

State of Colorado  
Energy & Carbon Management Commission

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Receive Date:  
05/07/2024

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: SMITH ENERGY CORP	Operator No: 70385	Phone Numbers Phone: (303) 894-2100 Mobile: (303) 905-5341
Address: 12706 SHILOH RD		
City: GREELEY	State: CO	Zip: 80631
Contact Person: James Hix - East OWP EPS	Email: james.hix@state.co.us	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 27581 Initial Form 27 Document #: 403275844

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 PA cut and cap sampling Workplan/Tank Battery Decommissioning Site Investigation Report

SITE INFORMATION

Yes  Multiple Facilities

Facility Type: WELL	Facility ID:	API #: 123-22590	County Name: WELD
Facility Name: CHINOOK 1 (OWP)	Latitude: 40.579247	Longitude: -103.731857	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NWNW	Sec: 14	Twp: 7N	Range: 57W Meridian: 6 Sensitive Area? Yes

Facility Type: LOCATION	Facility ID: 305168	API #:	County Name: WELD
Facility Name: CHINOOK-67N57W 14NWNW (OWP)	Latitude: 40.579127	Longitude: -103.731640	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NWNW	Sec: 14	Twp: 7N	Range: 57W Meridian: 6 Sensitive Area? Yes

## SITE CONDITIONS

General soil type - USCS Classifications CL

Most Sensitive Adjacent Land Use Cropland

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**

No DWR Permitted Water Wells w/in 1/4-mile, No surface water within 1/4-mile. NWI Mapped Freshwater Emergent Wetlands - low areas ~1625 ft SE. Depth to Groundwater estimated at greater than 50 ft bgs (85 ft bgs) based on DWR Permit #24341 (Livestock) ~4185 ft NNW at similar elevation.

# 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 checked="" type="checkbox"/> Oil            | <input checked="" 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 type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) |  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	SOILS	UNKNOWN	VISUALLY, FIELD SCREENING, ANALYTICAL

## INITIAL ACTION SUMMARY

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

The Smith Energy Corp. Chinook #1 (OWP) is in the COGCC Orphaned Well Program. The initial Form 27 was submitted for conducting a site investigation during the decommissioning of the tank battery and removal of flowlines at the Chinook-67N57W 14NWNW (Location ID# 305168). This supplemental Form 27 is for Civitas Resources/Extraction Oil & Gas plugging and abandoning (PA) the Chinook #1 (OWP) oil and gas well (API #05-123-22590) as part of a public project. Site investigation activities will be performed during decommissioning of Oil and Gas Facilities, specifically sampling activities for cut, cap, and burial following the well PA. Field screening will be performed of the four sidewalls and base of the wellhead excavation to investigate for evidence of E&P Waste impacts. At a minimum, soil samples will be collected from the excavation sidewall that exhibit E&P Waste impact; or from the expected downgradient sidewall in the absence of E&P Waste impact; and from the base of the excavation. These soil samples will be submitted to an accredited environmental laboratory for analysis of Table 915-1 parameters. Soil samples will be collected and analyzed in accordance with Colorado ECOM 900 Series Rules.

## 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 from areas most likely to exhibit E&P Waste impacts. Soil samples will be submitted for analysis of Table 915-1 parameters including organic compounds (TPH ranges C6-C36; BTEX; 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Naphthalene, PAH) and inorganic compounds (metals, soil suitability for reclamation).

### Proposed Groundwater Sampling

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

Groundwater samples are not expected to be collected as part of this investigation.

### Proposed Surface Water Sampling

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

Surface water samples are not expected to be collected as part of this investigation.

## Additional Investigative Actions

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

No additional alternative investigative actions are expected to be conducted as part of this initial site investigation to decommission the tank battery and remove the on-location flowline.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 5

-- Highest concentration of TPH (mg/kg) 421

Number of soil samples exceeding 915-1 4

-- Highest concentration of SAR 8.72

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

BTEX > 915-1 No

Approximate areal extent (square feet) 2520

Vertical Extent > 915-1 (in feet) 10

**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?

\_\_\_\_\_

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.

If E&P waste impacts are encountered during wellhead and oil and gas facility decommissioning, approximately 10 cubic yards of the impacted soils will be excavated, temporarily stockpiled on location, and disposed at a commercial disposal facility.

**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 E&P Waste impacted soils are encountered, the soils will be excavated and removed. If the horizontal and vertical extent of the E&P Waste impacts cannot be defined or removed during this initial action, then additional site investigation and remediation will be performed at a later date under an approved supplemental Form 27. Site data will be evaluated and remediation technologies implemented to meet Table 915-1 soil residential screening levels, protection of groundwater screening levels, or Table 915-1 groundwater and WQCC Regulation 41 numeric and narrative levels as applicable to site conditions.

**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  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Name of Licensed Disposal Facility or ECMC 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  
\_\_\_\_\_ 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

A supplemental Form 27 will be submitted with the closure results.

### 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.

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

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? \_\_\_\_\_

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

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

E&P waste (solid) description \_\_\_\_\_

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

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? 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? \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? \_\_\_\_\_

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 1000 Series Rules.

Is the described reclamation complete? \_\_\_\_\_

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. 01/30/2023

Actual Spill or Release date, or date of discovery. 08/30/2023

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/16/2023

Proposed site investigation commencement. 08/30/2023

Proposed completion of site investigation. 06/28/2024

### 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**

The former SMITH ENERGY CORP - 70385 CHINOOK #1 (OWP) oil and gas well (API #05-123-22590) CHINOOK-67N57W 14NWNW (Location ID #305168) is in the ECMC Orphaned Well Program ("OWP"). This supplemental Form 27 presents the Site Investigation Report for the tank battery decommissioning sampling that occurred on 08/30/2023. Results indicate historic releases occurred at the location. Groundwater is expected to lie at depths greater than 50 feet bgs; therefore, residential SSL are applicable to the site. Analytical results indicate that soil suitability for reclamation parameters for pH, hot water soluble boron, and SAR were reported above Table 915-1 cleanup levels. Impacted soils remain beneath the produced water vault (PWV) and aboveground storage tank (AST) and risers in the tank battery. Civitas Resources/Extraction Oil & Gas will perform the plugging and abandonment (PA) of the Chinook #1 (OWP) well as part of a public project. This supplemental Form 27 presents the Workplan for cut and cap sampling following the well PA activities. The OWP will oversee site investigation and remediation work under Remediation Project #27581.

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

Signed: James Hix

Title: East OWP EPS

Submit Date: 05/07/2024

Email: james.hix@state.co.us

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: 06/21/2024

Remediation Project Number: 27581

**COA Type****Description**

	If groundwater is encountered, OWP will analyze groundwater samples for Table 915-1 Groundwater Inorganic Parameters (total dissolved solids, sulfate, chloride) and organic compounds in groundwater.
1 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**

403780969	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403781675	SITE INVESTIGATION REPORT
403832518	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

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

Environmental	ECMC approves OWP'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.	06/21/2024
Environmental	ECMC added the "CHINOOK-67N57W" location, Location ID: 305168, to this form. "The inspector noted that the flowlines appeared to have been removed." "Weston recommends additional investigation to delineate the impacts in these locations. Weston recommends that the impacted soils be excavated, removed from the Site for offsite disposal, and replaced with clean fill. Weston recommends the remaining oil and gas debris, including the wellhead be removed from the Site."	06/21/2024

Total: 2 comment(s)