

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
403865250  
Receive Date:  
09/05/2024

Report taken by:  
Laurel Anderson

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: (970) 515-1110 Mobile: ( )
Address: P O BOX 173779		
City: DENVER	State: CO	Zip: 80217-3779
Contact Person: Macy Kiel	Email: DJRemediation_Forms@oxy.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 29958 Initial Form 27 Document #: 403436002

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: 318687	API #: _____	County Name: WELD
Facility Name: DECHANT 27-12	Latitude: 40.154760	Longitude: -104.604150	
** correct Lat/Long if needed: Latitude: 40.154379		Longitude: -104.603296	
QtrQtr: SENE	Sec: 12	Twp: 2N	Range: 65W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 485091	API #: _____	County Name: WELD
Facility Name: Dechant 1-12, 17-12 O SA	Latitude: 40.154379	Longitude: -104.603296	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SENE	Sec: 12	Twp: 2N	Range: 65W Meridian: 6 Sensitive Area? Yes

## SITE CONDITIONS

General soil type - USCS Classifications SP

Most Sensitive Adjacent Land Use Crop land

Is domestic water well within 1/4 mile? No

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: none  
Surface water: approximately 850' NW  
Wetlands: areas with wetland characteristics are located approximately 840' NW and 892' NW  
Spring: none  
Livestock: none  
Occupied Building: none  
High Priority Habitats: within a 1/4 mile of Aquatic Native Species Conservation Waters and Mule Deer Migration Corridor area

**DENIED**

# 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	78' (N-S) x 24' (E-W) x 6' bgs	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 Dechant 1-12 17-12 O SA production facility on August 29 and September 1, 2023. Groundwater was not encountered during excavation activities. Visual inspection and field screening of soils at one separator, one meter house, one produced water vessel (PWV), five dump line removal potholes, two aboveground storage tanks (ASTs), and one emissions control device (ECD) were conducted following removal activities and soil samples (AST-B01@3', AST-B03@3', SEP-B01@3', SEP-B02@3', DL-B04@3', PW-B01@4', PW-N01@3', PW-E01@3', PW-S01@3', PW-W01@3') were submitted for laboratory analysis to determine if a release occurred. Laboratory analytical results indicated that the benzene, naphthalene, 1,2,4-trimethylbenzene (TMB), 1-methylnaphthalene, and 2-methylnaphthalene, and arsenic concentrations in DL-B04@3' exceeded the applicable ECMC Table 915-1 standards and site-specific background limits. As such, a Form 19 Initial/Supplemental Spill/Release Report (ECMC Document No.403516295) was submitted on August 31, 2023 and the ECMC issued Spill/Release Point ID 485091. Soil sample DL-B04@3' (waste characterization sample) was submitted for laboratory analysis of the full ECMC Table 915-1 analytical suite. A topographic Site Location Map showing the geographic setting of the site location is provided as Figure 1. Soil sample location and field screening data is presented in Table 1. The facility soil sample and field screening locations are illustrated on Figure 2. The laboratory analytical report is provided as Attachment A. The field notes and photographic log are provided as Attachment B.

## 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 August 29, 2023 - September 20, 2023, excavation activities were conducted to address remaining soil impacts at the former dump line and PWV location and sixteen (16) confirmation soil samples were collected from the base and sidewalls of the excavation extent, at depths of approximately 4' and 6' bgs. Based on the waste characterization results (DL-B04@4'), the confirmation soil samples were submitted for laboratory analysis of benzene, ethylbenzene, xylenes, TPH, naphthalene, 1,2,4-TMB, pH, 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, chrysene, arsenic, barium, and selenium using ECMC-approved methods. Analytical results indicated that constituent concentrations in the soil samples collected from the final excavation extents were in compliance with the applicable ECMC Table 915-1 standards and/or within background limits. Soil analytical results are summarized in Tables 2 through 5.

### Proposed Groundwater Sampling

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

Groundwater was not encountered during assessment or remediation 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 August 29, 2023, visual inspections and field screening of soils was conducted at the former meter house, 3 dump line removal potholes, two former ASTs, and the former ECD. 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 32

Number of soil samples exceeding 915-1 29

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 1872

### NA / ND

-- Highest concentration of TPH (mg/kg) 0.894

-- Highest concentration of SAR 5.68

BTEX > 915-1 Yes

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 PW-BG01@3"-PW-BG02@3", PW-BG03@3' - PW-BG04@3', PW-BG03@5' - PW-BG04@5', PW-BG05@4' - PW-BG06@4', and PW-BG05@5' - PW-BG06@6' were collected from native material adjacent to the produced water vessel excavation. Additional background soil samples collected from the Dechant 17,27-17 wellhead (located approximately 200' to the west) from similar soil type, depth, and land use are included. The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and Table 915-1 Metals in Soils using standard methods appropriate for detecting the target analytes in Table 915-1. Analytical results for the background soil samples are presented in Tables 3 and 5. Background sample locations are illustrated on Figures 2 and 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.

From August 29, 2023 - September 20, 2023, approximately 350 cubic yards of impacted material were excavated and transported to the Buffalo Ridge Landfill located in Keenesburg, Colorado for disposal. The excavation area 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 analytical results indicated that constituent concentrations in the soil samples collected from the final excavation extent were in compliance with the applicable ECMC Table 915-1 standards and/or within background limits. Groundwater was not encountered during assessment or remediation activities. Based on the analytical and soil screening data presented herein, assessment is complete at this site and no further activities are required. As such, Kerr-McGee is requesting a No Further Action (NFA) determination for this location.

### Soil Remediation Summary

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 350

\_\_\_\_\_ 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 Final Report

### 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 NFA Request

## 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: \$ 0

## 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:

None.

Volume of E&P Waste (solid) in cubic yards 350

E&P waste (solid) description Impacted soil

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Buffalo Ridge Landfill located in Keenesburg, Colorado

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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 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. Timeliness of reclamation initiation and completion will be subject to NFA, surface owner discretion and land use, and suitable ground conditions which allow for execution of surface reclamation activities so as to not cause unwarranted damages.

Is the described reclamation complete? Yes

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? Yes

If YES, does the seed mix comply with local soil conservation district recommendations? Yes

Did the local soil conservation district provide the seed mix? No

### SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 07/21/2025

Proposed date of completion of Reclamation. 08/21/2025

## 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. 06/14/2023

Actual Spill or Release date, or date of discovery. 08/30/2023

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/29/2023

Proposed site investigation commencement. 08/29/2023

Proposed completion of site investigation. 07/02/2024

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/30/2023

Proposed date of completion of Remediation. 09/20/2023

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

Following completion of remedial activities in September 2023, the elevated pH concentrations in four (4) soil samples remaining onsite were considered to be within the acceptable range of analytical variability allowed by the ECMC at the time. However, following further discussion with the ECMC, it was determined that the range of analytical variability would not be acceptable, and that verification sampling would need to be completed to verify the elevated pH concentrations. Prior to collection of verification and additional background soil samples, background soil samples were collected at the Dechant 17,27-12 wellhead (located approximately 200' to the west) from similar soil type, depth, and land use. Laboratory analytical results indicated that constituent concentrations in the soil samples collected from the final excavation extent were in compliance with the applicable ECMC Table 915-1 standards and/or within background limits.

In response to the conditions of approval (COAs) issued in the previous Form 27-Supplemental (Document No. 403675412), submitted to the ECMC on April 30, 2024, and approved on August 13, 2024, soil sample DL-B04@3' (waste characterization sample) was submitted for laboratory analysis of the full ECMC Table 915-1 analytical suite. Confirmation soil samples were analyzed for all constituents containing detections in concentrations and/or concentrations exceeding background limits within the waste characterization analytical results. In addition, all photo documentation related to Spill ID 485091 and assessment/remediation activities completed at this site are attached.

Laboratory analytical results indicated that constituent concentrations in the soil samples collected from the final excavation extent were in compliance with the applicable ECMC Table 915-1 standards and/or within background limits. Groundwater was not encountered during assessment or remediation activities. Based on the analytical and soil screening data presented herein, assessment is complete at this site and no further activities are required. As such, Kerr-McGee is requesting a No Further Action (NFA) determination for this location.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Macy Kiel

Title: HSE Advisor

Submit Date: 09/05/2024

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: 29958

### 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

403865250	FORM 27 DENIED
403865341	PHOTO DOCUMENTATION
403865342	SITE MAP
403897439	SOIL SAMPLE LOCATION MAP
403897440	SOIL SAMPLE LOCATION MAP
403897443	ANALYTICAL RESULTS
403897448	ANALYTICAL RESULTS
403994482	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 8 Files

### General Comments

User Group	Comment	Comment Date
Environmental	<p>ECMC has not conducted a thorough review of this form as conditions of approval on previously approved forms, corrective actions on previously approved field inspection reports, and/or comments on previously denied forms have not been addressed; As such Operator's request for closure has been removed and Doc #403865250 has been denied.</p> <p>Operator states: "In response to the conditions of approval (COAs) issued in the previous Form 27-Supplemental (Document No. 403675412), submitted to the ECMC on April 30, 2024, and approved on August 13, 2024, soil sample DL-B04@3' (waste characterization sample) was submitted for laboratory analysis of the full ECMC Table 915-1 analytical suite. Confirmation soil samples were analyzed for all constituents containing detections in concentrations and/or concentrations exceeding background limits within the waste characterization analytical results. In addition, all photo documentation related to Spill ID 485091 and assessment/remediation activities completed at this site are attached."</p> <p>Laboratory analysis of Full Table 915-1 was required per COA on the approved Form 19i/s Doc #403516295 from August 2023.</p> <p>ECMC did not receive a Form 27 for remediation of this spill until 4/30/2024 Doc #403675412.</p> <p>Per COA on Form 27 Doc #403675412: "Operator shall analyze confirmation soil samples for complete Table 915-1 Contaminants of Concern until Operator has submitted sufficient characterization data to request and receive Director Approval of reduced list of contaminants of concern."</p> <p>Per COA on Form 27 Doc #403675412: "Operator shall include photo documentation of additional site investigation and remediation activities related to Spill ID 485091."</p> <p>Soil samples from beneath the liner are required at facility decommissioning. Additionally, liner integrity must be verified and documented. Operator has not provided adequate documentation of liner integrity nor photo documentation of *additional* site investigation and remediation activities related to Spill ID 485091.</p> <p>Operator shall:</p> <ul style="list-style-type: none"> <li>-Provide documentation (engineering drawings, receipts, field tickets for installation, photos, etc.) that a liner was present beneath the separator dump line</li> <li>-Clarify which samples were collected from within the liner and which samples were collected from outside/beneath the liner</li> <li>-Provide documentation of liner integrity (including photographs prior to removal)</li> </ul>	11/14/2024

Total: 1 comment(s)