

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
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Receive Date:

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Report taken by:

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

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: PIT	Facility ID: 117932	API #: _____	County Name: WELD
Facility Name: KINDT 1	Latitude: 40.593338	Longitude: -103.726530	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENW	Sec: 11	Twp: 7N	Range: 57W Meridian: 6 Sensitive Area? Yes
Facility Type: WELL	Facility ID: _____	API #: 123-15182	County Name: WELD
Facility Name: WELD COUNTY-KINDT 1	Latitude: 40.593780	Longitude: -103.726960	
** correct Lat/Long if needed: Latitude: 40.593780		Longitude: -103.726960	
QtrQtr: NENW	Sec: 11	Twp: 7N	Range: 57W Meridian: 6 Sensitive Area? Yes

Facility Type: LOCATION	Facility ID: 327811	API #:	County Name: WELD
Facility Name: WELD COUNTY-KINDT-67N57W 11NENW	Latitude: 40.593767	Longitude: -103.727000	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NENW	Sec: 11	Twp: 7N	Range: 57W Meridian: 6 Sensitive Area? Yes

**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
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# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input checked="" type="checkbox"/> Other E&P Waste  | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input type="checkbox"/> Oil                       | <input type="checkbox"/> Tank Bottoms                |  |
| <input type="checkbox"/> Condensate                | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |  |
|  | <input checked="" type="checkbox"/> Pit Bottoms      |  |
|  | <input type="checkbox"/> 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.

In accordance with EECMC Rule 911, this form serves as notification for the decommissioning and abandonment of the Kindt production facility including production tanks, heater treater, pumping unit, and produced water pit. Soils surrounding and beneath production equipment will be visually inspected during decommissioning activities and confirmation soil sampling will be conducted to assess potential hydrocarbon impacts. In accordance with EECMC Rule 911.a. soil and groundwater (if present) samples will be collected and submitted for laboratory analysis to determine if concentrations and values are in compliance with EECMC Table 915-1.

## 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 ):

On August 20, 2024, additional soil investigation activities took place within the former produced water pit area to delineate impacts. Visual and olfactory observations indicated hydrocarbon impacts within the top ~5' of the area. A clay layer was encountered at approximately 16' bgs where SAR impacts decreased (PWC01@16'). Samples were submitted for analysis of SAR and TPH for soil screening purposes. Once remediation action have taken place, confirmation soil samples will be analyzed for the approved reduced analytical suite (pH, EC, SAR, Boron, BTEX, 124-TMB, 135-TMB, and TPH). Analytical results and soil samples locations collected to date are provided in the attachments to this Form.

### 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 ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 33

-- Highest concentration of TPH (mg/kg) 665

Number of soil samples exceeding 915-1 25 -- Highest concentration of SAR 268

Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 No

Approximate areal extent (square feet) 15000 Vertical Extent > 915-1 (in feet) 16

**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 were collected during the investigation sampling event on May 28, 2024. Arsenic and pH concentrations in previously collected confirmation samples will be compared to 1.25x local background samples as an alternate to the ECMC Table 915-1 standard.

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, boron, and TPH.

**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, boron, and TPH as described in this report. Any hydrocarbon-impacted material will be transported off-site to a licensed disposal facility in accordance with Rules 905 and 906.

**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.

If reportable hydrocarbon impacts, as defined in Rule 912.b., are discovered, a site-specific remediation plan will be developed and submitted via a Supplemental Form 27.

**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 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.



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. 05/28/2024

### **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. 11/30/2024

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 09/01/2024

Proposed date of completion of Remediation. 04/01/2025

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**

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

Signed: Drezden Kinnaird

Title: Consultant

Submit Date: \_\_\_\_\_

Email: dkinnaird@cgrs.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: \_\_\_\_\_

Date: \_\_\_\_\_

Remediation Project Number: 24530

**COA Type****Description**

0 COA	

**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**

403949441	ANALYTICAL RESULTS
403949442	ANALYTICAL RESULTS
403949620	SOIL SAMPLE LOCATION MAP

Total Attach: 3 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)