

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Kari Brown

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 ECOM 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 #: 34638 Initial Form 27 Document #: 403711424

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>123-09362</u>	County Name: <u>WELD</u>
Facility Name: <u>STREAR SIDNEY GU 1</u>	Latitude: <u>40.120220</u>	Longitude: <u>-104.862640</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSW</u>	Sec: <u>23</u>	Twp: <u>2N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>489727</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Strear Sidney GU 1 Soil Vapor</u>	Latitude: <u>40.120220</u>	Longitude: <u>-104.862640</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSW</u>	Sec: <u>23</u>	Twp: <u>2N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use Crop land

Is domestic water well within 1/4 mile? Yes

Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Multiple buildings and livestock holding pens are located within 1/4 mile of the wellhead.
A building is located approximately 1060 feet northwest of the wellhead.
The nearest domestic water well is located approximately 150 feet to the east of the wellhead.
An area with wetland characteristics is located approximately 1000 feet north of the wellhead.

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	Groundwater not encountered	Groundwater samples/laboratory analytical results
Yes	SOILS	TBD	Inspection/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 and flowline removal activities were completed at the Strear Sidney GU 1 wellhead from August 1, 2024 - March 12, 2025. Groundwater was not encountered in the wellhead cut and cap excavation area or flowline removal potholes. Visual inspection and field screening of soils around the well, associated pumping equipment, and flowline removal potholes was conducted following wellhead cut and cap and flowline removal activities and soil samples WH-B01@6', FL-B01@4', FL-B04@4', FL-B08@4', and FL-B13@3' were submitted for laboratory analysis to determine if a release occurred. Laboratory analytical results indicated that pH in soil sample WH-B01@6' and lead (Pb) in soil sample FL-B01@4' exceeded ECMC Table 915-1. As such, verification samples FL-B01R@4' and WH-B01V@6' were collected to verify the Pb and/or pH exceedances. Analytical results for samples FL-B01R@4' and WH-B01V@6' were in compliance with Table 915-1 and/or site-specific background limits. During plugging and abandonment activities at the Strear Sidney GU 1 wellhead, five (5) shallow soil vapor points (SVPs) were installed in the vicinity of the wellhead. On March 14, 2025, methane was detected with field screening equipment at SVP-01 and SVP-05. Soil vapor samples were collected from 5 SVPs using IsoTubes™ and an IsoTube™ sampling manifold in conjunction with the pump on a GEM 5000. The samples were submitted to IsoTech for gas composition analysis. Results from the gas composition analysis indicated the presence of thermogenic gas. As such, a Form 19-Initial/Supplemental Spill/Release Report was submitted on April 14, 2025 and the ECMC issued Spill/Release ID 489727. On May 28, 2025, twenty-two soil vapor points were installed near the former wellhead location to further assess the methane concentrations in the soil surrounding the wellhead. Soil Vapor Screening and sampling locations and analytical results are presented in Figure 2 and Tables 1 and 2.

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 1, 2024 - March 12, 2025 soil samples were collected from the base of the cut and cap excavation (WH-B01@6'), locations where the flowline risers were disconnected at the wellhead (FL-B01@4'), separator (FL-B13@3'), and directional changes (FL-B04@4' and FL-B08@4') and submitted for laboratory analysis to determine if a release occurred. Analytical results indicated that the pH in soil sample WH-B01@6' and lead (Pb) in soil sample FL-B01@4' exceeded ECMC Table 915-1 and/or site specific background limits. As such, verification samples FL-B01R@4' and WH-B01V@6' were collected to verify the Pb and/or pH exceedances. Analytical results for samples FL-B01R@4' and WH-B01V@6' were in compliance with Table 915-1 Standards or site-specific background limits. Analytical results for soil vapor samples in SVP-01 - SVP-22 indicated the presence of stray thermogenic gas in the soil vapor samples. SVP screening and sampling locations are illustrated on Figure 2.

Proposed Groundwater Sampling

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

Groundwater was not encountered during wellhead cut and cap or flowline removal activities.

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):

Soil vapor points were installed in soils around the former Strear Sidney GU 1 wellhead to investigate the nature and source of the soil gas detected in the original soil vapor point locations installed during wellhead cut and cap activities. The original soil vapor points were destroyed during backfilling activities at the wellhead excavation. A total of twenty-two (22) new soil vapor points were installed in the vicinity of the former wellhead location on May 28, 2025. Quandary returned to the former wellhead location and samples were collected at the 22 previously installed soil vapor points using IsoTubes™ and IsoTube™ sampling manifold in conjunction with the pump on a GEM 5000. The samples were submitted to IsoTech for gas composition analysis and analytical results indicated the presence of stray thermogenic gas in the soil vapor samples. Additional assessment activities are ongoing and will be summarized in a forthcoming Form 27-Supplemental.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 7

Number of soil samples exceeding 915-1 6

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

Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 129

-- Highest concentration of SAR 1.26

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?

Background soil samples WH-BG01@3'-WH-BG04@3' and WH-BG01@6'-WH-BG04@6' were collected from native material adjacent to the wellhead cut and cap excavation area. Additional background samples from the Debeque V 27-1 wellhead (~0.56mi SW) were collected from similar soil type (silty sand) and depth (3'-6'). The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and Table 915-1 Metals using standard methods appropriate for detecting the target analytes in Table 915-1.

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?

Thermogenic gas (C2-C5) has been detected at the site and Kerr-McGee is currently reviewing a remediation path forward. Additional assessment activities to address the stray thermogenic gas in the soils around the former wellhead location are ongoing and will be summarized in a forthcoming Form 27-Supplemental.

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.

Additional assessment activities to address the stray thermogenic gas in the soils around the former wellhead location are ongoing and will be summarized in a forthcoming Form 27-Supplemental.

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.

Gas Composition analysis results from the June 2025 sampling event were received on July 30, 2025. A subsequent report with requested additional analyses was received on September 16, 2025. Thermogenic gas (C2-C5) has been detected at the site and Kerr-McGee is currently reviewing a remediation path forward. Additional assessment activities to address the stray thermogenic gas in the soils around the former wellhead location are ongoing and will be summarized in a forthcoming Form 27-Supplemental.

The field data and laboratory analytical results are included as Tables 1 and 2, respectively, and the laboratory report from the June 2025 sampling event is attached.

Soil Remediation Summary

In Situ

- _____ Bioremediation (or enhanced bioremediation)
- _____ Chemical oxidation
- _____ Air sparge / Soil vapor extraction
- _____ Natural Attenuation
- _____ Other _____

Ex Situ

- _____ Excavate and offsite disposal
- _____ If Yes: Estimated Volume (Cubic Yards) _____
- _____ 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

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 Progress Report _____

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: \$ 12500 _____

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 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. 01/24/2024

Actual Spill or Release date, or date of discovery. 04/03/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/01/2024

Proposed site investigation commencement. 08/01/2024

Proposed completion of site investigation. 03/31/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/03/2025

Proposed date of completion of Remediation. 03/31/2026

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

Thermogenic gas (C2-C5) has been detected at the site and Kerr-McGee is currently reviewing a remediation path forward. Additional assessment activities to address the stray thermogenic gas in the soils around the former wellhead location are pending. Work is scheduled to resume by 2026 and will be summarized in a forthcoming Form 27-Supplemental.

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: 11/21/2025

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: Kari Brown

Date: 01/16/2026

Remediation Project Number: 34638

COA Type**Description**

0 COA	
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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**

404423770	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404424171	SITE MAP
404424174	ANALYTICAL RESULTS
404424210	SOIL SAMPLE LOCATION MAP
404424252	ANALYTICAL DATA SUMMARY TABLE(S)
404446152	OTHER
404510054	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 7 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)