

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
403359918  
Receive Date:  
03/29/2023  
Report taken by:  
Jason Kosola

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 COGCC 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>EVERGREEN NATURAL RESOURCES LLC</u>	Operator No: <u>10705</u>	<b>Phone Numbers</b> Phone: <u>(303) 2848820</u> Mobile: <u>( )</u>
Address: <u>1875 LAWRENCE ST STE 1150</u>		
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		
Contact Person: <u>Mackenzie Smith</u> Email: <u>mackenzie.smith@enrllc.com</u>		

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 19662 Initial Form 27 Document #: 402782552

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

No Multiple Facilities

Facility Type: <u>PIT</u>	Facility ID: <u>112908</u>	API #: _____	County Name: <u>LAS ANIMAS</u>
Facility Name: <u>RED DOG 21-32</u>	Latitude: <u>37.221312</u>	Longitude: <u>-104.695807</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENW</u>	Sec: <u>32</u>	Twp: <u>32S</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications CH Most Sensitive Adjacent Land Use Non-Crop Land  
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



Number of soil samples collected 19 -- Highest concentration of TPH (mg/kg) 1600  
 Number of soil samples exceeding 915-1 17 -- Highest concentration of SAR 42  
 Was the areal and vertical extent of soil contamination delineated? Yes BTEX > 915-1 No  
 Approximate areal extent (square feet) 1404 Vertical Extent > 915-1 (in feet) 1

**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 0 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  
 \_\_\_\_\_ 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?  
 Composite native samples from 4 different areas were collected in the initial sampling event on June 24, 2021. No additional background samples are expected to be collected during this investigation

Was investigation derived waste (IDW) generated as part of this investigation?  
 Volume of solid waste (cubic yards) 308 Volume of liquid waste (barrels) 0

Is further site investigation required?  
 Soil samples do not indicate conditions improving, and therefore Evergreen completed a full remediation and excavation of the soil within the Red Dog pit. Evergreen soil samples post-excavation indicate that soil at deeper levels may be impacted with elevated pH and SAR levels. Therefore, Evergreen intends to continue the remediation of the soil within the pit, through treatment with bioremediation products. After secondary pit excavation efforts, soil samples indicate that the extend of impact has been reached.

**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 was treated with Oil Gator bioremediation product on September 21, 2021 and mixed into the impacted soil. SDS and product application description are attached hereto. The product was further mixed on October 28, 2021 and November 10, 2021. Second round of soil samples were collected on December 14th, 2021, and third round was collected on February 28, 2022. Results showed improvement in soil quality through the treatment process. A second round of bioremediation product was applied on June 10, 2022, however soil samples, completed on July 27th, 2022, indicated no improvement from remediation attempts.  
 Between October 4th and 14th, 2022, 432 tons (308 cubic yards) of source material from the Red Dog Pit was removed from the pit and hauled by a third party to the Trinidad Landfill. Additional samples were then completed on October 26th.  
 Further pit excavation was completed on March 9th, 2023. This excavation was delayed in the quarter due to persistent weather conditions which delayed the progress. On March 9th, 2023 ENR's construction team removed another 1 foot of material from the Red Dog 21-32 pit. The materials was hauled off by a third party to the Trinidad Landfill. From there, additional soil sampling was conducted on March 24, 2023. Soil samples indicate that removal of source is nearly complete. Evergreen intends to finish source removal through natural attenuation

**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.  
 Between October 4th and 14th, 2022, 432 tons (308 cubic yards) of source material from the Red Dog Pit was removed from the pit and hauled by a third party to the Trinidad Landfill. Additional samples were then completed on October 26th. Additional removal of source material was conducted on March 8th, 2023 where an additional 1 foot of material was removed. Follow up samples were completed on March 14th.

## Soil Remediation Summary

In Situ

Yes  Bioremediation ( or enhanced bioremediation )

Chemical oxidation

Air sparge / Soil vapor extraction

Yes  Natural Attenuation

Other \_\_\_\_\_

Ex Situ

Yes  Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 308

Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_

No  Excavate and onsite remediation

No  Land Treatment

No  Bioremediation (or enhanced bioremediation)

Chemical oxidation

Other \_\_\_\_\_

## Groundwater Remediation Summary

No  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

Upon collection and receipt of additional soil samples taking into consideration winter conditions.

### 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.

Operator does not have site-specific financial assurance for this project, however Operator has inactive well, blanket and surface bonding, as well as commercial general liability and/or umbrella/excess insurance meeting the requirements of 705.b. Operator does not anticipate making an insurance claim for this report. Assessment activities as outlined herein are proposed. Costs included herein are estimates only and they may change over time base on numerous factors. Accordingly, Operator makes no guarantee as to the accuracy of such cost estimates, thus providing that estimate for the next year below.

Operator anticipates the remaining cost for this project to be: \$ 5000 \_\_\_\_\_

## 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 \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

E&P waste (liquid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC 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 COGCC 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.

Existing pit pile will be used to backfill pit. Should additional material be needed, clean fill will be hauled in. Area will be reclaimed to match existing contour, seeded and mulched.

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. 08/30/2021

Proposed date of completion of Reclamation. 04/30/2023

## 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. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. 06/17/2021

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). \_\_\_\_\_

Proposed site investigation commencement. \_\_\_\_\_

Proposed completion of site investigation. \_\_\_\_\_

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/23/2021

Proposed date of completion of Remediation. 04/30/2024

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:

**OPERATOR COMMENT**

--

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

Signed: Mackenzie Smith

Title: Production Engineer

Submit Date: 03/29/2023

Email: mackenzie.smith@enrllc.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: Jason Kosola

Date: 07/07/2023

Remediation Project Number: 19662

**COA Type****Description**

0 COA	

**Attachment Check 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**

403359918	FORM 27-SUPPLEMENTAL-SUBMITTED
403359948	ANALYTICAL RESULTS
403359949	ANALYTICAL RESULTS

Total Attach: 3 Files

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

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)