

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
403339234  
Receive Date:  
03/27/2023

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

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

Facility Type: LOCATION	Facility ID: 321537	API #: _____	County Name: BROOMFIELD
Facility Name: SHANNON ROBERTS-61N68W 26NWNE	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

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**

Bull Canal/Stanley Irrigation Ditch higher in elevation from location, borders S edge of location  
National Wetland Survey – 725' away

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |                                                    |                                                      |                                        |
|----------------------------------------------------|------------------------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input type="checkbox"/> Oil                       | <input type="checkbox"/> Tank Bottoms                |                                        |
| <input type="checkbox"/> Condensate                | <input type="checkbox"/> Pigging Waste               |                                        |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |                                        |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |                                        |
|                                                    | <input type="checkbox"/> Pit Bottoms                 |                                        |
|                                                    | <input type="checkbox"/> 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 take 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

<p><b>Soil</b></p> <p>Number of soil samples collected     <u>   6   </u></p> <p>Number of soil samples exceeding 915-1     <u>   4   </u></p> <p>Was the areal and vertical extent of soil contamination delineated?    Yes     <u>      </u></p>	<p><b>NA / ND</b></p> <p>ND   Highest concentration of TPH (mg/kg)     <u>      </u></p> <p>      Highest concentration of SAR             <u>      </u></p> <p>BTEX &gt; 915-1   No     <u>      </u></p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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. No hydrocarbons were present or detectable. Since this site is going to remain in service, Blue Chip requests to leave these inorganic constituents in situ until time of abandonment. As a proactive treatment before backfilling the excavation, Blue Chip has applied gypsum prophylactically to the walls and floor to aid in remediating the SAR over time. During the decommissioning of this facility at some point in the future, the area will be assessed under the rules applicable at that time and any impacts will be addressed at that time.

**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

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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    One-time within 90 days of laboratory analytical.

### 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 insures 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? 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? No \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

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. \_\_\_\_\_

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**

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. No hydrocarbons were present or detectable. Since this site is going to remain in service, Blue Chip requests to leave these inorganic constituents in situ until time of abandonment. As a proactive treatment before backfilling the excavation, Blue Chip has applied gypsum prophylactically to the walls and floor to aid in remediating the SAR over time. During the decommissioning of this facility at some point in the future, the area will be assessed under the rules applicable at that time and any impacts will be addressed at that time.

Phone and email correspondence 2/14/2023 with COGCC EPS Chris Canfield approved the prophylactic application of gypsum and backfill prior to this Form 27 submittal.

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

Signed: Tim Hager

Title: President

Submit Date: 03/27/2023

Email: bluechipoil14@msn.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: 06/28/2023

Remediation Project Number: 26126

**COA Type****Description**

	Operator indicates groundwaters is greater than 20 feet below ground surface on the subject form; however, the related Form 19's for Spill ID 483032 indicate depth to groundwater is 10 feet below ground surface. Operator shall confirm depth to groundwater on the subsequent Supplemental Form 27.
	COGCC has removed Operator's request for closure of this Remediation Project. Operator shall address all COAs on the subject form and all unaddressed COAs on Form 19's associated with Spill ID #483032 prior to requesting closure.
	Operator states: "Boron was also present above the Table 915-1 concentration limit in the excavation floor. No hydrocarbons were present or detectable. Since this site is going to remain in service, Blue Chip requests to leave these inorganic constituents in situ until time of abandonment." COGCC does not approve of Operator's request to leave inorganic constituents in-situ until time of abandonment. Additionally, at no point can boron above Table 915-1 and/or site specific background levels remain in-situ without an approved variance.
	Operator states: "Phone and email correspondence 2/14/2023 with COGCC EPS Chris Canfield approved the prophylactic application of gypsum and backfill prior to this Form 27 submittal.". COGCC EPS Chris Canfield discussed SAR exceedances with the Operator; However, the EPS discussed if the Operator would like to request leaving SAR exceedances in situ below the A-horizon, then an approved Reclamation Plan is required. Additionally, both vertical and lateral delineation of SAR exceedances is required before a Reclamation Plan can be submitted for approval.
	COGCC does not approve this workplan as monitored natural attenuation is not an acceptable remediation strategy. Operator shall propose a remediation plan with timeline within 45 days of approval of this form 27.
	COGCC does not approve of the proposed Reporting Schedule.  Quarterly reporting is required under Remediation Project #26126 until the site investigation is complete and the implementation schedule can be updated. Operator shall select Quarterly under the Approved Reporting Schedule on the subsequent Supplemental Form 27.
	Operator shall update the subsequent Supplemental Form 27 with the Waste Disposal Information as Operator has indicated impacted soils have hydrovac'd in the source area and excavated from the walls and floor of the area around the partially buried fiberglass produced water tank.
	The Sample Summary portion of the Site Investigation Report is inaccurate and incomplete. On the subsequent Supplemental Form 27, Operator shall review and update the Sample Summary.

	The Remedial Action Plan tab is inaccurate and incomplete. On the subsequent Supplemental Form 27, Operator shall review and update the Remedial Action Plan with all relevant information.
	Operator shall fully populate the implementation schedule in accordance with Rule 913.d on the next Form 27.
	This Form 27 Supplemental is being approved as submitted. However, the next Form Supplemental must be populated with the Adequacy of Operator's General Liability Insurance and Financial Assurance data field under the Remediation Progress Update tab based on the scope of work proposed as required by Rules 703.b. and 705.b.
11 COAs	

### **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.

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
403339234	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403339296	ANALYTICAL RESULTS
403339298	ANALYTICAL RESULTS
403339304	SOIL SAMPLE LOCATION MAP
403352371	OTHER
403352372	PHOTO DOCUMENTATION
403448601	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 7 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Environmental	Operator has referenced Facility ID 245254 for the SHANNON ROBERTS #26-5 well as Spill/Release Under Site Information; However, the spill is associated with the partially buried produced water vessel associated with Location ID 321537. COGCC added Spill ID #483032 and Location ID #321537.	06/28/2023

Total: 1 comment(s)