

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:
404677009
Receive Date:
05/29/2026

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 ECOM 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>QB ENERGY OPERATING LLC</u>	Operator No: <u>10844</u>	Phone Numbers Phone: <u>(970) 285.2739</u> Mobile: <u>(970) 987.4650</u>
Address: <u>1001 17TH STREET SUITE 1600</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>
Contact Person: <u>Brett Middleton</u>	Email: <u>bmiddleton@qb-energy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 42721 Initial Form 27 Document #: 404341853

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: First Quarter (Q1) 2026 Status Update to Remediation Project Number (RPN) 42721

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>PIT</u>	Facility ID: <u>290544</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>LATHAM O-29</u>	Latitude: <u>39.579531</u>	Longitude: <u>-108.191265</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>29</u>	Twtp: <u>5S</u>	Range: <u>96W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use agricultural
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

North Little Creek and Little Creek are located approximately 450 feet east and 410 feet north of the pit location.

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	TBD	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.

Please refer to the State of Colorado Energy and Carbon Management Commission (ECMC) Document Number (DN) 404484813 for details on the initial pit closure sampling activities.

In accordance with ECMC Rules 913.b.(2) and 915.e.(2).B a total of 10 assessment soil/bedrock borings were advanced to delineate impacts reported in initial closure sampling. Eight (8) borings were advanced along the perimeter of the pit, and two (2) borings were advanced within the pit (SB04, SB08). Perimeter borings were advanced to 25 feet below ground surface (bgs) and borings within the pit were advanced to 24 feet bgs. It is estimated the depth of the pit is approximately 14 feet bgs. Discrete intervals of soil were collected using a California Sampler (split spoon) beginning at approximately 5 feet bgs. Assessment soil sample collection continued in 5-foot increments until bedrock was encountered. Once bedrock was encountered continuous core tooling was used to collect bedrock samples in 5-foot increments until the boring terminus. Bedrock cores were crushed into a powder. The crushed bedrock and assessment soil samples' headspaces were field screened using a photoionization detector (PID) to monitor for the presence or absence of volatile organic compounds. Soils and bedrock cores were observed for any petroleum hydrocarbon odor, and/or staining, including naturally present kerogen. A total of 28 assessment samples were submitted to Elevation Diagnostics (Elevation) of Aurora, Colorado for laboratory analysis of Table 915-1 constituents for soil. Boring locations, with respect to the Site, can be viewed in Figure 1 of the attached report of work completed (ROWC) under "Site Investigation Report".

Please refer to the attached ROWC for complete details associated with the investigative activities completed in Q1 of 2026.

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 sampling will occur to confirm removal of hydrocarbon impacts within the pit, specifically total petroleum hydrocarbons - diesel range organics (TPH-DRO) and Benzo(a)pyrene (BaP). Please see the "Remediation Summary" section of this form for these details. Sample locations can be referenced in the analytical exceedance map (Figure 2) under DN 404484813.

SAR impacts will be defined by advancing a boring in the location of SB04 and a step-out boring north of SB10. The soil boring advanced in the SB04 location will be advanced to a total depth of 34 feet bgs to define the vertical extent of SAR impacts. Bedrock cores will be collected beginning at 24 feet bgs. The soil boring advanced north of SB10 will be advanced to a total depth of 25 feet bgs. Soil/bedrock samples will be collected beginning at 5 feet bgs and continuing in 5-foot intervals until the boring terminus.

Please reference the attached ROWC for complete details of the proposed plans.

Proposed Groundwater Sampling

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

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):

To satisfy the Condition of Approval listed in DN 404341853, a source of produced water sample representative of the fluids formerly stored within the LATHAM O-29 pit during operation was collected. The source sample was collected from a tank battery situated on the 31A pad (ECMC Location ID: 335875). The source sample was submitted to Elevation for laboratory analysis of Table 915-1 constituents for groundwater, Table 915-1 metals, and potential of hydrogen (pH). The source water sample location with respect to the Site can be reference in the attached ROWC (Figure 2). Please reference the attached ROWC for complete details.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 28

-- Highest concentration of TPH (mg/kg) 3314.563

Number of soil samples exceeding 915-1 28

-- Highest concentration of SAR 34.11

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

BTEX > 915-1 No

Approximate areal extent (square feet) 15000

Vertical Extent > 915-1 (in feet) 25

Groundwater

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No

Highest concentration of Toluene (µg/l) _____

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

Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed _____

Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 _____

Highest concentration of Methane (mg/l) _____

Surface Water

0 Number of surface water samples collected

_____ 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?

Previous background samples were collected in support of other ongoing projects at or near the O29 596 location in accordance with ECMC Rule 915.e. (2)D. Please refer to DN 404484813 for these details.

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?

Please see the "Proposed Soil Sampling" and ROWC for these details.

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.

Above liner impacts were removed via hydro-vac, liner was disposed of at a commercial disposal facility.

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.

Small excavations will be advanced within the existing pit footprint to remove reported impacts of TPH-DRO and/or BaP at previously sampled locations; W1, S1, and S2. Field screening using a PID will be conducted simultaneously with the excavations to confirm removal of impacted soil. Once the excavations are complete, confirmation soil samples will be collected and submitted for laboratory analysis to determine if the removal of impacted soil was successful. Excavated material from each location will be stockpiled onsite and a 5-point composite sample will be collected from the stockpiled material. If the stockpile is greater than 500 cubic yards multiple composite samples will be collected.

Please reference the attached ROWC and "Proposed Soil Sampling" section for additional details.

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 ECMC 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)

_____ 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.

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 Pit Facility Closure - Q1 Status Update to RPN 42721 _____

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 \$5M, and QB Energy has umbrella insurance, which sits over the general liability insurance in the amount of \$65M. The umbrella and general liability insurance covers property damage, bodily injury to third parties, and sudden or accidental pollution under a combined \$70M

Operator anticipates the remaining cost for this project to be: \$ 75000 _____

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes _____

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Pit bottoms were removed via hydro-vac. The liner and above liner sediment were disposed of at Greenleaf Environmental Services. The liner after washing was disposed of as construction debris at Rio Blanco Landfill.

Volume of E&P Waste (solid) in cubic yards _____ 0

E&P waste (solid) description _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

Volume of E&P Waste (liquid) in barrels _____ 55

E&P waste (liquid) description above liner pit bottoms _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Greenleaf Environmental Services _____

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 comply with ECMC 1000 series rules after investigation and remediation is complete.

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. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/25/2025

Proposed site investigation commencement. 11/25/2025

Proposed completion of site investigation. 06/29/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/13/2026

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

Based on the approved Q1 2026 Form 27 (Doc # 404570275), ECMC approved the request for a reduced analyte suite of TPH, BaP, EC, SAR, and HWS-B, and included Benz(a)anthracene, Benzo(a)pyrene, and Dibenz(a,h)anthracene for future analysis due to the laboratory not meeting the detection limits of ECMC Table 915-1. QB is requesting reconsideration of that decision and asks that these three analytes be removed from the required analytical suite.

A letter from the analytical laboratory has been attached to this submission explaining the reason for the elevated method detection limits. The laboratory's explanation identifies matrix interference from naturally occurring TPH (ORO) present in the native bedrock at this location as the cause of the increased dilution factor applied during sample preparation. Figures 2 and 3 of the attached report are photos of the soil's post extraction as a fluid which shows the presence of the pigmentation. This pigmentation will cause instrumentation failure, so a dilution is required. When the dilution factor increases, the reported MDL scales proportionally, meaning the <MDL values reported in the analytical results reflect the dilution — not instrument failure or the presence of contamination above detectable thresholds.

Figures 4, 5, and 6 of the attached report provide chromatogram results for the SVOC analysis. These chromatograms show no peaks for the target PAH analytes in the environmental samples. Peaks were observed only in the Laboratory Control Sample (LCS), confirming that the instrument was functioning correctly and capable of detecting these compounds when present. This result confirms a true non-detection in the environmental samples. The elevated <MDL values are a reporting requirement of the required dilution factor and do not indicate that the compounds were present but unquantifiable.

In addition, the analytical results collected from the base of the pit throughout the project history have not shown detections of Benz(a)anthracene, Benzo(a)pyrene, or Dibenz(a,h)anthracene. Dilution factors were not an issue for those samples because they were not collected from native bedrock containing elevated levels of naturally occurring TPH-ORO. Those samples met ECMC Table 915-1 detection limit requirements and returned results which were at or below the ECMC required detection limits for the three analytes in question.

Although the method detection limits for these three analytes are higher than the applicable ECMC Table 915-1 RSSLCs due to the matrix conditions described above, all assessment samples previously collected within the project area (pit), where impacts would be reasonably expected to occur, reported concentrations compliant with the corresponding ECMC Table 915-1 RSSL constituents. This data set demonstrates that Benz(a)anthracene, Benzo(a)pyrene, and Dibenz(a,h)anthracene have not been detected at levels of concern within the area of potential impact, supporting their removal from the required analytical suite and continued use of the originally approved reduced suite.

Based on the laboratory documentation, chromatographic evidence of non-detection, and the historical analytical dataset described above, QB respectfully requests that ECMC reconsider and approve the removal of Benz(a)anthracene, Benzo(a)pyrene, and Dibenz(a,h)anthracene from the required analytical suite, allowing continued monitoring under the originally approved reduced analyte suite.

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

Signed: Brett Middleton

Title: EHS Lead

Submit Date: 05/29/2026

Email: bmiddleton@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: 06/02/2026

Remediation Project Number: 42721

COA Type

Description

1 COA	ECMC approves the request for a reduced analyte suite of TPH, BaP, EC, SAR, and HWS-B.
-------	--

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

404677009	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404677043	CORRESPONDENCE
404680960	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)