

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401890450

Receive Date:

01/03/2019

Report taken by:

BOB CHESSON

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>		Mobile: <u>()</u>
Contact Person: <u>Richard Byron</u>	Email: <u>byronoil@aol.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12152Initial Form 27 Document #: 401853474

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 checked="" 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 type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation | <input checked="" 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>PIT</u>	Facility ID: <u>114378</u>	API #: _____	County Name: <u>ADAMS</u>
Facility Name: <u>Price-Degenhart 1 Production Pit</u>	Latitude: <u>39.830469</u>	Longitude: <u>-103.857055</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESE</u>	Sec: <u>34</u>	Twp: <u>2S</u>	Range: <u>58W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

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

Other Potential Receptors within 1/4 mile

Unnamed narrow wash approximately 200 feet to the southwest

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
Yes	SOILS	75' N-S x 125' E-W	soil sampling investigation

INITIAL ACTION SUMMARY

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

On December 4, 2018, LTE conducted a site investigation.

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):

Six surficial soil samples (SS01 - SS06) were collected from the produced water pit. A soil boring was advanced vis hand auger at SS04. Two addiitonal soil samples were collected from the soil boring (SS04@7.5' and SS04@8.5'). Hand auger refusal was encountered at 8.5' bgs, prior to encountering native soil. The soil samples were submitted for BTEX, DRO, GRO, ORO, EC, pH, and SAR analysis. The soil sample locations are depicted on the attached Figure 1.

Proposed Groundwater Sampling

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

Groundwater was not encountered during the investigation.

Proposed Surface Water Sampling

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

There are no sources for surface water sampling nearby.

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 8

Number of soil samples exceeding 910-1 8

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

Approximate areal extent (square feet) 9375

NA / ND

-- Highest concentration of TPH (mg/kg) 54.3

-- Highest concentration of SAR 36.7

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 8

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

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

Number of groundwater monitoring wells installed

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)

Highest concentration of Methane (mg/l)

Surface Water

0 Number of surface water samples collected

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?

One background soil sample (BG01) was collected from an undisturbed area off the pad. BG01 was submitted for laboratory analysis of pH, EC, and SAR. Laboratory results for BG01 indicate that pH, EC, SAR were within Table 910-1 standards.

☐ 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.

Based on the laboratory analytical results, all soil samples were below the Table 910-1 standards for BTEX and TPH. Exceedances of Table 910-1 standards for pH, EC, and SAR will all be below the 3-foot root zone once the produced water pit is filled in and re-countoured to match the pre-existing grade.

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.

Due to the depth of the produced water pit (greater than 3 feet bgs) and the lack of BTEX or TPH impacts to soil, the inorganic impacts to the soil will be buried deeper than the root zone.

Soil Remediation Summary

☒ In Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

Yes Other bury inorganic impacts deeper
than 3 feet bgs (root zone)

☐ Ex Situ

_____ Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____

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

☐ 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

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? _____

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 _____

Do all soils meet Table 910-1 standards? No _____

Does the previous reply indicate consideration of background concentrations? _____

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

Does Groundwater meet Table 910-1 standards? Yes _____

Is additional groundwater monitoring to be conducted? _____

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.

Once the produced water pit is approved for closure, the site will be reclaimed in accordance with COGCC Rules.

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? _____

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. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/03/2018

Date of commencement of Site Investigation. 12/03/2018

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 12/03/2018

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

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

Signed: Steve Kahn

Title: Environmental Consultant

Submit Date: 01/02/2019

Email: skahn@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: 12152

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

401891781	SOIL SAMPLE LOCATION MAP
401906681	ANALYTICAL RESULTS
401906686	ANALYTICAL RESULTS

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)