

State of Colorado
Energy & Carbon Management Commission

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 7096 Initial Form 27 Document #: 2229186

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 ABANDONMENT

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>PIT</u>	Facility ID: <u>102634</u>	API #: _____	County Name: <u>WASHINGTON</u>
Facility Name: <u>WALTERS 1 & 12-21</u>	Latitude: <u>40.133564</u>	Longitude: <u>-102.865957</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>CNW</u>	Sec: <u>21</u>	Twp: <u>2N</u>	Range: <u>49W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use DRY LAND
 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

NONE.

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
	SOILS	MINIMAL TO NO IMPACT	SOIL SAMPLE 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.

REMOVED SOIL (APPROX. 35 SQUARE YARDS) FROM THE OLD SKIM PIT AND STOCK-PILED IT LOCATION FOR LAND TREATMENT ON SITE. TOOK SOIL SAMPLE FROM THE BASE OF THE SKIM PIT AFTER THE SOIL WAS REMOVED AND HAD THE SOIL ANALYZED PER COGCC INSTRUCTION.

Per the COA on Form 27 #4029551225, One confirmation soil sample will be collected from beneath the imported fill material to demonstrate that impacted soils were adequately removed.

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):

Samples were taken by Diamond operating and submitted with the attached and related form 27's. Impetro Resources LLC will go take additional samples over the landfarm area and submit the results.

Impetro conducted additional samples on 7/14/2020 in the area of the historic landfarm area, sample results were attached to Doc #402955125

Per the COA on Form 27 #4029551225, One confirmation soil sample will be collected from beneath the imported fill material to demonstrate that impacted soils were adequately removed.

Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? (Number, analyses, and locations of samples):

[Empty box for groundwater sampling details]

Proposed Surface Water Sampling

Will surface water samples be collected as part of this investigation? (Number, analyses, and locations of samples):

[Empty box for surface water sampling details]

Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan (summary):

Visual inspection of the landfarm area shows no visual impact. Vegetation is healthy across the landfarm area.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5
Number of soil samples exceeding 915-1 5
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 3600

NA / ND

-- Highest concentration of TPH (mg/kg) 1230
-- Highest concentration of SAR 12.5
BTEX > 915-1 Yes
Vertical Extent > 915-1 (in feet) 1

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) _____ 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.

Please see previous 27 showing landfarm plan.

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.

Initial remedial work was completed by Diamond Operating prior to Impetro Resources LLC purchasing the lease. Impetro will take additional samples across the remediation area and submit to the COGCC.

UPDATE 07/14/2020 - Impetro took additional analytical samples and is submitting with this update. Analytical results represent one elevated sample for hydrocarbons above Table 910-1 in the top 12 inches (SS-02) in the landfarm area. Impetro after discussions with Rob Young, plans to rip the soil in the area between points of compliance and continue to allow for natural attenuation to occur. Impetro will plan to resample the location late spring, early summer 2021.

Impetro ripped the soil in the area of concern between the points of compliance; Impetro will plan to rip the soil again and take samples late July 2021.

Update July 30, 2021; Impetro ripped the soil multiple times throughout the year since the last sampling event and the concentration have decreased across the land application area. Updated analytical results and map are attached. DRO is now below Table 910-1 standard in all but two areas and RRO is still exceeding at the five sample points. Impetro plans to excavate proposed area shown on the map and properly dispose of the remaining contaminated soil; take confirmation soil samples and work to close out the remedial project. Soil samples following excavation activities will be analyzed for DRORRO. Plan to take 5 samples in the excavated area at ~2' bgs to confirm vertical extent of contamination has been removed. Clean soil will be brought in after analytical results are confirmed below Table 910-1 standards.

Update January 01, 2022; Impetro dug and hauled the extent of the contamination (per the historic samples) to disposal. Clean top soil was hauled in and placed. Please see attached pictures and manifests. Confirmation samples can be taken when the ground thaws if requested.

Soil Remediation Summary

In Situ

Ex Situ

Yes Bioremediation (or enhanced bioremediation)

Excavate and offsite disposal

No Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 20

No Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or ECMC Facility ID # _____

Yes Natural Attenuation

Excavate and onsite remediation

No Other _____

Yes Land Treatment

Yes Bioremediation (or enhanced bioremediation)

No Chemical oxidation

No 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.

N/A

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

Quarterly Semi-Annually Annually Other

Rpt will be provided 60 days after sample analysis is conducted in late July 2021

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? Yes

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

Landfarming per the attached and related Form 27's.

Volume of E&P Waste (solid) in cubic yards _____ 20

E&P waste (solid) description Oil impacted soil

ECMC Disposal Facility ID #, if applicable: _____ 0

Non-ECMC Disposal Facility: Clean Harbors Deer Trail LLC

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

E&P waste (liquid) description n/a

ECMC Disposal Facility ID #, if applicable: _____ 0

Non-ECMC Disposal Facility: n/a

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 completed at site closure in accordance with COGCC 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? Yes

If YES, does the seed mix comply with local soil conservation district recommendations? Yes

Did the local soil conservation district provide the seed mix? _____

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 03/15/2012

Proposed date of completion of Reclamation. 05/15/2012

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). 03/15/2012

Proposed site investigation commencement. 03/15/2012

Proposed completion of site investigation. 05/01/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/15/2012

Proposed date of completion of Remediation. 05/01/2024

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:

Impetro plan to excavate the remaining contaminated soils from the historical landfarm application and close out the remediation project by January 15, 2022.

OPERATOR COMMENT

Per Form 27 Doc #402955125 COA, one confirmation soil sample will be collected from beneath the imported fill material to demonstrate that impacted soils were adequately removed.

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

Signed: Elizabeth Wilson

Title: Project Manager

Submit Date: 04/03/2024

Email: ewilson@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: 06/17/2024

Remediation Project Number: 7096

COA Type**Description**

	Operator shall amend the "Soil Remediation Summary" to align with the information presented in other areas of the form (WASTE DISPOSAL INFORMATION). These sections contain contrasting information.
	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 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".
	Operator shall submit photo documentation of the "landfarm" area and the skim pit area, within the next submittal.
	Operator shall select the box for "Rule 913.c.(1): Pit or Cuttings Trench closure." within the next submittal.
	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 provide all historic analytical data in table-format, within the next submittal, comparing each analyte value to Table 915-1 Protection of Groundwater Soil Screening Level Concentrations. As additional soil confirmation samples are analyzed, Operator shall update the analytics table.
	Further site investigation is needed. 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.
	Operator shall provide a "Proposed Soil Sample Location Map" that illustrates the locations of all proposed confirmation soil samples at the pit and at the "landfarming" sites, along with the location(s) of any background samples, within 30 days of the review of this form (July 17, 2024).

	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)).
	Per Doc# 402955125, Collect one confirmation soil sample from beneath the imported fill material to demonstrate that impacted soils were adequately removed. Additional site characterization will be required to laterally and vertically delineate any potential impacts at the "landfarming" area and skim pit area.
	Location and/or its associated flowlines lies within the following mapped High Priority Habitat(s): -Designated Groundwater Management Area -Designated Basin Please note that Approval of this Form 27 does not supersede any Federal, State or Local regulations. ECMC recommends consultation with Colorado Parks and Wildlife.
	Operator shall fully populate the implementation schedule in accordance with Rule 913.d on the subsequent Supplemental Form 27.
14 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.

<u>Att Doc Num</u>	<u>Name</u>
403733600	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403827359	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 2 Files

General Comments

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

Total: 0 comment(s)