

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

403283430

Receive Date:

01/09/2023

Report taken by:

Steven Arauza

## 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>LARAMIE ENERGY LLC</u>	Operator No: <u>10433</u>	<b>Phone Numbers</b>
Address: <u>1700 LINCOLN ST STE 3950</u>		Phone: <u>(970) 9019007</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80203</u>		Mobile: <u>(970) 9019007</u>
Contact Person: <u>Matt Kasten</u>	Email: <u>mkasten@laramie-energy.com</u>	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 19534 Initial Form 27 Document #: 402665836

#### 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>SPILL OR RELEASE</u>	Facility ID: <u>460326</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>Cascade Creek 604-12-13 SWD</u>	Latitude: <u>39.555290</u>	Longitude: <u>-108.232770</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSW</u>	Sec: <u>4</u>	Twp: <u>6s</u>	Range: <u>97w</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

#### SITE CONDITIONS

General soil type - USCS Classifications GC Most Sensitive Adjacent Land Use Non-crop Land

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

## 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
Yes	SOILS	300sqft	Soil sampling - inorganics

### INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Initial Form 19 (2018): A cam lock broke/failed during water transfer to SWD. Approximately 2 bbls spilled on the surface, because of extreme cold the fluid froze almost immediately. Frozen spill fluids were scraped up using shovels and remaining unfrozen fluid was sucked up with vac truck. Current estimates are for full recovery of fluids that were released, 2bbls spilled, 2bbls recovered.

### 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 ):

Additional / Re-samples to be collected to represent S4 (analyzed for SAR), S5 and S6 (analyzed for pH). Laramie is requesting reduced analyte suite and to remain under Table 910-1 per 915.f.

#### 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 ):

Re-samples for delineation

## SITE INVESTIGATION REPORT

### SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 11

Number of soil samples exceeding 915-1 1

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 300

-- Highest concentration of TPH (mg/kg) 1934.05

-- Highest concentration of SAR 2.33

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 1

#### 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?

Backgrounds will be collected as part of this project

☐ 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?

### 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.

Delineation will need to occur around impacted location identified during sampling (SS1). Source removal will likely be with heavy equipment.

#### 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.

If impacts are identified, project closure timeline will be delayed and reclamation plan will be submitted to close REM. Estimated 2 months time from initial soil sampling date. UPDATE: With winter weather this site is unable to achieve delineation until snow melt. This will likely delay closure until summer 2023 when site characterization is able to continue.

#### Soil Remediation Summary

☐ In Situ

☒ Ex Situ

Bioremediation ( or enhanced bioremediation )

Yes Excavate and offsite disposal

Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 9

Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC Facility ID #

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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.

## 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 Rem 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.

Based on the current COI provided by Acord, Laramie Energy has a total of \$16MM of sudden & accidental pollution. The primary layer in the General Liability Policy is \$1MM per occurrence and a \$15MM umbrella totaling \$16MM. Total estimation for cost; excavation, disposal, sampling and backfill will be less than \$6000.

Operator anticipates the remaining cost for this project to be: \$ 6000

### 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

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?

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.

Reclamation will not be part of this project. If a reclamation plan must occur, it will be submitted in supplemental form 27 (s).

Is the described reclamation complete? \_\_\_\_\_

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. \_\_\_\_\_

Proposed date of completion of Reclamation. \_\_\_\_\_

## 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). 08/22/2022

Proposed site investigation commencement. 08/22/2022

Proposed completion of site investigation. 06/01/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/07/2019

Proposed date of completion of Remediation. \_\_\_\_\_

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**

Historic 12-13 resample. Delay in sampling from original plan missed deadline; all re-samples were collected and analyzed for 915. Laramie is requesting:

1. Project to remain under RSSL: groundwater not encountered and is estimated greater than 50'.
2. Consideration of footnotes 1 and 11; arsenic identified in native soils above source area.
3. Consideration of footnote 9; chrom hex J flag from lab all estimate and considered not accurate.
4. Reduced analyte suite of only TPH and pH for clearance sampling. A fluid analysis will also be collected from site and compared to inorganics identified during characterization. 913.e.3.c will likely be requested for consideration of exceedances displayed from pH.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Matt Kasten

Title: Environmental Coordinator

Submit Date: 01/09/2023

Email: mkasten@laramie-energy.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: Steven Arauza

Date: 01/30/2023

Remediation Project Number: 19534

**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**

403283430	FORM 27-SUPPLEMENTAL-SUBMITTED
403283445	ANALYTICAL RESULTS
403283446	SOIL SAMPLE LOCATION MAP
403283448	ANALYTICAL RESULTS

Total Attach: 4 Files

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

Environmental	Based on the information provided for confirmation soil samples (docs #403283445 and #403283448) the Operator's request for a reduced analyte suite of TPH and pH is conditionally approved.	01/30/2023
Environmental	Based on the information provided for confirmation soil samples (docs #403283445 and #403283448), the Operator's requests to utilize Table 915-1 footnotes 1, 9, and 11 are conditionally approved.	01/30/2023
Environmental	Based on the information provided for estimated depth to groundwater (under Operator Comment), the Operator's request to utilize the Table 915-1 Residential Soil Screening Level concentrations (RSSLs) is conditionally approved.	01/30/2023

Total: 3 comment(s)