

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401831507

Receive Date:

11/08/2018

Report taken by:

Candice (Nikki) Graber

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: <u>SRC ENERGY INC</u>		Operator No: <u>10311</u>	Phone Numbers
Address: <u>1675 BROADWAY SUITE 2600</u>			Phone: <u>(970) 4755220</u>
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>	Mobile: <u>()</u>
Contact Person: <u>Dave Castro</u>		Email: <u>dcastro@srcenergy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12050Initial Form 27 Document #: 401831507

PURPOSE INFORMATION

- | | |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination | <input checked="" 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 checked="" 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 checked="" type="checkbox"/> Other <u>annual quarterly groundwater monitoring report</u> |

SITE INFORMATION

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

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>451026</u>	API #: <u></u>	County Name: <u>WELD</u>
Facility Name: <u>Dupper 27-3</u>		Latitude: <u>40.285310</u>	Longitude: <u>-104.642000</u>
		** correct Lat/Long if needed: Latitude: <u></u>	Longitude: <u></u>
QtrQtr: <u>SENE</u>	Sec: <u>27</u>	Twp: <u>4N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SMMost Sensitive Adjacent Land Use crop landIs domestic water well within 1/4 mile? NoIs surface water within 1/4 mile? NoIs groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

residence 265' SE

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	GROUNDWATER	35 bbls	sampling
Yes	SOILS	80 yds	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.

Partially buried produced water vault was removed. Soil and groundwater sampling indicated impacts to both. 80 yards of soil was removed and taken to North Weld Landfill, 35 bbls of impacted groundwater was removed and taken to CSI. Excavation was backfilled.

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):

See attached report from Eagle Environmental for a detailed description of sampling and analysis that was done for this remediation project, which includes figures, tables, and lab analysis results reports.

Proposed Groundwater Sampling

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

See attached report from Eagle Environmental for a detailed description of sampling and analysis that was done for this remediation project, which includes figures, tables, and lab analysis results reports.

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):

See attached report from Eagle Environmental for a detailed description of sampling and analysis that was done for this remediation project, which includes figures, tables, and lab analysis results reports.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 15

Number of soil samples exceeding 910-1 0

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

Approximate areal extent (square feet) 500

NA / ND

-- Highest concentration of TPH (mg/kg) 141

-- Highest concentration of SAR 2.75

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 0

Groundwater

Number of groundwater samples collected 30

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 2'

Number of groundwater monitoring wells installed 7

Number of groundwater samples exceeding 910-1 1

-- Highest concentration of Benzene (µg/l) 211

-- Highest concentration of Toluene (µg/l) 5.36

-- Highest concentration of Ethylbenzene (µg/l) 188

-- Highest concentration of Xylene (µg/l) 4980

NA 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) 80

Volume of liquid waste (barrels) 35

☐ Is further site investigation required?

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Partially buried produced water vault was removed.

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.

See attached report from Eagle Environmental for a detailed description of sampling and analysis that was done for this remediation project, which includes figures, tables, and lab analysis results reports. No further action required and this project can be closed.

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) _____ 80
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

Yes _____ Other _____ Impacted fluid recovery and disposal _____

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.

See attached report from Eagle Environmental for a detailed description of sampling and analysis that was done for this remediation project, which includes figures, tables, and lab analysis results reports.

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:

Produced water impacted soil and groundwater.

Volume of E&P Waste (solid) in cubic yards 80

E&P waste (solid) description produced water impacted soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: North Weld Landfill

Volume of E&P Waste (liquid) in barrels 35

E&P waste (liquid) description produced water impacted groundwater

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: CSI

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.

Site has been reclaimed per COGCC rules.

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? Yes

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

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). _____

Date of commencement of Site Investigation. 06/07/2017

Date of completion of Site Investigation. 05/10/2018

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

This Form 27 is for the removal and closure of the partially buried produced water vault at the Dupper 3 tank battery location. Is is also for closure of the subsequent remediation of spill ID 451026 that was discovered after removal of the partially buried produced water vault. We have completed 4 consecutive quarters of clean groundwater monitoring sample results within Table 910-1 standards. No further action was necessary after 2Q 2018 sampling event. A detailed remediation project report by Eqagle Environmental is attached with this document, which includes all figures, tables, and lab results reports from the entire project. SRC would like to request closure on this project.

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

Signed: Dave Castro

Title: Sr. Env. Specialist

Submit Date: 11/08/2018

Email: dcastro@srcenergy.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: Candice (Nikki) Graber

Date: 11/09/2018

Remediation Project Number: 12050

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

401831507	FORM 27-INITIAL-SUBMITTED
401831547	MONITORING REPORT

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

Environmental	Operator may submit a Form 27 Supplemental - Remediation Complete and request closure of this investigation.	11/09/2018
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Total: 1 comment(s)