

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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403906439

Receive Date:

09/03/2024

Report taken by:

Chris Sanchez

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: DESERT EAGLE OPERATING LLC	Operator No: 10797	Phone Numbers
Address: 17330 PRESTON RD STE 200D-208		Phone: (214) 886-5998
City: DALLAS	State: TX	Zip: 75252
Contact Person: Wesley Marsahl	Email: wmarshall@prohelium.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 34161 Initial Form 27 Document #: 403693462

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: 905.g.(2) Drill Cuttings

SITE INFORMATION

Yes Multiple Facilities

Facility Type: LOCATION	Facility ID: 484360	API #:	County Name: LAS ANIMAS
Facility Name: Red Rocks 35-11	Latitude: 37.475295	Longitude: -103.546960	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SENW	Sec: 35	Twp: 29S	Range: 55W Meridian: 6 Sensitive Area? No

Facility Type: SPILL OR RELEASE	Facility ID: 485690	API #:	County Name: LAS ANIMAS
Facility Name: Red Rocks 35-11	Latitude: 37.475420	Longitude: -103.547340	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SENW	Sec: 35	Twp: 29S	Range: 55W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications ML

Most Sensitive Adjacent Land Use Rangeland

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? No

Other Potential Receptors within 1/4 mile

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) cement effluence

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	SOILS	Unknown	Sample

INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Drill cuttings and soils that exhibited white cement effluence were removed from the location and taken to a landfill that accepts E&P waste.

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):

Soil samples will be taken in compliance with Rule 905.e. 2 at the spill release areas identified in the attached ECMC photos.. It is anticipated 1-2 grab samples will be taken at each identified area which represents the potentially impacted area. Soil samples will be tested for contaminants of concern listed in Table 915-1 to assess the impact. At least one background sample will be taken. No pathway to groundwater exists.

Proposed Groundwater Sampling

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

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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 1

Number of soil samples exceeding 915-1 1

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

Approximate areal extent (square feet) 150

NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 12

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 1

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?

☐ 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 soil samples are 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.

The drill cuttings pile and cuttings in the immediate area were removed and trucked to a disposal facility that accepts E&P waste, manifests and acceptance letters attached. Additional areas with soil identified as contaminated will be tested, and if not possible to remediate in situ, removed and hauled to a waste facility that accepts E&P waste in accordance with ECOM Rule 905.b.(1),(3), and Rule 905.g (2)a.

REMEDIAL ACTION 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.

The areal and vertical extent of soil contamination will be delineated. Confirmation soil samples will be taken as described in Rule 915.e.(2). to assess the impact or confirm Remediation. Samples from comparable, nearby non-impacted native soil will be collected and analyzed for purposes of establishing background soil conditions including pH, EC, SAR, and other constituents as identified in the E&P Waste profile. If the samples results exceed Table 915-1, remediation in situ will be evaluated. Native soils in the area have high SAR values in excess of Table 915-1; the SAR of the drill cuttings sample also exceeded Table 915.1. As detailed in the Colorado State University Extension Fact Sheet - Managing Sodic Soil 0.504, a calcium based soil amendment such as gypsum may be added to remediate the high SAR value of the soil and bring the soil into Table 915-1 compliance. The gypsum application rate and time to implement NFA status are dependent upon the soil sample results of the affected areas. If in situ remediation is not possible, the contaminated soil will be removed and hauled to a waste facility that accepts E&P waste in accordance with ECMC Rule 905.b.(1),(3), and Rule 905.g (2)a. Any excavated areas will be filled with soil that closely matches the VT – Villedry-Travessilla complex at the location.

Soil Remediation Summary

☒ In Situ

_____ Bioremediation (or enhanced bioremediation)
 _____ Chemical oxidation
 _____ Air sparge / Soil vapor extraction
 _____ Natural Attenuation
 Yes _____ Other Amendment(s) added to soil _____

☒ Ex Situ

Yes _____ Excavate and offsite disposal
 _____ If Yes: Estimated Volume (Cubic Yards) _____ 1
 _____ Name of Licensed Disposal Facility or ECMC Facility ID # _____
 No _____ Excavate and onsite remediation
 Yes _____ Land Treatment
 _____ Bioremediation (or enhanced bioremediation)
 _____ Chemical oxidation
 _____ Other _____

Groundwater Remediation Summary

No _____ Bioremediation (or enhanced bioremediation)
 No _____ Chemical oxidation
 No _____ Air sparge / Soil vapor extraction
 No _____ Natural Attenuation
 No _____ 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.

No impacted groundwater

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 Soil impact and remediation

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.

403614956

Operator anticipates the remaining cost for this project to be: \$ 10000

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 30

E&P waste (solid) description drill cuttings

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Trinidad Land Fill

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?

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.

There is not existing or new grade countouring. To decompact soil layers, areas to be reclaimed will be ripped to an estimated depth of 18 inches unless restrictive features are encountered at a shallower depth. Interim reclamation will be performed during the first growing season after well drilling is complete and within the anticipated 6 months described in Rule 1003.b. The anticipated seed mix was identified as a site specific seed mix in coordination with the Natural Resource Conservation Service District Conservationist, the Las Animas County Extension Service, and the surface owner. The seed weight (pounds/acre) and application rate will be provided to the operator by the seed mix provider. The seed mix will be certified weedfree. DEO will monitor for noxious and invasive weeds. Weed treatment will be conducted, where needed, to prevent establishment and spread of noxiousweeds. The weed treatment will be conducted according to Colorado Department of Agriculture recommendations by weed species

Is the described reclamation complete? No

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? No

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

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

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 06/24/2024

Proposed date of completion of Reclamation. 12/30/2024

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. 12/01/2023

Actual Spill or Release date, or date of discovery. 11/29/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/08/2023

Proposed site investigation commencement. 03/08/2024

Proposed completion of site investigation. 12/30/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/01/2024

Proposed date of completion of Remediation. 12/30/2024

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:

This request is to accomodate scheduling of the drone for mapping, soil testing personnel to secure soil samples, lab time to analyze soil samples, and time to analyze and develop the most appropriate remediation plan. Personnel scheduling conflicts and erratic weather conditions including high winds have impeded the mapping and soil sampling.

OPERATOR COMMENT

Operator requests a change in the Implementation Schedule. This request is to accomodate scheduling of the drone for mapping, scheduling soil testing personnel to secure soil samples, lab time to analyze soil samples, and sufficient time confirm the most appropriate remediation plan. The Spill ID 485690 has been added. Form 4 for dust mitigation activity has been added to document the field activities during this quarter. Per the attached soil test map, nine soil sample locations have been identified, final number and depth(s) to be determined. Delay in quarterly filing due to mostly resloved clarification issues for soil testing parameters.

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

Signed: Cathy Bulf

Title: Manager

Submit Date: 09/03/2024

Email: cathybulf@gmail.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: Chris Sanchez

Date: 11/13/2024

Remediation Project Number: 34161

COA Type**Description**

	Operator will continue quarterly reporting until the site investigation is complete and full Table 915-1 standards are met within the remediation area
	If impacted soils are encountered, the impacted soil will be segregated for proper offsite disposal and the lateral and vertical extent of impacts shall be determined with appropriate confirmation soil sampling
	Operator will analyze soil samples for TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble)).
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**

403906439	INVESTIGATION/REMEDIATION WORKPLAN (SUPPLEMENTAL)
403908220	SOIL SAMPLE LOCATION MAP
403993277	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)