

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Kyle Waggoner

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 #: 32002 Initial Form 27 Document #: 403290548

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: Cut and Cap Sampling - Civitas Resources/Extraction / Tank Battery Decommissioning - OWP

SITE INFORMATION

Yes Multiple Facilities

Facility Type: PIT	Facility ID: 110692	API #: _____	County Name: WELD
Facility Name: CARLSON 22-1	Latitude: 40.480610	Longitude: -104.197726	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENW	Sec: 22	Twp: 6N	Range: 61W Meridian: 6 Sensitive Area? Yes

Facility Type: WELL	Facility ID: _____	API #: 123-15054	County Name: WELD
Facility Name: CARLSON 22-1 (OWP)	Latitude: 40.477293	Longitude: -104.197117	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: E2NW	Sec: 22	Twp: 6N	Range: 61W Meridian: 6 Sensitive Area? Yes

Facility Type: LOCATION	Facility ID: 475625	API #:	County Name: WASHINGTON
Facility Name: CARLSON-66N61W 22E2NW	Latitude: 40.480646	Longitude: -104.198108	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NENW	Sec: 22	Twp: 6N	Range: 61W
		Meridian: 6	Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Cropland

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? No

Other Potential Receptors within 1/4 mile

There is a DWR Permitted water well (Permit #295538) plotted to the east of the Carlson 22-1 (OWP) well location (TD = 300 ft). Tank Battery: there is a DWR permitted water well to the northwest (DTW = 78 ft; TD = 265 ft). Use is listed as Domestic and Livestock (1982) and another DWR permitted water well is plotted to the northeast of the tank battery, permit #13689 - DTW = 50 ft; TD = 228 ft, for domestic purposes (1962). There is a pond downgradient approximately 1000 ft to the north-NW. Well is located within CPW mapped HPH for Pronghorn Winter Concentration area. The nearest occupied building is ~1470 ft N-NW. The property was used by Highpoint Operating as the Krier 4 West Spreadfield for water-based bentonitic drilling fluids and associated cuttings which is unrelated to the Carlson #22-1 (OWP) well and associated tank battery.

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 checked="" 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.

This oil and gas Location is in the ECMC Orphaned Well Program (OWP). This initial Form 27 is submitted for site investigation activities performed during decommissioning of Oil and Gas Facilities including the tank battery, pit, and wellhead cut and cap.

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 including the base of excavations, sidewalls, and beneath all major pieces of equipment. Soil samples will be submitted for analysis of Table 915-1 parameters. 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. If encountered in sufficient quantity to enable sample collection, a grab groundwater sample or samples will be collected and submitted for analysis of organic compounds (BTEX; Naphthalene; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene) and inorganic parameters (total dissolved solids (TDS), chloride ion, sulfate ion).

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 site investigation.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>16</u>	-- Highest concentration of TPH (mg/kg) <u>11770</u>
Number of soil samples exceeding 915-1 <u>13</u>	-- Highest concentration of SAR <u>14</u>
Was the areal and vertical extent of soil contamination delineated? <u>No</u>	BTEX > 915-1 <u>Yes</u>

Approximate areal extent (square feet) 11400

Vertical Extent > 915-1 (in feet) 15

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?

A site-specific background soil sample, 475625_BK01 @3', collected southeast of the tank battery was submitted for analysis of Table 915-1 metals (As, Ba, Cd, Cu, Cr6+, Pb, Ni, Se, Ag, Zn) and soil suitability for reclamation parameters (pH, EC, SAR, hot water soluble boron). Analytical results reported EC at 6.44 mmhos/cm and SAR at 6.34.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 10

Volume of liquid waste (barrels) 10

Is further site investigation required?

Further site investigation is required to delineate the lateral and vertical extent of E&P Waste impacts (TPH, 1,2,4-TMB, Arsenic, EC, and SAR) beneath the ASTs, Separator, and former pit locations.

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 decommissioning of Oil and Gas Facilities, approximately 10 cubic yards of impacted soils will be excavated, temporarily stockpiled on location, and hauled to 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 approximately 10 cubic yards of the impacted 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

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.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

Quarterly Semi-Annually Annually Other Supplemental Form 27 - Oil & Gas Facilities Decommissioning within 90 days of sample results receipt

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.

Smith Energy Corp. is in the ECMC Orphaned Well Program (OWP). The former Operator's bond, and/or other funding will be used to Plug and Abandon (PA) the orphaned well, perform site investigation, remediate, and reclaim the orphaned oil and gas location.

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.

This oil and gas location will be reclaimed in accordance with 1000 Series Rules. Reclamation will be performed under a separate scope of work. Final reclamation will be conducted per ECMC 1000 Series Rules and prioritized based on OWP ranking, project funding, and staff availability. The reclamation scope will include a plan to address and avoid any effect on reclamation from Table 915-1 inorganic and soil suitability for reclamation parameters

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. 10/27/2023

Actual Spill or Release date, or date of discovery. 01/30/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/30/2024

Proposed site investigation commencement. 04/01/2024

Proposed completion of site investigation. 05/16/2024

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 CARLSON #22-1 (OWP) oil and gas well (API #05-123-15054) CARLSON-66N61W 22E2NW (Location ID #327707) remote tank battery (Location ID #475625) and active pit (Pit #110692) are in the ECMC Orphaned Well Program ("OWP"). This supplemental Form 27 presents the results for decommissioning of the Carlson #22-1 (OWP) well and related oil and gas facilities. Civitas Resources Inc./Extraction Oil & Gas Inc. plugged and abandoned the Carlson #22-1 (OWP) well in May 2024 as part of a public project. The OWP oversaw decommissioning of the remote tank battery and flowline removal. The wellhead decommissioning package, a site investigation report for the tank battery decommissioning and flowline removal, and a memo with OWP responses to COA on the initial Form 27 are attached. Groundwater was not encountered and is expected to be at depths greater than 50 feet bgs; however, E&P waste impacts need to be delineated before a OWP request to use Residential SSL is considered. Wellhead soil samples indicated that organic compounds and TPH concentrations were detected in the excavation base soil sample, WH-B01 @7', and south sidewall soil sample, WH-S01 @6', as well as in the composite spoil pile sample, SP-CS01. Arsenic, barium, lead, and selenium were also reported above Table 915-1 SSL in the wellhead excavation soil samples. Evidence of historic releases and E&P Waste impacts was observed at the remote tank battery, pit, and flowline ends. Laboratory analytical results for TPH, BTEX, TMB, PAH, Arsenic, EC, and SAR were reported above Table 915-1 soil screening levels (SSL). The laboratory reported TPH in soil sample from the aboveground storage tank (AST) (475625_AST02_S01 @2') at 11770 mg/kg, flowline from the separator to the former pit (475625_FL02_02 @10') at 2050 mg/kg, and former pit soil sample (475625_FP01 @2') at 602 mg/kg. Further site investigation and remediation are required and will proceed under Remediation Project #32002.

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: 09/10/2024

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: Kyle Waggoner

Date: 10/31/2024

Remediation Project Number: 32002

COA Type

Description

	Operator will continue quarterly reporting until the site investigation is complete and Table 915-1 standards are met within the remediation area.
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
403911583	FORM 27-SUPPLEMENTAL-SUBMITTED
403912709	ANALYTICAL RESULTS
403912764	SITE INVESTIGATION REPORT
403916172	CORRESPONDENCE

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)