

State of Colorado Oil and Gas Conservation Commission

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Receive Date:

07/06/2020

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>RENEGADE OIL & GAS COMPANY LLC</u>	Operator No: <u>74165</u>	Phone Numbers
Address: <u>6155 S MAIN STREET #225</u>		Phone: <u>(303) 680-4725</u>
City: <u>AURORA</u>	State: <u>CO</u>	Zip: <u>80016</u>
Contact Person: <u>Edward Ingve</u>	Email: <u>ed@renegadeoilandgas.com</u>	Mobile: <u>(303) 829-2354</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 13240Initial Form 27 Document #: 402004565

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 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>114590</u>	API #: _____	County Name: <u>ARAPAHOE</u>
Facility Name: <u>COX 1-8</u>		Latitude: <u>39.626105</u>	Longitude: <u>-104.360381</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>NWSW</u>	Sec: <u>8</u>	Twp: <u>5S</u>	Range: <u>62W</u>
		Meridian: <u>6</u>	Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications SCMost Sensitive Adjacent Land Use CroplandIs 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

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	TBD	Soil Samples/Laboratory Analytical Results

INITIAL ACTION SUMMARY

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

This form has been prepared to provide notice of a follow-up investigation of two historical closed produced water pits affiliated with the production facility at the Cox 1-8 (API 05-005-06928). Both pits were initially closed at least 8 years ago. The COGCC has requested the investigation after reviewing aerial imagery and discovering COGCC record discrepancies. In accordance with COGCC Rule 905.b., soil samples and a groundwater sample (if present) will be collected following excavation of a pilot test over each pit to determine if soil and groundwater (if present) meet the concentrations of COGCC Table 910-1. Field screening of soils will be conducted during the digging of the pilot holes.

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 samples were obtained and submitted for analysis. A soil sample was taken from just below the contaminated soil found while excavating each historical pit. Soil samples were analyzed for BTEX, TPH, GRO and DRO. Samples were also be tested for pH, EC and SAR.

Proposed Groundwater Sampling

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

No groundwater was encountered during excavation. No sampling required.

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 5

Number of soil samples exceeding 910-1 2

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

Approximate areal extent (square feet) 1200

NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 87

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 10

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? Yes

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?

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

Volume of solid waste (cubic yards) 100

Volume of liquid waste (barrels) 0

☒ Is further site investigation required?

Pit is being treated with gypsum and fresh water. New sample evaluating SAR will be collected in the future.

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.

If historical contamination is identified and confirmed through soil screening and/or laboratory analysis, soils will be removed and transported to a licensed disposal facility. Disposal records will be kept on file and available upon request.

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.

Potential impacts that meet the criteria in Rule 906.b. will be reported to the Director in accordance with that Rule and a site specific soil and/or groundwater remediation plan will be developed and submitted to the COGCC via a supplemental Form 27 in accordance with Rule 906.c. If reportable impacts are not encountered, a supplemental Form 27 requesting closure will be submitted within 90 days. Field screening and applicable laboratory analytical results will be reported in all submittals. E & P waste records of material transported off-site are kept on file and available upon request.

Soil Remediation Summary

☐ In Situ

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

☐ 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 As necessary.

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:

No beneficial use

Volume of E&P Waste (solid) in cubic yards _____ 54

E&P waste (solid) description _____ Unspecified Contaminated Soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Waste Managements DADS landfill facility

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? Yes _____

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.

The site will be reclaimed in accordance with COGCC 1000 Series Reclamation Rules.

Is the described reclamation complete? _____

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). 04/16/2019

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

To address the pit closure issue advanced by the COGCC at the Cox #1-8, Renegade dug up the area of the small legacy produced water pits at the well's production facility site and removed all soil which appeared to have even slight hydrocarbon contamination. This soil was hauled off and disposed of. The manifests have been attached to an earlier Form 27. The soil was sampled at the approximate 10 foot depth of this pit and samples confirmed that any hydrocarbon was removed but the soil at the bottom of the pit was not in compliance due to a very high SAR reading. To remedy this condition repeated treatments of gypsum and fresh water have been used over the past year. A recent sampling of the soil at the bottom of the pit found that the SAR levels have now come down to acceptable levels of the COGCC Table 910-1 and the pit is ready for closure. Those soil sample analysis have been attached. It should be noted that the soil samples were from a 10'-12' depth well below any root zone for agriculture. The area above the pit still resides within the Cox #1-8 tank battery site and the final reclamation and seeding of the area directly above the pit won't occur until the well is P & A'd. Renegade requests final closure of the pit which will also require the bringing in of good clean fill dirt.

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

Signed: Edward Ingve

Title: Manager/Owner

Submit Date: 07/06/2020

Email: ed@renegadeoilandgas.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: BOB CHESSON

Date: 07/07/2020

Remediation Project Number: 13240

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**

402437587	FORM 27-SUPPLEMENTAL-SUBMITTED
402437588	ANALYTICAL RESULTS
402437589	OTHER

Total Attach: 3 Files

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

Environmental	<p>Based on the information presented no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards 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 and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements.</p>	07/07/2020
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Total: 1 comment(s)