

State of Colorado
Oil and Gas Conservation Commission

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403119190
Receive Date:
09/09/2022

Report taken by:
John Heil

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.

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

OPERATOR INFORMATION

Name of Operator: TEP ROCKY MOUNTAIN LLC	Operator No: 96850	Phone Numbers Phone: (970) 263-2760 Mobile: (970) 263-4875
Address: 1058 COUNTY ROAD 215		
City: PARACHUTE	State: CO	Zip: 81635
Contact Person: Michael Gardner	Email: mgardner@terraep.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 25072 Initial Form 27 Document #: 403119190

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: 482867	API #:	County Name:
Facility Name: RG 41-18-297 Drill Cuttings Trench	Latitude: 39.881867	Longitude: -108.322667	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NWNE	Sec: 18	Twp: 2S	Range: 97W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications OH Most Sensitive Adjacent Land Use rangeland
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

Ephemeral drainages lie approximately 790 feet to the west and 1,575 feet to the southwest, both which have no live water.

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	cuttings	confirmation 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.

The purpose of this Form 27 is to request permanent closure of the cuttings trench located at the RG 41-18 well pad. This request is for the routine, planned closure of the cuttings trench. There is no historical or current spill associated with this Form 27.

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):

Drill cuttings have been mixed and blended within the trench with clean fill material until COGCC Table 915-1 standards were met. Representative samples of the treated, mixed cuttings were collected from the east and west half of the cuttings trench in 1-2 foot intervals throughout the trench to demonstrate compliance with COGCC 900 series rules. Refer to the sample location map for sample points.

Proposed Groundwater Sampling

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

[Empty text box for groundwater sampling details]

Proposed Surface Water Sampling

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

[Empty text box for surface water sampling details]

Additional Investigative Actions

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

[Empty text box for additional investigative actions]

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 16

-- Highest concentration of TPH (mg/kg) 721

Number of soil samples exceeding 915-1 2

-- Highest concentration of SAR 25.5

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

BTEX > 915-1 No

Approximate areal extent (square feet) 14000

Vertical Extent > 915-1 (in feet) 2

Groundwater

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No

Highest concentration of Toluene (µg/l) _____

Depth to groundwater (below ground surface, in feet) 100

Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed 0

Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 0

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?

Three (3) background samples were collected from the nearby undisturbed soils for arsenic and inorganics (SAR/EC/pH)

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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

NA - Request is for permanent drill cuttings trench closure

REMEDICATION 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.

Using heavy equipment, the drill cuttings from the RG 41-18 location have been thoroughly mixed and blended with clean fill material as approved for this location. The cuttings were sampled both before (4/19/2022) and after the mixing / blending with clean fill material. Initially one sample was collected from the east and west half. After further evaluation, additional sampling was conducted from different depth intervals, which are outlined within the data tracker and lab reports. With the exception of arsenic, inorganics (pH/SAR) and one chromium (IV) exceedance, the post mixing analytical results confirm that the treated drill cuttings comply with COGCC 915-1 cleanup standards. A data summary sheet and the analytical reports are attached to this document

Soil Remediation Summary

In Situ

Ex Situ

No Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

No Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____

No Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC Facility ID # _____

No Natural Attenuation
Yes Other mixing and blending drill cuttings with clean fill

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.

Groundwater has not been impacted and monitoring is not necessary at this time

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

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? _____

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

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

E&P waste (solid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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.

Interim reclamation of the pad will be performed per the attached construction and reclamation plans. In general, clean, stockpiled fill material is added to the drill cuttings and mixed within the cuttings trench using large excavators and dozers to thoroughly mix and blend the material. The mixed material is sampled on multiple occasions throughout the mixing process to ensure that Table 915-1 cleanup standards are achieved. Once the treated / mixed cuttings materials have successfully attained Table 915-1 cleanup standards, the mixed materials are contoured within the trench. The trench is then covered (capped) with a uniform layer of clean fill material. The cap and cut-slope areas are then contoured to match the pre-existing and adjacent slopes and topography as closely as possible. Stockpiled topsoil is then spread over the recontoured areas. The interim reclamation areas are then hydro-seeded with a seed mix approved by the surface owner (BLM). Soil amendments will also be used as needed to optimize successful germination. Storm water BMPs are installed per good engineering practices as outlined TEPs Best Management Practice (BMP) manual to protect the newly reclaimed site and to minimize and control sediment from leaving the location. The progress and success of revegetation efforts at this location will be closely monitored by TEP staff. This location is part of TEP's annual weed spraying and control program which is designed to prevent the establishment and spread of noxious weeds.

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? No

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 07/29/2022

Proposed date of completion of Reclamation. 08/05/2022

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. _____

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/19/2022

Proposed site investigation commencement. 08/15/2022

Proposed completion of site investigation. 08/31/2022

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

Please forward onto John Heil

This Initial Form 27 is being submitted to request closure of the RG 41-18 cuttings trench.

As outlined within this Form 27, samples were initially collected on 4/19/2022 from the east and west half of the cuttings trench at approximately 1-foot below the surface. Results indicated that TPH concentrations exceeded Table 915-1 thresholds at the SL-1 (western half) sample point. Further mixing and blending was conducted and samples were re-collected on 5/18/2022 and 6/7/2022.

After further evaluation, it was decided to collect additional samples from the trench on 6/23/2022 at 1-2 foot intervals from various points to ensure the mixed / blended cuttings satisfy COGCC Table 915-1 throughout the entire depth of the trench.

Results from the 6/23/2022 sampling event indicated a slight detection above the COGCC Table 915-1 thresholds for chromium (IV), as well as arsenic, inorganics constituents (pH/SAR).

TEP is requesting relief for these exceedances mentioned above as the concentrations only slightly exceed the Table 915-1 thresholds and pose no risk to public safety and environmental for the following reasons:

- Groundwater is anticipated to be beyond 100 feet deep
- Nearest live surface water is over 1.5 miles away and the surrounding topography and terrain prevent any impacts to live water
- The native soil types at this location contain a high clay content which act as a barrier and will effectively limit the migration of constituents within the soil.
- A native soil barrier cap greater than 3-feet will be placed on top of the cuttings trench preventing any root zone interference when the pad goes to final reclamation.
- Arsenic levels within the cuttings are comparable to background concentrations and/or within 1.25x allowance
- Chromium (IV) is observed in background soil reports for nearby locations (see attached background data report for the B-19P location - Facility ID 335891)

After construction activities and drilling, the maximum depth (thickness) of the drill cuttings within the trench was estimated to be approximately 12-feet deep. Discrete confirmation samples were collected from the surface to the base of the cuttings as outlined within the attached data.

TEP is requesting permission to close the RG 41-18 cuttings trench and proceed with placing the native soil cap.

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

Signed: Kris Rowe

Title: TEP Environmental

Submit Date: 09/09/2022

Email: Krowe@terraep.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: John Heil

Date: 09/19/2022

Remediation Project Number: 25072

Condition of Approval

COA Type

Description

<u>COA Type</u>	<u>Description</u>
1 COA	Operator shall submit a Form 27 Supplemental with a request for closure of the RG 41-18-297 Drill Cuttings Trench.

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

<u>Att Doc Num</u>	<u>Name</u>
403119190	FORM 27-INITIAL-SUBMITTED
403119332	SOIL SAMPLE LOCATION MAP
403119334	ANALYTICAL RESULTS
403119337	ANALYTICAL RESULTS
403119338	ANALYTICAL RESULTS
403119339	ANALYTICAL RESULTS
403119341	ANALYTICAL RESULTS
403119391	ANALYTICAL RESULTS
403119715	SITE MAP

Total Attach: 9 Files

Date Run: 9/19/2022 Doc [#403119190]

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General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)