

**State of Colorado**  
**Energy & Carbon Management Commission**

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Receive Date:  
08/23/2024  
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: <u>TALLGRASS WATER WESTERN LLC</u>	Operator No: <u>10608</u>	<b>Phone Numbers</b>
Address: <u>370 VAN GORDON STREET</u>		Phone: <u>(316) 322-3514</u>
City: <u>LAKEWOOD</u>	State: <u>CO</u>	Zip: <u>80228</u>
Contact Person: <u>Scott Yount</u>	Email: <u>scott.yount@tallgrass.com</u>	
		Mobile: <u>(316) 322-3514</u>

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 36100 Initial Form 27 Document #: 403844188

**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: <u>SPILL OR RELEASE</u>	Facility ID: <u>486406</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>SPILL/RELEASE POINT</u>	Latitude: <u>40.804528</u>	Longitude: <u>-103.811806</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>25</u>	Twp: <u>10N</u>	Range: <u>58W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

**SITE CONDITIONS**

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use None  
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

### 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	85' by 45'	visible impacts to soil

**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. The line has been exposed and it appears that the release was due to the failure of a fitting on the pipeline riser. Tallgrass estimates that approximately 75 barrels of brine water was released, approximately 10 barrels of brine water was recovered.

**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 ):

During the initial spill response, one waste characterization sample was submitted for analysis of all contaminants of concern listed in Table 915-1. Four background samples were collected at two locations at two feet bgs and five feet bgs. Based on the waste characterization sample results, Tallgrass requested an amended analysis of contaminants of concern which was approved by the COGCC. A map of soil sample locations will be provided in subsequent Form 27 submittals.

**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 33  
Number of soil samples exceeding 915-1 20  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 3507

**NA / ND**

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 43.2  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 6

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

ND Highest concentration of Benzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Toluene (µg/l) \_\_\_\_\_  
ND Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Xylene (µg/l) \_\_\_\_\_  
ND 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?  
Four background samples were collected at two locations at two and five feet bgs.

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 fitting associated with the pipe riser have been made

**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.  
Initial remediation of the site consisted of the removal of visibly impacted soil. Discrete soil confirmation were collected from the excavated area in accordance with the COGCC excavation guidance document and compared to the approved reduction of Table 915-1 contaminants of concerned. Lab data indicates that additional soil removal is required. Removal of impacted soil will continue until confirmation soil samples indicate that cleanup levels have been achieved. Implementation of the excavation of impacted soil is in progress, determining obtaining NRA status is difficult due to delays in receiving lab data and the presence of several third-party pipelines in the excavated area.

**Soil Remediation Summary**

In Situ \_\_\_\_\_  
Bioremediation ( or enhanced bioremediation )  
 Ex Situ \_\_\_\_\_  
Yes Excavate and offsite disposal

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

If Yes: Estimated Volume (Cubic Yards) 2300  
Name of Licensed Disposal Facility or ECMC 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

### 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 Removal of impacted soil

## 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.

We have \$35M in General Liability limits with a self-insured retention of \$2,000,000. The current estimate for complete remediation of this project is well within our self-insured retention, currently estimated around \$200,000. Our net income last year was over \$540,000,000 we have the financial ability to cover the remediation costs

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:

None

Volume of E&P Waste (solid) in cubic yards 2300

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? No

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? No

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

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 COGCC 1004 Series Rules. Will work with landowner to ensure the chose of seed mix is acceptable

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. 04/08/2024

Actual Spill or Release date, or date of discovery. 04/08/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/10/2024

Proposed site investigation commencement. 04/16/2024

Proposed completion of site investigation. 08/08/2024

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/10/2024

Proposed date of completion of Remediation. 08/08/2024

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**

Laboratory analytical results for confirmation grab soil samples SS15@3, SS16@4, SS17@4, SS18@4, SS19@4, SS20@3, and SS22@6 reported concentrations above Table 915-1 Residential Soil Screening Limits and established site-specific background limits for SAR, or pH, and/or arsenic. Since these results represented the only exceedances reported at these sample locations, and the reported analytical results were minimally above regulatory limits, the soil samples were requested to be re-analyzed by the laboratory. Original results and the rerun results are displayed in the report and summary tables, rerun results are denoted with the suffix 'RE'. Based on these investigation results, the elevated SAR, or pH, and/or arsenic at soil sample SS15@3, SS16@4, SS17@4, SS18@4, SS19@4, SS20@3, and SS22@6 appear to be de minimus in quantity or within the range of background levels. Tallgrass requests no further action determination for Remediation Project Number 36100 and Spill/Release ID 486406.

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: 08/23/2024

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: 10/10/2024

Remediation Project Number: 36100

**COA Type****Description**

	Operator shall fully remediate all Table 915-1 analytes exceedances before requesting closure.
	Closure request removed. Arsenic concentrations in confirmation soil samples exceed the Table 915-1 Residential Soil Screening Level Concentrations and are greater than 1.25 times the arsenic concentration in the background sample. Operator will provide additional data to characterize arsenic concentrations at the site and to determine its source in the next quarterly report
2 COAs	

**ATTACHMENT 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**

403898963	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403899015	SITE MAP
403899018	SOIL SAMPLE LOCATION MAP
403899019	ANALYTICAL RESULTS
403899020	PHOTO DOCUMENTATION
403899024	OTHER
403953473	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 7 Files

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

Environmental	Per Doc# 403794609, Due to shallow groundwater (~37' bgs) and the quantity of this spill/release - Operator shall comply with Table 915-1 Protection of Groundwater Soil Screening Level Concentrations.	10/10/2024
Environmental	Per Doc# 403794609, ECMC agrees to the reduced analyte list of BTEX, Fluorene, 1Methylnaphthalene, EC, SAR, pH, Arsenic, Barium, Cadmium and Lead.	10/10/2024

Total: 2 comment(s)