

State of Colorado  
Energy & Carbon Management Commission

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Receive Date:  
01/26/2024  
Report taken by:  
Krystal Heibel

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 ECMC 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: TALLGRASS WATER WESTERN LLC	Operator No: 10608	<b>Phone Numbers</b>
Address: 370 VAN GORDON STREET		Phone: (316) 322-3514
City: LAKEWOOD State: CO Zip: 80228		Mobile: (316) 322-3514
Contact Person: Scott Yount	Email: scott.yount@tallgrass.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 30336 Initial Form 27 Document #: 403440302

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: TANK BATTERY	Facility ID: 444115	API #: _____	County Name: WELD
Facility Name: Wildhorse 16 SWD Pad	Latitude: 40.749304	Longitude: -103.991457	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSW	Sec: 16	Twp: 9N	Range: 59W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Cattle grazing land  
Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? No  
Is groundwater less than 20 feet below ground surface? No

**Other Potential Receptors within 1/4 mile**

The Site is surrounded by vacant rangeland in all directions. There are no residences or surface water within 0.25 miles of the Site. According to the Colorado Division of Water Resources (DWR) database, the nearest groundwater well (Permit Number 297715), located approximately 1.05 miles southeast of the release, reported a static water level at 135 ft-bgs at the time of completion. According to the Colorado GIS database, there were no high priority habitats mapped within 0.25 miles of this Site. There are no additional sensitive areas within a quarter mile of the site.

**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	500' by 3'	visible impacted soil (salt encrustation)

**INITIAL ACTION SUMMARY**

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

The line was shut in to prevent the release of additional brine water. Excavation of the impacted was conducted and soil samples were collected in accordance with COGCC 900 Series Rules, lab results indicate the removal of additional soil in areas in required to meet state cleanup thresholds.

**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 ):

Sixteen grab soil samples have been collected in the impacted area and were submitted for analysis for soil suitability for reclamation parameters and metals in soil. Seven waste characterization samples were collected and were submitted for analysis for soil suitability for reclamation parameters, metals in soil, BETXN+TMBs, TPH, and PAHs. See attached sample location map, laboratory results and a spreadsheet that summarizes laboratory results.

**Proposed Groundwater Sampling**

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

If groundwater is encountered during soil remediation, a grab sample will be collected as soon as practical. If contaminated soil is in contact with groundwater or if free product/hydrocarbon sheen are observed, the release will be reported in accordance with Rule 912.b. Groundwater samples will be submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene by EPA Method 8260

**Proposed Surface Water Sampling**

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

No surface water present.,

**Additional Investigative Actions**

Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

**SITE INVESTIGATION REPORT**

**SAMPLE SUMMARY**

Soil

NA / ND

Number of soil samples collected 92

Number of soil samples exceeding 915-1 39

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

Approximate areal extent (square feet) 1660

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_

\_\_\_\_\_ Highest concentration of SAR \_\_\_\_\_

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 5

**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 915-1 \_\_\_\_\_

\_\_\_\_\_ 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

0 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?

See Figure 2 of the attached remediation closure report

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.

Repairs have been made to the pipe.

**REMEDATION 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.

Remediation of impacted soils will consist of the removal of visibly impacted soils. Soil samples will be collected from the excavated soil in accordance with the COGCC's excavation guidance document. On May 30, 2023, waste characterization soil samples (SS01@5/WC01, SS02@3/WC02, and SS03@3/WC03) were collected from the base and adjacent sidewalls from the source area trench excavated to repair the flowline and were submitted for analysis of Table 915-1 analytes. Additionally, two composite stockpile samples (C01 and C02) were collected from the source area stockpiles and were submitted for analysis of BTEXN, TMBs, TPH, PAHs, SAR, EC, pH, boron, arsenic, barium and selenium. Based on the results of these samples and site-specific background samples, Tallgrass Energy respectfully requests that the COGCC modify the list of contaminants of concern in soil to include only EC, SAR, boron and barium for soil excavation confirmation soil samples per COGCC Rule 915.e.(2).C. A Sample Location Map, analytical results summary tables, and laboratory analytical reports are attached.

**Soil Remediation Summary**

In Situ

Ex Situ

Bioremediation ( or enhanced bioremediation )

Excavate and offsite disposal

Yes

Chemical oxidation  
 Air sparge / Soil vapor extraction  
 Natural Attenuation  
 Other \_\_\_\_\_

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  
 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 Reporting conducted as site conditions change.

### 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 Removal of impacted soil and sample results

## Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).  
If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

Operator anticipates the remaining cost for this project to be: \$ \_\_\_\_\_

## 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, E&P waste (produced water impacted soil) will be disposed at Pawnee Waste, LLC's landfill in Grover, CO.

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 140

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

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: Pawnee Waste, LLC

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

E&P waste (liquid) description \_\_\_\_\_

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC 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 ECMC 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.

Reclamation will be conducted in accordance with the COGCC's 1004 Series 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 provide the seed mix? \_\_\_\_\_

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

Did the local soil conservation district provide the seed mix? \_\_\_\_\_

### SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. \_\_\_\_\_

Proposed date of completion of Reclamation. \_\_\_\_\_

## 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. 05/20/2023

Actual Spill or Release date, or date of discovery. 05/20/2023

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/30/2023

Proposed site investigation commencement. \_\_\_\_\_

Proposed completion of site investigation. 05/30/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/22/2023

Proposed date of completion of Remediation. 01/19/2024

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**

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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: Scott Yount

Title: Sr. EHS Specialist

Submit Date: 01/26/2024

Email: scott.yount@tallgrass.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: Krystal Heibel

Date: 03/14/2024

Remediation Project Number: 30336

**COA Type****Description**

0 COA	

**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**

403667318	FORM 27-SUPPLEMENTAL-SUBMITTED
403667377	REMEDICATION PROGRESS REPORT

Total Attach: 2 Files

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

Environmental	Based on the information presented, it appears the elevated pH samples appear to be de minimis in quantity or within the range of background pH; therefore, elevated pH may not be associated with E&P activities. It appears that no further remedial action is necessary at this time and the ECMC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards or background levels or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.	03/14/2024
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Total: 1 comment(s)