

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Taylor Robinson

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
Address: <u>3609 S WADSWORTH BLVD STE 340</u>		Phone: <u>(303) 727-9915</u>
City: <u>LAKEWOOD</u> State: <u>CO</u> Zip: <u>80235</u>		Mobile: <u>()</u>
Contact Person: <u>Paul Herring</u>	Email: <u>paul.herring@topoperating.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 18090 Initial Form 27 Document #: 402679572

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: Wellhead, Flowline, and Tank Battery Closure

SITE INFORMATION

Yes Multiple Facilities

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-10615</u>	County Name: <u>WELD</u>
Facility Name: <u>STAMP 31-2C</u>	Latitude: <u>40.186450</u>	Longitude: <u>-105.048090</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENW</u>	Sec: <u>31</u>	Twp: <u>3N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>TANK BATTERY</u>	Facility ID: <u>426981</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Stamp 31-2 426981</u>	Latitude: <u>40.186687</u>	Longitude: <u>-105.048643</u>	
** correct Lat/Long if needed: Latitude: <u>40.186895</u>		Longitude: <u>-105.048765</u>	
QtrQtr: <u>NENW</u>	Sec: <u>31</u>	Twp: <u>3N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SC _____ Most Sensitive Adjacent Land Use Union Reservoir, approx. 700' east of site

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

Water Well: 496'
 Surface Water: 710'
 Wetlands: 694'
 Springs: none
 Livestock: none
 Occupied Building: 1247'
 High Priority Habitat (HPH): 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	No impacted groundwater	laboratory analysis
UNDETERMINED	SOILS	78' (N-S) x 64' (E-W) x 14' bgs	laboratory analysis

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 Stamp 31-2C facility on July 18, 2021. Visual inspection and field screening of soils at one separator, three emission control devices (ECD), and one aboveground storage tank (AST) was conducted following removal activities, and soil samples were submitted for laboratory analysis to determine if a release occurred.

Wellhead cut and cap operations and flowline removal activities were completed at the Stamp 31-2C wellhead and associated flowline on July 27, 2021. Visual inspection and field screening of soils around the wellheads and associated flowlines was conducted following wellhead cut and cap operations, and soil samples were submitted for laboratory analysis to determine if a release occurred. Soil samples were collected from the locations where the flowline risers were disconnected at the wellhead and separator.

Laboratory analytical results indicated that BTEX, TPH, TMBs, 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, fluorene, and naphthalene concentrations in soil sample WHF01@4' collected at the Stamp 31-2C wellhead exceeded the applicable ECOMC Table 915-1 standards. As such, the soil impacts were reported under the Form 19-Initial Spill/Release Report (Document No. 402771698) was submitted on August 5, 2021, and the ECOMC issued Spill/Release Point ID 480596 for this release. Soil sample location and field screening data is presented in Table 1. The soil sample and field screening locations 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 July 18 through August 23, 2021, excavation activities were conducted to address soil impacts at the former wellhead and confirmation soil samples were collected at depths ranging from 10' and 14' bgs. The soil samples were submitted for laboratory analysis of BTEX, TPH, TMBs, boron, pH, EC, SAR, PAHs, and/or ECOMC Table 915-1 metals using ECOMC-approved methods. Analytical results for the soil samples collected from the final excavation extents were in compliance with the applicable ECOMC Table 915-1 standards and/or within background limits, with the exception of the inorganic concentrations in soil samples FL01@13', N02@10', N03@10', W02@10', and W01@10'. However, the inorganic exceedances of site-specific background limits are within the acceptable range of analytical variability of background limits. In addition, inorganic exceedances are below the vegetation root-zone. The initial waste characterization sample WHF01@4' did not contain inorganic exceedances.

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 13' bgs. On August 16, 2021, a groundwater sample (GW-EX) was collected and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB by USEPA Method 8260D. Downgradient monitoring well EMW-01 was installed on October 29, 2021 to further assess groundwater impacts near the release location. A groundwater sample collected from monitoring well EMW-01 on December 2 and 27, 2021 and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB by USEPA Method 8260D. Analytical results indicated that constituent concentrations in the groundwater samples were in compliance with ECMC Table 915-1 standards. The groundwater analytical results are summarized in Table 2. The groundwater sample locations are illustrated in 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):

On July 18 - 27, 2021, visual inspection and field screening of soils was conducted at 4 sidewall locations within the cut and cap excavation area, 2 locations at the flowline removal potholes, and three ECD locations. Based on the inspection and screening results, hydrocarbon-impacted soil was not observed at the screening locations, and no soil samples were submitted for laboratory analysis from these areas in accordance with the ECMC Operator Guidance. Laboratory analytical reports are included.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>54</u>	-- Highest concentration of TPH (mg/kg) <u>11050</u>
Number of soil samples exceeding 915-1 <u>5</u>	-- Highest concentration of SAR <u>15.6</u>
Was the areal and vertical extent of soil contamination delineated? <u>Yes</u>	BTEX > 915-1 <u>Yes</u>
Approximate areal extent (square feet) <u>4992</u>	Vertical Extent > 915-1 (in feet) <u>14</u>
Groundwater	
Number of groundwater samples collected <u>3</u>	-- Highest concentration of Benzene (µg/l) <u>2.26</u>
Was extent of groundwater contaminated delineated? <u>Yes</u>	ND Highest concentration of Toluene (µg/l) _____
Depth to groundwater (below ground surface, in feet) <u>13</u>	-- Highest concentration of Ethylbenzene (µg/l) <u>1.87</u>
Number of groundwater monitoring wells installed <u>1</u>	-- Highest concentration of Xylene (µg/l) <u>9.89</u>
Number of groundwater samples exceeding 915-1 <u>0</u>	NA Highest concentration of Methane (mg/l) _____
Surface Water	
<u>0</u> 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 BKG01 through BKG05 were collected from native non-impacted material nearby from similar soil type/depths and land use at depths ranging from approximately 2.5' to 12' bgs. The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and/or ECMC Table 915-1 metals using standard methods appropriate for detecting the target analytes in Table 915-1. Analytical results for the background soil samples are presented in Table 3-5.

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 July 18 and August 23, 2021, approximately 2590 cubic yards of impacted material were excavated and transported to the Front Range Landfill located in Erie, Colorado for disposal; and approximately 50 barrels of groundwater was removed via hydrovac and transported to the NGL disposal facility located in La Salle, Colorado. The excavation area was backfilled and contoured to match pre-existing conditions.

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.

Analytical results for the soil samples collected from the final excavation extents were in compliance with the applicable ECMC Table 915-1 standards and/or within background limits, with the exception of the inorganic concentrations in soil samples FL01@13', N02@10', N03@10', W02@10', and W01@10'. However, the inorganic exceedances of site-specific background limits are within the acceptable range of analytical variability of background limits and are below the vegetation root-zone. The initial waste characterization sample WHF01@4' did not contain inorganic exceedances. In addition, analytical results indicated that constituent concentrations in the groundwater samples were in compliance with ECMC Table 915-1 standards. Based on the analytical 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) 2590

 Air sparge / Soil vapor extraction

 Name of Licensed Disposal Facility or ECMC 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 NFA Request

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.

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 2590

E&P waste (solid) description impacted soil

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Front Range Landfill located in Erie, Colorado

Volume of E&P Waste (liquid) in barrels 50

E&P waste (liquid) description groundwater

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: NGL disposal facility located in La Salle, Colorado

REMEDIATION COMPLETION REPORT

REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

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.

Reclamation will be completed in accordance with ECMC 1000 Series Rules.

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? No

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 05/06/2024

Proposed date of completion of Reclamation. 05/06/2024

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. 08/03/2021

Actual Spill or Release date, or date of discovery. 07/31/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/18/2021

Proposed site investigation commencement. 07/18/2021

Proposed completion of site investigation. 12/27/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/18/2021

Proposed date of completion of Remediation. 08/23/2021

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

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: 05/06/2024

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: Taylor Robinson

Date: 06/28/2024

Remediation Project Number: 18090

COA Type**Description**

	Further confirmation sampling is needed for a multitude of organic exceedances. Operator shall further remediate these exceedances.
	A multitude of inorganic constituents exceed background and Table 915-1 standards. Operator shall sample the area(s) most likely to be impacted by produced water for inorganics and soil suitability parameters regardless of depth below ground surface. The prior 2008 FAQ response #32 is no longer valid.
	Closure request removed. Due to the presence of impacted soil in contact with groundwater Operator will install monitoring wells (within the spill/release area, cross-gradient, down-gradient, and up-gradient) to properly characterize groundwater pursuant to Rule 915. Operator will analyze groundwater samples from all monitoring wells for Table 915-1 organic and inorganic parameters for a minimum of four quarterly monitoring events.
3 COAs	

ATTACHMENT 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**

403779870	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403779902	ANALYTICAL RESULTS
403779903	LOGS
403779904	OTHER
403779905	OTHER
403779906	OTHER
403779907	SOIL SAMPLE LOCATION MAP
403779908	SOIL SAMPLE LOCATION MAP
403779914	ANALYTICAL RESULTS
403779959	PHOTO DOCUMENTATION
403839805	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 11 Files

General Comments

User Group

Comment

Comment Date

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

Total: 0 comment(s)