

State of Colorado Oil and Gas Conservation Commission

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402953583

Receive Date:

02/10/2022

Report taken by:

Jason Kosola

Site Investigation and Remediation Workplan (Initial 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: EVERGREEN NATURAL RESOURCES LLC	Operator No: 10705	Phone Numbers Phone: (303) 2848820 Mobile: ()
Address: 1875 LAWRENCE ST STE 1150		
City: DENVER	State: CO Zip: 80202	
Contact Person: Mackenzie Smith	Email: mackenzie.smith@enrllc.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 21982 Initial Form 27 Document #: 402953583

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: WATER GATHERING SYSTEM/LINE	Facility ID: 427440	API #: _____	County Name: LAS ANIMAS
Facility Name: Raton Basin Water Gathering 427440	Latitude: 37.133130	Longitude: -104.697080	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENW	Sec: 32	Twp: 33S	Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use non-crop

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

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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
Yes	SOILS	1"	visual inspection

INITIAL ACTION SUMMARY

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

The spill was caused due to a produced water gathering line break. It is estimated that 22.35bbls spilled. The Spill ran down the access road where it the entered a culvert, allowing the water to flow into a dry arroyo on the east side off the road. It has been identified the spill entered the dry arroyo which has been identified as waters of the state. Upon finding, teams were deployed to isolate the line and stop the leak. The cause of the spill was determined to be a worn fuse on the buried gathering line. The line was isolated while the line was repaired.

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 were taken downstream of the source of the leak to determine the horizontal extent of the spill. Samples were collected on 10/18/2021.
SS1 : 37.148856, -104.738640 - grab sample
SS2 : 37.148806, -104.738707 - grab sample
SS3 : 37.148680, -104.738719 - grab sample
SS4 : 37.148759, -104.738808 - grab sample (NATIVE)

All samples were analyzed for TPH (C6-C36), 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)), as per COA's.

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):

Soil sample results show that the impact of the produced water spill decreases along the pathway of the spill. The results do not meet Table 915-1 standards in several areas. Therefore, a sampling plan will be established to continue to monitor the effects of the spill on the soil environment. Sampling at the same locations (in the spill pathway) or approximate locations in the spill pathway will be completed 4 months from original sample date, and 6 months from the original sample date, taking into consideration impacts of snow coverage. No additional Native samples will be collected for this Site Investigation Plan.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 4
Number of soil samples exceeding 915-1 4
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 1503

NA / ND

-- Highest concentration of TPH (mg/kg) 21
-- Highest concentration of SAR 4.8
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 0'
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 915-1 0

NA Highest concentration of Benzene (µg/l)
NA Highest concentration of Toluene (µg/l)
NA Highest concentration of Ethylbenzene (µg/l)
NA Highest concentration of Xylene (µg/l)
NA 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?

1 background sample (37.148759, -104.738808) was collected during the initial round of sampling for this spill. Lab results indicated that the Native sample exceeded several of the 915-1 table standards.

☐ 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?

Continued site investigation is proposed until Soil Samples meet 915-1 Table standards.

REMEDIAL ACTION PLAN**SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

Natural Attenuation of produced water will be determined through the second round of soil sampling.

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.

Once results are received from soil samples collected, impact can be evaluated and a remediation plan designed as needed.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

Bioremediation (or enhanced bioremediation)
Chemical oxidation
Air sparge / Soil vapor extraction

Excavate and offsite disposal
If Yes: Estimated Volume (Cubic Yards)
Name of Licensed Disposal Facility or COGCC Facility ID #

_____ Natural Attenuation

_____ Excavate and onsite remediation

_____ Other _____

_____ 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.

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 _____

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: _____

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.

Once results are received, impact can be evaluated and a plan designed as needed.

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. 10/11/2021

Proposed date of completion of Reclamation. 04/11/2022

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. 10/16/2021

Actual Spill or Release date, or date of discovery. 10/11/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/12/2021

Proposed site investigation commencement. 10/11/2021

Proposed completion of site investigation. 04/11/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/11/2022

Proposed date of completion of Remediation. 10/11/2022

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: 02/10/2022

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: 02/14/2022

Remediation Project Number: 21982

Condition of Approval**COA Type****Description**

	Operator shall submit Form 19 Supplemental to close spill within 10 days of approval of this Form 27.
	913.e.(3) Reporting Schedule In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule.
2 COAs	

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**

402953583	FORM 27-INITIAL-SUBMITTED
402953642	MAP
402953643	ANALYTICAL RESULTS
402953644	SOIL SAMPLE LOCATION MAP
402953645	ANALYTICAL RESULTS

Total Attach: 5 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)