

State of Colorado Oil and Gas Conservation Commission

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402402254

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Report taken by:

John Heil

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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

OPERATOR INFORMATION

Name of Operator: RIO MESA RESOURCES INC	Operator No: 74740	Phone Numbers Phone: (970) 675-8491 Mobile: (970) 620-2257
Address: P.O. BOX 984		
City: RANGELY	State: CO Zip: 81648	
Contact Person: Mike Hayes	Email: hayespetroleum@gmail.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 15663

Initial Form 27 Document #: 402402254

PURPOSE INFORMATION

- | | |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste | <input type="checkbox"/> Rule 906.c.: Director request |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____ |

SITE INFORMATION

N Multiple Facilities (in accordance with Rule 909.c.)

Facility Type: PIT	Facility ID: 117371	API #: _____	County Name: RIO BLANCO
Facility Name: NEWTON 1-1		Latitude: 40.079546	Longitude: -108.784393
		** correct Lat/Long if needed: Latitude: 40.079285	Longitude: -108.784005
QtrQtr: SESE	Sec: 1	Twp: 1N	Range: 102W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Residential

Is domestic water well within 1/4 mile? Yes

Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Ephemeral drainage is located approximately 850 feet to the east/northeast. Surface water (Douglas Creek) is located approximately 2,235 feet to the east. Nearest constructed water well (Well Permit # 67236) is located ~3,300 feet to the north and indicates a depth of 30 feet. The elevation different between the water well and the pit is ~200 feet, suggesting that groundwater is greater than 100 feet deep.

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
UNDETERMINED	SOILS	>5 feet	Analytical data and field screening

INITIAL ACTION SUMMARY

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

Site characterization will consist of hand auguring and collecting samples at every one (1) foot interval to a maximum five (5) feet on the pit bottom floor and side walls, as that is the maximum depth possible by the hand augur. Field screening will consist of a Photoionizing Detection Unit (PID) and Petroflag Hydrocarbon Analyzer (Petroflag). Samples will be collected from the interval that contains the highest field screening reading and submitted to the laboratory for full COGCC Table 910-1. Additional site investigation, remediation and sampling will be pending the initial sample results.

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):

Five samples will be collected, four (4) from the each of the side walls and one (1) from the bottom of the pit floor at the intervals that contain the highest field screening reading within a five foot column.

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 5
Number of soil samples exceeding 910-1 3
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 500

NA / ND

-- Highest concentration of TPH (mg/kg) 14365
-- Highest concentration of SAR 34.2
BTEX > 910-1 No
Vertical Extent > 910-1 (in feet) 5

Groundwater

Number of groundwater samples collected 0
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 100'
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 910-1 0

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
0 Number of surface water samples exceeding 910-1
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?

Three (3) background samples were collected from nearby off pad locations and analyzed for arsenic and inorganics (SAR/EC/pH).

☐ 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?

The pit bottom at five (5) feet exceeds COGCC Table 910-1 for TPH, as well as the northern and southern side walls for inorganics (EC & SAR). Arsenic exceeds Table 910-1 as well, but concentrations are comparable to background levels.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Impacted soils will be excavated via backhoe/trackhoe and stockpiled onsite. Field screening instruments (PID and Petroflag) will be utilized to guide the excavation to determine when excavation can be stopped and additional confirmation samples collected. Additional delineation via heavy equipment is necessary.

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.

Soil exceeding Table 910-1 for hydrocarbon (TPH) and inorganics will be excavated via backhoe/trackhoe. Once confirmation samples indicate the pit subsoils satisfy Table 910-1 thresholds, the pit will be backfilled with clean native soil consistent with the surrounding material. Rio Mesa Resources is requesting to landfarm the soils onsite. If landfarming is approved, a separate landfarming management plan will be submitted via Supplemental Form 27. If landfarming is denied, the soils will be profiled and hauled off site to an approved waste disposal facility.

Soil Remediation Summary

☐ In Situ

_____ Bioremediation (or enhanced bioremediation)
_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

☒ Ex Situ

Yes _____ Excavate and offsite disposal
If Yes: Estimated Volume (Cubic Yards) _____ 0
Name of Licensed Disposal Facility or COGCC Facility ID # _____ 0
Yes _____ Excavate and onsite remediation
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
☐ 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.

It is not anticipated that groundwater is impacted at this time. Should groundwater impacts be encountered, a separate groundwater monitoring plan will be submitted via Supplemental Form 27

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other Remediation Planning

Report Type: ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report

☒ Other Pit Closure Remediation

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:

Waste will be generated and disposition is currently TBD

Volume of E&P Waste (solid) in cubic yards 0

E&P waste (solid) description hydrocarbon impacted soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility:

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

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.

The pit will be reclaimed to the present grade of the location or to the approximate original contour of the landscape and consistent with the 1000-series Rule.

Seeding of the disturbed area will be performed in accordance with its' intended use. The seed mix will be prescribed by the landowner. There are no known noxious weeds in the immediate area of the disturbance.

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 approve the seed mix? Yes

If NO, does the seed mix comply with local soil conservation district recommendations? Yes

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/08/2020

Date of commencement of Site Investigation. 04/20/2020

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Please forward onto John Heil

Location: Newton 1-1

Location ID: 315256

Pit ID: 117371 (Bass Enterprises Production Co.)

This initial Form 27 is also serving as a Supplemental Form 27 to obtain a REM# for the pit closure process, but also present initial sampling results for the pit.

The sampling and analysis indicate that soils exceed COGCC Table 910-1 thresholds for TPH and inorganics on pit bottom, as well as inorganics on the southern & northern side wall to a depth of 5 feet. Upon approval of this Form 27, Rio Mesa Resources will excavate the impacted soil and landfarm onsite (if approved) or haul off site to an approved waste disposal facility. The vertical extent of impacts have not yet been determined, but upon completion of remediation, updated information will be provided within Supplemental Form 27's.

Please note that the pit is listed under Bass Enterprises Production Co. and lat/long coordinates on the COGCC GIS show the pit ~150 feet to the northwest.

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

Signed: Mike Hayes

Title: Owner

Submit Date: 05/27/2020

Email: hayespetroleum@gmail.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: John Heil

Date: 06/26/2020

Remediation Project Number: 15663

COA Type**Description**

	Based on the elevated TPH-DRO, the proximity to residences and the fact that the pit is within Rangley Town limits, COGCC does not approve the landfarming of impacted material. Operator shall comply with rule 907.e.(1).A.
	Surface disturbances shall be reclaimed in accordance with the 1000 Series Reclamation Regulations. Consult COGCC Reclamation Specialist regarding interim and/or final reclamation.

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**

402402254	FORM 27-INITIAL-SUBMITTED
402402297	ANALYTICAL RESULTS
402402299	ANALYTICAL RESULTS
402402300	ANALYTICAL RESULTS
402402301	SOIL SAMPLE LOCATION MAP

Total Attach: 5 Files

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

Environmental	Constituents of concern are mainly TPH-DRO which would be more challenging to remediate and would need an aggressive landfarming treatment program.	06/26/2020
Environmental	As indicated on Project, Purpose, & Site Information tab under Site Conditions and Most Sensitive Land Use is Residential. Pit is located approximately 90 feet from a residence and is within Rangley Town limits.	06/26/2020

Total: 2 comment(s)