

State of Colorado
Oil and Gas Conservation Commission

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Document Number:

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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 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: <u>KODA EXPLORATION LLC</u>	Operator No: <u>10720</u>	Phone Numbers
Address: <u>2443 SOUTH UNIVERSITY BLVD 215</u>		Phone: <u>(303) 915-2555</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80210</u>		Mobile: <u>()</u>
Contact Person: <u>Anders Eldgerd</u>	Email: <u>elgerd@comcast.net</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 17972 Initial Form 27 Document #: 402674207

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: <u>LOCATION</u>	Facility ID: <u>472992</u>	API #: _____	County Name: <u>LINCOLN</u>
Facility Name: <u>Roaring Fork 14-28 Pad</u>	Latitude: <u>38.627090</u>	Longitude: <u>-103.460720</u>	
	** correct Lat/Long if needed: Latitude: <u>38.626860</u>	Longitude: <u>-103.460900</u>	
QtrQtr: <u>SESW</u>	Sec: <u>28</u>	Twp: <u>16S</u>	Range: <u>54W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Rangeland
 Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? Yes
 Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

The closest water well is DWR Permit # 37997 at approx. 2560' to the South of the Roaring Fork 14-28 wellhead. The Aquatic Native Species Conservation Waters high priority habitats is within 1/4 of a mile.

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	105' x 115'	Laboratory Analytical

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 Roaring Fork 14-28 oil and gas location for closure of drill cuttings pit and interim reclamation.

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):

Seven (7) total samples to be analyzed by the lab for compliance with concentration levels in Table 915-1. Refer to pages 1 and 2 of the attached exhibit. Four additional background composite samples were collected (SS01-SS04) at the base of the pit on 10/29/20 after pit construction and prior to use. These samples were analyzed for Table 910-1 inorganic constituents as Table 915-1 was not yet adopted. These samples are included on the analytical results table and the laboratory data is included in the attachments.

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 pit will occur during closure activities. A photolog will be submitted on the subsequent form 27. Operator will work with COGCC to make sure pit contents meet requirements set forth in Table 915-1 prior to backfilling cuttings pit.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 7
Number of soil samples exceeding 915-1 7
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 12075

NA / ND

-- Highest concentration of TPH (mg/kg) 291.6
-- Highest concentration of SAR 25.7
BTEX > 915-1 No
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.

This project is for pit closure. No additional sources of contamination are located on the site.

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.

On May 19, 2021 five soil samples were collected from the base and sidewalls of the pit. Two additional composite samples of the cuttings material were collected from the mixed soil and drill cuttings. These samples were analyzed for Table 915-1 constituents. Approximate sample locations are shown on the 'Soil Sample Location' figure. All 915-1 constituents except SAR, EC, Boron and Arsenic are below COGCC Table 915-1 limits. Arsenic values are within 1.25x of background. Operator requests permission to backfill the pit with clean fill and leave inorganics in place approximately 4' below ground surface.

Soil Remediation Summary

- In Situ**
 Bioremediation (or enhanced bioremediation)
- Ex Situ**
 Excavate and offsite disposal

Chemical oxidation
 Air sparge / Soil vapor extraction
 Natural Attenuation
 Other _____

If Yes: Estimated Volume (Cubic Yards) _____
 Name of Licensed Disposal Facility or COGCC 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 Closure report

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 _____

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 _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

REMEDATION COMPLETION REPORT

REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes _____

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? No _____

Operator shall comply with the COGCC 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.

Interim reclamation will be in accordance with COGCC 1000 Series Rules. Operator will be reclaiming the site to the 2A approved size of 2.5 acres. See attached exhibit for details. Seed mix will be approved by surface owner and/or will comply with the local soil conservation district recommendations.

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? Yes _____

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 06/06/2021

Proposed date of completion of Reclamation. 06/20/2021

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. 04/29/2021

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/19/2021

Proposed site investigation commencement. _____

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/10/2021

Proposed date of completion of Remediation. 05/19/2021

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

Operator respectfully request permission to leave inorganics (EC, SAR, Boron) above Table 915-1 standards in place. Impacted soil will be approximately 4' below ground surface and should not interfere with final reclamation of the site.

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

Signed: Ryan Bruner

Title: Regulatory Project Mgr

Submit Date:

Email: rbruner@cdhconsult.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:

Date:

Remediation Project Number: 17972

COA Type

Description

COA Type	Description

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

402706255	ANALYTICAL RESULTS
402706256	ANALYTICAL RESULTS
402706283	RECLAMATION FIGURE
402706553	SOIL SAMPLE LOCATION MAP
402706645	PHOTO DOCUMENTATION

Total Attach: 5 Files

General Comments

User Group

Comment

Comment Date

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)