FORM 27 Rev 3/16

State of Colorado
Oil and Gas Conservation Commission

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Report taken by: ALEX FISCHER

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 INFORMATON

Name of Operator: OLD OPERATORS - STATUS UNKNOWN Operator No: 99999
Address: SEE COMMENT LINE IN WELL
City: XXXXXXX State: XX Zip:
Contact Person: Shannon Chollett

Phone Numbers
Phone: (303) 894-2100
Mobile: ( )
Email: shannon.chollett@state.co.us

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20500 Initial Form 27 Document #: 402704324

PURPOSE INFORMATION

- [ ] 901.e. Sensitive Area Determination
- [ ] 909.c.(1), Rule 905: Pit or PW vessel closure
- [ ] 909.c.(2), Rule 906: Spill/Release Remediation
- [ ] 909.c.(3), Rule 907.e.: Land treatment of oily waste
- [ ] 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure
- [ ] 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water
- [ ] Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b.
- [ ] Rule 909.e.(2)B.: Closure of remediation project
- [ ] Rule 906.c.: Director request
- [x] Other — Plug and abandon well and decommission on site production equipment and flow line(s).

SITE INFORMATION

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

Facility Type: WELL Facility ID: API #: 007-40034 County Name: ARCHULETA
Facility Name: Underwood Ditch (OWP) 2 Latitude: 37.043380 Longitude: -106.839630
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SWNW Sec: 3 Twp: 32N Range: 1E Meridian: N Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications: ML
Most Sensitive Adjacent Land Use: Grazing
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? Yes

Other Potential Receptors within 1/4 mile

Little Navajo River, irrigation ditch.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [x] **E&P Waste**
  - [x] Produced Water
  - [x] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA) _____
- [ ] **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	TBD	Field screening, analytical results
UNDETERMINED	SOILS	TBD	Field screening, analytical results

INITIAL ACTION SUMMARY

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

The COGCC Orphan Well Program will be re-entering and plugging the Underwood Ditch (OWP) #2 well and decommissioning any associated flow lines and/or production equipment. Soil samples will be collected in accordance with COGCC Rule 915.e(2)B. Samples will be collected from the wellhead excavation, flow line path(s), as well as any other area likely to have been impacted. Samples will be submitted for laboratory analysis of Table 915-1 constituents.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

- [x] Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

Soil samples will be collected for laboratory analysis of Table 915-1 constituents from areas most likely to have been impacted. Visual inspection and field screening of soils will be conducted in the areas surrounding the flow line and well head. Based on these observations, soil samples may be collected and submitted for laboratory analysis of Table 915-1 constituents. Discrete soil samples will be collected for confirmation of compliance with Table 915-1.

Proposed Groundwater Sampling

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

If a pathway to groundwater is discovered or groundwater is encountered during remediation activities, a sample(s) will be collected and analyzed for Table 915-1 constituents and notice given to COGCC.

Proposed Surface Water Sampling

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

Baseline surface water samples will be collected from the irrigation ditch, upstream and downstream of the Underwood Ditch (OWP) #2 well head prior to initial site disturbance.

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 0

Number of soil samples exceeeding 910-1 _____

Was the areal and vertical extent of soil contamination delineated? _____

Approximate areal extent (square feet) _____

NA / ND

_____ Highest concentration of TPH (mg/kg) _____

_____ Highest concentration of SAR _____

BTEX > 910-1 _____

Vertical Extent > 910-1 (in feet) _____

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 910-1 _____

_____ 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 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?

Background soil conditions will be determined by the analysis of a sample(s) collected from nearby, non-impacted native soil to establish background concentrations.

☐ 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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The Underwood Ditch (OWP) #2 well will be plugged and abandoned. Any/all production equipment associated with this well on the Oil and Gas Location will be removed or decommissioned.

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.

Impacted material discovered during the scope of this work plan will be removed and disposed of as E&P waste at an approved facility.

Soil Remediation Summary

☐ **In Situ**

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

☐ **Ex Situ**

_____ Excavate and offsite disposal

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

Frequency: ☒ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other _____

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

☒ Other Facility closure

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: _____

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? 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? _____

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

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). 07/05/2021

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 07/05/2021

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

This Site Investigation and Remediation Work Plan is being submitted on behalf of the COGCC Orphaned Well Program.

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

Signed:` Jim Hughes Title: SW EPS

Submit Date:` 05/28/2021 Email: jimo.hughes@state.co.us

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: 10/19/2021

Remediation Project Number: 20500

Condition of Approval

COA Type	Description
	Fluids samples from the well shall be collected and submitted for the laboratory analysis of major anions (chloride, carbonate, bicarbonate, and sulfate), cations (sodium, potassium, calcium, and magnesium) total dissolved solids (TDS), BTEX, DRO, GRO, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and dissolved gasses (RSK 175).
	If groundwater is encountered during any excavation, a minimum of one surface/groundwater sample shall be collected per Rule 913.c.(6) for those constituents listed in Table 915-1.
	Discrete soil samples shall be collected and analyzed for Table 915-1 Cleanup Concentrations using the Protection of Groundwater Screening Level Concentrations.
	Form 44 not found in well file for offline flowline abandonment. Comply with COGCC Rule 1105 flowline abandonment requirements, including notification and verification requirements.
	A supplemental Form 27 will be submitted within 45 days of the completion of the actions described in this submission.
	Upon discovery of flowline release during the PA and removal, the operator must investigate the extent of release and provide form 19 and a supplemental form 27 with proposed investigation sample sites for COGCC staff approval.
	Should historic impact be discovered during P&A and/or Reclamation activities, the operator must investigate the extent of release and provide form 19 and a supplemental form 27 with proposed investigation sample sites for COGCC staff approval.
7 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
402704324	FORM 27-INITIAL-SUBMITTED
402704371	AERIAL IMAGE

Total Attach: 2 Files

General Comments

User Group	Comment	Comment Date
Environmental	Location ID: 440389 API 007-40034 No Inspection on file. Historic topo map shows a "Spring" within the vicinity of the well location. Little Navajo River approximately 165 feet to the west of the well location. Water feature (stock pond) approximately 95 feet to the north of the well location. Groundwater is estimated to be less than 10' below ground surface.	10/18/2021

Total: 1 comment(s)