

State of Colorado Oil and Gas Conservation Commission

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402655184

Receive Date:

04/12/2021

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 Phone: <u>(970) 9019007</u> Mobile: <u>(970) 9019007</u>
Address: <u>1401 17TH STREET SUITE #1400</u>		
City: <u>DENVER</u>	State: <u>CO</u> Zip: <u>80202</u>	
Contact Person: <u>Matt Kasten</u>	Email: <u>mkasten@laramie-energy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 17836Initial Form 27 Document #: 402655184

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>479751</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>Baker Canyon</u>		Latitude: <u>39.464769</u>	Longitude: <u>-108.243560</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>SENW</u>	Sec: <u>8</u>	Twp: <u>7S</u>	Range: <u>97W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

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

Other Potential Receptors within 1/4 mile

Groundwater depth at release site is unknown. Will be updated during investigation.

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
UNDETERMINED	GROUNDWATER	TBD	drilling delineation needed
UNDETERMINED	SOILS	TBD	Soil sampling delineation
No	SURFACE WATER	NA	Lab reported

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 lease operations, water was found to be surfacing along the gas processing line. Line was immediately shut in and a berm and booms were installed around leak area to minimize spill. Initial soil samples were collected to characterize surface spill impact. Additionally, a water sample was collected down gradient from spill area along Conn Creek. It is not anticipated that Conn Creek will be impacted with the release. Excavation of the area will be completed once the utilities are cleared. Additional information will be provided with the Supplemental Form 19.

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):

3 monitoring wells and 3 soil borings proposed. Soil borings depths and grab soil sampling locations will vary and rely on field screening (PID). Laramie does not expect to advanced drilling to depths past 50 feet below grade if impacts are not identified by field screening instruments. Depths of advancement will vary depending field conditions during drilling.

Proposed Groundwater Sampling

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

During delineation via drill rig. If groundwater is located, a well will be set and sampled accordingly for table 915. TBD - number of water wells and number of samples collected. Supplemental information will be provided in additional reports when made available. If groundwater is not encountered by 50' depth and field screening instruments do not identify soil impacts, the well will be set at 50 foot below grade and monitored quarterly for one year. It is expected to encounter ground water prior to 50 foot below grade.

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):

Delineation of site via drill rig is needed to determine next steps of investigation. Information not provided in initial form 27 will be supplied in supplemental form 27(s).

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected _____ 0
Number of soil samples exceeding 910-1 _____ 0
Was the areal and vertical extent of soil contamination delineated? _____
Approximate areal extent (square feet) _____ 0

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) _____ 0'
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

_____ 1 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?

background samples were collected during initial 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?

Site delineation needed. Information not provided in initial form 27 will be provided when details are received.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Original source was to be removed by heavy equipment. After repair, excavation began and was determined that a drill rig was needed to delineate location. If source removal is transported to facility for disposal, supplemental form 27(s) will be updated and provide documentation.

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.

-If impacts are not identified (soil and groundwater) after soil boring delineation, Laramie expects closure of site to be obtained within 3 months time. (1 year is water is located and must monitor for 1 full year).

Soil Remediation Summary

☐ In Situ

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

☐ Ex Situ

_____ Excavate and offsite disposal
_____ If Yes: Estimated Volume (Cubic Yards) _____
_____ 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.

TBD - updates to groundwater will be provided in supplemental form 27(s). At the moment, it is not expected that groundwater has been impacted.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other TBD - after initial boring delineation (quarterly likely)

Report Type: ☒ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report

☒ Other Rem Progress Report

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/seeding is not expected to be part of this project. If reclamation must occur, 1000 series rules will be followed and updated in supplemental form 27(s).

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 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. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/06/2021

Date of commencement of Site Investigation. 04/06/2021

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 04/06/2021

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Once Rem# is assigned to project, Form 19 DOC 402650012 (Spill 479751) will be requested for closure and work will proceed under REM#.

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: 04/12/2021

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: Steven Arauza

Date: 04/26/2021

Remediation Project Number: 17836

Condition of Approval**COA Type****Description**

	Operator shall conduct regular visual monitoring of downgradient sections of Conn Creek for potential surface water impacts.
	Comply with Rule 913.e.(3) quarterly reporting requirement for this Remediation Project. Per Rule 913, an alternative reporting schedule may be requested by the Operator for approval by the Director.
	Operator shall collect sample(s) from comparable, nearby non-impacted native soil for purposes of establishing background soil conditions including pH, electrical conductivity (EC) and sodium adsorption ratio (SAR), per Rule 915.e.(2).D.
	Per Rule 913.b.(2), the Operator will conduct sampling and analysis of soil, surface water, and groundwater--if encountered, to determine the horizontal and vertical extent of any contamination in excess of the cleanup concentrations in Table 915-1 for soil and groundwater. The Operator shall analyze samples for the complete Table 915-1 list and shall delineate the extent of impacts using the Table 915-1 Protection of Groundwater Soil Screening Level Concentrations.
	Submit Supplemental eForm 19 to request closure of Spill/Release ID #479751. Supplemental report shall comply with outstanding COAs, indicate that work is proceeding under an approved eForm 27 and shall reference the Remediation Project number assigned upon approval of this report.
5 COAs	

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**

402655184	FORM 27-INITIAL-SUBMITTED
402655395	SOIL SAMPLE LOCATION MAP

Total Attach: 2 Files

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

Environmental	Due to the presence of shallow groundwater and proximity to surface water, the Operator shall comply with the Table 915-1 Protection of Groundwater Soil Screening Level Concentrations for delineation and remediation of impacts to soil, groundwater, and surface water. See COAs above.	04/26/2021
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Total: 1 comment(s)