

State of Colorado
Oil and Gas Conservation Commission

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Report taken by:
ALEX FISCHER

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.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

Name of Operator: CALIFORNIA OIL GROUP, LTD	Operator No: 12950	Phone Numbers Phone: (970) 946-3761 Mobile: ()
Address:		
City: DENVER	State: CO	Zip:
Contact Person: Jacob Harter	Email: jharter@cottonwoodconsulting.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 16955 Initial Form 27 Document #: 402610659

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: WELL	Facility ID: _____	API #: 103-05254	County Name: RIO BLANCO
Facility Name: A C MCLAUGHLIN JR (OWP) 33		Latitude: 40.105577	Longitude: -108.844224
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: NWNE	Sec: 33	Twp: 2N	Range: 102W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications ML Most Sensitive Adjacent Land Use Public byway.
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

Unnamed arroyo to the northwest.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- E&P Waste
- Other E&P Waste
- Non-E&P Waste
- Produced Water
- Workover Fluids
- No waste generated to date
- 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	N/A	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.

This Form 27 is being submitted for the AC McLaughlin Jr (OWP) #33 well site. Initial assessment and sampling occurred on April 13, 2021 and indicated soil impacts above COGCC standards as described in the Site Investigation Report section below. Proposed impact removal and confirmation sampling is described in the Proposed Sampling Plan below.

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):

Confirmation soil samples will be collected for laboratory analysis of COGCC Table 915-1 constituents in the following areas: one sample at the wellhead and one sample from the area of each flowline segment (if encountered). Prior to collecting confirmation soil samples, soil will be field screened using a PID and visual/olfactory observations. Impacted soil will be removed and disposed of as E&P waste. Remaining soil that shows the highest degree of impact during field screening will be sampled for laboratory analysis. If no potential impacts are observed, samples will be collected in accordance with COGCC Rule 911.a(4) and 915.e.(2) Guidance Documents. All flowline risers and paths will be GPS'd during or following removal.

Proposed Groundwater Sampling

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

No groundwater was encountered during the initial assessment and sampling conducted on April 13, 2021.

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 1
Number of soil samples exceeding 915-1 1
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 286
-- Highest concentration of SAR 10.3
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 0
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 915-1 0

NA Highest concentration of Benzene (µg/l) 0
NA Highest concentration of Toluene (µg/l) 0
NA Highest concentration of Ethylbenzene (µg/l) 0
NA Highest concentration of Xylene (µg/l) 0
NA Highest concentration of Methane (mg/l) 0

Surface Water

0 Number of surface water samples collected
0 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?

During the initial assessment and sampling conducted on April 13, 2021, background samples were not collected. It is recommended that one background soil sample and one groundwater sample (if present) be collected during a follow up sampling event for comparison purposes.

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?

Initial assessment and sampling occurred on April 13, 2021 and indicated soil impacts above COGCC standards. Further site investigation is required to fully define the horizontal and vertical extent of impacts at the site. Additionally, based on initial assessment and sampling results a reduced list of analytes is requested for future sampling. It is requested that PAH analytes be removed from future sampling.

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.

Soil will be field screened using a PID and visual/olfactory observations. Impacted soil will be removed via excavation and disposed of as E&P waste per COGCC Rule 905. During excavation, soils will be immediately transferred into trucks for transportation to an approved disposal facility or placed within a lined containment berm on-site awaiting transportation to an approved disposal facility.

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.

Remediation will consist of removal of impacted soil and disposal at an approved disposal facility. Remediation activities would commence in late summer 2021 and NFA status is anticipated by the end of 2021.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Yes Excavate and offsite disposal

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

If Yes: Estimated Volume (Cubic Yards) _____ 25
Name of Licensed Disposal Facility or COGCC Facility ID # _____ 0
_____ 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 _____

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? 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? _____

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? _____

Is additional groundwater monitoring to be conducted? _____

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.

Reclamation will be in accordance with COGCC 1000 Series Rules.

Is the described reclamation complete? _____

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. _____

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/02/2021

Proposed site investigation commencement. 04/01/2021

Proposed completion of site investigation. 04/30/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/02/2021

Proposed date of completion of Remediation. 12/31/2021

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

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

Signed: Jacob Harter

Title: Staff Scientist

Submit Date: 06/11/2021

Email: jharter@cottonwoodconsulting.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: ALEX FISCHER

Date: 10/25/2021

Remediation Project Number: 16955

Condition of Approval

COA Type

Description

	Operator shall collect sample(s) from comparable, nearby non-impacted native soil for purposes of establishing background soil conditions including pH, electrical conductivity (EC) and sodium adsorption ratio (SAR), per Rule 915.e.(2).D
	Assess nature and extent of contamination with confirmation soil samples. The operator shall comply with Rule 915.e.(2) for collection of soil samples. The operator shall notify the COGCC and comply with Rule 915.e.(3) if groundwater is encountered during cleanup operations.
	Delineate horizontal and vertical extent of impacted area and remediate impacts to Table 915-1 standards. Provide delineation and remediation plan with implementation schedule via an eForm 27 Initial Site Investigation and Remediation Workplan. Documentation must include a figure showing spill area with sample locations plus laboratory results.
	Operator shall comply with Rule 913.b.(5) If impacted material (E&P Waste) is placed within a lined containment berm on-site, and proper BMPs must be in place to prevent storm water accumulation and migration of E&P waste off of the Location.

4 COAs

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

402709703	FORM 27-SUPPLEMENTAL-SUBMITTED
402709749	ANALYTICAL RESULTS
402709750	PHOTO DOCUMENTATION
402709751	SOIL SAMPLE LOCATION MAP
402709752	ANALYTICAL RESULTS

Total Attach: 5 Files

Date Run: 10/25/2021 Doc [#402709703]

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General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	Conductivity 7.380 SAR 10.3 Boron 2.14 All exceed table 915-1 for Soil Suitability for Reclamation Arsenic 5.34 Exceeds Residential Soil Screening Level Concentrations.	10/25/2021
Environmental	It is requested that PAH analytes be removed from future sampling. This request is granted.	10/25/2021

Total: 2 comment(s)