

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Candice (Nikki) Graber

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>		Phone: <u>(713) 350-4906</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80217-3779</u>		Mobile: <u>()</u>
Contact Person: <u>Ariana Ochoa</u>	Email: <u>DJRemediation_Forms@oxy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 35960 Initial Form 27 Document #: 403789218

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>123-11242</u>	County Name: <u>WELD</u>
Facility Name: <u>MARTIN T. HART GAS UNIT E TRUE 1</u>	Latitude: <u>40.113720</u>	Longitude: <u>-104.882610</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWNW</u>	Sec: <u>27</u>	Twp: <u>2N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>LOCATION</u>	Facility ID: <u>319426</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>MARTIN T. HART GAS UNIT E TR-62N67W 27NWNW</u>	Latitude: <u>40.113720</u>	Longitude: <u>-104.882610</u>	
** correct Lat/Long if needed: Latitude: <u>40.113820</u>		Longitude: <u>-104.883500</u>	
QtrQtr: <u>NWNW</u>	Sec: <u>27</u>	Twp: <u>2N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>487499</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Smith 6-27A, Hart Mar Facility</u>		Latitude: <u>40.113820</u>	Longitude: <u>-104.883500</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>NWNW</u>	Sec: <u>27</u>	Twp: <u>2N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>487561</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Hart Martin E True 1 Wellhead</u>		Latitude: <u>40.113744</u>	Longitude: <u>-104.882749</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>NWNW</u>	Sec: <u>27</u>	Twp: <u>2N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>487897</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Hart Martin E True 1 Wellhead</u>		Latitude: <u>40.113720</u>	Longitude: <u>-104.882610</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>NWNW</u>	Sec: <u>27</u>	Twp: <u>2N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

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

Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Occupied buildings 330 feet (ft) north, 760 ft southwest. Livestock 220 ft south, 1,090 ft southwest, and 1,140 ft northwest. County Roads 990 ft west and 980 ft north. Agriculture. Groundwater at approximately 13.5 ft below ground surface (bgs).

SITE INVESTIGATION PLAN

TYPE OF WASTE:

<input checked="" type="checkbox"/> E&P Waste	<input type="checkbox"/> Other E&P Waste	<input type="checkbox"/> Non-E&P Waste
<input checked="" type="checkbox"/> Produced Water	<input type="checkbox"/> Workover Fluids	_____
<input checked="" type="checkbox"/> Oil	<input type="checkbox"/> Tank Bottoms	
<input checked="" type="checkbox"/> Condensate	<input type="checkbox"/> Pigging Waste	
<input type="checkbox"/> Drilling Fluids	<input type="checkbox"/> Rig Wash	
<input type="checkbox"/> Drill Cuttings	<input type="checkbox"/> Spent Filters	
	<input type="checkbox"/> Pit Bottoms	
	<input type="checkbox"/> 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.

Wellhead cut & cap operations were completed at the Hart Martin E True 1 wellhead on 7/29/24. Groundwater was encountered in the cut & cap excavation at 13.5 ft bgs. Visual inspection & field screening of soil around the wellhead & pumping equipment were conducted following cut & cap operations. A soil sample (B01@6') 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 on 7/29 & 7/30/24. Samples were collected from where the flowline risers were disconnected from the wellhead (WH01-RISER@3') & the separator (SEP-RISER@4') & where a pothole had potential impact (FL02@6'). Results indicated that polycyclic aromatic hydrocarbon (PAH), pH, &/or Table 915-1 metals impacts exceeding the allowable levels or background levels were present at WH01-RISER & FL02. Form 19 Initial Spill Reports (Doc# 403872676 & 403908809) were submitted on 8/2 & 9/6/24 & the ECMC issued Spill IDs 487561 & 487897.

Decommissioning activities were completed at the Smith 6-27A, Hart Mar facility on 7/30/24. Groundwater was not encountered during excavation activities. Visual inspection & field screening of soil at one aboveground storage tank (AST), one produced water vessel (PWV), one meter house, three dumphline potholes, & one separator were conducted following removal activities. Samples were submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. Results indicated that PAH &/or pH impacts were present at the AST, a dumpline pothole (FL01@6'), PWV base, & separator inlet. A Form 19 Initial Spill Report (Doc# 403872669) was submitted on 8/2/24 & the ECMC issued Spill ID 487499.

The facility, wellhead, & flowline soil sample locations are depicted on Figures 1, 2, & 3.

Excavation activities at the former PWV are pending and will be summarized 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 8 & November 13, 2024, excavation activities were conducted to address remaining soil impacts at the FL01, FL02, AST, & wellhead riser locations & 24 confirmation soil samples were collected from the base & sidewalls of the final excavation extents at depths ranging from 8 to 15 ft bgs & 3 to 12 ft bgs, respectively. The confirmation soil samples were submitted for laboratory analysis of the excavation specific waste profiles, including total petroleum hydrocarbons (TPHs), PAHs, boron, pH, &/or select Table 915-1 metals using ECMC-approved methods. Analytical results indicated that all samples at the final FL01, FL02, AST, & wellhead riser excavation extents were within the ECMC Table 915-1 allowable levels or background levels x1.25 for Table 915-1 metals. Excavation activities are pending at the PWV-B01 location. The laboratory reports are attached.

Proposed Groundwater Sampling

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

On October 9, 2024, a groundwater sample (GW-WH01-RISER-B01@14') was collected from the wellhead excavation. The groundwater sample was submitted for analysis of full list Table 915-1 constituents in groundwater. Background groundwater samples (GW-NATIVE-BG12@14 and GW-NATIVE-BG15@14') were collected for analysis of Table 915-1 inorganic constituents in groundwater. Based on the laboratory analytical results groundwater concentrations were in compliance with ECMC Table 915-1 allowable levels or background levels for all requested analytes. No organic constituents were detected above the laboratory reporting limits. The groundwater sample locations and background groundwater sample locations are depicted on Figure 4. 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):

On July 29 and July 30, 2024, visual inspections and field screening of soil were conducted at four sidewall locations within the cut and cap excavation area, four locations at the ground surface adjacent to the wellhead excavation, four flowline potholes, the hatch and footprint of the AST, three sidewalls of the PWV excavation, and three dumphline potholes. Based on the inspection and screening results, impacted soil was not observed at the soil screening locations and no soil samples were submitted for analysis from these areas. A photographic log is attached.

On August 9, 2024, a soil gas survey was conducted at four soil vapor points (SVPs) installed adjacent to the former wellhead location following cut and cap operations. One additional SVP was blocked and could not be screened. 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. The soil vapor field form is included as an attachment.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected	41	--	Highest concentration of TPH (mg/kg)	475
Number of soil samples exceeding 915-1	40	--	Highest concentration of SAR	17.3
Was the areal and vertical extent of soil contamination delineated?	No		BTEX > 915-1	No
Approximate areal extent (square feet)	1928		Vertical Extent > 915-1 (in feet)	15

Groundwater

Number of groundwater samples collected	1	ND	Highest concentration of Benzene (µg/l)	
Was extent of groundwater contaminated delineated?	No	ND	Highest concentration of Toluene (µg/l)	

Depth to groundwater (below ground surface, in feet) 14

ND Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed 0

ND Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 0

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?

Thirty background soil samples (NATIVE-BG01@3' through NATIVE-BG11@3', NATIVE-BG01@6' through NATIVE-BG11@6', NATIVE-BG12@10' through NATIVE-BG15@10', and NATIVE-BG12@13' through NATIVE-BG15@13') were collected from the native material outside of the wellhead cut and cap and facility excavations. The samples were submitted for laboratory analysis of pH, electrical conductivity (EC), sodium adsorption ratio (SAR), boron, and Table 915-1 metals, using ECMC-approved methods. Laboratory analytical results indicate that EC, SAR, pH, boron, arsenic, barium, and selenium are naturally high in the native soil. The background soil sample laboratory analytical results are summarized in Table 2. The background soil samples are depicted on Figure 4.

Two background groundwater samples were collected for analysis of Table 915-1 inorganic constituents in groundwater. The background groundwater sample results are summarized in Table 3. The background groundwater locations are depicted on Figure 4.

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?

Excavation activities at the PWV are pending and will be summarized 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 FL01, FL02, AST, PWV, and wellhead riser 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.

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 PAH, pH, and/or Table 915-1 metals impacts at the FL01, FL02, AST, and wellhead riser locations have been remediated and all soil at the final excavation extents is within the ECMC Table 915-1 allowable levels x1.25 for Table 915-1 metals. Laboratory data indicate that PAH impacts exceeding the ECMC Table 915-1 allowable levels remain in the PWV excavation area. Groundwater was encountered at approximately 13.5 ft bgs. Analytical results indicate that groundwater concentrations were in compliance with ECMC Table 915-1 allowable levels for all requested analytes. No organic constituents were detected above the laboratory reporting limits. Excavation activities at the PWV are pending and will be summarized 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.

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. 09/05/2024

Actual Spill or Release date, or date of discovery. 09/04/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/29/2024

Proposed site investigation commencement. 07/29/2024

Proposed completion of site investigation. 07/20/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/29/2024

Proposed date of completion of Remediation. 07/20/2025

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: Ariana Ochoa

Title: Sr. HSE Advisor

Submit Date: 02/18/2025

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: Candice (Nikki) Graber

Date: 04/07/2025

Remediation Project Number: 35960

COA Type**Description**

	Operator shall provide all waste disposal manifests on the next Supplemental Form 27.
	ECMC did not approve the reduced analyte list that the Operator selected. All final confirmation samples shall be re-collected for complete Table 915-1.
	In accordance with 913.d.(1), Operator will investigate impacts to soil, Groundwater, and surface water as soon as the impacts are discovered.
3 COAs	

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**

404040132	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404040670	CORRESPONDENCE
404040673	PHOTO DOCUMENTATION
404040674	OTHER
404062999	SOIL SAMPLE LOCATION MAP
404086315	SOIL SAMPLE LOCATION MAP
404086353	SOIL SAMPLE LOCATION MAP
404086356	ANALYTICAL RESULTS
404086357	ANALYTICAL RESULTS
404086360	ANALYTICAL RESULTS
404086361	ANALYTICAL RESULTS
404086362	ANALYTICAL RESULTS
404094162	SOIL SAMPLE LOCATION MAP
404094164	ANALYTICAL RESULTS
404156277	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 15 Files

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

Environmental	Re-samples/verification samples of organic exceedances are not considered valid.	04/07/2025
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Environmental	Analytes detected in source samples but omitted from final confirmation samples included TPH, Benzo (b) fluoranthene, Chrysene, Fluoranthene, 2-Methyl naphthalene, or Pyrene.	04/07/2025
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Total: 2 comment(s)