

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

402435741

Receive Date:

Report taken by:

## Site Investigation and Remediation Workplan (Initial 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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

### OPERATOR INFORMATION

Name of Operator: BLUE CHIP OIL INC	Operator No: 8840	<b>Phone Numbers</b>
Address: 155 E BOARDWALK DR STE 400		Phone: (970) 4936456
City: FORT COLLINS State: CO Zip: 80525		Mobile: (970) 2134365
Contact Person: Tim Hager	Email: bluechipoil@msn.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: Initial Form 27 Document #: 402435741

#### PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water                   |
| <input type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure                             | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation                 | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project                                  |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste                      | <input type="checkbox"/> Rule 906.c.: Director request   |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other   |

#### SITE INFORMATION

N Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: WELL	Facility ID:	API #: 001-09479	County Name: ADAMS
Facility Name: GAIL 1	Latitude: 39.966640	Longitude: -104.707330	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SENW	Sec: 18	Twp: 1S	Range: 65W Meridian: 6 Sensitive Area? Yes

#### SITE CONDITIONS

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

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? Yes

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**☐ Oil☐ Condensate☐ Drilling Fluids☐ Drill Cuttings**Workover Fluids**☐ Tank Bottoms☐ Pigging Waste☐ Rig Wash☐ Spent Filters☐ Pit Bottoms☒ Other (as described by EPA) Petroleum Impacted Soils**DESCRIPTION OF IMPACT**

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	water excavation pit, @ pipe leak	grab sample
Yes	SOILS	surface to water table (<5 ft BGL)	excavation

**INITIAL ACTION SUMMARY**

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

The first indication of a suspected release was detected on May 3, 2020, during the annual pressure check of the flow lines. The two wells using the tank battery (Gail #1 and Gail Smith 1) were immediately shut-in. The site investigation / excavation commenced on May 20, 2020. The storage tank and the water vault were moved outside of the berm area. The excavation activities found two release points: 1) a small hole leak in the dump flow line mid-way between the separator and the partially buried fiberglass water tank and 2) at the flex hose dump line connection on the west side water storage tank. The accessible impacted soils were overexcavated along the piping run (approx 10 feet east of the pipe leak and 15 feet west of the pipe leak). In addition, the impacted soils on the west side and below the water tank were overexcavated. The soil impacts extended to the water table level, approximately 5 feet BGL, at the small pipe hole leak. The water tank area was overexcavated to apparent limited residual soil impact as confirmed by lab confirmation samples. Groundwater sample (Water2) was collected from groundwater entering the water tank overexcavation base. The oil storage tank area was not impacted. Soil (14) and excavation pit water samples (2) were collected. The excavation activity was suspended on May 22, 2020 pending the receipt of the laboratory results. The pit was fenced off and covered with netting. The site has been waiting for approval from Adams County to proceed with backfilling, pending 7/9/2020.

**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 ):

14 soil samples were collected in the initial site investigation excavation, including 2 impacted soil stockpile samples, May 22, 2020. The samples were collected following overexcavation, after the field observations indicated that the majority of the impacted soils were removed. Residual laboratory concentrations were confirmed in the vicinity of the pipe line leak hole. The laboratory analysis, sample table summary and sample location schematic are included in the attachments.

It is proposed that additional soil removal will occur in the vicinity of the pipe line leak (samples 444 and samples 444). It is likely that this soil removal will extend below the water table. Additional soil samples will be collected as deemed necessary.

**Proposed Groundwater Sampling**

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

2 water samples were collected of groundwater that collected in the initial site excavation pit. Sample Water1 (from the area of the pipe hole) had BTX and TPH concentration above regulatory levels. Sample 2 from the south end of the excavation had DRO concentrations > than detection levels. GRO and BTEX results were below regulatory levels.

It is proposed that following the additional overexcavation, extending into the water table, groundwater samples will be collected from the water that will collect in the pit. Pending the results of these water samples, the data will be reviewed to determine if additional water sampling/monitoring is necessary. If needed, it is likely that the subsequent groundwater sampling will include the installation of (4) monitoring wells: 1 near the point of the pipe release and three wells in potential downgradient and upgradient locations.

**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 14  
Number of soil samples exceeding 910-1 0  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 220

### NA / ND

-- Highest concentration of TPH (mg/kg) 113  
-- Highest concentration of SAR 16  
BTEX > 910-1 No  
Vertical Extent > 910-1 (in feet) 5

### Groundwater

Number of groundwater samples collected 2  
Was extent of groundwater contaminated delineated? No  
Depth to groundwater (below ground surface, in feet) 5'  
Number of groundwater monitoring wells installed 0  
Number of groundwater samples exceeding 910-1 1

-- Highest concentration of Benzene (µg/l) 1500  
-- Highest concentration of Toluene (µg/l) 6500  
-- Highest concentration of Ethylbenzene (µg/l) 130  
-- Highest concentration of Xylene (µg/l) 3410  
NA Highest concentration of Methane (mg/l)

### Surface Water

0 Number of surface water samples collected  
0 Number of surface water samples exceeding 910-1  
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?

☒ Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 200 Volume of liquid waste (barrels) 0

☒ Is further site investigation required?

As described above: Confirm impacted soils at base of excavation and below the water table have been removed. The objective is to determine, if the elevated TPH and BTEX concentrations detected in the initial excavation water samples on May 22, 2020, may be associated with the release of contaminants into the groundwater from disturbing the soils during excavation. Since all of the soil samples collected on May 22, 2020 were collected from more than 3 feet BGL, it is MEC Inc opinion that the SAR results are not considered a concern. Groundwater monitoring wells will be installed to further delineate the extent of groundwater impact.

# REMEDIAL ACTION PLAN

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The majority of the impacted soils have been removed. A limited amount of additional overexcavation, at the base and below the water table, at the point of the dump line release hole to remove accessible residual impacted soils, is proposed prior to backfilling.

## REMEDICATION 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.

A limited amount of overexcavation, at the base of the excavation and below the water table, primarily at the point of the dump line pipe hole release is proposed to removed accessible residual impacted soils. It is assumed that this overexcavation will assist in improving the subsequent groundwater quality. This activity will commence after the Adams County inert-backfill permit is approved, which currently scheduled for July 9, 2020.

## Soil Remediation Summary

☐ In Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

☒ Ex Situ

Yes \_\_\_\_\_ Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 300  
Name of Licensed Disposal Facility or COGCC 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  
Yes \_\_\_\_\_ Natural Attenuation  
Yes \_\_\_\_\_ Other Treat the excavation base with a water remediation amendments prior to backfilling.

## 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.

4 groundwater monitoring wells will be installed at the following locations, if accessible

MW1: Dump Line Pipe Hole Release Point  
MW2: West of MW1 ( Assumed DG location)  
MW3: Offset of Separator and dump line  
MW4: E of MW1  
MW5: NW of water vault, assumed downgradient

Activity Schedule:

- After July 9, 2020 : pending approval of inert fill material permit from Adams County, will proceed with proposed additional overexcavation, and additional sampling.  
- August 17, 2020: submit supplemental Form 27 report, with additional overexcavation sampling results  
- Aug - Oct 2020: Install monitoring wells, schedule based on contractor availability.

## REMEDATION PROGRESS UPDATE

### PERIODIC REPORTING

Frequency: ☒ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other \_\_\_\_\_

Report Type: ☒ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report  
☐ Other \_\_\_\_\_

### 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:

Impacted soils will be disposed of at approved landfill.

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 300

E&P waste (solid) description \_\_\_\_\_ Hydrocarbon Impacted Soils

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_ Buffalo Creek Landfill

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_ 0

E&P waste (liquid) description \_\_\_\_\_ NA

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

## 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.

The piping will be replaced with new piping. New inert gravel pit materials (approved by Adams County) will be used as backfill. The oil and water storage tanks will be inspected and replaced if necessary. Containment berms will be re-constructed. and the access road area near the battery will be re-graded.

Is the described reclamation complete? Yes \_\_\_\_\_

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

☐ Interim? ☒ Final?

Did the Surface Owner approve the seed mix? \_\_\_\_\_

If NO, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_ 07/01/2020

Actual Spill or Release date, if known. \_\_\_\_\_ 05/20/2020

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). \_\_\_\_\_ 04/03/2020

Date of commencement of Site Investigation. \_\_\_\_\_ 05/20/2020

Date of completion of Site Investigation. \_\_\_\_\_

### REMEDIAL ACTION DATES

Date of commencement of Remediation. \_\_\_\_\_ 07/17/2020

Date of completion of Remediation. \_\_\_\_\_

### SITE RECLAMATION DATES

Date of commencement of Reclamation. \_\_\_\_\_ 07/17/2020

Date of completion of Reclamation. \_\_\_\_\_

**OPERATOR COMMENT**

Additional work at the tank battery will commence as soon as possible, pending Adams County approval of inert fill permit. These activities will include additional over excavation and soil confirmation sampling. Groundwater monitoring will be installed. Any comments from COGCC following review of Form 27 will be appreciated.

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

Signed: John Mahoney

Title: MEC Inc for Blue Chip

Submit Date:

Email: jmahoney2644@comcast.net

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:

Date:

Remediation Project Number:

**COA Type****Description**

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**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**

402441150	MAP
402441151	SITE MAP
402441153	MAP
402441155	AERIAL IMAGE
402441161	OTHER
402441163	OTHER
402441165	ANALYTICAL RESULTS
402441814	SOIL SAMPLE LOCATION MAP

Total Attach: 8 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)