

State of Colorado Oil and Gas Conservation Commission

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



Document Number:

401775413

Receive Date:

Report taken by:

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.

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

OPERATOR INFORMATION

Name of Operator: <u>BYRON OIL INDUSTRIES INC</u>	Operator No: <u>12400</u>	Phone Numbers
Address: <u>154 CLARKSON EXECUTIVE PARK</u>		Phone: <u>(636) 391-8770</u>
City: <u>BALLWIN</u>	State: <u>MO</u>	Zip: <u>63011</u>
Contact Person: <u>Richard Byron</u>	Email: <u>byronoil@att.net</u>	Mobile: <u>()</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10531Initial Form 27 Document #: 401414213

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: <u>TANK BATTERY</u>	Facility ID: <u>104647</u>	API #: _____	County Name: <u>ADAMS</u>
Facility Name: <u>Price-Degenhart 1 Skim Pit</u>		Latitude: <u>39.830810</u>	Longitude: <u>-103.857291</u>
		** correct Lat/Long if needed: Latitude: <u>39.831154</u>	Longitude: <u>-103.857764</u>
QtrQtr: <u>SESE</u>	Sec: <u>34</u>	Twp: <u>2S</u>	Range: <u>58W</u>
		Meridian: <u>6</u>	Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications SCMost Sensitive Adjacent Land Use PastureIs domestic water well within 1/4 mile? NoIs surface water within 1/4 mile? NoIs groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Stock wells DWR: Receipt #'s 9004902 and 0092141

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 type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | |
| <input checked="" 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
Yes	SOILS	30' x 18' x 4' bgs	Excavation and confirmation 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.

Based on the results discussed in the previously submitted Form 27 supplemental (Document # 401635776), LTE conducted a hand auger site assessment on August 24, 2018, of the area where previously collect soil samples Tank #2 and Tank#3 indicated TPH concentration above the COGCC Table 910-1 standard. Two borings were advanced to 4 feet below ground surface at locations representative of soil samples Tank#2 and Tank#3. LTE personnel observed the soil cuttings for evidence of potential hydrocarbon impact including visual staining, odor, and elevated VOC concentrations using a photoionization detector (PID).

On September 19 and 20, 2018, in order to comply with the conditions of approval (COA) for remediation project #10531 outlined in COGCC Document # 401635776, excavation was conducted to remove the hydrocarbon impact identified in soil sample Tank#2@1' and to remove the top 3 feet of soil used previously used as backfill in the skim pit where soil sample Sim Pit In-Fill identified elevated levels of SAR. The final extent of the excavation in the area of soil sample Tank#2@1' was approximately 30 feet by 18 feet to a depth of 4 feet below ground surface. In total, 60 cubic yards of impacted material were removed and hauled to Tower landfill for final disposal.

Photographs were collected and are attached that document the removal of the top 3 feet of backfill from the skim pit. The material excavated was the stockpiled onsite on plastic in a temporary earthen bermed containment for future disposal. The excavation extents and soil sample locations are presented on Figure 2.

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):

Two soil samples (Tank#2@1' and Tank#2@4') were collected from the soil boring representative of Tank#2. One soil sample (Tank#3@3.5') was collected from the boring representative of Tank#3 from the interval exhibiting the highest PID reading.

Soil sample Tank#2@1' exceeded the Table 910-1 standard for TPH at a concentration of 13,200 mg/kg. Soil samples Tank#2@4' and Tank#3@3.5' were in compliance with applicable COGCC Table 910-1.

Four soil samples (NW01@3', EW01@3', WW02@3', and SW01@3') were collected from the sidewalls representative of the final extent of the excavation representative of soil sample Tank#2. One soil sample (FS01@4') was collected as representative of the floor of the excavation. All five soil representative of the final excavation extent were in compliance with Table 910-1.

One 5-point composit soil sample (COMP01) was collected from the imported fill material. Results were in compliance with the Table 910-1 standards for BTEX, TPH, EC, SAR, and pH.

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 10

Number of soil samples exceeding 910-1 0

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

Approximate areal extent (square feet) 500

NA / ND

-- Highest concentration of TPH (mg/kg) 13200

-- Highest concentration of SAR 3.09

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 3

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 0'

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 910-1

-- Highest concentration of Benzene (µg/l)

-- Highest concentration of Toluene (µg/l)

-- Highest concentration of Ethylbenzene (µg/l)

-- Highest concentration of Xylene (µg/l)

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)

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.

Source was removed via excavation. Approximately 60 cubic yards of impacted soil were hauled offsite for final disposal at the Republic Services Tower Landfill.

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.

The following actions were taken to satisfy the COA's from document #401635776 regarding remediation project # 10531:

The hydrocarbon impact identified by soil sample Tank#2 was investigated via a hand auger assessment and the impact was removed via excavation. Cleanup was confirmed via confirmation soil samples. The impacted material was hauled to Tower landfill for final disposal.

Photographs were collected and are attached that document the removal of the top 3 feet of backfill from the skim pit. The skim pit was backfilled with imported material from Henderson Pit, and laboratory results of composite sample COMP01 confirm the imported material is in compliance with COGCC Table 910-1 standards. The material excavated was stockpiled onsite on plastic in a temporary earthen bermed containment for future disposal.

Results summary Tables and a sample location figure are attached.

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) 65

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

No Bioremediation (or enhanced bioremediation)

No Chemical oxidation

No Air sparge / Soil vapor extraction

No Natural Attenuation

No 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.

NA

REMEDIATION 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:

none

Volume of E&P Waste (solid) in cubic yards _____ 65

E&P waste (solid) description _____ Soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____ Tower Landfill

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

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 _____

Do all soils meet Table 910-1 standards? Yes _____

Does the previous reply indicate consideration of background concentrations? No _____

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? _____

Does Groundwater meet Table 910-1 standards? No _____

Is additional groundwater monitoring to be conducted? No _____

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.

TBD, pending P&A activities.

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 approve the seed mix? No _____

If NO, does the seed mix comply with local soil conservation district recommendations? No _____

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/24/2018

Date of commencement of Site Investigation. 08/24/2017

Date of completion of Site Investigation. 08/24/2018

REMEDIAL ACTION DATES

Date of commencement of Remediation. 09/19/2018

Date of completion of Remediation. 09/20/2018

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

--

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

Signed: ` Jeremy Pike _____

Title: Staff Geologist _____

Submit Date: ` _____

Email: jpike@ltenv.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: _____

Date: _____

Remediation Project Number: 10531 _____

COA Type**Description**

--	--

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**

401775552	ANALYTICAL RESULTS
401775553	ANALYTICAL RESULTS
401775554	ANALYTICAL RESULTS
401775557	SITE MAP
401775559	SOIL SAMPLE LOCATION MAP
401775566	ANALYTICAL RESULTS
401775567	ANALYTICAL RESULTS
401775569	ANALYTICAL RESULTS
401775579	PHOTOS

Total Attach: 9 Files

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

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)