

State of Colorado Oil and Gas Conservation Commission

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Document Number:

403223325

Receive Date:

Report taken by:

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.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

Name of Operator: <u>LARAMIE ENERGY LLC</u>	Operator No: <u>10433</u>	Phone Numbers
Address: <u>1700 LINCOLN ST STE 3950</u>		Phone: <u>(970) 9019007</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80203</u>		Mobile: <u>(970) 9019007</u>
Contact Person: <u>Matt Kasten</u>	Email: <u>mkasten@laramie-energy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 11939 Initial Form 27 Document #: 401777422

PURPOSE INFORMATION

- ☐ Rule 913.c.(1): Pit or Cuttings Trench closure.
- ☐ Rule 913.c.(2): Buried or partially buried vessel closure, which will be by removal.
- ☒ Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912.
- ☐ Rule 913.c.(4): Land treatment of Oily Waste pursuant to Rule 905.e.
- ☐ Rule 913.c.(5): Closure of Centralized E&P Waste Management Facilities pursuant to Rule 907.h.
- ☐ Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1.
- ☐ Rule 913.c.(7): Investigation and remediation of natural gas in soil or Groundwater.
- ☐ Rule 913.c.(8): When requested by the Director due to any potential risk to soil, Groundwater, or surface water.
- ☐ Rule 913.c.(9): Decommissioning of Oil and Gas Facilities.
- ☐ Rule 913.g: Changes of Operator.
- ☐ Rule 915.b: Request to leave elevated inorganics in situ.
- ☐ Other: _____

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>CENTRALIZED EP WASTE MGMT FAC</u>	Facility ID: <u>441238</u>	API #: _____	County Name: <u>MESA</u>
Facility Name: <u>HARRISON CR WTR TRMENT FAC IMPOUND 441238</u>	Latitude: <u>39.268140</u>	Longitude: <u>-107.751830</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWNE</u>	Sec: <u>22</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 SC Most Sensitive Adjacent Land Use Ranching

Is domestic water well within 1/4 mile? Yes 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

None

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
No	GROUNDWATER	N/A	N/A

INITIAL ACTION SUMMARY

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

Pond 2, HCWTF was found to be leaking and reported via Form 19, doc num 401765168. No evidence of fluids escaping from the secondary liner system. Monitoring wells near the location indicated no sign of contamination. Fluid flows to the Pond were ceased and the Pond was drawn down to the point where fluids were no longer accumulating in the leak detection sump. Three (3) potential leak locations were identified, those locations were repaired on September 27, 2018.

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):

Proposed Groundwater Sampling

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

If groundwater is available in the Monitoring Wells, it will be sampled and compared to the criteria levels in the Pond water.

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 915-1 0

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet)

Groundwater

Number of groundwater samples collected 30

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 20

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 0

Surface Water

8 Number of surface water samples collected

0 Number of surface water samples exceeding 915-1

If surface water is impacted, other agency notification may be required.

NA / ND

NA Highest concentration of TPH (mg/kg)

NA Highest concentration of SAR

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet)

ND Highest concentration of Benzene (µg/l)

ND Highest concentration of Toluene (µg/l)

ND Highest concentration of Ethylbenzene (µg/l)

ND Highest concentration of Xylene (µg/l)

ND Highest concentration of Methane (mg/l)

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?

MW 6, remains to be below detection levels and site will continue to be monitored quarterly and analyzed for Table 915 groundwater.

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.

Since no fluids are currently accumulating in the leak detection sump, no additional produced water will be removed from Pond 2.
See attached

REMEDATION 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.

Since the date of the initial Form 19 submittal and the approval of the follow-on form 27 Document 401777422, the Pond 2 liner has been repaired. Subsequent to the repairs, fluids accumulating in the leak detection (LD) sump have consistently decreased. Currently, approximately 1 to 2 gallons of fluid accumulates on a daily basis. There is no evidence of impacts to soil or groundwater. As per conditions detailed in Document 401777422 a geo-hydro assessment of the location is being performed and potential locations for monitoring wells have been identified. Based on an initial review/suggestions by geo-hydrologists, we have scheduled a drilling team to be on location starting November 19, 2018 for installation of the MWs. Core samples will be collected and analyzed during the boring process. Immediately following the installation of the wells, if water is present, we will collect samples for lab analysis to confirm no contaminants have breached the secondary liner.

Preliminary Scope of Efforts for Pond 2, general drilling and sampling plans for the week of the 19th:

- We will drill five 2' wells 40-50' in depth Monday through Thursday and will likely carry into Friday.
- We plan to drill solid stem auger and sample an 18" split spoon every 5' to TD but will be prepared with a hollow stem auger if needed
- Wells will be completed as stickups the week of drilling
- If all soils appear to be clean and screen clean with the PID, we will not submit a sample for analysis. If split spoon samples above the water table appear to be impacted, we will submit those intervals for analysis
- Anticipate drilling the wells and characterizing soils to take the full days and that an Entrada representative will have to come out to the site from Grand Junction the following week to develop and sample the 5 wells for groundwater. If drilling goes faster than anticipated and time allows I will be prepared to develop and sample the wells the week of the 19th

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____

_____ Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC Facility ID # _____

_____ Natural Attenuation

_____ 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

_____ 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.

See attached. Q2 Updates/Requests

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

☐ Quarterly☐ Semi-Annually☒ Annually☐ Other

☐ Request Alternative Reporting Schedule:

☐ Semi-Annually☐ Annually☐ Other

Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

Report Type:

☐ Groundwater Monitoring☐ Land Treatment Progress Report☐ O&M Report☐ Other

Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).

If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

At this moment, quarterly sampling of project remains due to Form 28 facility. Remediation on MW6 has not encountered impacts for 3+ quarters. \$4,000 a quarter to sample with analytical will remain for life of Form 28 facility.

Operator anticipates the remaining cost for this project to be: \$ 4000

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:

REMEDIATION COMPLETION REPORT

REMEDIATION COMPLETION SUMMARY

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

If YES:

☐ Compliant with Rule 913.h.(1).☐ Compliant with Rule 913.h.(2).☐ Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards?

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards?

Is additional groundwater monitoring to be conducted? _____

Operator shall comply with the COGCC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

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.

Thi slocation will not be reclaimed until it is at the end of the Project Lifecycle.

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 provide the seed mix? _____

If YES, does the seed mix comply with local soil conservation district recommendations? _____

Did the local soil conservation district provide the seed mix? _____

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. _____

Proposed date of completion of Reclamation. _____

IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

PRIOR DATES

Date of Surface Owner notification/consultation, if required. _____

Actual Spill or Release date, or date of discovery. 08/11/2018

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/12/2018

Proposed site investigation commencement. 08/12/2018

Proposed completion of site investigation. 09/27/2018

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/19/2018

Proposed date of completion of Remediation. 11/25/2018

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

☐ Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

OPERATOR COMMENT

Q1 - Q3 HCWTF Data updates

Laramie is requesting:

1. Reporting schedule to be reduced to annually for data submittal; However, Data will be reviewed after collected quarterly and if impacts are discovered, COGCC will be notified immediately.

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

Signed: Matt KastenTitle: Project Manager

Submit Date: _____

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: _____

Date: _____

Remediation Project Number: 11939**COA Type****Description**

0 COA	

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**

403223326	ANALYTICAL RESULTS
403223327	ANALYTICAL RESULTS
403223328	ANALYTICAL RESULTS
403223329	ANALYTICAL RESULTS
403223330	ANALYTICAL RESULTS
403223331	SITE MAP

Total Attach: 6 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)