

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
RICK ALLISON

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 ECOM 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>EXTRACTION OIL & GAS INC</u>	Operator No: <u>10459</u>	Phone Numbers Phone: <u>(303) 8293811</u> Mobile: <u>(303) 8293811</u>
Address: <u>555 17TH STREET SUITE 3700</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>
Contact Person: <u>Jacob Evans</u>	Email: <u>jevans@civiresources.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 27447 Initial Form 27 Document #: 403303524

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

Yes Multiple Facilities

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-26094</u>	County Name: <u>WELD</u>
Facility Name: <u>MATRIX 14-29</u>	Latitude: <u>40.452830</u>	Longitude: <u>-104.689250</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESW</u>	Sec: <u>29</u>	Twp: <u>6N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-26095</u>	County Name: <u>WELD</u>
Facility Name: <u>MATRIX 13-29</u>	Latitude: <u>40.452830</u>	Longitude: <u>-104.689330</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESW</u>	Sec: <u>29</u>	Twp: <u>6N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: SPILL OR RELEASE Facility ID: 486002 API #: _____ County Name: WELD
Facility Name: Matrix 14-29 & 13-29 WH's Latitude: 40.453172 Longitude: -104.689269
** correct Lat/Long if needed: Latitude: _____ Longitude: _____
QtrQtr: SESW Sec: 29 Twp: 6N Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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? No

Other Potential Receptors within 1/4 mile

No surface water within 1/4 of a mile.
The Commercial Well (DWR Receipt 10023488, Permit 328141-) approx 425-ft to the SE is the nearest permitted water well. This well was not constructed. The planned construction depth is 80-ft, no static water level recorded. Residential Well (DWR Receipt 9064993, Permit 63190-) approx 455-ft to the SW. This well was constructed to 83-ft and has a static water level of 55-ft. Monitoring Well (DWR Receipt 0058448C, Permit 315240-) is approx 745-ft to the SE. This well was constructed to 54-ft, static water level of 48.89-ft.
Groundwater less than 20 ft is not expected at the disturbance location.
This location is not within a HPH area. CPW consultation not required.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|----------------------------------------------------|------------------------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input checked="" type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste | |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash | |
| <input type="checkbox"/> Drill Cuttings | <input type="checkbox"/> Spent Filters | |
| | <input type="checkbox"/> Pit Bottoms | |
| | <input type="checkbox"/> Other (as described by EPA) | _____ |

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	TBD	Laboratory Analysis if Encountered
Yes	SOILS	10' X 10' X 8' bgs	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.

A site investigation will be conducted pursuant to COGCC rule 911 at the Matrix 29-O (333308) oil and gas location pertaining to the cut/cap of Matrix 13-29 (05-123-26095) and Matrix 14-29 (05-123-26094). The on-location flowlines associated with the wells will be abandoned in place. The on-location flowlines serving the Matrix 24-29 (05-123-32223) and Matrix 24-29-17 (05-123-33824) will also be abandoned in place. All other wells and equipment will remain active. Impacted soil was observed on January 23, 2024.

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 grab confirmation soil samples from the wellheads and flowlines and two composite stockpile overburden samples were collected for analysis by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron.

Proposed Groundwater Sampling

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

If groundwater is encountered during excavation activities, a grab sample will be collected for laboratory analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, chlorides, sulfates, and TDS.

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

NA / ND

Number of soil samples collected 7

-- Highest concentration of TPH (mg/kg) 33

Number of soil samples exceeding 915-1 1 -- Highest concentration of SAR 0.381
 Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 Yes
 Approximate areal extent (square feet) 100 Vertical Extent > 915-1 (in feet) 8

Groundwater

Number of groundwater samples collected 0 Highest concentration of Benzene (µg/l) _____
 Was extent of groundwater contaminated delineated? No Highest concentration of Toluene (µg/l) _____
 Depth to groundwater (below ground surface, in feet) _____ Highest concentration of Ethylbenzene (µg/l) _____
 Number of groundwater monitoring wells installed _____ Highest concentration of Xylene (µg/l) _____
 Number of groundwater samples exceeding 915-1 _____ 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?
 During excavation/remediation activities, if groundwater is encountered a grab sample will be collected.

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.

The source located at soil sample 13,14-29-FL-B02@8' has been removed through mechanical excavation. Grab soil samples were collected from the base and sidewalls of the excavation for laboratory analysis of Table 915-1 metals in soil, organic compounds in soil, TPH C6-36, EC, SAR, pH, and boron.

REMEDATION 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.

Arsenic, barium, and pH remain in situ above ECMC standards. Additional background samples will be collected from homogenous soil horizons and/or corresponding excavation soil sample depths. The estimated timeframe to achieve a no further action will be December 30, 2024.

Soil Remediation Summary

- In Situ
- Ex Situ
- _____ Bioremediation (or enhanced bioremediation) Yes Excavate and offsite disposal
- _____ Chemical oxidation If Yes: Estimated Volume (Cubic Yards) 23
- _____ Air sparge / Soil vapor extraction Name of Licensed Disposal Facility or ECMC Facility ID # _____
- _____ Natural Attenuation No Excavate and onsite remediation

Other _____

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 Excavation Data

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.

The General Liability coverage within the Civitas Resources insurance program includes coverage for bodily injury, property damage, and pollution clean-up costs arising from qualifying pollution events of a sudden and accidental nature subject to a \$1,000,000 per occurrence limit and \$2,000,000 aggregate limit. The Civitas Resources insurance program includes Excess Liability coverage of \$110,000,000 per occurrence and in the aggregate which sits over the sudden and accidental pollution within the General Liability coverage. It is the opinion of Civitas Resources that this total tower of limit is adequate to address the costs of remediation associated with any qualifying pollution event.

Operator anticipates the remaining cost for this project to be: \$ 10000

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:

No beneficial use

Volume of E&P Waste (solid) in cubic yards 23

E&P waste (solid) description E&P solid waste derived from excavation activities

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Pawnee 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 in accordance with ECMC 1000 Series Rules. The location will remain an active oil and gas location.

Is the described reclamation complete? Yes

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? _____

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

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

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. 01/23/2024

Actual Spill or Release date, or date of discovery. 01/23/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/05/2023

Proposed site investigation commencement. 09/28/2022

Proposed completion of site investigation. 04/30/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 01/23/2024

Proposed date of completion of Remediation. 12/30/2024

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

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

Signed: Jacob Evans

Title: Environmental Advisor

Submit Date: 05/15/2024

Email: jevans@civiresources.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: RICK ALLISON

Date: 05/17/2024

Remediation Project Number: 27447

COA Type**Description**

	Operator shall also collect soil samples from the edges of the separator riser excavation to analyze pH in the anticipated root zone for final reclamation.
1 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**

403776324	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403791938	REMEDATION PROGRESS REPORT
403795101	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

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

Environmental	Added Spill ID 486002 to related facilities	05/17/2024
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Total: 1 comment(s)