

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:
403916361
Receive Date:
09/13/2024

Report taken by:
John Heil

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>KERR MCGEE OIL & GAS ONSHORE LP</u>	Operator No: <u>47120</u>	Phone Numbers
Address: <u>P O BOX 173779</u>		Phone: <u>(720) 929-4306</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80217-3779</u>		Mobile: <u>()</u>
Contact Person: <u>Erik Mickelson</u>	Email: <u>DJRemediation_Forms@oxy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 27571 Initial Form 27 Document #: 403299781

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>WELL</u>	Facility ID: _____	API #: <u>123-22605</u>	County Name: <u>WELD</u>
Facility Name: <u>SHUTT 20-34</u>	Latitude: <u>40.265330</u>	Longitude: <u>-104.758710</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSE</u>	Sec: <u>34</u>	Twp: <u>4N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>484372</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Shutt 20-34 Wellhead</u>	Latitude: <u>40.265330</u>	Longitude: <u>-104.758710</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSE</u>	Sec: <u>34</u>	Twp: <u>4N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Surface Water

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? Yes

Other Potential Receptors within 1/4 mile

Platte Valley Ditch located approximately 500 feet (ft) to the south; Livestock approximately 800 ft to the southwest; Agriculture approximately 500 ft to the south; Water well located approximately 1,200 ft to the southeast; Groundwater approximately 1 ft below ground surface (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
No	GROUNDWATER	See attached data.	Groundwater Samples/Laboratory Analytical Results
Yes	SOILS	See attached data.	Soil Samples/Laboratory Analytical Results

INITIAL ACTION SUMMARY

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

Wellhead cut and cap operations were completed at the Shutt 20-34 wellhead on April 18, 2023. Groundwater was encountered in the wellhead cut and cap excavation. Visual inspection and field screening of soils around the wellhead and associated pumping equipment was conducted following cut and cap operations, and a soil sample was collected from the base of the excavation (B01@6'-WP). The sample was submitted for analysis of full list Table 915-1 constituents, due to the field indication of impact, to determine if a release occurred. Laboratory analytical results indicated that 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene impacts exceeding the ECOM Table 915-1 allowable levels were present at the former wellhead location. As such, a Form 19 Initial/Supplemental Spill/Release Report (Document No. 403380056) was submitted on April 21, 2023 and the ECOM issued Spill/Release Point ID 484372. The flowline associated with the wellhead was removed between April 18, 2023 and April 4, 2024 and samples were collected from the locations where the flowline risers were disconnected from the wellhead (WH-Riser@5') and from the separator (SEP01-RISER@4'), from where the flowline changed direction (FL01@3', FL03@4', FL09@3', and FL10@3') and from where groundwater was encountered in a flowline pothole (FL02@3'). Sample WH-Riser@5' was submitted for analysis of full list Table 915-1 constituents due to the presence of impacts at the wellhead. The remaining samples were submitted for analysis of reduced list Table 915-1 constituents, as approved in Form 27 Initial dated January 25, 2023 (Document No. 403299781), to determine if a release occurred. Analytical results indicated that constituent concentrations were within the ECOM Table 915-1 allowable levels or site-specific background levels. The wellhead excavation and flowline are depicted on Figures 1 and 2. The Form 44 is attached.

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):

Between April 18 and May 8, 2023, excavation activities were conducted to address the soil impacts at the wellhead and confirmation soil samples were collected from the base and sidewalls of the final excavation extents at approximately 7 ft and 5 ft bgs, respectively. The samples were submitted for analysis of the site-specific waste profile, including total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylenes (BTEX), 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, polycyclic aromatic hydrocarbons (PAHs), pH, boron, and select Table 915-1 metals, using ECOM-approved methods. Laboratory analytical results indicated that all concentrations were within the ECOM Table 915-1 allowable levels or background levels at the final excavation extents. The PID readings and soil sample results are summarized in Tables 1 and 2, respectively. The laboratory reports are attached.

Proposed Groundwater Sampling

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

Groundwater was encountered in the wellhead cut and cap excavation and flowline potholes at depths ranging from 1 to 5 ft bgs. One groundwater sample (WH-GW01) was submitted for laboratory analysis of full list Table 915-1 constituents, due to the presence of soil impacts at the wellhead. Three groundwater samples (FL01@3'-GW, FL02-GW@1', and SEP-RISERGW@5') were collected for analysis of Table 915-1 organic constituents. Laboratory analytical results indicate that groundwater is in compliance with ECMC Table 915-1 standards. The groundwater sample locations are depicted on Figures 1 and 2. The groundwater sample analytical results are summarized in Table 3.

Proposed Surface Water Sampling

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

Additional Investigative Actions

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

On April 18, 2023, visual inspection and/or field screening of soils were conducted at four sidewall locations within the cut and cap excavation area and four locations at the ground surface adjacent to the excavation. Based on the inspection and screening results, hydrocarbon-impacted soil was not observed at the screening locations, and no soil samples were submitted for laboratory analysis from these areas, in accordance with the ECMC Operator Guidance. A photographic log is attached.

On April 24, 2023, a soil gas survey was conducted at 5 soil vapor points (SVPs) installed adjacent to the former wellhead location following cut and cap operations. Trace methane was detected by the GEM 5000 gas meter at SVP02. Soil gas samples were submitted to Isotech Laboratories for gas composition and isotopic analysis. Analytical results indicated that no thermogenic gas (C2-C5) was present. The SVP locations are illustrated on Figure 1. The lab report is included as an attachment.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>19</u>	-- Highest concentration of TPH (mg/kg) <u>24.2</u>
Number of soil samples exceeding 915-1 <u>14</u>	-- Highest concentration of SAR <u>10.1</u>
Was the areal and vertical extent of soil contamination delineated? <u>Yes</u>	BTEX > 915-1 <u>No</u>
Approximate areal extent (square feet) <u>1891</u>	Vertical Extent > 915-1 (in feet) <u>7</u>
Groundwater	
Number of groundwater samples collected <u>4</u>	ND Highest concentration of Benzene (µg/l) _____
Was extent of groundwater contaminated delineated? <u>Yes</u>	ND Highest concentration of Toluene (µg/l) _____
Depth to groundwater (below ground surface, in feet) <u>5</u>	-- Highest concentration of Ethylbenzene (µg/l) <u>2.27</u>
Number of groundwater monitoring wells installed <u>0</u>	-- Highest concentration of Xylene (µg/l) <u>3.18</u>
Number of groundwater samples exceeding 915-1 <u>0</u>	NA 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?

Six background soil samples (Native-BG01@3' through Native-BG03@3' and Native-BG01@6' through Native-BG03@6') were collected from native material adjacent to the wellhead cut and cap excavation. The background soil samples were submitted for laboratory analysis of pH, EC, SAR, boron, and metals using ECMC-approved methods. Laboratory analytical results indicate that SAR, pH, and arsenic are naturally high in the native soil. Analytical results from the background soil samples are presented in Table 2.

One background groundwater sample (BG-GW01) was submitted for laboratory analysis of Table 915-1 inorganic constituents. The groundwater sample analytical results are summarized in Table 3.

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

Volume of solid waste (cubic yards) _____ Volume of liquid waste (barrels) _____

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

Quarterly Semi-Annually Annually Other _____

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.

KMOG has sufficient insurance and bonding to fully address the anticipated costs of Remediation, including the remaining estimated costs for this project. KMOG currently has over 40 million in bonds with the Energy and Carbon Management Commission. The cost for remediation is a preliminary estimate only, costs may change upwards or downward based on site-specific information. KMOG makes no representation or guarantees as to the accuracy of the preliminary estimate.

Operator anticipates the remaining cost for this project to be: \$ 14500 _____

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes _____

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

Approximately 424 barrels of non-impacted groundwater were removed from the site and transported to the Aggregate Recycle Facility in Weld County, Colorado for recycling. Approximately 340 cubic yards of impacted soil were removed from the site and transported to the Kerr-McGee Land Treatment Facility in Weld County, Colorado for recycling.

Volume of E&P Waste (solid) in cubic yards _____ 340

E&P waste (solid) description _____ Impacted Soil

ECMC Disposal Facility ID #, if applicable: _____ 149007

Non-ECMC Disposal Facility: _____

Volume of E&P Waste (liquid) in barrels _____ 424

E&P waste (liquid) description _____ Non-impacted Groundwater

ECMC Disposal Facility ID #, if applicable: _____ 434766

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? Yes _____

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? No

Is additional groundwater monitoring to be conducted? Yes

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 ECMC 1000 Series Reclamation 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. 04/21/2023

Actual Spill or Release date, or date of discovery. 04/21/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/18/2023

Proposed site investigation commencement. 04/18/2023

Proposed completion of site investigation. 03/11/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/18/2023

Proposed date of completion of Remediation. 03/11/2026

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

No additional work has been done since the previous Form 27 and, as such, none of the previous attachments have been included with this form. The implementation schedule has been updated.

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

Signed: Erik Mickelson

Title: Environmental Lead

Submit Date: 09/13/2024

Email: DJRemediation_Forms@oxy.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: John Heil

Date: 12/09/2024

Remediation Project Number: 27571

COA Type**Description**

	ECMC has processed this form as an update; no analytical was attached thus approval of this form does not imply any agreement with comments on completion of site investigation. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.
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**

403916361	FORM 27-SUPPLEMENTAL-SUBMITTED
-----------	--------------------------------

Total Attach: 1 Files

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

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)