

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:

402247335

Receive Date:

11/22/2019

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> | Phone Numbers |
| 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 #: 14692Initial 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 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 GCMost Sensitive Adjacent Land Use RanchingIs domestic water well within 1/4 mile? NoIs surface water within 1/4 mile? YesIs 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:

☒ 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 | 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 _____ 0

Number of soil samples exceeding 910-1 _____

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

Approximate areal extent (square feet) _____

NA / ND

_____ Highest concentration of TPH (mg/kg) _____

_____ Highest concentration of SAR _____

_____ BTEX > 910-1 _____

_____ Vertical Extent > 910-1 (in feet) _____

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

_____ 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

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, tanks and liner may be relocated to a new spot on the pad.

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) _____ 100
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.

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? _____

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.

N/A

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

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.

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

Signed: Lorne C Prescott

Title: Reg & Enviro Compliance

Submit Date: 11/22/2019

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: 14692

COA Type**Description**

| | |
|--|--|
| | Operator's site investigation shall include an assessment of the soils at the base of the valve can located northeast of the tank battery and shall establish a point of compliance downgradient of the tank battery in the location of the compromised section of liner (NW corner). |
| | Operator shall provide a revised Reclamation Plan in addition to complete soil sampling documentation via a Supplemental eForm 27. |
| | Assess nature and extent of contamination with confirmation soil samples. The operator shall comply with Rule 910.b.(3) for collection of soil samples. The operator shall notify the COGCC and comply with Rule 910.b.(4) if groundwater is encountered during cleanup operations. |
| | Under Remediation Summary, operator indicates that "tanks and liner may be relocated to a new spot on the pad." COGCC approval of this eForm 27 does not constitute COGCC approval of operator's plan to relocate the tank battery. Operator shall coordinate with COGCC OGLA Staff in addition any other regulatory agency (including BLM) required for approval of tank battery relocation. |
| | If additional 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). |

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**

| | |
|-----------|--|
| 402247335 | INVESTIGATION/REMEDIATION WORKPLAN (INITIAL) |
| 402251225 | FORM 27-INITIAL-SUBMITTED |

Total Attach: 2 Files

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

| | | |
|---------------|---|------------|
| Environmental | Why does report indicate Drill Cuttings as Type of Waste? Clarify on Supplemental eForm 27. | 12/02/2019 |
| Environmental | Operator has submitted eForm 19 Spill/Release Report (Initial w/ Supplemental), doc #402249354, to report discovery of historical impacts during this site investigation. | 12/02/2019 |

Total: 2 comment(s)