

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

402246241

Receive Date:

11/21/2019

Report taken by:

Steven Arauza

## 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>LARAMIE ENERGY LLC</u>	Operator No: <u>10433</u>	<b>Phone Numbers</b>
Address: <u>1401 SEVENTEENTH STREET #1401</u>		Phone: <u>(970) 8125311</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>(970) 2106889</u>
Contact Person: <u>Lorne C Prescott</u>	Email: <u>lprescott@laramie-energy.com</u>	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 14690Initial Form 27 Document #: 402246241

#### 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 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 checked="" 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 checked="" type="checkbox"/> Other <u>Deliniate, excavate impacted soils, remove gravel from tank battery, inspect liner for compromise</u> |

#### SITE INFORMATION

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

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>469032</u>	API #: _____	County Name: <u>MESA</u>
Facility Name: <u>Alkali Creek Compression Station</u>		Latitude: <u>39.357588</u>	Longitude: <u>-107.644467</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>SESE</u>	Sec: <u>15</u>	Twp: <u>8S</u>	Range: <u>92W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

#### SITE CONDITIONS

General soil type - USCS Classifications GCMost Sensitive Adjacent Land Use RanchingIs domestic water well within 1/4 mile? YesIs surface water within 1/4 mile? YesIs groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

## 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

☐ Piggings 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	Area beneath secondary containment	Liner will be removed, collect soil samples

### INITIAL ACTION SUMMARY

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

After fluid was discovered inside containment 130 bbls of fluid was pumped out and disposed of. Recovered fluid was a mixture of produced water release and frozen precip. A saturated area outside the containment was noted and dug out, approx 1.5ft x 1.5ft. The liner was pulled back from the steel containment ring and frozen fluid was discovered. The frozen materials were removed along with soils (using a Supersucker/pressure washer). Samples were collected from soils to confirm delineation and compliance with Table 910-1. After this effort was completed, Laramie removed the remaining gravel from the remaining lined containment and discovered additional compromises (holes). To fully examine the area for potential impacts from fluids, Laramie will remove all the tanks and the remaining secondary containment. Delineation, excavation and sampling according to Table 910-1 is ongoing and pending the removal of the tanks/liner.

### 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 ):

After the tanks and liner are removed, the soils beneath the liner will be examined for staining/impacts and samples will be collected to confirm the extent of impacts.

#### Proposed Groundwater Sampling

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

No groundwater is present, depth is estimated at 30 feet or more according to the BLM hydrologist.

#### Proposed Surface Water Sampling

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

There is no evidence of impacts to surface waters (Alkali Creek), fluids have been contained within the secondary containment and Laramie's current assessment is minimal impacts to soils.

### 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 8

Number of soil samples exceeding 910-1 0

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 120

### NA / ND

NA Highest concentration of TPH (mg/kg)

NA Highest concentration of SAR

BTEX > 910-1 No

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) 30'

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 910-1 0

NA Highest concentration of Benzene (µg/l)

NA Highest concentration of Toluene (µg/l)

NA Highest concentration of Ethylbenzene (µg/l)

NA Highest concentration of Xylene (µg/l)

NA 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) 2

Volume of liquid waste (barrels) 2

☒ Is further site investigation required?

After the tanks and liner are removed, the soils beneath the liner will be examined for staining/impacts and samples will be collected to confirm the extent of impacts.

# REMEDIAL ACTION PLAN

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Soils will be examined for staining/odor. Material will be excavated using heavy equipment and shovels. Materials determined to have been impacted and potentiallt exceeding Table 910-1 will be hauled to a disposal facility (Greenleaf).

## 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.

No impacts to groundwater are anticipated at this time. Impacted soils will be removed and hauled away for disposal. soils will be replaced with clean fill prior to the (re)installation of the tanks and secondary containment. Determination of the horizontal and vertical extent of contamination will be performed using field screening devices and olafactory assessment.

## Soil Remediation Summary

☐ In Situ

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

☒ Ex Situ

Yes \_\_\_\_\_ Excavate and offsite disposal  
\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 10  
\_\_\_\_\_ Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_  
No \_\_\_\_\_ Excavate and onsite remediation  
\_\_\_\_\_ Land Treatment  
\_\_\_\_\_ Bioremediation (or enhanced bioremediation)  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Other \_\_\_\_\_

## Groundwater Remediation Summary

No \_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
No \_\_\_\_\_ Chemical oxidation  
No \_\_\_\_\_ Air sparge / Soil vapor extraction  
No \_\_\_\_\_ Natural Attenuation  
No \_\_\_\_\_ 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.

Not applicable at this time.

## 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.

This location will continue to be used for storage and transport of fluids via tanks within secondary containment.

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). 11/01/2019

Date of commencement of Site Investigation. 11/01/2019

Date of completion of Site Investigation. 11/30/2019

### 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**

This Form 27 is intended to accommodate the closure of Form 19(s). No sample results were available at the time of this submittal (11/21/2019).

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

Signed: ` Iorne C Prescott

Title: Reg & Enviro Compliance

Submit Date: ` 11/21/2019

Email: lprescott@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: 12/02/2019

Remediation Project Number: 14690

**COA Type****Description**

	If historical impacts are discovered during assessment of the tank battery secondary containment area, operator shall report historical impacts via Initial eForm 19 Spill/Release Report(s).
	Operator shall submit complete documentation of soil sampling events (sample location diagram, analytical summary table, laboratory reports) via a Supplemental eForm 27. Operator's Supplemental eForm 27 shall also include a detailed proposed groundwater sampling plan with implementation schedule.
	Operator shall advance soil boring(s) and construct temporary monitoring well(s) to assess for potential groundwater impacts. Operator shall collect and analyze groundwater samples for analytes listed in Rule 910.b.(4).C and inorganics.
	Operator shall complete vertical and horizontal delineation of soil impacts before 12/31/2019, per Corrective Action on Field Inspection Report #698100091.

**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**

402246241	FORM 27-INITIAL-SUBMITTED
402246301	PHOTOS
402246434	SITE MAP

Total Attach: 3 Files

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

Environmental	Operator was required to bring this compressor station into compliance with Rule 313.B by 11/25/2019 as a Corrective Action on Field Inspection Report #698100091. As of 12/2/2019, the COGCC has not received a Form 12 from the operator for the Alkali Creek Compressor Station.	12/02/2019
Environmental	Under Proposed Surface Water Sampling, operator states that "fluids have been contained within the secondary containment."  The COGCC does not concur with this assessment, based on the facts that compromised sections were found in the tank battery liner and that frozen fluids resulting from the release were discovered beneath the tank battery liner.  For future reference: the COGCC does not consider spills/releases to be contained within lined secondary containment areas if released fluids are discovered beneath the liner.	11/22/2019

Total: 2 comment(s)