

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Alexander Ahmadian

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 ECMC 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>BECCA OIL LLC</u>	Operator No: <u>10156</u>	Phone Numbers Phone: <u>(303) 894-2100</u> Mobile: <u>(303) 905-5341</u>
Address: <u>P O BOX 1347</u>		
City: <u>CUSHING</u>	State: <u>OK</u>	Zip: <u>74023</u>
Contact Person: <u>James Hix - East OWP EPS</u>	Email: <u>james.hix@state.co.us</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 37931 Initial Form 27 Document #: 403980887

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>486301</u>	API #: _____	County Name: <u>ARAPAHOE</u>
Facility Name: <u>Kalcevik Tank Battery</u>	Latitude: <u>39.723430</u>	Longitude: <u>-104.388550</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENW</u>	Sec: <u>12</u>	Twp: <u>4S</u>	Range: <u>63W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Residential, Cropland
Is domestic water well within 1/4 mile? No 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

Water Wells: DWR Permit #81922-F Receipt #3685548 (Exp 04/17/2019)[Upper Arapahoe (Ka) Top = 389 ft, ~525 ft SE]; DWR Permit #80983-F Receipt #3679775 (2017) [Aquifer: Upper Arapahoe (Ka), SWL = 210 ft, Top of Perf Casing = 400 ft, TD = 558 ft, ~400 ft SW]; DWR Permit #81923-F Receipt #3685549 (Exp 2019) [Upper Arapahoe (Ka) Top 420 ft, ~1110 ft SE]; Surface Water: None w/in 1/4 mile, tributary drainage to Wolf Creek ~3/4 mile SE; No NWI Mapped Wetlands w/in 1/4-mile. Location is within CPW Mapped HPH: Pronghorn Winter Concentration Area.

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	UNKNOWN	VISUALLY, FIELD SCREENING, 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 oil and gas Location is in the Colorado Energy and Carbon Management Commission (ECMC) Orphaned Well Program (OWP). This Form 27 Supplemental presents the results of site investigation and sampling activities during Kalcevic (sic) tank battery decommissioning. The tank battery served the Kalcevic #2 (OWP) and Kalcevic #3 (OWP) oil and gas wells located to the west-southwest. Soils were field screened beneath aboveground storage tanks (AST), produced water vault (PWV), separators, and on-location flowlines and flowline risers to investigate for evidence of E&P Waste impacts. Soil samples were collected beneath each key piece of equipment, stained soils, and areas where E&P Waste impacts were most likely to have occurred. Samples were submitted to an accredited environmental laboratory for analysis of full Table 915-1 parameters. Soil samples were collected and analyzed in accordance with Colorado ECMC 900 Series Rules.

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):

Grab soil samples will be collected from areas most likely to exhibit E&P Waste impacts. Soil samples will be submitted for analysis of Table 915-1 parameters including organic compounds (TPH ranges C6-C36; BTEX; 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Naphthalene, PAH) and inorganic compounds [metals (As, Ba, Cd, Cu, Cr6+, Pb, Ni, Ag, Zn) and soil suitability for reclamation parameters (pH, EC, SAR, hot water soluble boron)].

Proposed Groundwater Sampling

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

Groundwater samples are not expected to be collected as part of this investigation. If encountered in sufficient quantity to enable sample collection, a grab groundwater sample or samples will be collected and submitted for analysis of organic compounds (BTEX; Naphthalene; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene) and inorganic parameters (total dissolved solids (TDS), chloride ion, sulfate ion).

Proposed Surface Water Sampling

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

Surface water samples are not expected to be collected as part of this investigation.

Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan (summary):

No additional alternative investigative actions are expected to be conducted as part of this site investigation.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 6

Number of soil samples exceeding 915-1 2

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 12470

NA / ND

-- Highest concentration of TPH (mg/kg) 501

-- Highest concentration of SAR 4.12

BTEX > 915-1 No

Vertical Extent > 915-1 (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) _____

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?

Three site-specific background soil samples (486301_BK01 @3', 486301_BK02 @3', 486301_BK03 @3') were collected from undisturbed areas away from historic oil and gas facilities. The background soil sample locations are shown on Figure 2 of the attached report.

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?

Further site investigation is required to delineate the lateral extent of total petroleum hydrocarbons (TPH) reported in soil sample 486301_PWV01_E01@4', which had a TPH of 501 mg/kg collected beneath the produced water vault (PWV). This result is slightly above the Table 915-1 TPH cleanup concentration of 500 mg/kg. The vertical extent of TPH impacts were defined in soil sample, 486301_PWV01_B01@5'. Concentrations of benzene, toluene, ethylbenzene, xylenes (BTEX), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, and polycyclic aromatic hydrocarbon (PAH) compounds were not detected at or above the respective laboratory reporting limits. Concentrations of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene were reported in soil sample 486301_AST02_B01 @2', but were below Table 915-1 soil screening levels (SSL). Arsenic was reported at 3.80 mg/kg in this sample which is above the calculated site-specific arsenic cleanup level of 3.11 mg/kg. Results for soil pH were reported at 8.42 standard units (s.u.) (486301_PWV01_B01@5') and 8.30 s.u. (486301_SEP01_B01@5'); however, a soil pH of 8.44 s.u. were also reported in background soil sample 486301_BK01 @3'. Therefore, pH appears to be elevated at depth to levels above the Table 915-1 soil suitability for reclamation pH level of 8.3 s.u.

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.

If E&P Waste impacts are encountered during decommissioning of Oil and Gas Facilities, approximately 10 cubic yards of impacted soils will be excavated, temporarily stockpiled on location, and hauled to a commercial disposal facility.

REMEDICATION 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.

If E&P Waste impacted soils are encountered, approximately 10 cubic yards of the soils will be excavated and removed. If the horizontal and vertical extent of the E&P Waste impacts cannot be defined or removed during this initial action, then additional site investigation and remediation will be performed at a later date under an approved supplemental Form 27. Site data will be evaluated and remediation technologies implemented to meet Table 915-1 soil residential screening levels, protection of groundwater screening levels, or Table 915-1 groundwater and WQCC Regulation 41 numeric and narrative levels as applicable to site conditions.

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 ECMC 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

A Form 27 Supplemental will be submitted within 90 days of results receipt.

Request Alternative Reporting Schedule:

Semi-Annually Annually Other

The OWP requests an annual reporting schedule.

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 _____

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 BECCA OIL LLC - KALCEVIC Tank Battery is in the ECMC Orphaned Well Program. The Operator's bond and other funding will be used to investigate, remediate, and reclaim this oil and gas location to comply with ECMC Rules.

Operator anticipates the remaining cost for this project to be: \$ 30000

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 _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

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

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? _____

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 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.

The Colorado ECMC OWP will prepare a reclamation plan to reclaim this oil and gas location in accordance with 1000 Series Rules including grading/recontouring of disturbed areas. The reclamation plan will be implemented under a separate scope of work. Final reclamation will be conducted per ECMC 1000 Series Rules and prioritized based on OWP ranking, project funding, and staff availability. The reclamation scope will include a plan to address and avoid any effect on reclamation from Table 915-1 inorganic and soil suitability for reclamation parameters.

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. 10/22/2024

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/08/2024

Proposed site investigation commencement. 01/06/2025

Proposed completion of site investigation. 01/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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

The former BECCA OIL LLC - 10156 Kalcevic (sic) Tank Battery, (Location ID #486301) and the related Kalcevic #2 (OWP) (API #05-005-06449) KALCEVIC-64S63W 12SWNW and Kalcevic #3 (OWP) (API #05-005-06805) located west-southwest of the remote tank battery are in the ECMC Orphaned Well Program ("OWP"). Off-location flowlines will be removed when the wells are plugged and abandoned in a future OWP project. Related forms will be submitted at that time. There are no surface waters or mapped NWI wetlands within 1/4 mile. Depth to groundwater is estimated at greater than 210 feet bgs based on a review of DWR permitted water well records in the area. This Form 27 Supplemental presents results for the tank battery decommissioning performed in February to April 2025. Although evidence of historic spills/releases was not observed, further site investigation is required to delineate the lateral extent of total petroleum hydrocarbons (TPH) was reported at 501 mg/kg in soil sample 486301_PWV01_E01@4' collected beneath the produced water vault (PWV). The TPH result is above the Table 915-1 TPH cleanup concentration of 500 mg/kg. The vertical extent of TPH impacts was defined in soil sample, 486301_PWV01_B01@5' (TPH = 98.7 mg/kg). Concentrations of benzene, toluene, ethylbenzene, xylenes (BTEX), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene were not detected at or above the respective laboratory reporting limits. Concentrations of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene were reported in soil sample 486301_AST02_B01 @2', but were below Table 915-1 soil screening levels (SSL). Arsenic was reported at 3.80 mg/kg in sample 486301_AST02_B01 @2' which is above the calculated site-specific arsenic cleanup level of 3.11 mg/kg. Concentrations of polycyclic aromatic hydrocarbon (PAH) compounds and metals were detected in some of the soil samples; however, the results were below applicable Table 915-1 SSL. The OWP requests to use the Table 915-1 residential SSL based on the expected depth to groundwater, lack of surface water, and low level impacts. Results for soil pH were reported at 8.42 standard units (s.u.) (486301_PWV01_B01@5') and 8.30 s.u. (486301_SEP01_B01@5'); however, a soil pH of 8.44 s.u. were also reported in background soil sample 486301_BK01 @3'. Therefore, pH appears to vary and background may be above the Table 915-1 soil suitability for reclamation pH level of 8.3 s.u. at depth. Results for EC, SAR, and hot water soluble boron met the Table 915-1 soil suitability for reclamation criteria. Further site investigation and remediation will be proceed under Remediation Project #37931.

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

Signed: James Hix

Title: East OWP EPS

Submit Date: 06/04/2025

Email: james.hix@state.co.us

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: Alexander Ahmadian

Date: 07/14/2025

Remediation Project Number: 37931

COA Type**Description**

	The Laboratory Analytical PDF attached to this form indicates it has been altered after lab delivery. The Laboratory Report PDF(s) must be secured by the issuing laboratory; If there is a difference between the creation date and secured date of the PDF, Operator shall provide an explanation in the case narrative of the associated report.
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**

404228236	FORM 27-SUPPLEMENTAL-SUBMITTED
404228266	SITE INVESTIGATION REPORT
404228538	ANALYTICAL RESULTS

Total Attach: 3 Files

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

Environmental	ECMC approves of an annual reporting schedule.	07/14/2025
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Total: 1 comment(s)