

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404448791
Receive Date:
12/15/2025

Report taken by:
Taylor Robinson

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: KERR MCGEE OIL & GAS ONSHORE LP	Operator No: 47120	Phone Numbers Phone: (720) 929-4307 Mobile: ()
Address: P O BOX 173779		
City: DENVER	State: CO	Zip: 80217-3779
Contact Person: Max Moran	Email: DJRemediation_Forms@oxy.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 31178 Initial Form 27 Document #: 403490327

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: LOCATION	Facility ID: 446180	API #: _____	County Name: WELD
Facility Name: CROISSANT 30-12, 13 O SA 36148779	Latitude: 40.377758	Longitude: -104.937659	
** correct Lat/Long if needed: Latitude: 40.377715		Longitude: -104.937634	
QtrQtr: NENW	Sec: 30	Twp: 5N	Range: 67W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 488395	API #: _____	County Name: WELD
Facility Name: Croissant 30-12, 13 O SA Facility	Latitude: 40.377715	Longitude: -104.937634	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENW	Sec: 30	Twp: 5N	Range: 67W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM

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

Ponds 80 feet (ft) south, 110 ft west, and 970 ft east. An area with wetland characteristics is located approximately 80 ft south and 110 ft west. Thompson River 1,180 ft north. Water well 1100 ft northwest. County Road 90 ft north. The site is located in a 100 year floodplain. The site is located within a Bald Eagle Active Nest Site 1/2 mile, Bald Eagle Roost Site, Mule Deer Severe Winter Range, and Mule Deer Winter Concentration Area and within a 1/4 mile of the boundary of an Aquatic Native Species Conservation Waters High Priority Habitat (HPH) areas.



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	GROUNDWATER	TBD	Groundwater Samples/Laboratory Analytical Results
Yes	SOILS	TBD	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.

Decommissioning activities were completed at the Croissant 30-12, 13 O SA facility on October 1 and October 3, 2024. Groundwater was not encountered during facility decommissioning activities. Visual inspection and field screening of soil at one aboveground storage tank (AST), one produced water vessel (PWV), one dumpline pothole location, one emission control device (ECD), one meter house, and one separator were conducted following removal activities. Soil samples (AST01@0.5', PWV-E01@2.5', PWV-B01@5', SEP01-INLET@4', and SEP01-OUTLET@4') were submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. Laboratory analytical results indicated that 1-methylnaphthalene and/or 2-methylnaphthalene impacts exceeding the ECMC Table 915-1 allowable levels were present at the PWV-B01@5', SEP01-INLET@4', and SEP01-OUTLET@4' locations. As such, a Form 19 Initial/Supplemental Spill/Release Report (Document No. 403944566) was submitted on October 4, 2024, and the ECMC issued Spill/Release Point ID 488395.

Additional excavation activities are pending due to the bald eagle ½ mile buffer and details will be provided in a subsequent Form 27 Supplemental report.

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 October 1 and November 6, 2024, excavation activities were conducted to address remaining soil impacts at the PWV and separator locations and ten confirmation soil samples were collected from the base and sidewalls of the final excavation extents at depths of approximately 6 ft below ground surface (bgs) and 3 ft bgs, respectively. The confirmation soil samples were submitted for laboratory analysis of the excavation specific waste profile, including 1,2,4- and 1,3,5-trimethylbenzenes (TMBs), polycyclic aromatic hydrocarbons (PAHs), boron, pH, total petroleum hydrocarbons (TPH), and/or select Table 915-1 metals using ECMC-approved methods. Analytical results indicated that 1-methylnaphthalene impacts exceeding the ECMC Table 915-1 allowable level remain in the separator excavation area. Additional excavation activities are pending due to the bald eagle ½ mile buffer.

Proposed Groundwater Sampling

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

Groundwater was not encountered during facility decommissioning 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):

On October 1, 2024, visual inspections and field screening of soil were conducted at the hatch and drain for the AST, three sidewalls of the PWV excavation, one dumpline location, one meter house location, and one ECD location. 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.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 18

Number of soil samples exceeding 915-1 17

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

Approximate areal extent (square feet) 993

NA / ND

-- Highest concentration of TPH (mg/kg) 58.6

-- Highest concentration of SAR 1.12

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?

One tank battery background soil sample (TB-BG01@0.5') was collected from the soil used to construct the tank battery. Eight background soil samples were collected from the native material outside of the facility excavations. Eighteen background samples were also collected as part of the Croissant 30-13 wellhead decommissioning activities (Rem No. 31176), located 1940 ft southeast, from similar depths (2.5, 4.5, & 5 ft bgs), & NCRS soil type (gravelly sand). Background soil samples were submitted for laboratory analysis of pH, electrical conductivity (EC), sodium adsorption ratio (SAR), boron & Table 915-1 metals using ECOMC-approved methods. Analytical results indicate that pH & arsenic are naturally high in the soil used to construct the tank battery & EC, SAR, pH, boron, arsenic, barium, & selenium are naturally high in the native soil.

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?

Additional excavation activities are pending due to the bald eagle ½ mile buffer and details will be provided in a subsequent Form 27 Supplemental report.

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.

Impacted soil from the PWV and separator excavations will be removed and transported to a licensed disposal facility. Final disposal information will be provided upon completion of assessment activities. Disposal records are kept on file and available upon request. The excavation areas will be backfilled and contoured to match pre-existing conditions.

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.

Laboratory data indicate that 1-methylnaphthalene impacts exceeding the ECOMC Table 915-1 allowable level remain in the separator excavation area. Groundwater was not encountered during facility decommissioning activities. Additional excavation activities are pending due to the bald eagle ½ mile buffer and details will be provided in a subsequent Form 27 Supplemental report.

Soil Remediation Summary

In Situ

Ex Situ

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

- _____ 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 _____

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: \$ 13500 _____

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 reseeded 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. 10/03/2023

Actual Spill or Release date, or date of discovery. 10/03/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/01/2024

Proposed site investigation commencement. 10/01/2024

Proposed completion of site investigation. 11/30/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/01/2024

Proposed date of completion of Remediation. 11/30/2026

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

KMOG will not conduct intrusive operations related to this form between 12/1 - 7/31 in compliance with the 0.5 mile Bald Eagle Nesting Buffer, and if facility decommissioning operations are scheduled between 11/15 - 11/30, work will be performed between 10am - 2pm, in compliance with the Bald Eagle Winter Night Roost Buffer. Additionally, landowner access discussions have been ongoing at this location.

KMOG has a large number of active remediation projects that fall within High Priority Habitats (HPH), which limits when field work can be completed on these projects. This project falls within the Bald Eagle Active Nest Site 1/2 mile HPH buffer, and field work can only be conducted between August 1st and November 30th each year. The projects within HPH buffers are being prioritized based on potential environmental risk; considering factors such as size of impact, type of impact, what media is impacted, proximity to sensitive receptors and land use. Due to this prioritization, no field work was completed on this project during the 2025 open timing window. Field work is anticipated to resume on the project within the 2026 open timing window.

No additional work has been done since the previous Form 27 submitted on 9/15/2025 (Document No. 404339351). Additional assessment at this location is pending. 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: Max Moran

Title: Environmental Advisor

Submit Date: 12/15/2025

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: _____

Date: _____

Remediation Project Number: 31178

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

404448791	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

Environmental	<p>ECMC has denied this form without technical review as Operator has provided no analytical or site investigation data showing progress of remediation of impacts documented at this location.</p> <p>Per Rule 912.a.(1-2): Operators will investigate, clean up, and document impacts resulting from Spills and Releases as soon as the impacts are discovered. Operator shall not delay execution of remedial or investigative actions while waiting for ECMC approval and may request expedited review if necessary.</p> <p>Operator shall conduct work in compliance with approved workplans and the 900 Series Rules. Operator shall provide a replacement form documenting investigation and clean up of these impacts; if a form providing this information is in process no replacement Form is due. If Operator is requesting a schedule change under Rule 913.d.(2) Operator shall attach adequate justification for the request. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.</p>	12/19/2025
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Total: 1 comment(s)