

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
402458711  
Receive Date:  
08/05/2020  
Report taken by:  
ALEX FISCHER

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) 263-3641</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>( )</u>
Contact Person: <u>Joan Proulx</u>	Email: <u>jproux@laramie-energy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

**PROJECT INFORMATION**  
Remediation Project #: 15898 Initial Form 27 Document #: 402458711

**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 type="checkbox"/> Other _____

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

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>476992</u>	API #: _____	County Name: <u>MESA</u>
Facility Name: <u>Piceance 28-05 Pad</u>	Latitude: <u>39.250660</u>	Longitude: <u>-107.779118</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNW</u>	Sec: <u>28</u>	Twp: <u>9S</u>	Range: <u>93W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

**SITE CONDITIONS**

General soil type - USCS Classifications GW Most Sensitive Adjacent Land Use Ranching

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**

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input type="checkbox"/> Oil                       | <input type="checkbox"/> Tank Bottoms                |  |
| <input type="checkbox"/> Condensate                | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |  |
|  | <input type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) | _____                                  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	approx. 293 sq ft	sampling results/visual

## INITIAL ACTION SUMMARY

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

During normal operations, pumper discovered the 3" nipple between the produced water tank and load out valve was leaking, the tank was isolated and the produced water transferred to another tank in the containment ring. The nipple was thrn removed and a corrosion hole was discovered in the threaded section (see attached photo). Initial estimate is 1-5 bbls leaked into the containment. Approximately one bbl or less leaked out of the containment on to the ground. Fluids in side the containment will be place back into the produced water tanks. Laramie is investigating the cause of the discharge including pulling the tank out of containmnet and pulling the liner back to determine impact below liner. Laramie will inspect the tank for any additional possibility of holes and if found the tank will be replaced and Laramie will follow-up with a Form 19 supplemental with the results of the investigation.

## 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 ):

Three grab samples were collected 6/18/2020 at the origin and terminus of the spill, as well as below the excavation and a background sample. On 6/30/2020, two grab samples were obtained below the containment.

### 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 ):

Additional sampling will occur due to the elevated readings of SAR.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 6

Number of soil samples exceeding 910-1 4

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

Approximate areal extent (square feet) 293

### NA / ND

--          Highest concentration of TPH (mg/kg) 0.114

--          Highest concentration of SAR 81.1

BTEX > 910-1 No

Vertical Extent > 910-1 (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 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

         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?

One grab sample was obtained for a background sample.

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?

Additional sampling will occur due to the elevated readings of SAR.

# REMEDIAL ACTION PLAN

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Impacted soils will be loaded onto trucks and delivered to Greenleaf for disposal. The final volume of impacted soils will be provided on a subsequent Form 27 after the additional excavation is complete due to high SAR readings.

## 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.

Impacted soils will be loaded onto trucks and delivered to Greenleaf for disposal. The final volume of impacted soils will be provided on a subsequent Form 27 after the additional excavation is complete due to high SAR readings. Clean soil will be brought to the pad to replace the impacted soils.

## Soil Remediation Summary

In Situ

Ex Situ

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

Yes \_\_\_\_\_ Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 10  
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

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.

# 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.

Final reclamation will occur at the end of the life of the facility.

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? \_\_\_\_\_

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

## IMPLEMENTATION SCHEDULE

### PRIOR DATES

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

Actual Spill or Release date, if known. 06/17/2020

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/18/2020

Date of commencement of Site Investigation. \_\_\_\_\_

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**

--

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

Signed: Joan Proulx

Title: Regulatory Analyst

Submit Date: 08/05/2020

Email: jproulx@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: ALEX FISCHER

Date: 09/01/2020

Remediation Project Number: 15898

<b>COA Type</b>	<b>Description</b>
	Address the COA on Doc #402432986 that makes reference to potential historical impacts on a Supplemental F27.
	Under the Remedial Action Tab, it is stated that impacted materials will be excavated and disposed of at GreenLeaf.  Provide all remediation activities performed on a Supplemental F27.
	Under the Site Investigation Tab, it is stated that 6 soil samples were collected, 4 of which exceed Table 910-1.  It is also stated that one sample was collected for arsenic, and additional samples will be collected because of elevated SAR.  Provide all analytical data to date and sample location map on a Supplemental F27.
	Submit a Supplemental F19 requesting closure of the spill and proceeding under this approved Initial F27. Additionally, on the Supplemental F19 address the following COA:  "Operator shall incorporate COA responses in attachment doc #402433009 into relevant sections of a Supplemental eForm 19 (e.g., root cause section and volume estimates)."

**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.

<b>Att Doc Num</b>	<b>Name</b>
402458711	FORM 27-INITIAL-SUBMITTED

Total Attach: 1 Files

**General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
		Stamp Upon Approval

Total: 0 comment(s)