

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403835633

Receive Date:

Report taken by:

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: <u>IMPETRO RESOURCES LLC</u>	Operator No: <u>10690</u>	Phone Numbers
Address: <u>558 CASTLE PINES PKWY UNIT B-4</u>		Phone: <u>(361) 935-5633</u>
City: <u>CASTLE PINES</u> State: <u>CO</u> Zip: <u>80108</u>		Mobile: <u>()</u>
Contact Person: <u>Brent Bongers</u>	Email: <u>bbongers@impetroresources.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 9053 Initial Form 27 Document #: 2086929

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: Skim Pit Closure

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>PIT</u>	Facility ID: <u>107591</u>	API #: _____	County Name: <u>WASHINGTON</u>
Facility Name: <u>COWLES 1</u>	Latitude: <u>39.767648</u>	Longitude: <u>-103.151830</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSE</u>	Sec: <u>25</u>	Twps: <u>3S</u>	Range: <u>52W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications ML Most Sensitive Adjacent Land Use CULTIVATED

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

A receptors map was submitted with Form 27 Doc #403742658

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	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.

This Form 27-S is being submitted to meet COAs addressed on the previous Form 27-S (#403742658) submittal. Tabulated historic analytical data and a proposed soil sample location map have been submitted with this Form as attachments.

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 soil sample location map has been provided as an attachment that illustrates the locations of all proposed confirmation samples at the former skim pit, historic landfarm, and background samples from the active facility. Samples will be analyzed by a NELAP-accredited lab for TPH (C6-C36), Table 915-1 Organic compounds in soil, Table 915-1 metals, and Table 915-1 soil suitability for reclamation.

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

Soil

Number of soil samples collected 29
Number of soil samples exceeding 915-1 25
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 1250

NA / ND

-- Highest concentration of TPH (mg/kg) 43600
-- Highest concentration of SAR 24.1
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 24

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?

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 555 Volume of liquid waste (barrels) 0

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.

Soils will be assessed and samples will be analyzed at an approved lab, any identified contamination will be excavated and disposed of at an approved disposal facility. Previous waste disposal manifests were included in Doc #2087015 submitted in 2015. In May/June 2018 approximately 595 cy of impacted soil from the landfarm was sent to the landfill. Manifests from this event were provided in attachment #401684208.

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.

Skim pit was closed by previous operator; residual soil contamination (Doc# 2087015) was left in south sidewall of current operation pit in order to not affect the integrity of the current pit.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Yes Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 1150

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

_____ 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.

Impacts to groundwater have not been identified at the site.

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 Skim Pit Closure

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 carries general liability insurance of \$1,000,000.00 per occurrence and \$4,000,000.00 in excess. Operator carries \$25,000.00 blanket surface surety bond.

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

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Soil was placed in the on-site cell for treatment in 2015. In May/ June 2018 approximately 595 cy of impacted soil from the landfarm was sent to the landfill.

Volume of E&P Waste (solid) in cubic yards 595

E&P waste (solid) description hydrocarbon impacted soils

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Denver Arapahoe Disposal Landfill

Volume of E&P Waste (liquid) in barrels 0

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.

Reclamation will be conducted at the time of facility closure per 1000 Series rules.

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. 03/30/2015

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/25/2025

Proposed site investigation commencement. 10/01/2015

Proposed completion of site investigation. 01/01/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/20/2025

Proposed date of completion of Remediation. 07/20/2025

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

This Form 27-S is being submitted to meet COAs addressed on the previous Form 27-S (#403742658) submittal. Tabulated historic analytical data and a proposed soil sample location map have been submitted with this Form as attachments.

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: _____

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: _____

Date: _____

Remediation Project Number: 9053

COA Type**Description**

<u>COA Type</u>	<u>Description</u>
0 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**

403835743	ANALYTICAL RESULTS
403835745	SOIL SAMPLE LOCATION MAP

Total Attach: 2 Files

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

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)