

State of Colorado
Energy & Carbon Management Commission

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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 #: 39621 Initial Form 27 Document #: 404087685

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: Request Director's Approval to establish site-specific waste profile

SITE INFORMATION

Yes Multiple Facilities

Facility Type: TANK BATTERY	Facility ID: 487693	API #: _____	County Name: WELD
Facility Name: HSR-WISEMAN-63N66W24SWNW TB	Latitude: 40.212170	Longitude: -104.734400	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNW	Sec: 24	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 490851	API #: _____	County Name: WELD
Facility Name: HSR 12-24/Richmon 4 Facility	Latitude: 40.212342	Longitude: -104.734415	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNW	Sec: 24	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes

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? Yes

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Domestic water well: approximately 1060' N and 1130' NW
Surface water: approximately 980' E
Wetland: an area with wetland characteristics is located approximately 940' E
Spring: none
Livestock: approximately 1110' NW
Occupied Building: approximately 1220' NW
High Priority Habitats: none

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	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.

Decommissioning activities were completed at the HSR 12-24/ Richmon 4 production facility on May 21, 2025. Groundwater was not encountered during decommissioning activities. Visual inspection and field-screening of soils at six separators, one meter house, two produced water vessels (PWV), one emission control device (ECD), six dumphine removal potholes, and three aboveground storage tanks (AST) was conducted following removal activities, and soil samples (SEP-B01@3" - SEP-B12@3", PW-B01@5', PW-W01@2.5', PW-B02@5', PW-W02@2.5', AST-B01@3" - AST-B03@3") were submitted for laboratory analysis of Table 915-1 Contaminants of Concern to determine if a release occurred. Laboratory analytical results indicated that the 1,2-methylnaphthalene concentrations in soil sample PW-B02@5', the EC concentration in soil sample AST-B01@3", and the pH concentrations in soil samples SEP-B01@3", SEP-B03@3", and SEP-B07@3" were outside of the applicable ECOMC Table 915-1 standards and/or background limits. As such, a Form 19 Initial/Supplemental Spill/Release Report (ECMC Document #404232205) was submitted on June 4, 2025, and the ECMC issued Spill/Release Point ID 490851. Verification soil samples (AST-B01-01@3", SEP-B01-01@3", SEP-B03-01@3", SEP-B07-01@3") were submitted for laboratory analysis of EC or pH only, as applicable, as previously presented in pending Form 27-Supplemental Doc. #404276418. Laboratory analytical results for the verification soil samples confirmed the EC exceedance in AST-B01@3" and indicated that the pH concentrations in SEP-B01@3", SEP-B03@3", and SEP-B07@3" were in compliance with ECOMC Table 915-1 standards. The soil sample and field screening locations are illustrated on Figure 1.

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 5/21/25, samples were collected from the PWV excavation area (PW-B01@5', PW-B02@5', PW-W01@2.5', PW-W02@2.5'), beneath the former separators (SEP-B01@3"-SEP-B12@3"), and beneath the former ASTs (AST-B01@3"-AST-B03@3"). The samples were submitted for analysis of the full Table 915-1 analytical suite. Analytical results indicated that the 1,2-methyl. concentrations in sample PW-B02@5', the EC concentration in sample AST-B01@3" and the pH concentrations in samples SEP-B01@3", SEP-B03@3", and SEP-B07@3" exceeded the applicable Table 915-1 standards and/or background limits. Verification samples (AST-B01-01@3", SEP-B01-01@3", SEP-B03-01@3", SEP-B07-01@3") were submitted for laboratory analysis of EC or pH only. Analytical results for the verification samples confirmed the EC exceedance in AST-B01@3" and indicated that the pH concentrations in samples SEP-B01@3", SEP-B03@3", and SEP-B07@3" were in compliance with Table 915-1 standards. Assessment and/or excavation activities are ongoing.

Proposed Groundwater Sampling

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

Groundwater was not encountered during initial decommissioning activities. If groundwater is encountered during remaining assessment activities, a minimum of one grab sample will be collected as soon as practical. Groundwater samples will be submitted to an accredited laboratory for all analytes listed in ECMC Table 915-1 Organic Compounds in Groundwater and Groundwater Inorganic Parameters using standard methods appropriate for detecting the target analytes in ECMC Table 915-1.

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 May 21, 2025, visual inspection and field screening of soils was conducted at one former meter house, one former ECD, six dump line removal potholes, beneath three former ASTs, and at six sidewall screening locations within the PWV excavation areas. Based on the inspection and screening results, hydrocarbon-impacted soils were not observed at the soil screening locations. As a result, no soil samples were submitted for laboratory analysis from these areas in accordance with the ECMC Operator Guidance for Oil & Gas Facility Closure document.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected	31	NA / ND	Highest concentration of TPH (mg/kg)	
Number of soil samples exceeding 915-1	22		Highest concentration of SAR	
Was the areal and vertical extent of soil contamination delineated?	No		BTEX > 915-1	No
Approximate areal extent (square feet)	210		Vertical Extent > 915-1 (in feet)	5

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?

Background soil samples AST-BG01@3" - AST-BG04@3", PW-BG02@3' - PW-BG03@3', and PW-BG02@6' - PW-BG03@6' were collected from non-impacted native material adjacent to the former facility. 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?

Additional assessment and/or excavation activities are ongoing.

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 and/or excavation activities are ongoing. If required, soil will be removed and transported to a licensed 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.

Additional assessment and/or excavation activities are ongoing.

Based on waste characterization results, KMOG proposes to analyze future confirmation soil samples for TPH, 1&2-methylnaphthalene, naphthalene, pH, EC, boron, and Table 915-1 Metals (except silver and zinc).

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 _____

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: \$ 28000 _____

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. 02/06/2025

Actual Spill or Release date, or date of discovery. 06/04/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/21/2025

Proposed site investigation commencement. 05/21/2025

Proposed completion of site investigation. 06/30/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/04/2025

Proposed date of completion of Remediation. 06/30/2026

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

No additional assessment and/or remediation activities have been conducted at this site since the previous Form 27-Supplemental update was submitted (Doc. No. 404276418). Additional assessment at this location is pending. Work is scheduled to resume by March 31, 2026.

Based on waste characterization results, KMOG proposes an amended sampling and analysis plan to include only detected organic constituents, detected metal constituents (including boron), and soil suitability parameters exceeding Table 915-1. Based on waste characterization results, KMOG proposes to analyze future confirmation soil samples for TPH, 1&2-methylnaphthalene, naphthalene, pH, EC, boron, and Table 915-1 Metals (except silver and zinc). The soil analytical summary tables and secured laboratory analytical reports are attached to assist with the review of the proposed reduced waste profile.

Based on the location of impacts, soil samples SEP-RIS@4' (Richmon 4-24, Remediation Project #39615) and SEP-RIS@4' (HSR 12-24, Remediation Project #39637) will be remediated under this project. The applicable data is attached.

Verification samples have been included for pH and EC to further assess the ECMC Table 915-1 inorganic exceedances. The scientific justification for the inclusion of the results is the assessment of soil heterogeneity and identification of analytical variability due to constituent composition and distribution within the sample media.

The previous Form 27-Supplemental (Document #404276418, submitted 8/14/25) is still in process with the ECMC.

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: 11/11/2025

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: 39621

COA Type

Description

COA Type	Description
0 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

404423948	FORM 27 DENIED
404424819	LABORATORY ANALYTICAL REPORT
404424823	LABORATORY ANALYTICAL REPORT
404424826	LABORATORY ANALYTICAL REPORT
404424828	LABORATORY ANALYTICAL REPORT
404426319	SOIL SAMPLE LOCATION MAP
404426322	ANALYTICAL DATA SUMMARY TABLE(S)
404426331	LABORATORY ANALYTICAL REPORT
404426332	LABORATORY ANALYTICAL REPORT
404509419	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 10 Files

General Comments

User Group

Comment

Comment Date

Environmental	ECMC has denied this form without technical review, "Background" soil samples were collected from areas disturbed by oil and gas and not all sample points presented in the map are presented in the table.	01/16/2026
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Total: 1 comment(s)