FORM 27 Rev 4/21

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 INFORMATON

Name of Operator: TEP ROCKY MOUNTAIN LLC Operator No: 96850
Address: 1058 COUNTY ROAD 215
City: PARACHUTE State: CO Zip: 81635
Contact Person: Michael Gardner Email: mgardner@terraep.com

Phone Numbers
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PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 18430 Initial Form 27 Document #: 402703249

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.
- [X] 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: 479988 API #: County Name: GARFIELD
Facility Name: MV 9-32-696 Tank Battery Latitude: 39.481235 Longitude: -108.132667
** correct Lat/Long if needed: Latitude: 39.481229 Longitude: -108.132659
QtrQtr: NESW Sec: 32 Twp: 6S Range: 96W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications CL
Most Sensitive Adjacent Land Use Rangeland
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

Other Potential Receptors within 1/4 mile

South Fork is located ~ 230 feet to the east and Starkey Gulch lies approximately 375 feet to the north. Nearest developed groundwater wells are located ~2,548 feet to the northeast at the Starkey Waste Management Facility, which has groundwater depth noted at 60 feet. The elevation difference between the groundwater wells and the release area is ~ 133 feet, suggesting that groundwater is located at ~190-200 feet.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [ ] Produced Water
  - [ ] Oil
  - [X] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA) _____
- [ ] **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	area of impact measures 20'x20'x20'	field screening and confirmation data

INITIAL ACTION SUMMARY

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

TEP personnel dispatched vac truck equipment to recover any free standing liquids within the secondary containment. It was also discovered that approximately 3 bbls of condensate / storm water leaked out of the containment in the northwest corner from a faulty patch on the poly liner. Field screening instruments (PID and PetroFlag) indicated that soil contained a very high hydrocarbon concentration (5,000 ppm+). The area was flagged off and utility locates called to allow for excavation of the impacted soils.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

Soil samples will be collected from the excavation side walls at a position centered in depth as well as on the lowest point of the excavation bottom.

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 7

Number of soil samples exceeeding 915-1 7

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

Approximate areal extent (square feet) 400

NA / ND

-- Highest concentration of TPH (mg/kg) 15.4

-- Highest concentration of SAR 2.6

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 20

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 190`

Number of groundwater monitoring wells installed 0

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

[X] Were impacts to adjacent property or offsite impacts identified?

Impacts extended approxmiately 20 feet north and west from the secondary containment.

[X] Were background samples collected as part of this site investigation?

One (1) background sample was collected on the eastern side of the access road as shown in the attached maps

[ ] 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? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The leaking condensate tank was removed from service. The entire tank battery is being reduced from 4 tanks to 2 tanks. The two new tanks are internally coated to prevent / minimize future occurrence of tank failure. The secondary containment will be metal structure with a new liner, and will be reduced accordingly to accomodate the two new tanks.

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.

UPDATE: An initial Form 27 (doc#402703249) was submitted for this project on 06/01/21 and approved by COGCC on 06/09/21. This initial Form 27 was submitted in anticipation of encountering and treating a large volume of contaminated soils in an on-site landfarm (to be located on TEP surface). As remediation progressed, the initial volume of soils encountered were heavily contaminated with condensate and it was determined that these soils were not suitable to be successfully landfarmed in a reasonable amount of time due to their high hydrocarbon content. Therefore, the heavily contaminated soils removed from the excavation were tranported off-site immediately upon excavation and disposed of at an approved commercial disposal facility. TEP made the determination that direct removal and disposal of the materials exceeding 915-1 cleanup standards was a preferrable and more responsible plan of managing these wastes than attempting to landfarm the materials on-site over the course of several months. Direct removal and disposal of the heavily contaminated materials prevents / eliminates prolonged exposure of contaminated materials to the environmental, wildlife, and the elements. The materials that were temporarily stockpiled on location consisted of soils that tested below 915-1 cleanup standards and clean fill soils that were brought in from TEP property. TEP maintains that no active treatment of contaminated materials exceeding 915-1 cleanup standards ever occurred. Therefore, the need for an on-site landfarm never materialized and was effectively negated due to the decision to haul soils exceeding 915-1 cleanup standards to an off-site commercial disposal facility.

Samples were collected from the stockpiled soils on 6/4/21 and 6/9/21, and data demonstrate that the soils stored on location pending backfill were below COGCC Table 915-1 standards (with the exception to arsenic which is comparable to background levels in the area).

Soil Remediation Summary

☐ **In Situ**

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

☒ **Ex Situ**

- Yes Excavate and offsite disposal
  - If Yes: Estimated Volume (Cubic Yards) 140
  - Name of Licensed Disposal Facility or COGCC Facility ID # ____
- Yes Excavate and onsite remediation
  - Yes Land Treatment
  - No Bioremediation (or enhanced bioremediation)
  - No Chemical oxidation
  - No Other ____

Groundwater Remediation Summary

- No Bioremediation (or enhanced bioremediation)
- No Chemical oxidation
- No Air sparge / Soil vapor extraction
- No 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.

Groundwater impacts are not anticipated 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

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. E&P wastes were hauled to off-site commercial disposal facility.

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

E&P waste (solid) description soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Greenleaf Environmental

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?

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.

Once the excavation confirmation samples indicate compliance with Table 915-1, the area will be backfilled and contoured to the current grade. Reclamation will be completed in accordance with the COGCC 1000 series rules. Please note that the reclamation mentioned in the Form 27 is for the spill area and not the entire pad area. The pad is still a working pad.

Is the described reclamation complete? Yes

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

[X] 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. 05/11/2021

Actual Spill or Release date, or date of discovery. 05/11/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/13/2021

Proposed site investigation commencement. 05/13/2021

Proposed completion of site investigation. 05/25/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/11/2021

Proposed date of completion of Remediation. 05/25/2021

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

This Supp. Form 27 is being submitted to provide additional information regarding the remediation of the spill at the MV 9-32 and to answer COA requests. Confirmation soil samples collected from within the excavation indicate compliance with COGCC Table 915-1 with the exception of arsenic and pH. TEP is requesting relief from the arsenic and pH exceedance as background values are comparable to those within the excavation as well as in the surrounding areas in Parachute as shown in the attached background data tracker.

Samples collected on 6/4/21 and 6/9/21 from the temporarily stockpiled soils demonstrate compliance with Table 915-1 with the exception to arsenic, which is consistent with background levels observed at other locations in the vicinity of the spill site and the Parachute area.

Responses to the COA's on the Initial Form 27 are provided below.

COA 1: 5/25/21 was the date that excavation (remediation) of the spill area had stopped and confirmation samples collected. Refer to attachments for confirmation data results.

COA 2: Rule 913.c.4 applies to the land treatment of oily waste pursuant to Rule 905.e.. TEP did not land farm / treat oily waste on site. See updated language provided in Remediation Summary.

COA 3: See updated language provided in Remediation Summary. Field screening and analytical results for excavation and backfill materials are included as attachements to this document.

COA 4: Rule 304.a.(2) requires approval of a Form 2A for "... surface disturbance (activities) for purposes of expanding an existing Working Pad Surface or Oil and Gas Location." The temporary or inadvertent placement of clean soil materials (i.e., below 915-1 standards) immediately adjacent to the working pad surface was not an "expansion to the working pad surface or oil and gas location" which would otherwise have required Form 2A approval prior to remediation efforts. These types of remediation activities have never necessitated Form 2A approval or compliance with Rule 304.a.(2) as these activities are considered part of required maintenance and operation. Additionally, the working pad surface was not permanently altered or changed. The spill and impacted soils were remediated, the excavation has been backfilled, the containment system upgraded, and the working surface of the location has not changed from what it was prior to the spill. TEP was also in the process of removing / abandoning an un-used off location flowline. Because the flowline was located on the west side of the containment structure, the occurrence of the spill accelerated the need to remove / abandon the flowline. The flowline abandonment activities also resulted in surface disturbance immediately adjacent to the remediation area. All disturbed areas have been restored to their original contour and reseeded with a seed mix that is appropriate for this location.

COA 5: The secondary containment has been reduced and upgraded with a new, spray-in liner.

COA 6: Approximately 140 cu yds of soil containing high hydrocarbon concentrations based on visual assessment, olfactory, and field screening instruments with results of 1,500 ppm (or more) were hauled offsite for disposal. Attached are the manifests.

COA 7: See reponse to COA 4 above.

COA 8: TEP has ensured Rule 913.b.(5).B.i-v. was met by fencing excavated areas; Any temporary soil stockpiles were bermed to prevent contact with storm water; Surface disturbances were minimized; Disturbed areas were reclaimed and reseeded immediately upon completion; TEP chose to haul contaminated soils to off site disposal rather than landfarm on-site. This is a more environmentally responsible plan than landfarming contaminated soils over an extended period of time. The decision to haul the contaminated soils to an off-site disposal facility prevented a prolonged exposure of the contaminated soils to the environmental, wildlife, livestock, and the elements.

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

Signed:` Michael Gardner Title: TEP Environmental

Submit Date:` 06/17/2021 Email: mgardner@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: 03/02/2022

Remediation Project Number: 18430

Condition of Approval

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.

Att Doc Num	Name
402714517	FORM 27-SUPPLEMENTAL-SUBMITTED
402714797	SOIL SAMPLE LOCATION MAP
402714801	MAP
402714802	SITE MAP
402714803	ANALYTICAL RESULTS
402714807	DISPOSAL MANIFESTS
402714808	DISPOSAL MANIFESTS
402714810	ANALYTICAL RESULTS
402714822	ANALYTICAL RESULTS
402721945	ANALYTICAL RESULTS
402721946	ANALYTICAL RESULTS

Total Attach: 11 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)