

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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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
Address: 12706 SHILOH RD		Phone: (303) 894-2100
City: GREELEY	State: CO	Zip: 80631
Contact Person: James Hix - East OWP EPS	Email: james.hix@state.co.us	Mobile: (303) 905-5341

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 - 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?		No

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?		No

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. Location lies within CPW Mapped HPH: Mule Deer Severe Winter Range, Mule Deer Winter Concentration Area, Pronghorn Winter Concentration Area.

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
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 1

Number of soil samples exceeding 915-1 0

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

Approximate areal extent (square feet) 2520

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 2.75

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 6

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet)

Number of groundwater monitoring wells installed

Number of groundwater samples exceeding 915-1

Highest concentration of Benzene (µg/l)

Highest concentration of Toluene (µg/l)

Highest concentration of Ethylbenzene (µg/l)

Highest concentration of Xylene (µg/l)

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?

No site-specific background soil samples were collected as part of this site investigation; however, site-specific background soil samples were collected from undisturbed areas during tank battery decommissioning. Results for background soil sample 305168_BK01 @3' (08/30/2023) reported pH at 9.24 standard units (s.u.).

☐ 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?

Based on the analytical results further site investigation of the Chinook #1 wellhead is not required; however, further site investigation of the associated produced water vault and flowline are 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.

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

☐ Quarterly☐ Semi-Annually☐ Annually☒ Other

A Form 27 supplemental will be submitted within 90 days of 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.

The SMITH ENERGY CORP - 70385 CHINOOK #1 (OWP) is in the ECMC Orphaned Well Program. The former Operator's bond(s) and other funding sources will be used to plug and abandon (PA) the well, investigate, remediate, and reclaim the location.

Operator anticipates the remaining cost for this project to be: \$ 60000

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: _____

REMEDATION COMPLETION REPORT

REMEDATION 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. 08/28/2024

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. Civitas Resources/Extraction Oil & Gas Inc. plugged and abandoned (PA) the Chinook #1 (OWP) well as part of a public project. This Form 27A supplemental presents the cut and cap soil sample results. Soil samples collected from the wellhead sidewalls at a depth of 3 feet below ground surface (bgs) and excavation base at 6 feet bgs were field screened for evidence of E&P Waste impacts. Impacted soils were not encountered. The excavation base soil sample, B01 @ 6', collected on 08/28/2024 was submitted for laboratory analysis of Table 915-1 soil parameters. Results show that Table 915-1 organic compounds were not detected at or above the laboratory reporting limits. Arsenic was reported at 2.20 mg/kg which is above the Table 915-1 residential arsenic concentration. The soil pH was reported at 9.29 s.u. which is above the Table 915-1 soil suitability for reclamation pH level of 8.3 s.u. Site-specific background soil samples were not collected at the time of the wellhead cut and cap sampling; however, a site-specific background soil sample (305168_BK01 @ 3' 08/30/2023) was collected during the decommissioning of the associated tank battery, submitted previously. The background arsenic concentration was reported at 4.40 mg/kg and soil pH at 9.24 s.u. The NRCS mapped soil unit is the Platner loam (Map Unit Symbol 54). According to the NRCS soil survey for Weld County, Colorado Northern Part (Crabb, 1982) the Platner loam is calcareous and the subsoil (24-60 inches depth) for this unit has a pH that ranges from 7.9 to 8.4 s.u. Therefore, the OWP requests no further action for the Chinook #1 wellhead; however, further site investigation and remediation are required at the produced water vault and flowline and will proceed 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: 10/11/2024

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: 02/14/2025

Remediation Project Number: 27581

COA Type

Description

	<p>OWP shall submit the analytical results (official lab documents and analytical summary table) for the background sample previously collected, within the next submittal. When requesting 'No Final Action', all analytical data is required.</p> <p>To request closure, OWP must check the box for "Is this a Final Closure Request for this Remediation Project?"</p> <p>"The background arsenic concentration was reported at 4.40 mg/kg and soil pH at 9.24 s.u."</p>
	<p>The pH of soil samples collected at the site exceeds the allowable level for Table 915-1 soil suitability for reclamation. OWP will provide additional data to characterize pH at the site and to determine its source in the next quarterly report. Therefore, OWP will define the extent of soil with elevated pH, and if OWP proposes to leave soil with elevated pH in place, Operator will submit a Reclamation plan pursuant to Rule 915.b.</p>
	<p>Arsenic concentrations in confirmation soil samples exceed the Table 915-1 Residential Soil Screening Level Concentrations and are greater than 1.25 times the arsenic concentration in the background sample. OWP will provide additional data to characterize arsenic concentrations at the site and to determine its source in the next quarterly report.</p>
	<p>Per Doc# 403780969, 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.</p>
4 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

403954225	INVESTIGATION/REMEDIATION WORKPLAN (SUPPLEMENTAL)
403954399	SITE INVESTIGATION REPORT
403954533	OTHER

Total Attach: 4 Files

General Comments

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

Total: 0 comment(s)