

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:
403693300
Receive Date:
03/29/2024

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 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: ENERGY SEARCH CO ADBA ENERGY SEARCH CO INC	Operator No: 27635	Phone Numbers Phone: (303) 894-2100 Mobile: (303) 905-5341
Address: PO BOX 1896		
City: EDWARDS	State: CO	Zip: 81632
Contact Person: James Hix - East OWP EPS	Email: james.hix@state.co.us	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20914 Initial Form 27 Document #: 402869463

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: TANK BATTERY	Facility ID: 480987	API #: _____	County Name: ADAMS
Facility Name: ES_Green (OWP) TB 1S67W/18NENW	Latitude: 39.971574	Longitude: -104.935495	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NE NW	Sec: 18	Twp: 1S	Range: 67W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use 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

Irrigation Ditch < 2000 ft SE; housing development < 1320 ft West; City of Thornton < 300 ft north

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) E&P Debris: Flowlines, Aboveground Storage Tanks, Separator

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	SOILS	UNKNOWN	Visual, Field Screening, Soil Samples

INITIAL ACTION SUMMARY

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

Potential soil impacts will be assessed during decommissioning of the Energy Search Co Green (OWP) TB1S67W 18NENW Tank Battery Location by collecting soil samples beneath the tanks, loadout bucket, separator, and flowline risers. Flowlines from the Green (OWP) 2 and Green (OWP) 3 well pads to the tank battery will be removed.

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):

Soil impacts will be assessed during decommissioning of the Energy Search Co TB1S67W 18NENW Tank Battery facility by collecting grab five (5) soil samples beneath the tanks, loadout bucket, separator, and flowline risers submitted for laboratory analysis of Table 915-1 parameters. See Figure 3 Proposed Soil Sample Locations.

Proposed Groundwater Sampling

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

Groundwater is not expected to be encountered. If surficial soil impacts are found to extend several feet below the surface, then impact to groundwater resources will be evaluated. There are no permitted shallow water wells (total depth < 20 ft) within 1/4 mile of the Energy Search Green (OWP) TB1S67W 18NENW Tank Battery. The DWR permitted water wells in the area have total depths ranging from 350 ft to 960 ft below ground surface.

Proposed Surface Water Sampling

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

There are no surface waters within 1320 ft of the Green (OWP) TB1S67W 18NENW Tank Battery facility. The nearest surface water is Signal Ditch located within 2000 ft to the southeast. Therefore, surface water samples are not expected to be collected during this investigation.

Additional Investigative Actions

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

Additional alternative investigative actions will be evaluated once the off-location flowlines, production aboveground storage tanks, and separator are removed, field observations and screening are performed, and the laboratory results of confirmation soil samples are received.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5
Number of soil samples exceeding 915-1 2
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 250

NA / ND

-- Highest concentration of TPH (mg/kg) 24670
-- Highest concentration of SAR 6.6
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 4

Groundwater

Number of groundwater samples collected 1
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) 15
Number of groundwater monitoring wells installed 1
Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l) _____
ND Highest concentration of Toluene (µg/l) _____
ND Highest concentration of Ethylbenzene (µg/l) _____
ND Highest concentration of Xylene (µg/l) _____
NA 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?

Five soil samples were collected (Sample IDs: AST, PWV, SEPW-4, AST-Spill Bucket, and PWV DUMP 3). Analytical results reported SAR at 6.60 (PWV) and 6.54 (PWV DUMP 3). Concentrations of naphthalene, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene were reported above the Protection of Groundwater SSL Table 915-1 concentrations in grab soil sample PWV DUMP 3 at 3 ft bgs.

Were background samples collected as part of this site investigation?

Sample BG at 0.5 ft was collected on 01/10/2022 southwest of the ES_Green (OWP) Tank Battery 1S67W 18NENW location and access road. Sample BG was submitted for analysis of pH, EC, SAR, and Boron.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 61 Volume of liquid waste (barrels) 0

Is further site investigation required?

Additional excavation and confirmation soil sampling was performed in the vicinity of soil sample ID # PWV DUMP 3 to meet Table 915-1 SAR and hydrocarbon concentrations/levels. Based on the reported depth to groundwater in the area, and groundwater analytical results, groundwater does not appear to be impacted.

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 stained soils are encountered during the Production Facility/Tank Battery facility - the impacted soils will be excavated and hauled to an offsite commercial disposal facility. Soils will be screened on location using field instrumentation such as a photoionization detector (PID) and visually examined for evidence of staining. Confirmation soil samples will be collected from beneath the flowline risers, separator, loadout and aboveground storage tanks.

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 encountered, impacted soils will be excavated, temporarily stockpiled on location, and will be hauled to a commercial disposal facility. It is expected that laboratory analytical results for confirmation soil samples will demonstrate the lateral and vertical extent have been defined. If soil analytical results exceed Table 915-1 parameter concentrations or levels the need for additional excavation or additional alternative investigative actions to determine the vertical extent of impacts will be evaluated.

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 Remediation completed.

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 Decommissioning of the Energy Search Green (OWP)
TB1S67W 18NENW Tank Battery and flowlines.

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 former ENERGY SEARCH CO ADDBA ENERGY SEARCH CO INC. - 27635 is in the ECMC Orphaned Well Program. The site will be remediated and reclaimed with the former Operator's bond or other state and federal funds.

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 _____

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? Yes _____

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? Yes _____

Does the previous reply indicate consideration of background concentrations? Yes _____

Does Groundwater meet Table 915-1 standards? Yes _____

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.

If encountered, and once the nature and extent of soil impacts have been delineated, excavated, and removed from the location for offsite disposal, the surface will be regraded and restored to approximate natural contours. Location is co-located with the KP KAUFFMAN COMPANY Inc. GREEN-61S67W #18NENW Tank Battery (Location ID #319921) The OWP will coordinate with the surface owner as to reclamation of this location. Previous land use was cropland.

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 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. 09/29/2021

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/13/2021

Proposed site investigation commencement. 01/10/2022

Proposed completion of site investigation. 01/30/2023

REMEDIAL ACTION DATES

Proposed start date of Remediation. 01/10/2022

Proposed date of completion of Remediation. 01/30/2023

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 ENERGY SEARCH CO ADDBA ENERGY SEARCH CO INC. - 27635 ES_Green (OWP) TB Tank Battery (Facility ID #480987), GREEN-61S67W #18NWNW (Location ID #320267), and the associated ENERGY SEARCH CO GREEN #2 and GREEN #3 wells are in the ECMC Orphaned Well Program. The location is co-located with the KP Kauffman Green #1 Tank Battery (Location ID #319921). This supplemental Form 27 presents a remediation progress report for excavation of E&P waste impacted soils beneath the on-location flowlines to the former separator and east of the tank battery. Facility decommissioning was completed on January 10, 2022. Petroleum hydrocarbon and SAR impacts identified in soil samples collected along the produced water vault (PWV) dump line, PWV Dump 3, that extended from the separator to the PWV. A soil boring, GSB1, installed on August 11, 2022 was completed as a temporary groundwater monitoring hole. No groundwater hydrocarbon impacts were observed. A total of 88.66 tons (61.14 cubic yards) of impacted soils were excavated and disposed at the Waste Connections, Front Range Landfill, in Erie, Colorado. Analytical results for confirmation soil samples collected on 01/30/2023 show the impacted soils were removed and Table 915-1 SSL were met. The OWP requests closure for Remediation Project #20914.

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: 03/29/2024

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: CHRIS CANFIELD

Date: 06/25/2024

Remediation Project Number: 20914

COA Type**Description**

	Based on the information presented, it appears that no further action is necessary at this time and the ECMC approves the closure request. However, if future conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.
	The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements.
2 COAs	

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
403693300	FORM 27-SUPPLEMENTAL-SUBMITTED
403693301	REMEDATION PROGRESS REPORT
403736645	CORRESPONDENCE
403736648	DISPOSAL MANIFESTS

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)