

State of Colorado
Energy & Carbon Management Commission

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403684177
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02/13/2024

Report taken by:
Krystal Heibel

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>CHACO ENERGY COMPANY</u>	Operator No: <u>10017</u>	Phone Numbers Phone: <u>(303) 981-3840</u> Mobile: <u>()</u>
Address: <u>P O BOX 1587</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80201</u>
Contact Person: <u>Matt Nelson</u>	Email: <u>matt@chacoenergy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 24530 Initial Form 27 Document #: 403134907

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>PIT</u>	Facility ID: <u>117932</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>KINDT 1</u>	Latitude: <u>40.593338</u>	Longitude: <u>-103.726530</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENW</u>	Sec: <u>11</u>	Twp: <u>7N</u>	Range: <u>57W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-15182</u>	County Name: <u>WELD</u>
Facility Name: <u>WELD COUNTY-KINDT 1</u>	Latitude: <u>40.593780</u>	Longitude: <u>-103.726960</u>	
** correct Lat/Long if needed: Latitude: <u>40.593780</u>		Longitude: <u>-103.726960</u>	
QtrQtr: <u>NENW</u>	Sec: <u>11</u>	Twp: <u>7N</u>	Range: <u>57W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications OH

Most Sensitive Adjacent Land Use Non-irrigated
Cropland;
agricultural

Is domestic water well within 1/4 mile? No

Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Mule Deer Severe Winter Range
Mule Deer Winter Concentration Area
Pronghorn Winter Concentration Area
Groundwater is anticipated to be greater than 75 feet bgs

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	SOILS	Produced Water Pit	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.

This Form 27-Supplemental report is being submitted to provide notification of proposed additional investigation soil sampling activities in accordance with the conditions of approval provided on Form 27-Supplemental Document #403533126 that was submitted on November 16, 2023, and approved on January 16, 2024. Based on the laboratory analytical results from the initial decommissioning investigation soil sampling event, the inorganic constituents of concern for soil suitability were above the Table 915-1 clean up concentrations at multiple locations on-site and at one background location. Additional horizontal and vertical delineation activities are required at the produced water pit, produced water pit earthen berms, the former separator location, and from the former flowline location. Additional background samples will also be collected as part of this investigation. Soil samples will be submitted for laboratory analysis of the Table 915-1 list of inorganic constituents for soil suitability which include electrical conductivity, SAR, pH, and boron. As provided in the approved Form 27-S referenced above, the arsenic concentrations observed at the site during the initial investigation are related to background conditions and are not related to E&P Waste. Therefore, arsenic will not be analyzed.

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):

Grab soil samples will be collected to delineate the horizontal and vertical extents of the Table 915-1 list of inorganic constituents for soil suitability including electrical conductivity, SAR, pH, and boron. Soil samples will be collected from the produced water pit, water pit earthen berms, the former separator location, the former flowline location, and multiple background locations.

Proposed Groundwater Sampling

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

Groundwater was not encountered during site investigation activities and based on the nearest registered water wells, is anticipated to be greater than 75 feet below ground surface in this area.

Proposed Surface Water Sampling

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

Surface water is not present.

Additional Investigative Actions

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

Additional investigation as described in this report.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 11

ND Highest concentration of TPH (mg/kg) _____

Number of soil samples exceeding 915-1 7

-- Highest concentration of SAR 10.1

Was the areal and vertical extent of soil contamination delineated? No

BTEX > 915-1 No

Approximate areal extent (square feet) 0

Vertical Extent > 915-1 (in feet) 3

Groundwater

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No

Highest concentration of Toluene (µg/l) _____

Depth to groundwater (below ground surface, in feet) _____

Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed _____

Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 _____

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?

Additional background samples will be collected during the proposed investigation sampling event from locations that are sufficiently away from impacted areas to reflect conditions not impacted by oil and gas activity and will be obtained from similar depths and soil horizons or lithologic materials for comparison to confirmation soil samples.

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?

Further site investigation is required to delineate the horizontal and vertical extents of elevated electrical conductivity, SAR, pH and boron concentrations as described in this report.

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.

Further site investigation is required to delineate the horizontal and vertical extents of electrical conductivity, SAR, pH, and boron as described in this report. Once the horizontal and vertical extents have been determined, source removal will be evaluated.

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.

Further site investigation is required to delineate the horizontal and vertical extents of electrical conductivity, SAR, pH, and boron as described in this report. Once the horizontal and vertical extents have been determined, remediation activities will be evaluated.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____

_____ Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or ECOM Facility ID # _____

_____ Natural Attenuation
_____ Other _____

_____ 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
_____ 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.

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 COGCC 1000 Series Rules and a reclamation plan will be proposed in a Form 27-Supplemental report subsequent to additional investigation activities.

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. _____

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. 08/22/2022

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/31/2023

Proposed site investigation commencement. 08/31/2023

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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 Form 27-Supplemental report is being submitted to provide notification of proposed additional investigation soil sampling activities in accordance with the conditions of approval provided on Form 27-Supplemental Document #403533126 that was submitted on November 16, 2023, and approved on January 16, 2024. Based on the laboratory analytical results from the initial decommissioning investigation soil sampling event, the inorganic constituents of concern for soil suitability were above the Table 915-1 clean up concentrations at multiple locations on-site and at one background location. Additional horizontal and vertical delineation activities are required at the produced water pit, produced water pit earthen berms, the former separator location, and from the former flowline location. Additional background samples will also be collected as part of this investigation. Soil samples will be submitted for laboratory analysis of the Table 915-1 list of inorganic constituents for soil suitability which include electrical conductivity, SAR, pH, and boron. As provided in the approved Form 27-S referenced above, the arsenic concentrations observed at the site during the initial investigation are related to background conditions and are not related to E&P Waste. Therefore, arsenic will not be a

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

Signed: Matt Nelson

Title: Sr. Operations Engineer

Submit Date: 02/13/2024

Email: matt@chacoenergy.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: Krystal Heibel

Date: 05/22/2024

Remediation Project Number: 24530

COA Type

Description

0 COA	
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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

403684177	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403800610	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

Environmental	Per Doc# 403533126, Based on the Operator's assessment of background conditions at the subject location, arsenic results for confirmation soil samples appear to be representative of background as opposed to E&P activities. Therefore, the Operator's demonstration of background will be accepted as an alternative to the default standard in ECMC's Table 915-1.	05/22/2024
Environmental	Per Doc# 403533126, ECMC approves Operator's request for use of Residential SSLs based on the depth to groundwater and the local lithology suggesting a pathway to groundwater at this location is not likely.	05/22/2024

Total: 2 comment(s)