

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404282842  
Receive Date:  
07/17/2025

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>PILAND RESOURCES</u>	Operator No: <u>70350</u>	<b>Phone Numbers</b>
Address: <u>43651 E 38TH AVE</u>		
City: <u>BENNETT</u>	State: <u>CO</u>	Zip: <u>80102</u>
Contact Person: <u>James Hix - East OWP EPS</u>	Email: <u>james.hix@state.co.us</u>	Phone: <u>(303) 894-2100</u>
		Mobile: <u>(303) 905-5341</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36706 Initial Form 27 Document #: 403870301

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: Piland Resources - 70350 PILAND #15-3 (OWP) PA

SITE INFORMATION

Yes  Multiple Facilities

Facility Type: <u>PIT</u>	Facility ID: <u>119692</u>	API #: _____	County Name: <u>ADAMS</u>
Facility Name: <u>PILAND 15-3</u>	Latitude: <u>39.789221</u>	Longitude: <u>-104.528147</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: _____	Sec: <u>15</u>	Twp: <u>3S</u>	Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>001-08357</u>	County Name: <u>ADAMS</u>
Facility Name: <u>PILAND 15-3 (OWP)</u>	Latitude: <u>39.787500</u>	Longitude: <u>-104.534080</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSE</u>	Sec: <u>15</u>	Twp: <u>3S</u>	Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: LOCATION	Facility ID: 320187	API #:	County Name: ADAMS
Facility Name: PILAND-63S64W 15NWSE (OWP)	Latitude: 39.787683	Longitude: -104.534169	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NWSE	Sec: 15	Twp: 3S	Range: 64W
		Meridian: 6	Sensitive Area? Yes

### SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Front Range Airfield /Rangeland

Is domestic water well within 1/4 mile? Yes 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

One DWR Permitted Water Well is located within 1/4-mile of the location: DWR Permit #2240-BD [(Commercial) Aquifer = Laramie-Fox Hills (Klf), Rejected, ~970 ft NW.] Depth to groundwater is based on DWR Records outside 1/4-mile radius of the location. DWR Permit #43291 [(Domestic) SWL = 140 ft bgs, TD = 548 ft bgs, DTW = 361-383 ft bgs, ~5370 ft SW] DWR Permit #41820-MH [(Monitoring Hole NOI)\_USGS Est TD = 50 ft bgs, ~3720 ft NE] DWR Permit #41764-F through #41767-F [(Aquifer = Upper Arapahoe) TD = 900 ft bgs, ~4900 ft SE]; Surface Water: Unnamed intermittent tributary to Lost Sand Creek ~900 ft NE and ~925 ft NW; NWI Mapped Wetlands, Riverine, ~900 ft NE and ~925 ft NW; No CPW Mapped HPH w/in 1/4-mile of the Location. Location lies within the Colorado Air and Space Port property. There are no residential building units (RBU) located within 1/4 mile.

# 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 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	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 ECOM Orphaned Well Program (OWP). This Form 27 Supplemental presents results for site investigation activities performed during decommissioning of Oil and Gas Facilities, specifically cut and cap sampling following plugging and abandonment (PA) of the well and samples collected during tank battery and flowline decommissioning. Field screening was performed of the four sidewalls and base of the wellhead excavation to investigate for evidence of E&P Waste impacts. Soil samples were collected beneath key pieces of equipment, including aboveground storage tanks (AST), produced water vaults (PWV), separators, pipe manifolds, and beneath flowline risers. Soil samples were submitted to an accredited environmental laboratory for analysis of Table 915-1 parameters from the excavation sidewall soils that exhibit E&P Waste impact; or from the expected downgradient sidewall in the absence of E&P Waste impact; and from the base of the excavation. Soil samples were collected and analyzed in accordance with Colorado ECOM 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, soil suitability for reclamation).

### 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

NA / ND

Number of soil samples collected 15 -- Highest concentration of TPH (mg/kg) 56905  
 Number of soil samples exceeding 915-1 6 -- Highest concentration of SAR 21.6  
 Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 Yes  
 Approximate areal extent (square feet) 25300 Vertical Extent > 915-1 (in feet) 4

**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?  
 One site-specific background soil sample, BKG-3, collected from an undisturbed area away from historic oil and gas operations northeast of the wellhead and southwest of the tank battery, was submitted for analysis of Table 915-1 metals and soil suitability for reclamation parameters. Additional site-specific background soil samples will be collected during future site investigation activities to define the lateral and vertical extent of E&P Waste impacts.

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 define the lateral and vertical extent of E&P Waste/petroleum hydrocarbon constituent impacts beneath the aboveground storage tank (AST) (Sample ID: WASTS-0.5), produced water AST (Sample ID: PWASTC-0.5), several locations along the dump lines (Sample IDs: DLE2-1, DLE3-4, DLE4-4) and wellhead wall sample beneath the flowline (Sample ID: FL15&WHE-4). Table 915-1 metals (arsenic, barium, cadmium, lead, and selenium) were reported above Table 915-1 soil screening levels (SSL) and pH, SAR, and hot water soluble boron were reported above the Table 915-1 soil suitability for reclamation parameters.

**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.

**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.  
 If E&P Waste impacted soils are encountered, approximately 10 cubic yards of the impacted 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  Ex Situ  
 \_\_\_\_\_ Bioremediation ( or enhanced bioremediation ) \_\_\_\_\_ 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 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 supplemental Form 27 will be submitted within 90-days following receipt of results.

### 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 PILAND RESOURCES - 70350, PILAND #15-3 (OWP) oil and gas well is in the ECMC Orphaned Well Program (OWP). The Operator's bond or other funding will be used to plug and abandon the well and to remediate and reclaim the oil and gas location.

Operator anticipates the remaining cost for this project to be: \$ 55300 \_\_\_\_\_

## 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 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. 07/10/2024

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/10/2024

Proposed site investigation commencement. 07/31/2024

Proposed completion of site investigation. 08/31/2024

### 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 PILAND RESOURCES - 70350, PILAND #15-3 oil and gas well (API #05-001-08357) PILAND-63S64W 15NWSE (Location ID #320187) is in the ECMC Orphaned Well Program ("OWP"). The PILAND 15-3 PIT (Pit #119692) status is unknown; however, no open/active pits were observed at the remote tank battery location. The OWP oversaw well plugging and abandonment (PA), off-location and on-location flowline removal, and tank battery decommissioning in August 2024. Pre- and post-plugging methane monitoring was conducted and did not detect leaks. The Facility Closure Data Submittal report is attached along with laboratory-secured PDF copies of the analytical reports and related forms. Wellhead excavation sidewall soils were screened and observed for evidence of E&P Waste impacts, with soil samples collected from the east sidewall beneath the flowline (Sample ID: FL15&WHE-4) at 4 ft bgs and the excavation floor sample (WHF-8) at 8 ft bgs were submitted to an accredited environmental laboratory. Soil samples collected from beneath the key pieces of equipment at the remote tank battery, at flowline risers and connection points, and areas that exhibited evidence of E&P Waste impacts were also submitted for laboratory analysis of Table 915-1 parameters. Petroleum hydrocarbon constituent impacts above Table 915-1 soil screening levels (SSL) were reported in soil samples from beneath the AST (sample ID: WASTS-0.5), produced water storage tank (sample ID: PWASTC-0.5), several locations along the dump line to the ASTs (sample ID: DLE2-1, DLE3-4, DLE4-4), and wellhead excavation sidewall beneath the flowline (Sample ID: FL15&WHE-4). Metal concentrations including arsenic, barium, cadmium, lead, and selenium were reported above the Table 915-1 SSL in multiple samples, and pH, SAR, and hot water soluble boron were reported above the Table 915-1 soil suitability for reclamation parameters in several samples. A background soil sample, BKG-3, collected from an undisturbed area northeast of the wellhead and southwest of the tank battery was submitted for these parameters; however, additional site-specific background soil sampling is needed. Further site investigation to define the lateral and vertical extent of impacts is required at the wellhead and tank battery, but not along the off-location flowline trench. Site investigation and remediation are required in areas where analytical results were reported above Table 915-1 SSL and will proceed under Remediation Project #36706.

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: 07/17/2025

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: 08/12/2025

Remediation Project Number: 36706

**COA Type****Description**

	Operator shall fully populate/update the implementation schedule in accordance with Rule 913.d on the subsequent Supplemental Form 27.
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.

<b>Att Doc Num</b>	<b>Name</b>
404282842	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404283230	ANALYTICAL RESULTS
404283233	ANALYTICAL RESULTS
404283239	SITE INVESTIGATION REPORT
404283668	MONITORING REPORT
404283670	MONITORING REPORT
404313692	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 7 Files

**General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Environmental	ECMC agrees to an annual reporting schedule.	08/12/2025

Total: 1 comment(s)