

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

402963156

Receive Date:

Report taken by:

## 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.

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 #: \_\_\_\_\_ Initial Form 27 Document #: 402963156

#### 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>335203</u> | API #: _____                  | County Name: <u>GARFIELD</u>                                    |
| Facility Name: <u>CC 0697-16D Pad</u>          | Latitude: <u>39.516896</u> | Longitude: <u>-108.222768</u> |   |
| ** correct Lat/Long if needed: Latitude: _____ |                            | Longitude: _____              |   |
| QtrQtr: <u>SWSE</u>                            | Sec: <u>16</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? Yes

Is groundwater less than 20 feet below ground surface? No

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

Dry drainage (Stormwater dependent) located ~200' south of site. Elevation from working surface ~7,005' and elevation of dry drainage ~6,825' (180' difference). It is assumed groundwater at site and failure point is greater than 20'. A drill rig is scheduled to begin delineation and correct data will be collected during assessment.

**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          | TBD              | soil 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.

A scheduled loadout from 3rd party water truck driver was scheduled for 2/14/2022, and notified Laramie that no contents were within tanks. Field personnel arrived to inspect and found a leaking frost free valve was leaking inside lined secondary containment. Liner failure was identified and no free fluids were held within containment. Some residual condensate is being recovered from working surface but it is assumed a majority of the fluid is below the tank battery. Tank and containment removal is pending. Initial soil sample Chris, collected at point of release 2/15/2022 and will be analyzed for Table 915. Data collected from initial sampling is still pending and will be presented in supplemental form 27(s).

**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 ):

1 soil sample was collected at surface point of release for 915 along with a surface water ~4.5 miles south of site (only location that surface water is present). During delineation samples will be field screened and sampled for 915. See attached Proposed drilling report and diagram for additional information on soil sampling proposal.

**Proposed Groundwater Sampling**

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

During drilling delineation; if groundwater is encountered it will be sampled and analyzed for 915. See attached drilling diagram for initial delineation proposal.

**Proposed Surface Water Sampling**

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

Surface water is being monitored daily ~ 4.5 miles from site (only present surface water). Initial sampling results are pending and will be presented when data is received, during initial sampling event no sheen or odor was noted. Surface water visualization will continue and if changes are noted a sample will be collected.

**Additional Investigative Actions**

☐ Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

See attached drilling proposal.

**SITE INVESTIGATION REPORT**

## **SAMPLE SUMMARY**

### **Soil**

Number of soil samples collected 1

Number of soil samples exceeding 915-1 1

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

Approximate areal extent (square feet) 2000

### **NA / ND**

-- Highest concentration of TPH (mg/kg) 7594

-- Highest concentration of SAR 40.7

BTEX > 915-1 Yes

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

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?

See attached Drilling proposal.

## **REMEDIAL ACTION PLAN**

### **SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

After drill delineation did not identify impacts below 20'bgs, source removal will begin with heavy equipment.

### **REMEDATION 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.

Drilling delineation did not identify impacts beyond 20' bgs, excavation and disposal will occur or source area. Estimated NFA is late spring (April - May 2022).

### **Soil Remediation Summary**

☐ In Situ

☒ Ex Situ

Bioremediation ( or enhanced bioremediation )

Yes Excavate and offsite disposal

Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 600

\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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.

If groundwater is encountered during delineation, samples will be collected and analyzed for 915. TBD - after initial soil investigation.

## **REMEDATION 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 \_\_\_\_\_

### **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.

Reclamation will not be part of this project; if reclamation is needed, 1000 series rules will be followed.

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). 02/15/2022

Proposed site investigation commencement. 03/07/2022

Proposed completion of site investigation. \_\_\_\_\_

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. \_\_\_\_\_

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**

Initial form 27; proposed boring/drilling plan attached. Once REM # is established, Spill 481628 will be requested closure and work will proceed under approved REM. Documentation and reports of work completed are being drafted along with delayed analytical. All reporting will be presented on supplemental form 27(s) when completed.

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

Signed: Matt Kasten

Title: Project Manager

Submit Date:

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:

Date:

Remediation Project Number:

**COA Type****Description**

|  |  |
|--|--|
|  |  |
|--|--|

**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**

|           |                          |
|-----------|--------------------------|
| 402963915 | SOIL SAMPLE LOCATION MAP |
| 402963917 | SITE MAP                 |
| 402971805 | REMEDIAL ACTION PLAN     |
| 402972087 | SOIL SAMPLE LOCATION MAP |
| 402988013 | ANALYTICAL RESULTS       |
| 402988014 | ANALYTICAL RESULTS       |
| 402988016 | ANALYTICAL RESULTS       |
| 402988017 | ANALYTICAL RESULTS       |

Total Attach: 8 Files

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

|               |   |            |
|---------------|---|------------|
| Environmental | Attached analytical summary table (doc #402971594), indicates that DRO is 200 mg/kg, lab report indicates that DRO is 2000 mg/kg. Correct Summary table and update Sample Summary section of the Form 27. | 03/17/2022 |
|---------------|---|------------|

Total: 1 comment(s)