FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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

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Report taken by: Steven Arauza

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 INFORMATON

Name of Operator: CAERUS PICEANCE LLC Operator No: 10456
Address: 1001 17TH STREET #1600
City: DENVER State: CO Zip: 80202
Contact Person: Jake Janicek Email: jjanicek@qb-energy.com

Phone Numbers
Phone: (970) 778-2314
Mobile: (970) 778-2314

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 35474 Initial Form 27 Document #: 403770880

PURPOSE INFORMATION

- [ ] Rule 913.c.(1): Pit or Cuttings Trench closure.
- [X] 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.
- [X] Other: Request for Closure of Remediation Project Number (RPN) 35474

SITE INFORMATION

No Multiple Facilities

Facility Type: LOCATION Facility ID: 324388 API #: County Name: GARFIELD
Facility Name: PUCKETT-66S97W 25SENW Latitude: 39.495217 Longitude: -108.172213
** correct Lat/Long if needed: Latitude: 39.495762 Longitude: -108.172460
QtrQtr: SENW Sec: 25 Twp: 6S Range: 97W 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:

- [X] **E&P Waste**
  - [X] Produced Water
  - [ ] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA)
- [ ] **Non-E&P Waste**

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
No	SOILS	NA	Field Observations and Lab Analysis

INITIAL ACTION SUMMARY

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

Following the removal of the partially buried vault [SN 4162] at the PUCKETT-66S97W 25SENW (Puckett 234-25), four sidewall soil samples and one base soil sample were collected from the PBV excavation footprint on September 13, 2024. A minimum of six inches of soil was first scraped back from each sampling surface prior to collection to assure representative samples were collected. All confirmation samples were collected from areas exhibiting the greatest degree or potential of impact based on field observation. Additionally, the transfer flowline between the former PBV and separator skid was trenched to remove PBV associated piping infrastructure. Two 5-point composite samples were collected from the stockpiles onsite. STOCK01 consisted of soils removed from the PBV excavation footprint and STOCK02 consisted of soils removed to access associated PBV piping infrastructure between the PBV footprint and separator. The headspace of each soil sample was field screened using a photo-ionization detector (PID) to detect for the presence or absence of volatile organic compounds (VOCs). Soils were also field characterized by a geologist for hydrocarbon odors or staining via visual and olfactory senses. A total of seven confirmation soil samples were submitted to Pace Analytical for laboratory analysis of ECMC Table 915-1 constituents.

Please see the attached report of work completed (ROWC) for details regarding soil sampling activities, accompanying figures, and a discussion of the analytical results.

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):

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: 7

Number of soil samples exceeeding 915-1: 7

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

Approximate areal extent (square feet): 240

NA / ND

-- Highest concentration of TPH (mg/kg): 293.1, 605

-- Highest concentration of SAR: 0.491

BTEX > 915-1: No

Vertical Extent > 915-1 (in feet): 0

Groundwater

Number of groundwater samples collected: 0

Was extent of groundwater contaminated delineated? Yes

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

Number of groundwater monitoring wells installed:

Number of groundwater samples exceeding 915-1:

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

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?

To provide comparison to background soil conditions, six site specific background soil samples were collected from four nearby, undisturbed native areas in accordance with ECMC 915.e.(2).D. These backgrounds were submitted for laboratory analysis of electrical conductivity (EC), sodium adsorption ratio (SAR), pH, hot water soluble boron, and ECMC Table 915-1 metals.

Please see the attached ROWC for more information regarding the collection of the site-specific background samples, a discussion of the analytical results, and supporting figures.

☐ 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?

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.

There are no impacts associated with this project. Therefore source removal details cannot be provided.

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.

Remediation is not necessary associated with this project.

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 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 for Closure of RPN 35474

☐ **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, Caerus has general liability insurance in the amount of $1M, and Caerus has umbrella insurance, which sits over the general liability insurance in the amount of $75M. The umbrella and general liability insurance covers property damage, bodily injury to third parties, and sudden or accidental pollution under a combined $76M.

Operator anticipates the remaining cost for this project to be: $ 0

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? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? Yes

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.

Any excavation associated with this project will be backfilled to match existing pad elevation.

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). 05/15/2024

Proposed site investigation commencement. 05/15/2024

Proposed completion of site investigation. 09/18/2024

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

In order to address the arsenic exceedances, Caerus requests the Director to consider the use of ECMC Table 915-1, Footnote 1 to remove arsenic as a contaminant of concern (COC). The arsenic concentrations observed in the seven confirmation soil samples ranged from 4.00 milligram per kilogram (mg/kg) to 42.0 mg/kg. These arsenic concentrations are within the arsenic concentration observed in a background sample associated with a nearby site, PUCKETT-66S97W/25SESE [Puckett 44C-25 (Facility ID: 324244)]. The Puckett 44C-25 is located approximately 0.75 miles southeast of the Site and is in the same soil horizon as the Puckett 234-25 per ECMC GIS Database, Map Unit Symbol 682 - Parachute-Rhone loams (5 - 30% slopes). Puckett 44C-25 background soil sample 20240612-LMBG-(PUCKETT 44C-25-S) @ 1 reported a arsenic concentration of 53.0 mg/kg.

To address the chromium (VI) exceedances, Caerus requests the Director to consider the use of ECMC Table 915-1 Footnote 1 and Footnote 9 to evaluate this project for remediation success.

The chromium (VI) concentrations observed in the seven confirmation soil samples ranged from 0.539 to 0.635 mg/kg. These chromium (VI) concentrations are within the chromium (VI) concentration observed in a background sample associated with a nearby site, CHEVRON J13 697 [J13 697 (Facility ID: 335616)]. The J13 697 is located approximately 1.8 miles north of the Site and is in the same soil horizon as described above. J13 697 background soil sample 20240725-LMBG-(J13 697-E)@10-11.5 reported a chromium (VI) concentration of 0.651 mg/kg.

To further address the chromium (VI) exceedances, Caerus requests that the Director consider the use of ECMC Table 915-1, Footnote 9 to use the analytical laboratory's reporting detection limit of 1.0 mg/kg as an alternative screening level. Although there are reported hexavalent chromium concentrations exceeding the ECMC Table 915-1 RSSLCs associated with sample locations STOCK01 and STOCK02, as described in the attached ROWC, these concentrations are below the Reporting Detection Limit (RDL) of 1.0 mg/kg resulting in an analytical laboratory qualifying J-flag.

Figure 6 of the attached ROWC includes a geo-proximity map depicting the distance between the Site and the two referenced nearby pad locations (Puckett 44C-25 and J13 697). Lab reports are included in Enclosure B of the attached document.

In accordance with ECMC Table 915-1, Footnote 7, Caerus requests the Director that RPN 35474 be evaluated under ECMC Residential Soil Screening Level Concentrations (RSSLCs) due to the observations and facts provided below as it relates to potential pathway(s) to groundwater associated with the Puckett 234-25 location.

1) No groundwater was/has been observed infiltrating, pooling, or standing within the excavation footprint at any point during the excavation or sample collection activities.
2) The nearest sensitive surface receptor (0.20 miles south) is an unnamed ephemeral stream identified on the United States Geological Survey (USGS) topo map provided by the ECMC GIS Online. This stream is a part of a system of streams that provide drainage for the Garden Gulch basin during periods of high snowmelt or during extreme weather events.
3) Nearby monitoring well (39.492616, -108.169059), Department of Water Resources (DWR) Well Permit Number 271290, is located 0.25 miles southeast of the Puckett 234-25 pad location. The Puckett 234-25 pad sits approximately 200 feet higher elevation than the above referenced monitoring well location. The depth to water documented on the well construction and test report is 260 feet below ground surface (bgs).

Based on the information presented in the attached ROWC and in this document, Caerus requests the Director to assign a "No Further Action" designation to RPN 35474 which is associated with the removal of the former PBV (SN 4162) at the Puckett 234-25 (Facility ID: 324388) pad location.

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: 11/25/2024 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: Steven Arauza Date: 01/06/2025

Remediation Project Number: 35474

COA Type	Description
	Based on review of information presented it appears that no further action is necessary at this time, and ECMC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards or if surface and/or ground water is found to be impacted, then further investigation and/or remediation activities will be required at the site. In addition, the non-working surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules including the establishment of vegetative cover on non-cropland and successful growth on cropland. Landowner must approve reclamation of cropland.
1 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
403994538	INVESTIGATION/REMEDIATION WORKPLAN (SUPPLEMENTAL)
404004222	ANALYTICAL RESULTS
404004223	ANALYTICAL RESULTS
404004225	ANALYTICAL RESULTS
404004226	ANALYTICAL RESULTS
404005612	ANALYTICAL RESULTS
404005732	SITE INVESTIGATION REPORT
404048047	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 8 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)