

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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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: IMPETRO RESOURCES LLC | Operator No: 10690 | Phone Numbers |
| Address: 558 CASTLE PINES PKWY UNIT B-4 | | Phone: (361) 935-5633 |
| City: CASTLE PINES | State: CO | Zip: 80108 |
| Contact Person: Brent Bongers | Email: bbongers@impetroresources.com | Mobile: () |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10743 Initial Form 27 Document #: 401466248

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: PIT | Facility ID: 104595 | API #: _____ | County Name: WASHINGTON |
| Facility Name: PACHNER | Latitude: 39.855085 | Longitude: -103.354417 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NWNE | Sec: 30 | Twp: 2S | Range: 53W Meridian: 6 Sensitive Area? No |

SITE CONDITIONS

General soil type - USCS Classifications OH Most Sensitive Adjacent Land Use Pasture

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

Surface drainage to the west

Nearest depth to groundwater reported at 46 feet bgs on September 8, 1961 (Domestic Water Well Permit #9671)

The location is not within any registered High Priority Habitats

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 | TBD | lab |

INITIAL ACTION SUMMARY

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

Location was previously operated by Alfred Ward & Son company (Operator #94300). Impetro Resources, LLC (Operator No. 10690) acquired the assets in July 2023. Based on review of the ECMC database and records search, it appears that the previous operator performed excavation remediation and some type of bioremediation. However, Impetro has been unable to gather additional information beyond what was submitted to the ECMC and uploaded to the database. Additionally, the previous operator collected grab soil samples at the locations illustrated on the attached soil sample location figures from the northern and southern produced water pits at the site. CGRS, Inc., on behalf of Impetro, drafted the soil sample location figures based on available data submitted by the previous operator to the ECMC and available on the ECMC database. Therefore, Impetro and CGRS do not make any claim to the accuracy of the soil sample locations, which are approximate. In accordance with COAs from the most recent approved Form 27-Supplemental report (Document #402658702), CGRS on behalf of Impetro completed the attached Soil Sample Laboratory Analytical Data Summary Tables for soil samples collected by the previous operator. Impetro has attempted to locate the applicable waste disposal manifests described in the approved Form 27-S, unsuccessfully. The main point of contact and responsible party for Alfred Ward & Son became deceased in 2023, subsequent to Impetro's purchase of the asset and the remaining persons for the company are not able to determine or locate the waste manifests or additional documentation of completed remediation activities.

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):

A minimum of five confirmation soil samples- one from the pit bottom and one from each sidewall of the former pit (facility ID 104595)- shall be collected and submitted to a NELAP-accredited laboratory for the full Table 915-1 analysis. Additionally, three background soil samples will be collected from similar depths and soil horizons as confirmation soil samples and submitted for Table 915-1 analyses. Based on the depth to groundwater indicated by the nearest permitted well, Impetro is requesting the use of residential soil screening levels

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

SoilNumber of soil samples collected 8Number of soil samples exceeding 915-1 4Was the areal and vertical extent of soil contamination delineated? NoApproximate areal extent (square feet) 42000**NA / ND**-- Highest concentration of TPH (mg/kg) 1920-- Highest concentration of SAR 23.9BTEX > 915-1 NoVertical Extent > 915-1 (in feet) 12**Groundwater**Number of groundwater samples collected 0Was extent of groundwater contaminated delineated? NoDepth 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?**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.

Based on review of the ECMC database and records search, it appears that the previous operator performed excavation remediation and some type of bioremediation. However, Impetro has been unable to gather additional information beyond what was submitted to the ECMC and uploaded to the database.

Any hydrocarbon-impacted material found during this investigation will be transported off-site to a licensed disposal facility in accordance with Rules 905 and 906.

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.

Remediation of impacted material will be assessed subsequent to the supplemental investigation activities described herein and if E&P waste impacts above Series 900 Rules Table 915-1 regulatory standards are identified.

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 ECMC 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:

☒ 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.

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

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?

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.

Reclamation and/or interim reclamation activities will be evaluated and presented to the CECMC for approval subsequent to additional investigation activities or successful remediation

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. _____

Proposed date of completion of Reclamation. _____

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). 11/11/2015

Proposed site investigation commencement. 11/20/2016

Proposed completion of site investigation. 06/30/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/20/2017

Proposed date of completion of Remediation. 09/30/2024

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: Drezden Kinnaird

Title: Consultant

Submit Date: 04/09/2024

Email: dkinnaird@cgrs.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: 06/18/2024

Remediation Project Number: 10743

COA Type**Description**

| | |
|--------|---|
| | Operator shall collect confirmation soil samples as described in the Rule 915.e.(2) Guidance Document. 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)). |
| | Operator shall conduct a closure investigation in accordance with Rule 911.c. Pit Closure Guidance Document. Operator is required to comply with the current Rule 911 for facility closure and with Table 915-1 for concentration standards. |
| | This Form 27 Supplemental is being approved as submitted. However, the next Form 27 Supplemental must be populated with the Adequacy of Operator's General Liability Insurance and Financial Assurance data field under the Remediation Progress Update tab to describe how Operator's Financial Assurance meets the requirements of Rule 703.b. and General Liability Insurance meets the requirements of Rule 705.b. |
| | Operator shall submit reports of site investigation including all laboratory analytical results for all samples collected, per Rule 913.h.(4).A.. Per the 900 Series rules 915.e "... Analyses of samples will be performed by laboratories that maintain state or national accreditation programs.." The main accreditation programs are National Environmental Laboratory Accreditation Program (NELAP) and National Environmental Laboratories Accreditation Conference (NELAC). Not only is this accreditation required the lab has to be accredited for each specific analyte. |
| | Operator shall fully populate the implementation schedule in accordance with Rule 913.d on the subsequent Supplemental Form 27. |
| | In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule (every 90 days). ECMC selected Quarterly under Remediation Progress Update and de-selected "other". |
| 6 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**

| | |
|-----------|---|
| 403646749 | INVESTIGATION/REMEDIATION WORKPLAN (SUPPLEMENTAL) |
| 403748213 | SOIL SAMPLE LOCATION MAP |
| 403828044 | FORM 27-SUPPLEMENTAL-SUBMITTED |

Total Attach: 3 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. | 06/18/2024 |

Total: 1 comment(s)