

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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404248947

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Report taken by:

John Heil

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 ECMC 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: QB ENERGY OPERATING LLC	Operator No: 10844	Phone Numbers
Address: 1001 17TH STREET SUITE 1600		Phone: (970) 902-3598
City: DENVER	State: CO	Zip: 80202
Contact Person: Andy Verbonitz	Email: averbonitz@qb-energy.com	Mobile: (970) 902-3598

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 37095 Initial Form 27 Document #: 403935843

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

Yes Multiple Facilities

Facility Type: CENTRALIZED EP WASTE MGMT FAC	Facility ID: 149012	API #: _____	County Name: RIO BLANCO
Facility Name: LOVE RANCH CENTRALIZED E&P WASTE	Latitude: 39.892642	Longitude: -108.296245	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNW	Sec: 9	Twp: 2S	Range: 97W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE	Facility ID: 487951	API #: _____	County Name: RIO BLANCO
Facility Name: Love Ranch Facility	Latitude: 39.889241	Longitude: -108.296215	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSW	Sec: 9	Twp: 2S	Range: 97W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use high priority habitat

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? Yes

Other Potential Receptors within 1/4 mile

Piceance Creek

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	GROUNDWATER	TBD	Laboratory Analytical
Yes	SOILS	TBD	Laboratory Analytical
No	SURFACE WATER	TBD	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.

Please refer to document number, 403928642 (Initial Form 19) and document number, 403935843 (Initial Form 27) for initial actions taken in support of this project. As part of remediation of project #37095, groundwater monitoring was initially conducted on a monthly basis since the addition of monitoring wells MW-100 through MW- 113. Monitoring wells MW-100 through MW- 113 were installed between September 18, 2024 and November 25, 2024. To further delineate the extent of inorganic groundwater impacts, monitoring wells MW14 through MW18 were installed between February 18, 2025 and February 19, 2025. Quarterly groundwater monitoring was approved on January 27, 2025 per Form 27, Document Number 404062712. Additional groundwater wells will be installed to further delineate inorganic exceedances east of the pond area and one upgradient monitoring well will be installed to evaluate inorganic background concentrations (Figure 2).

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):

Additional soil borings and/or monitoring wells will be advanced to delineate inorganic exceedances observed east of the pond area, below the point of release, and upgradient of the point of release (Figure 2). As each of these borings are advanced the soils will be field screened and soil samples will be collected from the zone of highest PID reading or immediately above the water table for laboratory submittal. During pond liner removal, the condition of both the liner and subgrade will be thoroughly documented. The soil beneath the liner will be inspected and screening locations be completed for every 2,000 square feet and every 60 feet along the pond perimeter. A total of 64 base screening locations and 29 perimeter screening locations are proposed. During pond liner removal, soil samples will only be collected from areas that exhibit elevated PID readings, show visual staining, or have an odor. Soil samples will be analyzed for ECMC full list Table 915-1.

Proposed Groundwater Sampling

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

Groundwater will be sampled on a quarterly basis from monitoring wells MW100 through MW118, plus the four proposed monitoring wells. Additional groundwater wells will be installed to further define inorganic exceedances observed in groundwater east of the pond area and at the point of release. One upgradient monitoring well is proposed for background groundwater evaluation. The proposed monitoring wells are shown on Figure 2.

Proposed Surface Water Sampling

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

Groundwater points of compliance have been established via MW100 through MW113. Unless those compliance points are lost, surface water sampling of Piceance Creek will not be conducted as part of this remediation project.

Additional Investigative Actions

- ☐ Additional alternative investigative actions described in attached Site Investigation Plan (summary):

During pond liner removal, the condition of both the liner and subgrade will be thoroughly documented. Photographic documentation will include any damaged sections of the liner, areas exhibiting visible staining or discoloration, and topographic low points where potential migration of impacted fluids may have occurred. Areas exhibiting impacts will be field screened for VOC concentrations using a PID. The soil beneath the liner will be inspected and screening locations be completed for every 2,000 square feet and every 60 feet along the pond perimeter. A total of 64 base screening locations and 29 perimeter screening locations are proposed. Soil samples will only be collected from areas exhibiting elevated PID readings or have visual staining or odor. Additional soil samples may be collected to assess impacts that may have occurred in the area around the POR. Soil samples will be analyzed for ECMC full list Table 915-1.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 59
Number of soil samples exceeding 915-1 7
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 0

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 51.89
BTEX > 915-1 Yes
Vertical Extent > 915-1 (in feet) 62

Groundwater

Number of groundwater samples collected 61
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 5
Number of groundwater monitoring wells installed 14
Number of groundwater samples exceeding 915-1 20

-- Highest concentration of Benzene (µg/l) 0.00194
ND Highest concentration of Toluene (µg/l) _____
-- Highest concentration of Ethylbenzene (µg/l) 0.00196
ND Highest concentration of Xylene (µg/l) _____
NA Highest concentration of Methane (mg/l) _____

Surface Water

0 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.

OTHER INVESTIGATION INFORMATION

☐ Were impacts to adjacent property or offsite impacts identified?

☒ Were background samples collected as part of this site investigation?

Upgradient monitoring wells MW-110 and MW-111 have been installed to establish background conditions of soil and groundwater in accordance with ECMC Rule 915.e.(2).D. One additional background monitoring well will be installed west of the point of release to provide additional background soil and groundwater data. Additional background samples may be collected southeast of the site to provide additional background soil groundwater data information as needed.

☐ 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?

Three monitoring wells will be installed east of the pond area and one monitoring well will be installed at the POR to further delineate the inorganic impacts in groundwater. One background monitoring well will be installed west of the POR to collect additional background soil and groundwater data. A soil boring may be completed near MW108 to assess the organic impacts identified in soil samples collected from the soil boring advanced at this location. Proposed Monitoring well locations are shown on Figure 2. Monitoring wells will be sampled on a quarterly basis and will be analyzed for benzene, TDS chloride and sulfate. Additional background soil and groundwater samples may be collected southeast of the site to as needed.

During liner removal, the condition of both the liner and subgrade will be thoroughly documented. Photographic documentation will include any damaged sections of the liner, areas exhibiting visible staining or discoloration, and topographic low points where potential migration of impacted fluids may have occurred. Areas exhibiting impacts will be field screened for VOC concentrations using a PID. The soil beneath the liner will be fully inspected, but it is recommended that screening locations be completed for every 2,000 square feet and along the perimeter of the pond (Figure 1). A total of 64 screening locations will be completed below the removed liner and 29 locations will be screened along the perimeter of the pond area. Soil samples will only be collected from areas that exhibit elevated PID readings, show visual staining, or have an odor. Soil samples will be analyzed for ECMC full list Table 915-1.

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.

The pond had been drained and removed from operation.

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.

After the investigation results are defined, QB Energy will develop a remediation strategy to be submitted in a future Form 27 Supplemental.

Soil Remediation Summary

☐

In Situ

☐

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

_____ Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____

Name of Licensed Disposal Facility or ECMC 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.

Currently, eighteen (18) monitoring wells have been installed and will continue to be sampled on a quarterly monitoring schedule. Four additional groundwater wells will be installed to further define inorganic exceedances east of the pond area, below the point of release, and one upgradient monitoring well for a total of 22 monitoring wells sampled quarterly. The monitoring wells will be analyzed for benzene, TDS chloride and sulfate. The current and proposed monitoring wells are shown on Figure 2.

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.

Per Rule 705.b, and in line with guidance laid out in the SBAP, QB Energy has general liability insurance in the amount of \$1M, and carries excess third liability coverage in the amount of \$50M per occurrence.

Operator anticipates the remaining cost for this project to be: \$ 200000

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

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels

E&P waste (liquid) description

ECMC Disposal Facility ID #, if applicable:

Non-ECMC 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 ECMC 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.

Reclamation will occur at the time of facility closure

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. 09/19/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/19/2024

Proposed site investigation commencement. 09/19/2024

Proposed completion of site investigation. 09/30/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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

This report is being submitted as a Q2-2025 update report for remediation project 37095 per ECMC Rule 913e. Additional laboratory analytical data that has not yet been submitted is also included.

Removal of the pond's poly liner will begin in Q3-2025. Soil beneath the liner will be field screened and sampled as described in the site investigation plan.

At this point it is unknown if the facility will be decommissioned or if it will return to operation following remediation of impacts from the subject release. Due to these uncertainties, investigation of any release associated impacts will be conducted as if the facility will be fully decommissioned.

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

Signed: Andy Verbonitz

Title: Remediation Specialist

Submit Date: 06/30/2025

Email: averbonitz@qb-energy.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: John Heil

Date: 07/16/2025

Remediation Project Number: 37095

COA Type**Description**

0 COA	

ATTACHMENT 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**

404248947	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404261283	ANALYTICAL RESULTS
404261284	ANALYTICAL RESULTS
404261285	ANALYTICAL RESULTS
404262095	SOIL SAMPLE LOCATION MAP
404262097	GROUND WATER SAMPLE LOCATION
404262105	ANALYTICAL DATA SUMMARY TABLE(S)
404262106	ANALYTICAL DATA SUMMARY TABLE(S)
404262107	ANALYTICAL DATA SUMMARY TABLE(S)
404281362	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 10 Files

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

Environmental	ECMC approves the attached Proposed Monitoring Well Locations Map and Pond Screening Locations.	07/16/2025
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Total: 1 comment(s)