

State of Colorado
Oil and Gas Conservation Commission

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Report taken by:
John Heil

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: TEP ROCKY MOUNTAIN LLC	Operator No: 96850	Phone Numbers
Address: 1058 COUNTY ROAD 215		Phone: (970) 263-2760
City: PARACHUTE State: CO Zip: 81635		Mobile: (970) 623-4875
Contact Person: Michael Gardner	Email: mgardner@terraep.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 5467 Initial Form 27 Document #: 2523680

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: Historical spill closure

SITE INFORMATION

No Multiple Facilities

Facility Type: WELL	Facility ID: _____	API #: 045-10270	County Name: GARFIELD
Facility Name: CLOUGH RWF 33-22	Latitude: 39.509545	Longitude: -107.873164	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSE	Sec: 22	Twp: 6S	Range: 94W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

Other Potential Receptors within 1/4 mile

COLORADO RIVER 1/2 MILE S, DOE MONITORING WELL 0172 ~30' NW.

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
	GROUNDWATER	See attached NOC report	SAMPLING
	SOILS	See attached NOC report	WILL BE DETERMINED
	SURFACE WATER	See attached NOC report	SAMPLE FROM COLORADO RIVER

INITIAL ACTION SUMMARY

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

DURING THE INVESTIGATION OF A SEPARATE INCIDENT AT THE NEARBY RWF 342-22 LOCATION, GROUNDWATER SAMPLES WERE COLLECTED FROM THE DOE #172 MONITORING WELL LOCATED ADJACENT TO THE RWF 33-22 WELL PAD. ANALYTICAL RESULTS (ATTACHED) INDICATED THE PRESENCE OF BTEX CONSTITUENTS AND GASOLINE RANGE HYDROCARBONS OF WHICH, BENZENE CONCENTRATIONS EXCEEDING THE TABLE 910-1 CLEANUP LEVELS. THE COGCC WAS NOTIFIED ON JULY 8, 2010 AND SUBSEQUENTLY ISSUED AN NOAV (200262621) ON JULY 19, 2010.

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 NOC report

Proposed Groundwater Sampling

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

See attached NOC report

Proposed Surface Water Sampling

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

See attached NOC report

Additional Investigative Actions

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

See attached NOC report

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 0

Number of soil samples exceeding 915-1 0

Was the areal and vertical extent of soil contamination delineated?

Approximate areal extent (square feet) 0

NA / ND

 Highest concentration of TPH (mg/kg)

 Highest concentration of SAR

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

Groundwater

Number of groundwater samples collected 41

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 12

Number of groundwater monitoring wells installed 4

Number of groundwater samples exceeding 915-1 0

 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?

See attached NOC report and additional documentation available under REM# 5467

Were background samples collected as part of this site investigation?

See attached NOC report and additional documentation available under REM# 5467

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?

INVESTIGATION IS CURRENTLY ON GOING. WHEN IMPACT REMEDIATION BEGINS, SAMPLE LOCATION INFORMATION AND ANALYTICAL RESULTS WILL BE SUBMITTED AS AN UPDATE TO THIS FORM27.

See attached NOC report and additional documentation available under REM# 5467

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.

A PLAN FOR SOURCE REMOVAL WILL BE GENERATED ONCE DELINEATION ACTIVITIES HAVE BEEN COMPLETED, HOWEVER, AT THIS TIME, IT IS BELIEVED THAT THE MOST LIKELY SOURCE OF IMPACT IS THE PRODUCTION TANK FACILITY AND/OR ASSOCIATED FLOWLINES. AS PART OF THE SOURCE/IMPACT INVESTIGATION SOIL SAMPLES WILL BE COLLECTED FROM THE FORMER UNDERGROUND PRODUCTION TANK LOCATIONS AND ASSOCIATED FLOWLINES AND ANALYZED FOR THE PARAMETERS LISTED ON THE ATTACHED TABLE-SOIL ANALYTICAL LIST. FURTHER DETAIL REGARDING SOURCE INVESTIGATION/REMOVAL AND GROUNDWATER INVESTIGATION ACTIVITIES IS PROVIDED IN ATTACHMENT 1 TO THIS FORM 27.

See attached NOC report and additional documentation available under REM# 5467

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.

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

- _____ 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.

THE INITIAL PHASE OF THE REMEDIATION WILL BE TO DELINEATE GROUNDWATER IMPACT. A MINIMUM OF THREE MONITORING WELLS WILL BE INSTALLED ADJACENT TO TEH RWF 33-22 LOCATION (SEE FIGURE 1). IT IS CURRENTLY ANTICIPATED THAT THE TOTAL DEPTH OF EACH MONITROING WELL WILL RANGE FROM 15-30 FEET BGS, DEPENDING ON WATER TABLE, WHICH, DURING THE RWF 342-22 INVESTIGATION, HAS BEEN DETERMINED TO BE HIGHLY VARIABLE. ADDITIONAL BORINGS COULD BE ADVANCED DEEPER, DEPENDING ON INFORMATION GATHERED IN THE FIELD DURING DRILLING ACTIVITIES. DURING DRILLING ACTIVITIES, CUTTINGS AND GROUNDWATER WILL BE FIELD SCREENED USING A PID. IF PRACTICAL, SOIL SAMPLES WILL BE COLLECTED AT 2 FOOT INTERVALS AND AT TEH PRESENCE OF IMPACT (SEE ATTACHED TABLE-SOIL ANALYTICAL LIST). INDICATION OF HYDROCARBON IMPACT WILL BE NOTED AND WILL ULTIMATELY DETERMINE THE NEED AND LOCATION OF ADDITIONAL MONITORING WELLS. THE MONITORING WELLS WILL BE DEVELOPED AFTER INSTALLATION ACTIVITIES ARE COMPLETE AND WILL BE SAMPLED AFTER DEVELOPMENT ACTIVITIES ARE COMPLETE (SEE ATTACHED TABLE-GROUNDWATER ANALYTICAL LIST). AS PART OF THE SOURCE/IMPACT INVESTIGATION SOIL SAMPLES WILL BE COLLECTED FROM THE FORMER UNDERGROUND PRODUCTION TANK LOCATIONS AND ASSOCIATED FLOWLINES AND ANALYZED FOR THE PARAMETERS LISTED ON THE ATTACHED TABLE-SOIL ANALYTICAL LIST.

REMEDATION 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: _____

REMEDATION COMPLETION REPORT

REMEDATION 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.

IF SOLID SOURCE REMOVAL IS DETERMINED TO BE NECESSARY (E.G. DIG AND HAUL), A RECLAMATION PLAN WILL BE GENERATED AS AN UPDATE TO THIS FORM 27.

Update 7/22/22 - See attached NOC report

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 provide the seed mix? Yes

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

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

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. _____

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/24/2010

Proposed site investigation commencement. 07/08/2010

Proposed completion of site investigation. 10/29/2010

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/01/2011

Proposed date of completion of Remediation. 11/29/2013

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

In response to NOAV Doc# 403003375, this Supplemental Form 27 is being submitted to provide pit closure documentation for the RWF 33-22 spill closure that consisted of groundwater remediation occurring between 2010 to 2013 under approved REM# 5467. Remediation activities were outlined within a Notice of a Completion (NOC) report (Doc# 400569846) drafted via Form 4 submitted to the COGCC on 3/11/2014 (Doc# 400569829) and approved by the COGCC on 3/21/2014.

Refer to attached closure documentation as well as the numerous documents available under REM# 5467;

Documentation attached consists of;
- Notice of Completion Report (NOC)
- Approved Sundry Notice Form 4 (requesting closure)

Terra is requesting formal closure of the RWF 33-22 REM# 5467 within the COGIS database

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: 07/27/2022

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: 12/07/2022

Remediation Project Number: 5467

COA Type

Description

	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.
1 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.

<u>Att Doc Num</u>	<u>Name</u>
403113380	FORM 27-SUPPLEMENTAL-SUBMITTED
403113409	SITE INVESTIGATION REPORT
403113410	CORRESPONDENCE

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	Closure was granted by Stan Spencer on 3/21/2014, see Form 4 Doc #400569829.	12/07/2022

Total: 1 comment(s)