

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: <u>KERR MCGEE OIL & GAS ONSHORE LP</u>	Operator No: <u>47120</u>	Phone Numbers
Address: <u>P O BOX 173779</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Phone: <u>(720) 929-4306</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 #: 39337 Initial Form 27 Document #: 404060451

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>123-16739</u>	County Name: <u>WELD</u>
Facility Name: <u>HERMAN L 32-14</u>	Latitude: <u>40.175790</u>	Longitude: <u>-104.803400</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESW</u>	Sec: <u>32</u>	Twp: <u>3N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>489719</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Herman L 32-14 Flowline</u>	Latitude: <u>40.175772</u>	Longitude: <u>-104.803444</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESW</u>	Sec: <u>32</u>	Twp: <u>3N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

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

Water well 50 feet (ft) northeast. Platteville Ditch 370 ft east. Ponds 490 ft southeast. County road 660 ft south. Commercial buildings 910 ft southeast. Livestock 950 ft southwest. Occupied buildings 1100 ft southeast. An area with wetland characteristics is located approximately 1170 ft east. Agriculture. Groundwater at approximately 2.5 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
UNDETERMINED	GROUNDWATER	TBD	Groundwater Samples/Laboratory Analytical Results
UNDETERMINED	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.

On 4/2/25, a release was identified at the Herman L 32-14 wellhead due to fluid daylighting from the subsurface during flowline flushing activities. A Form 19 Initial Report (Doc# 404151365) was submitted on 4/4/25 & the ECMC issued Release Point ID 489719. Visual inspection & field screening of soil at the release location were conducted. A soil sample was submitted for analysis of full list Table 915-1 constituents to establish a waste profile. Initial results indicated that pH impacts exceeding the Table 915-1 allowable level & background level are present at the site. A verification sample was collected & final results were within the Table 915-1 allowable level or within background level.

Wellhead cut & cap operations were completed on 4/22/25. Groundwater was encountered during cut & cap & flowline removal activities at a depth of 2.5 ft bgs. Visual inspection & field screening of soil around the wellhead & associated pumping equipment were conducted following cut & cap operations. A soil sample was submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. The flowline associated with the wellhead was removed between 4/22 & 4/25/25. Samples were collected from the locations where the flowline risers were disconnected from the wellhead & the separator, where the flowline changed directions, & where groundwater was detected. Samples were submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. Initial results indicated that pH impacts exceeding the Table 915-1 allowable level & background level were present at the FL05 location. A verification sample was collected & final results were within the ECMC Table 915-1 allowable level or within background level. The wellhead & flowline are depicted on Figures 1 & 2. The PID readings & soil sample results are summarized in Tables 1 & 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):

Between 4/22 and 4/25/25, soil samples were collected from the wellhead, from where the flowline was disconnected from the wellhead and separator, from where the flowline changed directions, and from where groundwater was detected at depths ranging from 3 ft bgs to 5 ft bgs. The samples were submitted for analysis of full list Table 915-1 constituents using ECMC-approved methods. Initial results indicated that pH impacts exceeding the Table 915-1 allowable level and background level were present at the FL05 location. A verification sample was collected and final results were within the ECMC Table 915-1 allowable level or within background level. The laboratory reports are attached.

Proposed Groundwater Sampling

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

Between 4/22 & 4/25/25, seven groundwater samples were collected from the wellhead cut & cap excavation & flowline potholes at depths ranging from 2.5 to 4.5 ft bgs. The groundwater samples were submitted for analysis of full list Table 915-1 constituents in groundwater. A background groundwater sample was collected for analysis of Table 915-1 inorganic constituents in groundwater. Based on the laboratory analytical results, groundwater concentrations exceeded the ECMC Table 915-1 allowable levels for total dissolved solids (TDS), chloride, & sulfate at the FL03, FL04, & FL06 locations. Due to the absence of organic detections at these locations in both soil & groundwater samples, the inorganic exceedances are not indicative of an oil & gas release & monitoring wells at these locations are not warranted. The groundwater sample locations & background groundwater sample location are depicted on Figures 1 & 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):

Between 4/3 and 4/25/25, visual inspection and field screening of soil were conducted at nine locations at the ground surface within the release extent, four sidewall locations within the cut and cap excavation area, four locations at the ground surface adjacent to the cut and cap excavation area, and nine flowline potholes. 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 photo log is attached.

On 4/28/25, a soil gas survey was conducted at two soil vapor points (SVPs) installed adjacent to the former wellhead location following cut and cap operations. Three additional SVPs were blocked and could not be screened. GEM 5000 field readings were all non-detect for methane at both remaining SVPs. The SVP locations are illustrated on Figure 1. The soil vapor field form is included as an attachment.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 20

Number of soil samples exceeding 915-1 11

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

Approximate areal extent (square feet) 0

NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 33.1

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

Groundwater

Number of groundwater samples collected 7

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 3

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 3

-- Highest concentration of Benzene (µg/l) 2.98

-- Highest concentration of Toluene (µg/l) 2.76

ND Highest concentration of Ethylbenzene (µg/l)

ND Highest concentration of Xylene (µg/l)

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?

Fourteen background soil samples (NATIVE-BG01@0.5' through NATIVE-BG04@0.5', NATIVE-BG05@3' through NATIVE-BG09@3', and NATIVE-BG05@6' through NATIVE-BG09@6') were collected from the native material outside of the release extent & wellhead excavation areas. Background soil samples were submitted for laboratory analysis of pH, electrical conductivity (EC), sodium adsorption ratio (SAR), boron, & Table 915-1 metals using ECMC-approved methods. Results indicate that EC, SAR, pH, boron, arsenic, barium, cadmium, hexavalent chromium, lead, & selenium are naturally high in the native soil. The background soil sample results are summarized in Table 2. The background soil sample locations are illustrated on Figure 1. The lab reports are attached.

One background groundwater sample was collected for analysis of Table 915-1 inorganic constituents in groundwater. The background groundwater sample results are summarized in Table 3. The background groundwater location is depicted on Figure 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?

Based on the compliant organic detections in groundwater at the FL05 location, groundwater monitoring wells will be installed to verify that no dissolved-phase impacts are present. Following installation, the wells will be sampled for full list Table 915-1 constituents in groundwater. The monitoring well installation scope of work will be submitted 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.

Laboratory data indicate that all soil samples collected in the release area and during wellhead cut and cap and flowline removal activities were within the ECMC Table 915-1 allowable levels or within background levels x1.25 for Table 915-1 metals; therefore, no soil was removed from the site during decommissioning activities. The excavation areas were backfilled and contoured to match pre-existing conditions.

REMEDICATION 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 soil samples collected in the release area and during wellhead cut and cap and flowline removal activities were within the ECMC Table 915-1 allowable levels or within background levels x1.25 for Table 915-1 metals. Groundwater was encountered at approximately 2.5 ft bgs. Analytical results indicate that groundwater concentrations exceeded the ECMC Table 915-1 allowable levels for TDS, chloride, and sulfate at the FL03, FL04, and FL06 locations. Due to the absence of organic detections at these locations in both soil and groundwater samples, the inorganic exceedances are not indicative of an oil and gas release and monitoring wells at these locations are not warranted. Based on the compliant organic detections in groundwater at the FL05 location, groundwater monitoring wells will be installed to delineate the dissolved phase plumes. The monitoring well installation scope of work will be submitted in a subsequent Form 27 Supplemental report.

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.

Based on the compliant organic detections in groundwater at the FL05 location, groundwater monitoring wells will be installed to verify that no dissolved-phase impacts are present. Following installation, the wells will be sampled for full list Table 915-1 constituents in groundwater. The monitoring well installation scope of work will be submitted in a subsequent Form 27 Supplemental report.

REMEDATION 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: \$ 12000 _____

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: _____

REMEDATION COMPLETION REPORT

REMEDATION 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. 04/03/2025

Actual Spill or Release date, or date of discovery. 04/02/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/03/2025

Proposed site investigation commencement. 04/03/2025

Proposed completion of site investigation. 12/19/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/03/2025

Proposed date of completion of Remediation. 12/19/2025

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

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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: 06/19/2025

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: Taylor Robinson

Date: 09/24/2025

Remediation Project Number: 39337

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**

404182956	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404183004	LABORATORY ANALYTICAL REPORT
404186522	SOIL SAMPLE LOCATION MAP
404186649	PHOTO DOCUMENTATION
404189127	OTHER
404191168	SOIL SAMPLE LOCATION MAP
404247744	ANALYTICAL DATA SUMMARY TABLE(S)
404247749	LABORATORY ANALYTICAL REPORT
404247752	LABORATORY ANALYTICAL REPORT
404247758	LABORATORY ANALYTICAL REPORT
404247761	LABORATORY ANALYTICAL REPORT
404365641	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 12 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)