

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403765567
Receive Date:
04/23/2024
Report taken by:
Krystal Heibel

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: VERDAD RESOURCES LLC	Operator No: 10651	Phone Numbers
Address: 1125 17TH STREET SUITE 550		Phone: (720) 845-6901
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Michael Cugnetti	Email: mcugnetti@verdadresources.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 31286 Initial Form 27 Document #: 403508870

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: 439517	API #: _____	County Name: WELD
Facility Name: TIMBRO RANCH 1-3-9-59 PAD	Latitude: 40.786250	Longitude: -103.963270	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: 2	Sec: 3	Twp: 9N	Range: 59W Meridian: 6 Sensitive Area? Yes
Facility Type: WELL	Facility ID: _____	API #: 123-40454	County Name: WELD
Facility Name: TIMBRO RANCH 2-3-9-59	Latitude: 40.786230	Longitude: -103.963370	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: LOT 2	Sec: 3	Twp: 9N	Range: 59W Meridian: 6 Sensitive Area? No

Facility Type: WELL Facility ID: API #: 123-40455 County Name: WELD
Facility Name: TIMBRO RANCH 1-3-9-59 Latitude: 40.786250 Longitude: -103.963270
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: LOT 2 Sec: 3 Twp: 9N Range: 59W Meridian: 6 Sensitive Area? No

Facility Type: WELL Facility ID: API #: 123-40525 County Name: WELD
Facility Name: TIMBRO RANCH 2-34-10-59 Latitude: 40.786250 Longitude: -103.963210
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: LOT 2 Sec: 3 Twp: 9N Range: 59W Meridian: 6 Sensitive Area? No

Facility Type: WELL Facility ID: API #: 123-40527 County Name: WELD
Facility Name: TIMBRO RANCH 1-34-10-59 Latitude: 40.786240 Longitude: -103.963320
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: LOT 2 Sec: 3 Twp: 9N Range: 59W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications SM 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

SITE INVESTIGATION PLAN

TYPE OF WASTE:

E&P Waste Other E&P Waste Non-E&P Waste

Produced Water

Workover Fluids

No anticipated waste impacts, confirmation for facility decommissioning

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	SOILS	to be determined	visual, olfactory, PID and laboratory analysis

INITIAL ACTION SUMMARY

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

Existing equipment is being removed and wells P&A'ed. No impacts are anticipated, but will be investigated. All removed equipment footprints and surrounding trenches including wellheads, tank battery, flowlines, separator, or other equipment on location will have visual, olfactory, PID inspection and tank battery, wellhead, separator, pump engine, flowlines will have confirmation by laboratory analysis. Laboratory analysis will consist of TPH, EC, SAR, pH, Boron, BTEX, naphthalene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene. Photos will be taken and attached to a supplemental form 27 of areas under equipment once the equipment has been removed.

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):

We will collect one grab sample or more if needed for the tank battery at locations where the containment liner is penetrated by dumplines or at a seam at a low spot if no flowlines penetrate liner, and at separators, wellhead line trenches, dumpline trench and wellheads at the location of most likely high impact under or near the equipment. Laboratory analysis will consist of TPH, EC, SAR, pH, Boron, BTEX, naphthalene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

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):

All areas of the facility will be inspected for impact. Trenches and all equipment footprints will have visual, olfactory and PID screening. Photo documentation will be created for all equipment footprints and other areas of the facility. If impacts are confirmed with laboratory analysis, a supplemental form 27 will be submitted describing in greater detail what the impacts are and the plan for determining and characterizing the horizontal and vertical extents of impact through excavation and additional confirmation sampling.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 29

ND Highest concentration of TPH (mg/kg) _____

Number of soil samples exceeding 915-1 0

Highest concentration of SAR _____

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

BTEX > 915-1 No _____

Approximate areal extent (square feet) 0

Vertical Extent > 915-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No _____

Highest concentration of Toluene (µg/l) _____

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

Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed _____

Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 _____

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?

one background soil sample was collected off of the site disturbance and analyzed for the Table 915 analytes.

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.

No anticipated waste impacts, confirmation investigation for facility decommissioning.

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.

No anticipated waste impacts, confirmation investigation for facility decommissioning.

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.

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.

Verdad has adequate general liability insurance. See attached certificate of insurance. Verdad currently has a \$100,000 plugging bond with the COGCC, surety ID 20170009. Verdad is also in the process of finalizing Financial Assurance with the COGCC to comply with the new 700 series rules.

Operator anticipates the remaining cost for this project to be: \$ 60000 _____

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: _____

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.

Site was reclaimed per ECMC 1000 series rules. Access road and pad were reclaimed. All culverts were removed. Grade was recontoured to match surrounding area. Area was cross ripped and tilled to alleviate compaction. Landowner approved seed mix.

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? 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. 04/01/2024

Proposed date of completion of Reclamation. 04/15/2024

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. 08/24/2023

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/25/2023

Proposed site investigation commencement. _____

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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

Request closure using residential screening limits. See attached discussion.

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

Signed: Michael Cugnetti

Title: Director of EHS&R

Submit Date: 04/23/2024

Email: mcugnetti@verdadresources.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: Krystal Heibel

Date: 06/21/2024

Remediation Project Number: 31286

COA Type**Description**

	<p>Closure request removed. Arsenic concentrations in confirmation soil samples exceed the Table 915-1 Residential Soil Screening Level Concentrations and are greater than 1.25 times the arsenic concentration in the background sample. Operator will provide additional data to characterize arsenic concentrations at the site and to determine its source.</p> <p>Operator shall obtain additional background samples from various locations as an initial characterization.</p> <p>The arsenic exceedance writeup includes assumptions (e.g. the chemical makeup of recently placed produced water) for facility decommissioning projects that often contain historical spills/releases.</p>
1 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**

403765567	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403765607	OTHER
403765608	OTHER
403765609	OTHER
403765610	OTHER
403765613	SOIL SAMPLE LOCATION MAP
403765614	ANALYTICAL RESULTS
403765615	PHOTO DOCUMENTATION
403765617	ANALYTICAL RESULTS
403765619	ANALYTICAL RESULTS
403765620	ANALYTICAL RESULTS
403765621	ANALYTICAL RESULTS
403765623	ANALYTICAL RESULTS
403765626	ANALYTICAL RESULTS
403765628	ANALYTICAL RESULTS
403832476	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 16 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	ECMC approves Operator's request for use of Residential SSLs based on the depth to groundwater and the local lithology suggesting a pathway to groundwater at this location is not likely.	06/21/2024

Total: 1 comment(s)