FORM 27 Rev 4/21

# State of Colorado
# Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 402877972
Receive Date: 11/24/2021
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 INFORMATON

Name of Operator: TEP ROCKY MOUNTAIN LLC Operator No: 96850
Address: PO BOX 370
City: PARACHUTE State: CO Zip: 81635
Contact Person: Michael Gardner Email: mgardner@terraep.com

**Phone Numbers**
Phone: (970) 623-4875
Mobile: (970) 263-2760

## PROJECT, PURPOSE & SITE INFORMATION

### PROJECT INFORMATION

Remediation Project #: 21574 Initial Form 27 Document #: 402877972

### 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: LOCATION Facility ID: 336014 API #: County Name: GARFIELD
Facility Name: RIVER RANCH-66S92W 8NWSW Latitude: 39.538952 Longitude: -107.697490
** correct Lat/Long if needed: Latitude: 39.538960 Longitude: -107.697320
QtrQtr: NWSW Sec: 8 Twp: 6S Range: 92W Meridian: 6 Sensitive Area? Yes

### SITE CONDITIONS

General soil type - USCS Classifications: OH
Most Sensitive Adjacent Land Use: Gravel pit to the west and rangeland to the east
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? Yes

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

Nearest water well is located ~2,440, but does not have a well construction diagram. The next closest well is located ~3,128 feet to the east and indicates a static water level of 6 feet. Surface water pond is located ~475 feet to the north and a wetland marsh area is located ~30 feet south of the spill point of origin.

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [ ] Oil
  - [ ] 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 | ~8-10" below ground surface | field screening and soil data analysis |
| Yes | SURFACE WATER | ~single detection <915-1 @ 1200' DG | water data analysis |
| Yes | VEGETATION | ~3,000 sq feet | visual impacts on vegetation |

## INITIAL ACTION SUMMARY

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

Immediately upon discovery, the source of the water was stopped by isolating the defective valve and plugging the poly-line riser. Spill absorbent booms and check dams were installed in efforts to channel the produced water away from the marsh. A vac-truck was immediately dispatched to the location to recover produced water and paraffin from the marsh.

## 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 ):

Six (6) soil samples have been collected within the impacted area upon initial discovery as well as throughout the excavation and remediation process. TEP will continue to collect samples as necessary and analyze them for constituents that exceeded within the initial sampling.

### Proposed Groundwater Sampling

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

Groundwater impacts are not expected at this time

### Proposed Surface Water Sampling

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

Eight (8) surface water sample points have been established with one of them being at the breach point where the spill flowed into the surface water marsh area, one upgradient, and the rest are downgradient. See attached sample location map.

### Additional Investigative Actions

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

TEP will conduct additional excavation of the soils and monitor surface water conditions for any sheen. Vac trucks will be utilized to remove any observed sheen on the surface water.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

**Soil**

Number of soil samples collected: 15

Number of soil samples exceeeding 915-1: 9

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

Approximate areal extent (square feet): 3000

**NA / ND**

-- Highest concentration of TPH (mg/kg): 1115

-- Highest concentration of SAR: 27.9

BTEX > 915-1: Yes

Vertical Extent > 915-1 (in feet): 1

**Groundwater**

Number of groundwater samples collected: 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet): 6`

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**

8 Number of surface water samples collected

6 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?

Production water flowed out of the riser and into a wetland marsh area. A single, low-level benzene detection was observed within the surface water ~1200 feet downgradient during a 10/11/21 sampling event, however subsequent sampling events indicate no benzene concentrations exceed Table 915-1 thresholds.

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

Six (6) background soil samples were collected from around the location in undisturbed points. One (1) upgradient water sample was collected to determine baseline of the surface water.

[X] Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards): 312

Volume of liquid waste (barrels): 35

[X] Is further site investigation required?

Additional excavation of soils around the riser is planned to help remove possible source of hydrocarbon-contaminated soils that may be the source of a sheen that is periodically observed in select areas.

# REMEDIAL ACTION PLAN

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The leaking riser has been removed from service and will be rebuilt. The riser will not be used until repairs are made and the riser is tested.

## 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.

Impacted soils around the release point have been and will continue to be excavated and hauled off site for disposal. Surface water absorbent booms have been placed downgradient and will be replaced as needed. Surface water monitoring will occur bi-weekly by TEP personnel visiting the site and evaluating the surface water for any sheen. If a sheen is observed, vac truck equipment will be dispatched to the site for removal. Sampling of the surface water will be performed as needed to document compliance with 915-1 cleanup standards.

### Soil Remediation Summary

[ ] **In Situ** [X] **Ex Situ**

| | | | |
|---|---|---|---|
| | Bioremediation ( or enhanced bioremediation ) | Yes | Excavate and offsite disposal |
| | Chemical oxidation | | If Yes: Estimated Volume (Cubic Yards) 312 |
| | Air sparge / Soil vapor extraction | | Name of Licensed Disposal Facility or COGCC Facility ID # |
| | Natural Attenuation | No | Excavate and onsite remediation |
| | Other | | 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.

Groundwater impacts are not anticipated at this time as soil analysis indicates compliance with Table 915-1 with the exception to inorganics.

# 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?

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.

The area where the spill occurred and excavation took place, reclamation will occur in accordance with the 1000 series rules as well as any other governing agency requirements. Note that the Army Core of Engineers (ACOE) has been contacted and they've confirmed that current activities do not warrant any actions or requirements set forth by the ACOE.

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? 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? No

## 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. 10/12/2021

Actual Spill or Release date, or date of discovery. 10/11/2021

## SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/11/2021

Proposed site investigation commencement. 10/11/2021

Proposed completion of site investigation.

## REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/13/2021

Proposed date of completion of Remediation. 12/10/2021

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

Please forward onto John Heil

This Initial Form 27 is being submitted for the River Ranch A riser spill as well as provide updated information on the status of the spill and remediation efforts.

Follow-up soil samples have been collected on 11/12/21 from the sample points that contained exceeding constituents from the 10/27/21 sampling event, but samples are still being analyzed by Pace Laboratories. Updated data trackers and sample location maps have been attached for reference.

Additional excavation is anticipated during the week of November 29 - December 3 to address any residual soil impacts that may be around the riser which are contributing to a sheen on the surface water observed by COGCC personnel during inspections.

TEP is currently conducting daily inspections of the site and dispatching a vac truck if at any time a sheen or signs of hydrocarbon presence is observed within the surface water.

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:` 11/24/2021 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: 01/17/2022

Remediation Project Number: 21574

## Condition of Approval

| COA Type | Description |
|---|---|
| | Assess the nature and extent of contamination with confirmation surface water and soil samples. Delineate the horizontal and vertical extent of impacted area and remediate impacts to Table 915-1 Protection of Groundwater Soil Screening Level Concentrations. |
| 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 |
|---|---|
| 402877972 | FORM 27-INITIAL-SUBMITTED |
| 402878143 | ANALYTICAL RESULTS |
| 402878144 | ANALYTICAL RESULTS |
| 402878146 | ANALYTICAL RESULTS |
| 402878148 | ANALYTICAL RESULTS |
| 402878149 | ANALYTICAL RESULTS |
| 402878151 | ANALYTICAL RESULTS |
| 402878161 | ANALYTICAL RESULTS |
| 402878169 | ANALYTICAL RESULTS |
| 402878171 | ANALYTICAL RESULTS |
| 402878173 | ANALYTICAL RESULTS |
| 402878198 | ANALYTICAL RESULTS |
| 402878201 | MAP |
| 402878202 | SOIL SAMPLE LOCATION MAP |

Total Attach: 14 Files

# General Comments

| User Group | Comment | Comment Date |
|---|---|---|
| | | Stamp Upon Approval |

Total: 0 comment(s)