

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
402439162  
Receive Date:  
07/08/2020

Report taken by:  
ALEX FISCHER

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.

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 #: 14692 Initial Form 27 Document #: 402247335

**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 checked="" 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>469075</u>	API #: _____	County Name: <u>MESA</u>
Facility Name: <u>HG 26-6</u>	Latitude: <u>39.334915</u>	Longitude: <u>-107.638951</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENW</u>	Sec: <u>26</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 GC 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**

Alkali Creek is approx 425 feet to the NW; an ephemeral drainage is approx 200 feet to the NE.

# 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	70 by 35 feet	Discovered during 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.

During soil sample collection to confirm the soil beneath the secondary containment liner an area of potentially contaminated soil was discovered. Soil was discolored and had hydrocarbon odor. Staff began excavation immediately in an effort to delineate the horizontal and vertical extent of the contamination. Laramie is in the process of removing the tanks and the liner. We intend to continue with the excavation to determine the sub surface extent of contamination. Laramie believes it is attributable to a historical release.

## 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 ):

Soil samples will be collected at various depths as material is removed during delineation of the contamination. They will be discrete samples intended to differentiate between impacted and non-impacted soils. Tanks and liner will likely be removed on November 25, 2019. Soil samples will be collected to delineate the contamination on that date.

### Proposed Groundwater Sampling

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

Laramie does not anticipate encountering groundwater, the hydrological data indicates water level is 30 ft below surface.

### 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 ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 11

Number of soil samples exceeding 910-1 6

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

Approximate areal extent (square feet) 2450

### NA / ND

--          Highest concentration of TPH (mg/kg) 1.41

--          Highest concentration of SAR 14.4

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 0

Number of groundwater samples exceeding 910-1 0

         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?

Excavation to delineate the extent of contamination is ongoing. Tanks and liner will likely be removed on November 25, 2019. Soil samples will be collected on that date.

# 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.

Excavated using heavy equipment.

## 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.

Delineation of impacts will proceed until soils evidence compliance with Table 910-1 criteria levels. Impacted materials will be removed and hauled to a licenced disposal site (Greenleaf). Clean soils will replace excavated materials. The tanks in the battery have been reduced from 7 tanks to 2 tanks. The tank battery was not relocated to a new spot on the pad.

## Soil Remediation Summary

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 100

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_

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

No \_\_\_\_\_ Excavate and onsite remediation

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

\_\_\_\_\_ 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.

N/A

# REMEDATION 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? 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: \_\_\_\_\_

## REMEDATION COMPLETION REPORT

### REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

Do all soils meet Table 910-1 standards? No

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? Yes

Does Groundwater meet Table 910-1 standards? Yes

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

## 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 occur at final close out of 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? No

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

# 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). 11/06/2019

Date of commencement of Site Investigation. 11/06/2019

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

In reference to the COAs on approved Form 27 #402247335:

-Groundwater was not encountered during cleanup operations.

-The tank battery was not relocated on the pad. The number of tanks in the battery was reduced from 7 tanks to 2 tanks. The old liner and the gravel were removed and disposed of at Greenleaf.

In reference to the comments on approved Form 27 #402247335:

It is unknown why drill cuttings was indicated as type of waste; the type of waste is produced water.

Attached is documentation to address FAQ 31 and FAQ 32. Refer to attachments Hidden Creek 14-14 Nov 2009 Data Table, COCL430894 HCW 14-14 (1), Hells Gulch 26-6 Pad to Hidden Creek 14-14 Pad, COCL430894 HCW 14-14, and Hells Gulch 26-6 Pad FAQ 31 & 32 Letter 07-07-20.

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: 07/08/2020 \_\_\_\_\_

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: 07/31/2020 \_\_\_\_\_

Remediation Project Number: 14692 \_\_\_\_\_

## COA Type

## Description

	<p>Under the Remediation Progress Tab, the question "Was E&amp;P waste generated as part of this remediation?" NO was selected.</p> <p>IT IS NOT CLEAR WHAT EXACTLY THE OPERATOR DID WITH THE EXCEPTION OF REDUCING THE TANK BATTERY FROM 7 TANKS DOWN TO 2 TANKS AND THE LINER AND GRAVEL BEING DISPOSED AT GREEN LEAF. PLEASE PROVIDE A DISUSSION OF THE ACTIVITIES THAT TOOK PLACE AS PART OF THE SITE INVESTIGATION AND REMEDIATION.</p>
	<p>Table 1 Sample HG 26-6 BG states 8-12" and the Chain of Custody states 16-18". This was a sample apparently was collected for background arsenic, but the location of the sample was not apparent in the attachments. The lat/long provided on Table 1 locates this sample point approximately 637 west of the Location along the lease road. PLEASE CLARIFY.</p>

## **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>
402439162	FORM 27-SUPPLEMENTAL-SUBMITTED
402439169	ANALYTICAL RESULTS
402439170	ANALYTICAL RESULTS
402439172	MAP
402439175	ANALYTICAL RESULTS
402439179	OTHER
402439190	PHOTOS
402439196	ANALYTICAL RESULTS
402439197	ANALYTICAL RESULTS
402439198	ANALYTICAL RESULTS
402439199	ANALYTICAL RESULTS
402439200	ANALYTICAL RESULTS
402439201	PHOTOS

Total Attach: 13 Files

### **General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Environmental	Under the Remediation Complete tab, the final Request for Closure and been changed from YES to NO.	07/31/2020
Environmental	Background arsenic concentration from the Hidden Creek 14-4 Pad (Location ID333548) are over a mile away Hells Gulch 26-6 Location ID 311750; Spill ID 469075, and REM 14692.	07/31/2020

Total: 2 comment(s)