FORM 27 Rev 4/21

State of Colorado
Oil and Gas Conservation Commission

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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 INFORMATON

Name of Operator: EVERGREEN NATURAL RESOURCES LLC Operator No: 10705
Address: 1875 LAWRENCE ST STE 1150
City: DENVER State: CO Zip: 80202
Contact Person: Mackenzie Smith Email: mackenzie.smith@enrllc.com

Phone Numbers
Phone: (303) 2848820
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 19706 Initial Form 27 Document #: 402784987

PURPOSE INFORMATION

- [X] 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: PIT Facility ID: 293300 API #: County Name: LAS ANIMAS
Facility Name: ANGEL 44-7 Latitude: 37.094540 Longitude: -104.597400
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SESE Sec: 7 Twp: 34S Range: 64W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications CL
Most Sensitive Adjacent Land Use Range
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? No

Other Potential Receptors within 1/4 mile

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [ ] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA)
- [ ] **Non-E&P Waste**

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
No	SOILS	none	Sample 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.

This Form 27 is in response to Field Inspection, Document #695104557. To investigate the soil quality in and around the pit, soil samples will be collected from top and bottom of pit.

Soil samples from the top and bottom of pit were collected on November 9, 2021. Soil sample results shows that there were no impacts to the soil due to the torn pit liner. ENR will proceed with closure and reclamation of this pit.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

To investigate the soil quality in and around the pit, grab samples from top of pit and bottom of pit will be collected and analyze for Table915-1 standards criteria.

Soil samples collected on November 9, 2021 were composite samples. These were determined to no longer be in compliance after the first of the year. Therefore, follow up grab samples were collected on February 22, 2022, from 3 points within the pit, as well as a grab native sample. These samples were analyzed for 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). A map is attached with the sampling locations.

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):

Three additional in-situ samples and one additional native sample need to be collected and analyzed for TPH (C6-C36), and Organic Compounds in Soils. These were constituents not analyzed for in the February 22, 2022 round of sampling. The analysis from Feb 2, 2022 indicated that all levels of Table 915 -1 metals, and Table 915-1 Soil Suitability for Reclamation were in compliance.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 6

Number of soil samples exceeeding 915-1: 0

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

Approximate areal extent (square feet): 0

NA / ND

ND — Highest concentration of TPH (mg/kg):

ND — Highest concentration of SAR:

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): `

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?

One native sample was collected

☐ 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?

Yes. Additional sampling for TPH and Organic Compounds in Soil are still needed.

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.

Source removal was produced water and the pit does not appear to have been used as evidenced in stormwater photos dating back to 2011 when a berm was added around the pit. Through sampling analysis so far, no indication that soils in pit were contaminated.

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.

This closure is in response to Field Inspection, Document #695104557. ENR will proceed with closure and remediation of this pit.

Soil Remediation Summary

☐ **In Situ** ☐ **Ex Situ**

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

_____ Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____

Name of Licensed Disposal Facility or COGCC Facility ID # _____

_____ Excavate and onsite remediation

_____ 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:

[X] 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:

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.

Impacts will be buried 3 ft deep and clean fill material will be used to backfill impacted area. Clean soil source: If backberm of pit exists, this material will be utilized to backfill pit. Native fill material may be collected from reccontouring slopes. Clean fill material will be brought onsite it needed. The area will be seeded with approved seed mix.

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. 05/01/2022

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.

Actual Spill or Release date, or date of discovery.

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/30/2021

Proposed site investigation commencement. 09/30/2021

Proposed completion of site investigation. 09/30/2021

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

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:` 03/14/2022 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: 03/14/2022

Remediation Project Number: 19706

Condition of Approval

COA Type	Description
	Analytical results demonstrate that background concentrations of arsenic (As) exceed Table 915-1 concentration levels. Analytical results demonstrate that concentrations of As in soils in the pit also exceed Table 915-1 concentration levels and the pit concentrations are greater than the background concentrations. COGCC and CDPHE have consulted and agree that operators do not need to request variances from CDPHE for instances where the concentrations of metals in impacted soils are equal to or less than background concentrations, but do not meet Table 915-1 concentration values. Since these pit contents exceed the background concentrations for As, the Operator will need to mix in 30% clean fill material and also must ensure that remaining pit contents are covered with a minimum of 3 feet of backfill and soil. The soil horizons must be replaced in their original relative position, and reclaimed in accordance with 1000 Series Rules.
	Operator shall submit Form 27 Supplemental documenting pit closure within 30 days of pit closure. Operator shall continue quarterly updates of this remediation until pit is closed.
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
402981075	FORM 27-SUPPLEMENTAL-SUBMITTED
402983785	ANALYTICAL RESULTS
402983797	ANALYTICAL RESULTS
402983817	SOIL SAMPLE LOCATION MAP

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)