

# State of Colorado Oil and Gas Conservation Commission

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Report taken by:

KRIS NEIDEL

## 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.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

### OPERATOR INFORMATION

Name of Operator: SWN PRODUCTION COMPANY LLC	Operator No: 10396	<b>Phone Numbers</b>
Address: P.O. BOX 12359		
City: SPRING State: TX Zip: 77391-2359		
Contact Person: Wayne Shortle	Email: wayne_shortle@swn.com	
		Phone: (832) 796-2874
		Mobile: (832) 922-3272

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 17854 Initial Form 27 Document #: 402582586

#### PURPOSE INFORMATION

- ☐ Rule 913.c.(1): Pit or Cuttings Trench closure.
- ☒ Rule 913.c.(2): Buried or partially buried vessel closure, which will be by removal.
- ☐ Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912.
- ☐ Rule 913.c.(4): Land treatment of Oily Waste pursuant to Rule 905.e.
- ☐ Rule 913.c.(5): Closure of Centralized E&P Waste Management Facilities pursuant to Rule 907.h.
- ☐ Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1.
- ☐ Rule 913.c.(7): Investigation and remediation of natural gas in soil or Groundwater.
- ☐ Rule 913.c.(8): When requested by the Director due to any potential risk to soil, Groundwater, or surface water.
- ☐ Rule 913.c.(9): Decommissioning of Oil and Gas Facilities.
- ☐ Rule 913.g: Changes of Operator.
- ☐ Rule 915.b: Request to leave elevated inorganics in situ.
- ☐ Other: \_\_\_\_\_

#### SITE INFORMATION

No Multiple Facilities

Facility Type: PIT	Facility ID: 286608	API #: _____	County Name: MOFFAT
Facility Name: WALKER 152 FT X 152 FT 12-5	Latitude: 40.576975	Longitude: -107.782028	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: CNE	Sec: 12	Twp: 7N	Range: 93W Meridian: 6 Sensitive Area? Yes

#### SITE CONDITIONS

General soil type - USCS Classifications OL Most Sensitive Adjacent Land Use Livestock/  
Wildlife

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? No

## SITE INVESTIGATION PLAN

### TYPE OF WASTE:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> E&P Waste       | <input checked="" type="checkbox"/> Other E&P Waste             | <input checked="" type="checkbox"/> Non-E&P Waste                                   |
| <input type="checkbox"/> Produced Water  | <input type="checkbox"/> Workover Fluids                        | No longer used for produced water. Currently only contains rainwater and snow melt. |
| <input 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 checked="" type="checkbox"/> Pit Bottoms                 |   |
|  | <input checked="" type="checkbox"/> Other (as described by EPA) | Liner from pits   |

### DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	SOILS	Undetermined	Soil Samples

### INITIAL ACTION SUMMARY

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

Prior to closing the pit, SWN will sample the pit bottoms from the pit to determine the requirements for disposal. The pit bottoms will be removed and disposed at an appropriately permitted facility. Any water in the pits will be sampled prior to removal and disposed at an appropriately permitted facility. If sample results indicate that the water is uncontaminated stormwater/snow melt, SWN will contact the COGCC regarding the sample results, for permission to discharge water to the ground surface. Following removal of water and pit bottoms, the liner will be removed and disposed at a permitted landfill facility, consistent with the facility at which the pit bottoms were disposed. Following removal of the liner, soil samples will be taken as described in the Soil Sampling Plan (below).

### 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 ):

Grab soil samples were collected from under the pit liner at the proposed locations as shown on the Figure 1 (attached) . Per the approved Site Investigation and Remediation Workplan, the sample near the middle of the pit was analyzed for the all of the Table 915-1 parameters and the samples from each corner of the pit were tested for inorganics (EC, SAR, pH), BTEX, and TPH (C6-C36). Background soil samples were also taken and analyzed for all of the Table 915-1 parameters as detailed in Figure 1.

#### 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 5  
Number of soil samples exceeding 915-1 5  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 0

### NA / ND

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 1.07  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 0

### Groundwater

Number of groundwater samples collected 0  
Was extent of groundwater contaminated delineated? No  
Depth to groundwater (below ground surface, in feet) 198'  
Number of groundwater monitoring wells installed 0  
Number of groundwater samples exceeding 915-1 \_\_\_\_\_

NA Highest concentration of Benzene (µg/l) \_\_\_\_\_  
NA Highest concentration of Toluene (µg/l) \_\_\_\_\_  
NA Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
NA Highest concentration of Xylene (µg/l) \_\_\_\_\_  
NA Highest concentration of Methane (mg/l) \_\_\_\_\_

### Surface Water

0 Number of surface water samples collected  
\_\_\_\_ Number of surface water samples exceeding 915-1  
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?

Three (3) background soil samples were collected and tested as shown in Figure 1. All samples exceeded Table 915-1 Arsenic limits and two of the three were higher than all of the pit subgrade samples. See attached lab report and tabulated data summary.

☐ 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?

Based on conversation with COGCC staff further investigation is not required based on the background levels of Arsenic, Groundwater elevation shown on attached Figure 2.

## 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.

n/a - this is a reclamation

## 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.

n/a - this is a reclamation

## Soil Remediation Summary

☐ In Situ

☐ Ex Situ

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

\_\_\_\_\_ 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**

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.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

#### Approved Reporting Schedule:

☒ Quarterly☐ Semi-Annually☐ Annually☐ Other

#### ☐ Request Alternative Reporting Schedule:

☐ Semi-Annually☐ Annually☐ Other

Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

#### Report Type:

☐ Groundwater Monitoring☐ Land Treatment Progress Report☐ O&M Report☒ Other 1st QTR Report - Field visit 07/08/21 to start required sampling.

### 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 uses identified at this time. Waste materials will be polyethylene liner material and any soil deemed by COGCC as unsuitable for backfill. No identified volume of unsuitable soil has been identified at this time pending COGCC review of background and soil sample analyses included in this submittal

Volume of E&P Waste (solid) in cubic yards 0

E&P waste (solid) description polyethylene liner material and subsoil deemed unsuitable for backfill

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal 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

If YES:

☒ Compliant with Rule 913.h.(1).☐ Compliant with Rule 913.h.(2).☐ Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? Yes

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? Yes

Is additional groundwater monitoring to be conducted?

Operator shall comply with the COGCC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

# 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.

After approval of pit closure, we will grade the area to return it to its original slope and contour, alleviating compaction. During the regrading process, the contractor will be aware of the possible presence of groundwater. If groundwater is encountered, the contractor will immediately cease activities and SWN will contact the COGCC prior to moving forward with grading activities. Approved seeding mix utilized will comply with local soil conservation district recommendations.

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 provide the seed mix? No

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? Yes

## SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 04/01/2022

Proposed date of completion of Reclamation. 06/30/2022

## IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

## PRIOR DATES

Date of Surface Owner notification/consultation, if required. 08/30/2021

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

## SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/19/2021

Proposed site investigation commencement. 08/30/2021

Proposed completion of site investigation. 09/20/2021

## REMEDIAL ACTION DATES

Proposed start date of Remediation. \_\_\_\_\_

Proposed date of completion of Remediation. \_\_\_\_\_

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

☐ Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

**OPERATOR COMMENT**

Reclamation approval is requested

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

Signed: Wayne Shortle

Title: Engineer

Submit Date: 01/14/2022

Email: wayne\_shortle@swm.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: KRIS NEIDEL

Date: 01/14/2022

Remediation Project Number: 17854

**Condition of Approval****COA Type****Description**

	Inorganic concentrations appear to be within range of undisturbed background concentrations. (per 915-1 table footnote 1)
	Based on a review of the information provided, it appears that no further action is necessary at this time and COGCC approves the closure request. Should conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards, or, if groundwater is found to be significantly impacted, further investigation and/or remediation activities may be required at the site.
	The area under the Above Ground Tank shall be sampled for COGCC table 915-1, per rule 911.
	Liner material shall be removed and disposed in accordance with applicable legal requirements for solid waste disposal.
4 COAs	

**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**

402898320	FORM 27-SUPPLEMENTAL-SUBMITTED
402898394	ANALYTICAL RESULTS
402898395	ANALYTICAL RESULTS
402898396	SOIL SAMPLE LOCATION MAP
402898397	ANALYTICAL RESULTS
402898402	MAP
402898403	OTHER

Total Attach: 7 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)