

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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Document Number:

404205258

Receive Date:

05/28/2025

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 Phone: (970) 778-2314 Mobile: (970) 778-2314
Address: 1001 17TH STREET SUITE 1600		
City: DENVER State: CO Zip: 80202		
Contact Person: Jake Janicek	Email: jjanicek@qb-energy.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36102 Initial Form 27 Document #: 403815800

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: PIT	Facility ID: 101728	API #: _____	County Name: RIO BLANCO
Facility Name: CORRAL CREEK 4512	Latitude: 39.940059	Longitude: -108.582235	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNE	Sec: 26	Twp: 1S	Range: 100W Meridian: 6 Sensitive Area? Yes

Facility Type: PIT	Facility ID: 117406	API #: _____	County Name: RIO BLANCO
Facility Name: 69-016755A	Latitude: 39.925656	Longitude: -108.561078	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 36	Twp: 1S	Range: 100W Meridian: 6 Sensitive Area? Yes

Facility Type: WELL		Facility ID: _____		API #: 103-08183		County Name: RIO BLANCO	
Facility Name: CORRAL CREEK 4512				Latitude: 39.925480		Longitude: -108.560838	
** correct Lat/Long if needed: Latitude: _____ Longitude: _____							
QtrQtr: NENE	Sec: 36	Twp: 1S	Range: 100W	Meridian: 6	Sensitive Area? Yes		

Facility Type: LOCATION		Facility ID: 315262		API #: _____		County Name: RIO BLANCO	
Facility Name: CORRAL CREEK DAK-MOR FED-61S100W 36NENE				Latitude: 39.925750		Longitude: -108.560564	
** correct Lat/Long if needed: Latitude: _____ Longitude: _____							
QtrQtr: NENE	Sec: 36	Twp: 1S	Range: 100W	Meridian: 6	Sensitive Area? Yes		

SITE CONDITIONS

General soil type - USCS Classifications OH _____ Most Sensitive Adjacent Land Use Rangeland _____

Is domestic water well within 1/4 mile? No _____ Is surface water within 1/4 mile? No _____

Is groundwater less than 20 feet below ground surface? No _____

Other Potential Receptors within 1/4 mile

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	See Maps	Field investigation and 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 see documents #403815800, #404031001, and #404087064 for a summary of site investigation activities completed prior to March 2025.

On March 11, 2025, ten (10) 5-point composite soil samples were collected from six (6) existing soil stockpiles associated with previous site investigation excavations and analyzed for ECMC Table 915-1. Excluding TPH, SAR, pH, arsenic, and Chromium VI, the sample analytical results did not exceed the ECMC Table 915-1 RSSLs cleanup concentrations. TPH was detected at concentrations above ECMC Table 915-1 at three (3) stockpile soil sample locations which include [20250311-A36 1100-(STOCK02B)], [20250311-A36 1100-(STOCK03B)], and [20250311-A36 1100-(STOCK03C)]. On April 11, 2025, WSP USA Inc. (WSP) collected samples of rocks originating from the three (3) stockpiles that exhibited Table 915-1 TPH exceedances and analyzed the samples for full ECMC Table 915-1 analytes. Excluding SAR, pH, arsenic, and chromium VI, the sample analytical results did not exceed ECMC Table 915-1 RSSLs. Please see the attached Site Investigation Report completed by WSP for additional details. See "Remediation Summary" section for how QB Energy plans to address the exceedances exhibited in the site assessment samples presented in document #404087064, stockpile soil samples, and stockpile rock samples. Per the general comments from the ECMC in document #404087064, the Remediation Summary now compares all of the site assessment samples to only the site-specific background soil samples collected adjacent to the Corral Creek 4512 Pad. The background samples that were utilized were collected from comparable depths as the site-assessment sample depths.

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):

Please see the Site Investigation Report section for details on additional sampling.

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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 80

Number of soil samples exceeding 915-1 80

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

Approximate areal extent (square feet) 2500

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 915-1

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.

NA / ND

-- Highest concentration of TPH (mg/kg) 2728.94

-- Highest concentration of SAR 14.5

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 16

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)

OTHER INVESTIGATION INFORMATION☐ Were impacts to adjacent property or offsite impacts identified?☒ Were background samples collected as part of this site investigation?

All site-assessment soil samples were collected from depths ranging from 1-17 feet bgs, and all soil stockpiles were generated from soil at depths of 1-17 feet bgs. Therefore, eighteen (18) background soil samples - collected from areas north, east, and west of the Corral Creek Dak-Mor Fed-61S100W 36 NENE Pad ranging from depths of 5-15 feet bgs - were utilized to compare to the site-assessment soil samples. The depth range of the background soil samples is similar to that of the site-assessment soil samples and will offer a more accurate display of naturally occurring background inorganic analytes present in the site-assessment soil samples.

☐ 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?

Additional soil samples will be collected to delineate the boron exceedance associated with the sample location [20240925-A36 1100-(FC-PL02)@5]. QB Energy requests approval to remove the PL02 investigation area from Remediation Project #36102. An Initial Form 27 will be created to address the boron exceedance associated with the PL02 investigation area.

To address the TPH exceedances identified at soil samples [20250311-A36 1100-(STOCK02B)], [20250311-A36 1100-(STOCK03B)], and [20250311-A36 1100-(STOCK03C)], QB Energy intends to remove the rocks from the three above-mentioned stockpiles and then segregate the stockpiles from all other stockpiles on site for remediation, which will include shredding the soil within the stockpiles to facilitate the volatilization of the TPH compounds. Via the 4/11/2025 sampling event, the rock associated with the samples mentioned above in this paragraph have been verified as compliant with TPH Cleanup Levels listed in ECOM Table 915-1. QB Energy requests a reduced analyte suite of TPH only for further sampling of the stockpiles. Once the TPH is no longer present in concentrations above ECOM Table 915-1 concentrations within the three stockpiles, QB Energy intends to use the stockpiled soils as backfill.

QB Energy intends to combine all soil stockpiles that did not have any TPH exceedances into one stockpile that will be blended to address the chromium (VI) exceedance observed in the soil sample [20250311-A36 1100-(STOCK06)]. QB Energy requests a reduced analyte suite of chromium (VI) only for further sampling of this stockpile. Once chromium (VI) is no longer present in concentrations above ECOM Table 915-1 RSSLs, QB Energy intends to use this soil stockpile as backfill.

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.

All impacts are being considered historical. Therefore, a source cannot be identified.

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.

Results from within the facility decommissioning areas exhibited ECMC Table 915-1 RSSL exceedances for arsenic in all site-assessment and stockpile soil samples as well as the three (3) stockpile rock samples. To address the arsenic exceedances, QB Energy requests an alternative allowable limit of 15.75 mg/kg for arsenic per ECMC Table 915-1 Footnote 11. Background arsenic concentrations range from 2.77-12.6 mg/kg. Per ECMC Table 915-1 Footnote 11, this adjusted range would be revised to 2.77 to 15.75 mg/kg. Excluding the sample collected from the south wall [20241111-A36 1100-(T02-SW02)@8] of the combined buried drip tank and meter house excavation, arsenic concentrations exhibited in vertical and horizontal delineation sample locations, as well as all stockpile rock and soil samples, fall within this adjusted range of arsenic values. The south wall of the excavation was extended horizontally, and the subsequent sample collected [20241210-A36 1100-(T02-SW03)@8] did not exceed the adjusted background range for arsenic.

pH was detected at concentrations above the ECMC Table 915-1 Cleanup Levels in 58 of the 80 site assessment and stockpile soil samples and in all three (3) stockpile rock samples. However, background pH concentrations range from 7.81 to 9.21. Therefore, QB Energy requests an alternative allowable range of 7.81 to 9.21 for pH per ECMC Table 915-1 Footnote 1 based on the pH concentrations demonstrated in the background soil samples. Excluding the four (4) samples collected from the extended separator area excavation, which are ([20241001-A36 1100-(SEP-BASE)@7], [20241001-A36 1100-(SEP-EW)@7], [20241001-A36 1100-(SEP-SW)@7], and [20241001-A36 1100-(SEP-WW)@7]), the site-assessment soil samples and stockpile soil and rock samples which exhibited Table 915-1 exceedances for pH are less than or within the adjusted background range for pH or have been excavated and removed.

See Operators Comment Section for a continuance of this section.

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.

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 \$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: \$ 200000

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

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 be completed once all site closure assessments and remediation, if necessary, activities are completed.

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). 08/01/2024

Proposed site investigation commencement. 08/01/2024

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. 09/18/2024

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

Continued from Remediation Summary for pH exceedances: The initial soil samples collected directly beneath the separator side dumpline 90 degree tie-in [20240906-A36 1100-(FC-SEP-DL)@3], directly beneath the former separator unit location [20240906-A36 1100-(FC-SEP)@1], and the separator side wellhead flowline 90 degree tie-in [20240906-A36 1100-(FC-SEP-FL)@3] did not exhibit any Table 915-1 RSSL exceedances for pH when compared to the adjusted background ranges described above. Five (5) soil samples were collected from the excavation that resulted from the removal of the flowlines at 7 feet bgs, four (4) of which exceeded Table 915-1 and background concentrations for pH. It is QB Energy's belief that any possible release resulting in elevated pH concentrations from the separator unit, separator side dumpline 90 degree tie-in, or the separator side wellhead flowline 90 degree tie-in would have also occurred at the depths of the initial samples collected on September 6, 2024, (1, 3, and 3 feet bgs, respectively). Since there weren't any Table 915-1 RSSL hydrocarbon exceedances associated with the pH exceedances demonstrated in the deeper samples, it is QB Energy's belief that the Table 915-1 pH exceedances associated with the deeper samples are natural and not as a result of a possible release.

SAR was detected at concentrations above the Table 915-1 cleanup concentration at twenty-four (24) site assessment and stockpile soil sample locations and in all three (3) stockpile rock samples. However, background SAR concentrations range from 2.66 to 23.7. QB Energy requests an alternative allowable range of 2.66 to 23.7 for SAR per Table 915-1 Footnote 1 based on the SAR concentrations demonstrated in the background soil samples. The site-assessment soil and stockpile soil and rock samples which exhibited Table 915-1 exceedances for SAR are less than or within the adjusted background range for SAR or have been excavated and removed.

Chromium (VI) was detected at concentrations above the ECMC Table 915-1 RSSLs at seventy-one (71) site-assessment and stockpile soil sample locations. Additionally, chromium (VI) was detected at concentrations above the Table 915-1 at two (2) rock stockpile sample locations. Due to the Table 915-1 RSSLs Cleanup Concentration for chromium (VI) being less than the Practical Quantitation Limit (PQL), the PQL of 1.00 mg/kg has been substituted for the cleanup concentration of 0.3 mg/kg as permitted in Table 915-1 Footnote 9. Soil from the site-assessment locations that exhibited chromium (VI) concentrations greater than the PQL of 1.00 mg/kg have been excavated and subsequent soil samples exhibit concentrations below the PQL of 1.00 mg/kg. Five (5) of the six (6) chromium (VI) exceedances from the stockpile soil samples and the two (2) chromium VI exceedances from the stockpile rock samples are less than the Practical Quantitation Limit (PQL) of 1.00 mg/kg. Soil sample [20250311-A36 1100-(STOCK06)] exhibited a chromium (VI) concentration greater than the PQL of 1.00 mg/kg.

TPH was detected at concentrations above the Table 915-1 RSSLs at eight (8) site-assessment soil sample locations. Soil from the site-assessment sample locations has been excavated and subsequent soil samples were collected and are below the Table 915-1 cleanup concentration. TPH was detected at concentrations above the Table 915-1 RSSLs at six (6) of the initial soil stockpile sample locations. After QB Energy combined all stockpiles, Kleinfelder collected additional stockpile samples as described in the Initial Action Summary. TPH was detected at concentrations above the Table 915-1 RSSLs in the soil samples [20250311-A36 1100-(STOCK02B)], [20250311-A36 1100-(STOCK03B)], and [20250311-A36 1100-(STOCK03C)]. TPH was not detected above Table 915-1 concentrations in any of the three (3) rock samples.

Due to character limits, please see the attached Site Investigation Report for points of compliance associated with the investigative areas.

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

Signed: Jake Janicek

Title: EHS Specialist

Submit Date: 05/28/2025

Email: jjanicek@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: 07/02/2025

Remediation Project Number: 36102

COA Type

Description

0 COA	
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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

404205258	INVESTIGATION/REMEDIATION WORKPLAN (SUPPLEMENTAL)
404206032	ANALYTICAL RESULTS
404206039	ANALYTICAL RESULTS
404206043	ANALYTICAL RESULTS
404206045	ANALYTICAL RESULTS
404219366	SITE INVESTIGATION REPORT
404266020	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	ECMC approves the request for a reduced analyte suite of chromium (VI) only for further sampling of the stockpile that did not have any TPH exceedances.	07/02/2025
Environmental	ECMC approves the request for a reduced analyte suite of TPH only for further sampling of the stockpiles.	07/02/2025
Environmental	ECMC approves the use of Practical Quantitation Limit (PQL) of 1.00 mg/kg for chromium (VI).	07/02/2025
Environmental	ECMC approves the statement "QB Energy's belief that the Table 915-1 pH exceedances associated with the deeper samples are natural and not as a result of a possible release."	07/02/2025
Environmental	ECMC approve the requests for an alternative allowable range of 2.66 to 23.7 for SAR.	07/02/2025
Environmental	ECMC approves the requests for an alternative allowable limit of 15.75 mg/kg for arsenic.	07/02/2025
Environmental	ECMC approves the request for an alternative allowable range of 7.81 to 9.21 for pH.	07/02/2025

Total: 7 comment(s)