

State of Colorado Energy & Carbon Management Commission

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Report taken by:

Laurel Anderson

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>BLUE CHIP OIL INC</u>	Operator No: <u>8840</u>	Phone Numbers Phone: <u>(970) 493-6456</u> Mobile: <u>()</u>
Address: <u>155 E BOARDWALK DR STE 400</u>		
City: <u>FORT COLLINS</u>	State: <u>CO</u> Zip: <u>80525</u>	
Contact Person: <u>Tim Hager</u>	Email: <u>bluechipoil14@msn.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26126 Initial Form 27 Document #: 403193062

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: <u>SPILL OR RELEASE</u>	Facility ID: <u>245254</u>	API #: _____	County Name: <u>BROOMFIELD</u>
Facility Name: <u>SHANNON ROBERTS 26-5</u>		Latitude: <u>40.026360</u>	Longitude: <u>-104.966170</u>
		** correct Lat/Long if needed: Latitude: <u>40.026453</u>	Longitude: <u>-104.965638</u>
QtrQtr: <u>NWNE</u>	Sec: <u>26</u>	Twp: <u>1N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>LOCATION</u>	Facility ID: <u>321537</u>	API #: _____	County Name: <u>BROOMFIELD</u>
Facility Name: <u>SHANNON ROBERTS-61N68W 26NWNE</u>		Latitude: <u>40.025988</u>	Longitude: <u>-104.966545</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>NWNE</u>	Sec: <u>26</u>	Twp: <u>1N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: SPILL OR RELEASE	Facility ID: 483032	API #:	County Name: BROOMFIELD
Facility Name: Produced Water Tank	Latitude: 40.025988	Longitude: -104.966545	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NWNE	Sec: 26	Twp: 1N	Range: 68W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Agriculture

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

Canal is located ~40' South of former PW vessel
 National wetland Survey – 725' away
 Wetland classification for riverine is located <40' south, freshwater emergent ~215' north
 Aquatic Native Species Conservation Waters – 3657 ft
 Bald Eagle Active Nest Site Qtr Mile – 4800 ft

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
UNDETERMINED	SOILS	UNDETERMINED	Lab Analysis

INITIAL ACTION SUMMARY

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

AFTER HYDROSTATIC TEST FAILURE, POSSIBLE PRODUCED WATER LEAK WAS CONSIDERED. TANK WAS IMMEDIATELY SHUT-IN. BROOMFIELD COUNTY NOTIFIED. WORKING ON GRADING PERMIT AND ENVIRONMENTAL ASSESSMENT IN ORDER TO OBTAIN A 20 DAY WORK PERMIT FROM BROOMFIELD COUNTY TO REMOVE PBV AND REPLACE WITH NEW ABOVEGROUND WATER TANK.

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):

Soil samples will be collected from beneath the PBV, from the sidewalls of the excavation to assess for potential contamination. Soil samples will be analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron.

Proposed Groundwater Sampling

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

If groundwater is encountered during the site investigation, a grab groundwater sample will be collected and analyzed for all organic compounds per COGCC Table 915-1.

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):

Visual inspection of the location and excavation will occur during replacement activities. Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. A photolog will be submitted on the subsequent Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 17

Number of soil samples exceeding 915-1 7

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

NA / ND

ND Highest concentration of TPH (mg/kg)

Highest concentration of SAR

BTEX > 915-1 No

Approximate areal extent (square feet) 150

Vertical Extent > 915-1 (in feet) 1

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?

One background sample was collected to the North of the tank battery in the undisturbed pasture and analyzed for pH, EC, Boron, and SAR.

☐ 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.

No source was generated.

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.

Salt impacts were present, but minor on the walls and floor of the excavated area that surrounded the partially buried fiberglass produced water tank. Boron was also present above the Table 915-1 concentration limit in the excavation floor. As a treatment before backfilling the excavation, Blue Chip has applied gypsum prophylactically to the walls and floor to aid in remediating the SAR over time with precipitation events. This facility has been re-sampled in the extent boundaries and demonstrates compliance with Table 915.

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 #

Yes Natural Attenuation

Excavate and onsite remediation

Yes Other Application of Gypsum and soil exposure to atmospheric oxygen.

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.

Blue Chip is in compliance with Rule 702 bonding requirements and is properly insured per Rule 705.

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

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? 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 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.

REPLACING A TANK INSIDE THE TANK BERM AND FIREWALL. NO SEEDING OR CONTOURING WILL BE NECESSARY

Is the described reclamation complete? No

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? No

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

Did the local soil conservation district provide the seed mix? No

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. 10/10/2022

Actual Spill or Release date, or date of discovery. 09/28/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/07/2022

Proposed site investigation commencement. 11/07/2022

Proposed completion of site investigation. 11/07/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. 06/29/2023

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

The Walls and floor locations were re-sampled for TMBs and the remaining constituents previously above table 915 were also analyzed. All the samples returned with concentrations below Table 915 samples, we believe due to the excessive rainfall, application of gypsum to treat the previous SAR concentration, and the exposure to oxygen allowing the hydrocarbons to oxidize. Since we no longer have samples above Table 915, we respectfully request closure.

This form requests closure under the sample concentrations reaching levels below Table 915 contaminant limits. All samples have been taken from the same location and depth as the initial samples, thus monitoring the effectiveness of the treatment of the material. During the time between sampling excessive rainfall in addition to the the applied gypsum has shown effective in treating the SAR in-situ which was previously above table 915 limits.

For 27 Doc #403339234: COAs

1. Depth to ground water will not be excavated, but is expected beyond 10 ft at its seasonal high and as deep as 20 feet in its seasonal low.

2.COAs Addressed below.

3. Third round sampling reflects Boron levels are now within 915 concentration limits.

4. SAR concentrations are delineated and reflect concentrations within table 915 concentrations.

5. Samples reflect concentrations within table 915 concentrations an no further action is required.

6. This is a request for closure.

7. Hydrovac was used to safely excavate midstream lines and facility dumplines beyond sampled area not within contamination boundary, and was not used to clean up contaminated soils. Volumes disposed of were parts of the berm and nearby clean soils. The material under the tank which was sampled, was left in-situ and treated with gypsum.

8. Sample Summary Updated.

9. Remedial Action Plan is Updates.

10. Implementation schedule is populated.

11. Statement is true and correct, Blue Chip is compliant with Rule 702 bonding requirements and is properly insured per Rule 705 and work is complete since all sampling reflects concentrations within Table 915.

For 19 Doc #403446668: COAs

1. The comments below address COAs from the Form 19.

2. Table and Map Attached, GPS coordinates and depths are on map.

3. Samples were collected in the original locations and run for 1,2,4-Trimethylbenzene nor 1,3,5-Trimethylbenzene, all returned results below lab detection limits.

4. During sampling to investigate the presence of 1,2,4-Trimethylbenzene nor 1,3,5-Trimethylbenzene the samples from the same initial locations were run for the constituents above 915 limits to investigate the efficacy of the applied gypsum and above average rainfall for the area in treating the contaminated soils. These soils returned limits below table 915 limits illustrating successful treatment of the contaminated soils and relieving the need for additional background sampling.

5. All known impacts now lie below table 915 limits and further investigation will not be necessary. Additional background sampling will not assist in the evaluation of impacts that are now demonstrated clean.

6. Hydrovac was used to excavate midstream lines and facility dumplines, and was not used to clean up contaminated soils. Volumes disposed of were parts of the berm and nearby clean soils. The material under the tank which was sampled, was left in-situ and treated with gypsum.

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

Signed: Ryan Dornbos

Title: Petroleum Engineer

Submit Date: 08/17/2023

Email: Ryan@PEOperating.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: Laurel Anderson

Date: 11/15/2023

Remediation Project Number: 26126

COA Type**Description**

	<p>Based on the information presented, the elevated metals concentrations in the confirmation soil samples appear to be similar to background levels. It appears that no further remedial action is necessary at this time and the ECMC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards or background levels or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.</p> <p>The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements.</p>
1 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**

403467195	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403467240	ANALYTICAL RESULTS
403467242	ANALYTICAL RESULTS
403467255	PHOTO DOCUMENTATION
403467266	MAP
403499910	MAP
403499951	PHOTO DOCUMENTATION
403597289	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 8 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)