The base sample will be collected and analyzed for the full COGCC Table 910-1.

### Proposed Groundwater Sampling

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

### 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 ):

TBD.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 5

Number of soil samples exceeding 910-1 0

Was the areal and vertical extent of soil contamination delineated?           

Approximate areal extent (square feet) 0

### NA / ND

NA Highest concentration of TPH (mg/kg)           

NA Highest concentration of SAR           

BTEX > 910-1           

Vertical Extent > 910-1 (in feet) 0

### 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 910-1           

           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 910-1

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?

TBD.

# REMEDIAL ACTION PLAN

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Soil samples will be collected from the locations proposed on the attached map; sidewall samples will be analyzed for BTEX, TPH, EC, SAR and pH, and the base sample will be analyzed for full Table 910-1. Based on the analytical results, soil will be removed as necessary at a later date with a backhoe/trackhoe and landfarmed on location. Confirmation samples will again be collected from the base and sidewalls and compared to Table 910-1 standard to ensure impacted soil will be treated.

## 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.

Since samples have not yet been collected, Foundation will require additional data in order to develop the remediation plan. However, should soil samples in the pit base and sidewalls exceed the Table 910-1 standard, soil will be removed from the pit until clean samples have been obtained from the extent of the excavation. Soil will be screened with a PID at the time of the excavation. Foundation will seek landfarm approval from the BLM if impacts are present.

## Soil Remediation Summary

### ☐ In Situ

- \_\_\_\_\_ Bioremediation ( or enhanced bioremediation )
- \_\_\_\_\_ Chemical oxidation
- \_\_\_\_\_ Air sparge / Soil vapor extraction
- \_\_\_\_\_ Natural Attenuation
- \_\_\_\_\_ Other \_\_\_\_\_

### ☒ Ex Situ

- \_\_\_\_\_ No Excavate and offsite disposal
- \_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_
- \_\_\_\_\_ Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_
- \_\_\_\_\_ Yes Excavate and onsite remediation
- \_\_\_\_\_ Yes Land Treatment
- \_\_\_\_\_ Yes Bioremediation (or enhanced bioremediation)
- \_\_\_\_\_ No Chemical oxidation
- \_\_\_\_\_ No 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.

N/A

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other \_\_\_\_\_

**Report Type:** ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report  
☐ Other \_\_\_\_\_

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

## 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.

Once soil samples collected from the base and sidewalls of the pit show concentrations less than the Table 910-1 standard, the berms will be pushed into the base of the pit. If landfarming is necessary, the material will be placed into the former pit once laboratory analytical shows that concentrations are below the Table 910-1 standard. Additional top soil will be brought in as necessary and compacted to bring the pit area to the surface and prepare for seeding. If soil amendments are necessary to increase the chance for success at seeding. Foundation will add amendments based on the inorganic soil results. Foundation will reseed the former pit area with a seed mix approved by the BLM during the next favorable season, and weed spraying will be utilized for weed prevention.

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 approve the seed mix? ☐ Yes \_\_\_\_\_

If NO, does the seed mix comply with local soil conservation district recommendations? ☐ Yes \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

### **PRIOR DATES**

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, if known. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 04/01/2021

Date of commencement of Site Investigation. 04/01/2021

Date of completion of Site Investigation. \_\_\_\_\_

### **REMEDIAL ACTION DATES**

Date of commencement of Remediation. \_\_\_\_\_

Date of completion of Remediation. \_\_\_\_\_

### **SITE RECLAMATION DATES**

Date of commencement of Reclamation. \_\_\_\_\_

Date of completion of Reclamation. \_\_\_\_\_

**OPERATOR COMMENT**

Please forward onto John Heil.

This Initial Form 27 is being submitted to outline the site investigation process for the closure of pit facility ID 119492 located on the Federal 2-34 well pad and to obtain a REM#. Attached to this Form 27 is a proposed soil sample location map.

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 Technician

Submit Date: 01/15/2021

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: John Heil

Date: 03/03/2021

Remediation Project Number: 16957

**COA Type****Description**

	Operator shall submit a Supplemental eForm 27 to present a comprehensive assessment of horizontal and vertical delineation of soil impacts for contaminants of concern listed on Table 915-1. The Operator's comprehensive report shall also address the potential for groundwater impacts and shall include as attachments a soil analytical summary table, groundwater sample analytical summary table (if groundwater has been sampled), and site diagram depicting soil and groundwater sample locations. Operator's analytical summary tables shall include comparisons of sample analytical results to Table 915-1 using the Protection of Groundwater Screening Level Concentrations.
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**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**

402574976	FORM 27-INITIAL-SUBMITTED
402575900	SOIL SAMPLE LOCATION MAP

Total Attach: 2 Files

**General Comments****User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)