

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404215720
Receive Date:
08/22/2025

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
Address: P O BOX 173779		Phone: (720) 929-4307
City: DENVER	State: CO	Zip: 80217-3779
Contact Person: Max Moran	Email: DJRemediation_Forms@oxy.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 18888 Initial Form 27 Document #: 402732790

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 of site-specific waste profile

SITE INFORMATION

Yes Multiple Facilities

Facility Type: WELL	Facility ID: _____	API #: 123-25961	County Name: WELD
Facility Name: USA 36-36	Latitude: 40.176360	Longitude: -104.727850	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESW	Sec: 36	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes
Facility Type: TANK BATTERY	Facility ID: 442949	API #: _____	County Name: WELD
Facility Name: USA FED TANK BATTERY 29N-36HZ	Latitude: 40.178538	Longitude: -104.729673	
** correct Lat/Long if needed: Latitude: 40.178875		Longitude: -104.730502	
QtrQtr: NESW	Sec: 36	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 483365 API #: _____ County Name: WELD
Facility Name: USA 36-36 Wellhead Latitude: 40.178854 Longitude: -104.730468
** correct Lat/Long if needed: Latitude: _____ Longitude: _____
QtrQtr: NWSW Sec: 36 Twp: 3N Range: 66W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Water well 1300 feet (ft) north. An area with wetland characteristics is located approximately 1320 ft southwest. Speer Canal 1350 ft southwest. No other potential receptors were identified in a 1/4 mile radius.

SITE INVESTIGATION PLAN

DENIED

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
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 & cap operations were completed at the USA 36-36 wellhead on 11/3/22. Visual inspection & field screening of soil around the wellhead & associated pumping equipment were conducted following cut & cap operations. A soil sample (B01@6'-WP) was submitted for analysis of reduced list Table 915-1 constituents, as approved in the Form 27 Initial dated 6/29/21 (Doc# 402732790) to determine if a release occurred. Portions of the flowline associated with the wellhead were removed between 11/11/22 & 2/2/23. Soil samples were collected from the location where the flowline riser was disconnected from the separator (Sep01-Riser@7'-WP) & from where the flowline was cut & capped (FL01@4'). The Sep01-Riser sample was submitted for analysis of full list Table 915-1 constituents due to potential impact & the FL01 sample was submitted for analysis of reduced list Table 915-1 constituents to determine if a release occurred. Results indicated that naphthalene impacts exceeding the ECMC Table 915-1 allowable level were present at the Sep01-Riser. A Form 19 Spill Report (Doc# 403243287) was submitted on 12/1/22 & the ECMC issued Spill ID 483365. The status of the remainder of the flowline has been changed from active to out-of-service & cannot be removed due to the proximity to active lines.

Per the conditions of approval (COA) issued by the ECMC for Doc Nos. 403315714 & 403884688, on 6/5/24 & 2/26/25, soil samples were collected from the locations where the flowline changed directions (FL02 & FL03) & verification samples were collected at the B01, FL01, FL02, & FL03 locations. Samples were submitted for analysis of reduced list Table 915-1 constituents to determine if a release occurred. Final results indicated that all soil samples were in compliance with Table 915-1 allowable levels or within background levels. The wellhead excavation & flowline are depicted on Figures 1 & 2. The PID readings & soil sample results are summarized in Tables 1 & 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):

From November 23 to December 20, 2022, excavation activities were conducted to address soil impacts at the former separator riser location and five confirmation soil samples were collected from the base and sidewalls of the excavation extent at approximately 5.5 ft below ground surface (bgs) and 4 ft bgs, respectively. The confirmation soil samples were submitted for laboratory analysis of naphthalene using ECMC-approved methods. Results indicated that samples collected at the final excavation extents were within the ECMC Table 915-1 allowable levels. The separator riser excavation is depicted on Figure 2. 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 not encountered during wellhead cut and cap or partial 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):

On November 3, 2022, and June 5, 2024, visual inspection and field screening of soils were conducted at four sidewall locations within the cut and cap excavation area, four locations at the ground surface adjacent to the excavation, and at three flowline hand auger locations. 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 November 7, 2022, a soil gas survey was conducted at five soil vapor points installed adjacent to the former wellhead location following cut and cap operations. GEM 5000 field readings were all non-detect for methane at all soil vapor points. The soil vapor point locations are illustrated on Figure 1.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 14
Number of soil samples exceeding 915-1 9
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 116

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 1.57
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
0 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?

Eight background samples (Native-BG05@3' through Native-BG08@3' and Native-BG05@6' through Native-BG08@6') were collected from the native material outside of the wellhead excavation area. Four background samples were also collected as part of the USA 19-36 wellhead cut and cap activities (Remediation No. 23478), located approximately 810 ft northwest, from similar depths (3' and 6' bgs), and NRCS soil type (loamy sand). Per the COA issued for Doc# 403315714, the backgrounds collected on 11/3/2022 near the USA 36-36 wellhead have been omitted from this report. The samples were submitted for laboratory analysis of electrical conductivity (EC), sodium adsorption ratio (SAR), pH, boron, and Table 915-1 metals using ECMC-approved methods. Laboratory results indicate that SAR, pH, arsenic, barium, selenium, and silver are naturally high in the native soil. The background sample results are summarized in Table 2. The background sample locations are depicted on Figure 3.

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?

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.

Approximately 20 cubic yards of impacted soil were transported to the Aggregate Recycle Facility in Weld County, Colorado for recycling. Disposal records are kept on file and are available upon request. The excavation area was 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 impacts at the separator riser have been remediated and all soil at the final excavation extents is within the ECMC Table 915-1 allowable levels or within background levels. Per the COAs issued by the ECMC for Document Nos. 403315714 and 403884688, on 6/5/2024 and 2/26/2025, six soil samples were collected from the locations along the flowline where the flowline changed directions and at the B01, FL01, FL02, & FL03 locations and submitted for analysis of reduced list Table 915-1 constituents to determine if a release occurred. Final analytical results indicated that all soil samples were in compliance with Table 915-1 allowable levels or within background levels. Groundwater was not encountered during wellhead cut and cap or partial flowline removal activities.

Soil Remediation Summary

In Situ

Ex Situ

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

- Yes _____ Excavate and offsite disposal
- _____ If Yes: Estimated Volume (Cubic Yards) _____ 20
- _____ Name of Licensed Disposal Facility or ECMC Facility ID # _____ 434766
- No _____ 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: \$ 5000 _____

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 20 cubic yards of impacted soil were transported to the Aggregate Recycle Facility in Weld County, Colorado for recycling.

Volume of E&P Waste (solid) in cubic yards _____ 20

E&P waste (solid) description Impacted Soil

ECMC Disposal Facility ID #, if applicable: _____ 434766

Non-ECMC Disposal Facility: _____

Volume of E&P Waste (liquid) in barrels _____ 0

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? No

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? Yes

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. 11/29/2022

Actual Spill or Release date, or date of discovery. 11/29/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/03/2022

Proposed site investigation commencement. 11/03/2022

Proposed completion of site investigation. 12/03/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/23/2022

Proposed date of completion of Remediation. 12/03/2025

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

Per Rule 915.e.(2).C, a discrete grab sample [Sep01-Riser@4.5'-WP] was collected from the most impacted material available in the source area on 11/23/22. The laboratory report and results summary table are attached. Based on these results and reduced list Table 915-1 constituents approved in the Form 27 Initial (6/29/2021; Document No. 402732790), KMOG requests approval to amend confirmation sampling and analysis to only include hydrocarbon and metal analytes detected above laboratory reporting limits and reclamation parameters exceeding Table 915-1 allowable levels, specifically: naphthalene and arsenic.

Soil samples B01@6'-WP-V, FL01@4'-V, FL02@5'-V, and FL03@5'-V were collected on February 26, 2025 to fulfill the conditions of approval (COA) issued by the ECMC for Document No. 403884688.

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: 08/22/2025

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: 18888

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**

404215720	FORM 27 DENIED
404216012	SOIL SAMPLE LOCATION MAP
404216040	SOIL SAMPLE LOCATION MAP
404216151	ANALYTICAL DATA SUMMARY TABLE(S)
404216175	LABORATORY ANALYTICAL REPORT
404216179	PHOTO DOCUMENTATION
404217992	SOIL SAMPLE LOCATION MAP
404218100	LABORATORY ANALYTICAL REPORT
404526977	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 9 Files

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

Environmental	All confirmation samples collected after August 2023 must be analyzed for the full list of Table 915-1 constituents. This was not done for soil sample B01@6'-WP-V or FL01@4'-V. Operator shall conduct sampling at these locations and analyze for full Table 915-1 list of constituents.	01/30/2026
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Total: 1 comment(s)