

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403692297
Receive Date:
02/21/2024
Report taken by:
CHRIS CANFIELD

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>TOP OPERATING COMPANY</u>	Operator No: <u>39560</u>	Phone Numbers Phone: <u>(303) 727-9915</u> Mobile: <u>()</u>
Address: <u>3609 S WADSWORTH BLVD STE 340</u>		
City: <u>LAKEWOOD</u>	State: <u>CO</u>	Zip: <u>80235</u>
Contact Person: <u>Paul Herring</u>	Email: <u>paul.herring@topoperating.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20928 Initial Form 27 Document #: 402867670

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

Yes Multiple Facilities

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>013-06036</u>	County Name: <u>BOULDER</u>
Facility Name: <u>TANAKA BROS 1</u>	Latitude: <u>40.078830</u>	Longitude: <u>-105.078500</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NESE</u>	Sec: <u>2</u>	Twp: <u>1N</u>	Range: <u>69W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>LOCATION</u>	Facility ID: <u>321259</u>	API #: _____	County Name: <u>BOULDER</u>
Facility Name: <u>TANAKA BROS-61N69W 2NESE</u>	Latitude: <u>40.078657</u>	Longitude: <u>-105.076658</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NESE</u>	Sec: <u>2</u>	Twp: <u>1N</u>	Range: <u>69W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications CL

Most Sensitive Adjacent Land Use Lake

Is domestic water well within 1/4 mile? Yes

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

Domestic Wells: approximately 30' SW, 1240' E
Surface Water: approximately 960' E, 1030' SE, 1140' SE
Wetlands: areas with wetland characteristics are located approximately 960'E, 1030' SE, 1140' SE
Springs: none
Livestock: within livestock area
Occupied buildings: 324' NNW
High Priority Habitats: none

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
No	GROUNDWATER	NA	Laboratory analytical results
Yes	SOILS	56' (N-S) x 51' (E-W) x 14.5' bgs	inspection/soil samples/laboratory analytical results

INITIAL ACTION SUMMARY

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

Decommissioning activities were completed at the Tanaka Bros production facility, flowline, and wellhead from February 7, 2022 through April 11, 2022. Groundwater was encountered during excavation activities at approximately 12' below ground surface (BGS). Visual inspection and field screening of soils at one separator, one meter house, one produced water vessel (PWV), and one above-ground storage tank (AST) was conducted following removal activities, and soil samples were submitted for laboratory analysis to determine if a release occurred. In addition, visual inspection and field screening of soils around the wellhead was conducted following wellhead cut and cap operations, and soil samples were submitted for laboratory analysis to determine if a release occurred. Laboratory analytical results indicated that impacted soil at the wellhead exceeding ECMC Table 915-1. As such, a Form 19-Initial/Supplemental Spill/Release Report (ECMC Document No. 402965094) was submitted on February 24, 2022 and the ECMC issued Spill/Release Point ID 481643. Soil sample location and field screening data is presented in Tables 1 through 4. The facility, wellhead, and flowline soil sample and field screening and groundwater sample location are illustrated on Figures 1 and 2.

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):

From February 7, 2022 through April 11, 2022, excavation activities were conducted to address remaining soil impacts at the former wellhead location, and confirmation soil samples were collected from the base and sidewalls of the final excavation extent, at a depths of ranging from approximately 2.5 feet to 17.5 feet bgs. The confirmation soil samples were submitted for laboratory analysis of Table 915 organics, inorganics, and metals using ECMC-approved methods. Analytical results indicated that constituent concentrations in the soil sample collected from the final excavation extent were in compliance with the applicable ECMC Table 915-1 standards and/or within the range of site-specific background levels. Soil analytical results are summarized in Tables 1 through 4. The laboratory analytical reports are provided as Attachment A.

Proposed Groundwater Sampling

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

Groundwater was encountered in the wellhead excavation at approximately 12 feet bgs. On February 21, 2022, a groundwater sample (GW-01) was collected from the wellhead excavation area and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB by USEPA Method 8260D. Groundwater analytical results indicated that constituent concentrations in groundwater sample GW-01 were in compliance with ECMC Table 915-1 standards. Groundwater analytical results are summarized in Table 5. The groundwater sample location is illustrated on Figure 2.

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):

From February 7, 2022 through April 11, 2022, visual inspection and field screening of soils was conducted at the sidewalls of the PWV excavation, one former meter house, one former AST, a flowline pothole, and a dump-line pothole. Based on the inspection and screening results, hydrocarbon-impacted soils were not observed at the soil screening locations. As a result, no soil samples were submitted for laboratory analysis from these areas in accordance with the ECMC Operator Guidance for Oil & Gas Facility Closure document. Soil sample location and field screening data is presented in Tables 1 through 4. Soil and groundwater analytical results are summarized in Tables 1 through 5. The soil and groundwater sample and field screening locations are illustrated on Figures 1 and 2. The laboratory analytical reports are provided as Attachment A. The photographic log are provided as Attachment B.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 46
Number of soil samples exceeding 915-1 12
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 2856

NA / ND

-- Highest concentration of TPH (mg/kg) 1159
-- Highest concentration of SAR 16.3
BTEX > 915-1 Yes
Vertical Extent > 915-1 (in feet) 17

Groundwater

Number of groundwater samples collected 1
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) 12
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l) _____
ND Highest concentration of Toluene (µg/l) _____
ND Highest concentration of Ethylbenzene (µg/l) _____
_____ Highest concentration of Xylene (µg/l) _____
NA 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?

Background soil samples were collected from native material adjacent to the wellhead cut and cap and PWV excavations. The background soil samples were submitted for laboratory analysis of the soil suitability for reclamation parameters and Table 915-1 metals using standard methods appropriate for detecting target analytes in Table 915-1. Analytical results for the background soil samples are presented in Tables 3 and 4.

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.

Between February 7, 2022 through April 11, 2022, approximately 1630 cubic yards of impacted material were excavated and transported to the Front Range Landfill in Erie, Colorado for disposal. The excavation area was backfilled and contoured to match pre-existing conditions.

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.

Laboratory data indicate that impacted soils in the excavation areas have been remediated to be in compliance with the ECMC Table 915-1 standards and/or within the range of site-specific background concentrations. Groundwater analytical results indicated that constituent concentrations in groundwater sample GW-01 were in compliance with ECMC Table 915-1 standards. Based on the analytical and soil screening data presented herein, assessment is complete at this site and no further activities are required. As such, Top Operating is requesting a No Further Action (NFA) determination for this location.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 1630

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or COGCC Facility ID # _____

_____ Natural Attenuation

_____ 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.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

Quarterly Semi-Annually Annually Other Final Report

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 NFA Request

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.

TOP Operating is adequately bonded per Rule 702 and has complied with the insurance requirements of Rule 705.

Operator anticipates the remaining cost for this project to be: \$ 0

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 1630

E&P waste (solid) description hydrocarbon impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Front Range Landfill

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? 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 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.

The site will be reclaimed in accordance with COGCC 1000 series reclamation rules.

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. 03/31/2024

Proposed date of completion of Reclamation. 06/30/2024

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. 02/08/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 02/07/2022

Proposed site investigation commencement. 02/07/2022

Proposed completion of site investigation. 04/11/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. 02/07/2022

Proposed date of completion of Remediation. 04/11/2022

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

Top Operating seeks the ECMC's approval of this report as they are aware of the gap in reporting from the time of completion of closure sampling/remedial activities until now. Following the review of the ECMC, Top will complete 90-day reporting (if needed) to comply with current ECMC regulations.

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

Signed: Paul Herring

Title: Landman

Submit Date: 02/21/2024

Email: paul.herring@topoperating.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: CHRIS CANFIELD

Date: 04/02/2024

Remediation Project Number: 20928

COA Type**Description**

	Based on the information presented, it appears that no further action is necessary at this time and the ECMC approves the closure request. However, if future conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.
	The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements.
2 COAs	

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**

403692297	FORM 27-SUPPLEMENTAL-SUBMITTED
403694565	PHOTO DOCUMENTATION
403694566	SOIL SAMPLE LOCATION MAP
403694567	SOIL SAMPLE LOCATION MAP
403694568	ANALYTICAL RESULTS
403694569	ANALYTICAL RESULTS

Total Attach: 6 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)