

State of Colorado Oil and Gas Conservation Commission

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Receive Date:

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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 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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

OPERATOR INFORMATION

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 15517

Initial Form 27 Document #: 402398543

PURPOSE INFORMATION

- | | |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste | <input type="checkbox"/> Rule 906.c.: Director request |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____ |

SITE INFORMATION

N Multiple Facilities (in accordance with Rule 909.c.)

Facility Type: TANK BATTERY	Facility ID: 426981	API #: _____	County Name: WELD
Facility Name: Stamp 31-2 426981		Latitude: 40.186687	Longitude: -105.048643
		** correct Lat/Long if needed: Latitude: 40.187067	Longitude: -105.048726
QtrQtr: NENW	Sec: 31	Twp: 3N	Range: 68W Meridian: 6 Sensitive Area? Yes

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

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
Yes	GROUNDWATER	unknown	laboratory analytical results
Yes	SOILS	approx. 14,880 square feet	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.

Crack observed in fiberglass partially buried produced water vessel. Produced water was removed from vessel to investigate further. Excavation activities commenced to assess potential petroleum hydrocarbon impacted soil. Water vessel was removed for further investigation/excavation activities following Initial Form 27 approval.

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):

Soil samples will be collected during monitoring well installation activities from all monitoring wells located outside of the excavation extents from native soil interval exhibiting the highest photoionization detector (PID) reading. In addition, soil samples will be collected from monitoring wells MW-06 and MW-11 to confirm removal of impacted soil observed in excavation soil samples SS-32 and SS-33. Soil samples will be collected from the remaining monitoring wells if elevated PID readings are observed during drilling activities. Soil samples will be submitted for laboratory analysis of BTEX and GRO by EPA Method 8260D and DRO by EPA Method 8015D. Proposed monitoring well locations are presented in Figure 1.

Proposed Groundwater Sampling

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

Following groundwater monitoring well installation activities, groundwater samples will be collected from MW-01 through MW-24 for laboratory analysis of BTEX following EPA Method 8260D. Proposed monitoring well locations are presented in Figure 1.

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 59
Number of soil samples exceeding 910-1 2
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 14880

NA / ND

-- Highest concentration of TPH (mg/kg) 0.214
-- Highest concentration of SAR 1.5
BTEX > 910-1 Yes
Vertical Extent > 910-1 (in feet) 4

Groundwater

Number of groundwater samples collected 1
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 5'
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 910-1 1

-- Highest concentration of Benzene (µg/l) 4050
-- Highest concentration of Toluene (µg/l) 2680
-- Highest concentration of Ethylbenzene (µg/l) 186
-- Highest concentration of Xylene (µg/l) 892
NA Highest concentration of Methane (mg/l)

Surface Water

0 Number of surface water samples collected
 Number of surface water samples exceeding 910-1
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?

☐ 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?

Installation of 24 proposed groundwater monitoring wells to assess groundwater beneath the site.

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.

Source removal activities were completed in May and June 2020 via excavation and hydrovac. Backfilling activities commenced in July 2020. Approximately 2,800 lbs of groundwater amendment was applied to the excavation prior to backfilling to aid in addressing any potential groundwater/soil impacts remaining at the site or downgradient of the excavation (GW amendment SDS forms are attached.)

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.

Remediation action plan summary will be developed if necessary following installation of groundwater monitoring wells and receipt of the groundwater laboratory analytical results.

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) _____ 4670

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

Yes _____ Other _____ Groundwater removed from excavation (hydrovac) and transferred to frac tank onsite for disposal

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.

Installation of 24 proposed groundwater monitoring wells to assess groundwater beneath the site. Groundwater samples will be collected from MW-01 through MW-24 following installation activities and submitted for laboratory analysis of BTEX following EPA Method 8260D. Following the initial groundwater sampling event and receipt of lab results, it will be determined if additional groundwater monitoring wells are required to maintain point of compliance. Groundwater samples will be collected quarterly from the site.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☒ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other _____

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.

Volume of E&P Waste (solid) in cubic yards 4670

E&P waste (solid) description petroleum hydrocarbon impacted soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Front Range Landfill

Volume of E&P Waste (liquid) in barrels 45

E&P waste (liquid) description produced water and petroleum hydrocarbon impacted groundwater

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: 40 bbls of produced water from tank to NGL (LaSalle), 5 bbls of groundwater onsite in frac tank.

REMEDIATION COMPLETION REPORT

REMEDIATION COMPLETION SUMMARY

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

Do all soils meet Table 910-1 standards? _____

Does the previous reply indicate consideration of background concentrations? _____

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? _____

Does Groundwater meet Table 910-1 standards? _____

Is additional groundwater monitoring to be conducted? _____

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 activities will be completed per the COGCC 1000 series 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 approve the seed mix? _____

If NO, does the seed mix comply with local soil conservation district recommendations? _____

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/14/2020

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Excavation soil samples SS-32 and SS-33 were sidewalls samples collected to determine soil concentrations prior to moving separator equipment. Excavation was completed to an approx. depth of 13 feet bgs in the area of SS-32 and SS-33, however, once soil lab results were obtained excavation activities already continued to the south not allowing for soil samples to be collected from beneath SS-32 and SS-33. Monitoring wells will be installed near the sample locations of SS-32 and SS-33 and soil samples will be collected to confirm impacted soil was removed.

Approximately 5 bbls of groundwater was removed from the excavation during excavation activities via hydrovac and transferred to a frac tank onsite for future disposal. Disposal will be completed and documented at an approved disposal facility.

Approximately 4330 cubic yards of clean backfill was transported from the Front Range Landfill by Amen Oilfield Services to the Stamp 31-2C site. Per the request of the COGCC, the backfill soil tickets will be provided to the COGCC.

TOP is waiting on 79 more soil waste manifests from the Front Range Landfill. Upon receipt of the manifests TOP will submit a supplemental form 27 containing the waste documents.

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: ` 08/07/2020

Email: paul.herring@topoperating.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: CHRIS CANFIELD

Date: 08/10/2020

Remediation Project Number: 15517

COA Type**Description**

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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**

402460476	FORM 27-SUPPLEMENTAL-SUBMITTED
402461386	MAP
402461389	DISPOSAL MANIFESTS
402461392	OTHER
402461394	OTHER
402461839	DISPOSAL MANIFESTS
402461841	DISPOSAL MANIFESTS
402461853	DISPOSAL MANIFESTS

Total Attach: 8 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)