

State of Colorado Energy & Carbon Management Commission

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Report taken by:

CHRIS CANFIELD

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: PAINTED PEGASUS PETROLEUM LLC	Operator No: 10711	Phone Numbers
Address: 16820 BARKER SPRINGS RD #521		Phone: (303) 894-2100
City: HOUSTON State: TX Zip: 77084		Mobile: (303) 905-5341
Contact Person: James Hix - East OWP EPS	Email: james.hix@state.co.us	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 1666 Initial Form 27 Document #: 1121867

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: Tank Battery Decommissioning, Remediation Project #1666, OWP Location 485158

SITE INFORMATION

Yes Multiple Facilities

Facility Type: SPILL OR RELEASE	Facility ID: 320365	API #:	County Name: ADAMS
Facility Name: HELIX-62S64W 30NWNW	Latitude: 39.852802	Longitude: -104.599262	
** correct Lat/Long if needed: Latitude: 39.855309		Longitude: -104.599053	
QtrQtr: NWNW	Sec: 30	Twp: 2S	Range: 64W Meridian: 6 Sensitive Area? Yes

Facility Type: TANK BATTERY	Facility ID: 485158	API #:	County Name: ADAMS
Facility Name: HELIX-62S64W 30NWNW	Latitude: 39.852802	Longitude: -104.599262	
** correct Lat/Long if needed: Latitude: 39.855321		Longitude: -104.598647	
QtrQtr: NWNW	Sec: 30	Twp: 2S	Range: 64W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications ML

Most Sensitive Adjacent Land Use PASTURE,
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? Yes

Other Potential Receptors within 1/4 mile

Residence 150 ft west; Depth to Groundwater reported at 15ft by Kerr McGee in 2003 for REM #1666. Upper Arapahoe aquifer wells in the area (DWR Permit #224692) Static = 110' TD = 475'; An unnamed tributary drainage to Box Elder Creek and NWI Riverine mapped wetlands are located approximately 1,070 feet W-NW of the tank battery. Tank Battery is ~150 ft from CPW mapped Aquatic Native Species Conservation Waters HPH. Surrounding land use is agricultural - pasture, rangeland.

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	GROUNDWATER	SITE INVESTIGATION	ANALYTICAL
Yes	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 CECMC Orphaned Well Program (OWP). This supplemental Form 27 is submitted for proposed site investigation activities performed during decommissioning of Oil and Gas Facilities, specifically sampling activities for decommissioning of the Helix #1 Tank Battery and Separator. A spill was reported at the separator in 2002 - 2003 and the operator at that time installed five groundwater monitoring wells and installed a vertical culvert ("tinhorn") for recovering impacted groundwater. It does not appear that these activities were continued or that the remediation project #1666 was resolved. Soil and groundwater samples will be collected and analyzed in accordance with CECMC 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 will be collected if groundwater is encountered in sufficient quantity to enable sample collection from each of the monitoring wells and the tinhorn. Grab groundwater 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. If warranted, alternative investigative actions will be described on a supplemental Form 27 to be performed under a separate scope of work.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 0

Number of soil samples exceeding 915-1

Was the areal and vertical extent of soil contamination delineated?

Approximate areal extent (square feet)

Highest concentration of TPH (mg/kg)

Highest concentration of SAR

BTEX > 915-1

Vertical Extent > 915-1 (in feet)

Groundwater

Number of groundwater samples collected 17

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 15

Number of groundwater monitoring wells installed 5

Number of groundwater samples exceeding 915-1 4

-- Highest concentration of Benzene (µg/l) 8430

-- Highest concentration of Toluene (µg/l) 1660

-- Highest concentration of Ethylbenzene (µg/l) 1.8

-- Highest concentration of Xylene (µg/l) 2480

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.

Impacted soils were reportedly previously excavated and disposed in the vicinity of the onsite separator. 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 E&P Waste 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

If Yes: Estimated Volume (Cubic Yards)

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

_____ 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.

Grab groundwater samples will be collected from the existing groundwater monitoring wells and tinhorn around the separator. See Attached Map from Kerr McGee from 2002.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

☐ Quarterly☐ Semi-Annually☐ Annually☐ Other

Supplemental Form 27 submitted within 90 days of receipt of results.

☐ 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

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 PAINTED PEGASUS PETROLEUM LLC - HELIX #1 (OWP) well and associated TANK BATTERY are in the ECMC Orphaned Well Program. The former Operator's bond, or other funding will be used to Plug and Abandon (PA) the orphaned well, remediate, and reclaim the orphaned oil and gas location.

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

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: _____

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 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.

The 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 include the method and testing of compaction alleviation, development of a reseeding program that describes preparation of a new seed bed, seed mix, and noxious weed prevention. This will be performed under a separate scope of work. Final reclamation will be conducted per ECMC 1000 Series Rules and prioritized based on OWP 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. 08/31/2023

Actual Spill or Release date, or date of discovery. 03/14/2002

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/13/2023

Proposed site investigation commencement. 03/14/2002

Proposed completion of site investigation. 07/24/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/19/2002

Proposed date of completion of Remediation. 12/31/2004

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 PAINTED PEGASUS PETROLEUM - 10711 HELIX-62S64W/30NWNW TANK BATTERY AND SPILL/RELEASE REMEDIATION (Project #1666) are in the ECMC Orphaned Well Program (OWP). Site investigation activities, including sampling the existing groundwater monitoring wells, and sampling beneath the key pieces of production equipment, will be performed in conjunction with the tank battery decommissioning.

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: 10/18/2023

Email: james.hix@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: CHRIS CANFIELD

Date: 12/21/2023

Remediation Project Number: 1666

COA Type**Description**

0 COA	

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**

403562246	FORM 27-SUPPLEMENTAL-SUBMITTED
403562288	MAP
403564372	OTHER
403564416	OTHER

Total Attach: 4 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)