

State of Colorado  
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
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403429404

Receive Date:

06/12/2023

Report taken by:

Laurel Anderson

## 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: KP KAUFFMAN COMPANY INC	Operator No: 46290	Phone Numbers
Address: 1700 LINCOLN ST STE 4550		Phone: (720) 8689848 x0110
City: DENVER	State: CO	Zip: 80203
Contact Person: John Peterson	Email: jpeterson@kpk.com	Mobile: (303) 5508872

## PROJECT, PURPOSE &amp; SITE INFORMATION

## PROJECT INFORMATION

Remediation Project #: 23438 Initial Form 27 Document #: 403002944

## 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: LOCATION	Facility ID: 320295	API #: _____	County Name: ADAMS
Facility Name: SACK G UNIT-61S68W 11NWNE	Latitude: 39.984938	Longitude: -104.966574	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNE	Sec: 11	Twp: 1S	Range: 68W Meridian: 6 Sensitive Area? Yes

## SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Crop Land

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

Approximately 4 residences, possibly 8 habitable structures are within a quarter mile of the Well; Highway 7 and 160th AVE is 595' North of the well, York St. is approximately 2019' East of the well; There is no permanent Surface water within a Quarter Mile of the well, however, there is a retention area 726' South of the well. The 100 year floodplain is 726' west of the well. The well is within 1/4 of pre-emergent freshwater wetland habitat. The Well is located within High Priority habitat. The Well is located within the 1/4 mile radius of a Bald Eagle Active nest site, but is not located within a 1/4 mile of a Bald Eagle Roost site. CPW has stated that site activities can continue without oversight because the tree the nest was in has been removed. There are 2 domestic water wells within a quarter mile of the Well. NO livestock has been present on site, and has not been witnessed at time of inspections in the area. Groundwater was determined to be at a depth of 23'.

## 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	SOILS	215 square feet	limits of excavation

### INITIAL ACTION SUMMARY

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

Facility Removal, impacted soil was excavated and transported offsite for disposal as part of P&A activities.

### 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 ):

post excavation soil samples from walls and floor of excavations, background soil samples from borings. All analyzed for Table 915-1 analytes.

#### Proposed Groundwater Sampling

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

#### Proposed Surface Water Sampling

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

### 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 28  
Number of soil samples exceeding 915-1 6  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 215

### NA / ND

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
Highest concentration of SAR \_\_\_\_\_  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 6

### Groundwater

Number of groundwater samples collected 0  
Was extent of groundwater contaminated delineated? No  
Depth to groundwater (below ground surface, in feet) 23  
Number of groundwater monitoring wells installed 0  
Number of groundwater samples exceeding 915-1 0

NA Highest concentration of Benzene (µg/l) \_\_\_\_\_  
NA Highest concentration of Toluene (µg/l) \_\_\_\_\_  
NA Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
NA Highest concentration of Xylene (µg/l) \_\_\_\_\_  
NA Highest concentration of Methane (mg/l) \_\_\_\_\_

### Surface Water

0 Number of surface water samples collected  
0 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?

Six soilborings off location sampled at 3' bgs and 6' bgs for background.  
Seven grab samples from around perimeter of location at 4-6' bgs

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

Volume of solid waste (cubic yards) 1 Volume of liquid waste (barrels) 0

☐ Is further site investigation required?

## REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Impacted soil from the tank battery, separator, and PWV locations were identified, excavated and removed. Soil was transported offsite to Frontrange Landfill.

## 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 soil was excavated and transported off site. Groundwater is at 23 feet below ground surface based on borings from the nearby Sack 1 wellhead site advanced to 25 feet bgs. Soil was not impacted based on confirmation soil sampling at 6' bgs.

## Soil Remediation Summary

☐ In Situ

☒ Ex Situ

       Bioremediation ( or enhanced bioremediation )

       Yes        Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 405

Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_

No \_\_\_\_\_ Excavate and onsite remediation

No \_\_\_\_\_ Land Treatment

No \_\_\_\_\_ Bioremediation (or enhanced bioremediation)

No \_\_\_\_\_ Chemical oxidation

No \_\_\_\_\_ Other \_\_\_\_\_

### **Groundwater Remediation Summary**

No \_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

No \_\_\_\_\_ Chemical oxidation

No \_\_\_\_\_ Air sparge / Soil vapor extraction

No \_\_\_\_\_ Natural Attenuation

No \_\_\_\_\_ 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.

GW has not been impacted. Soil borings to 25 feet bgs indicate gw is at 23'bgs at nearby Sack 1 wellhead site. Impacted soil was not detected at 6' bgs.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

#### Approved Reporting Schedule:

☒ Quarterly☐ Semi-Annually☐ Annually☐ Other

#### ☐ 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.

KPK has sufficient insurance and bonding to fully address the anticipated costs of Remediation, including the remaining estimated costs for this project. KPK has general liability insurance and financial assurance in compliance with COGCC rules. The cost for remediation is now \$0 because all remediation is complete.

Operator anticipates the remaining cost for this project to be: \$ 0

### WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

NA

Volume of E&P Waste (solid) in cubic yards 405

E&P waste (solid) description impacted soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Front Range Landfill

Volume of E&P Waste (liquid) in barrels 0

E&P waste (liquid) description NA

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: NA

## 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? Yes

Does the previous reply indicate consideration of background concentrations? No

Does Groundwater meet Table 915-1 standards? Yes

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.

Once site closure is approved, KPK will backfill the open excavations with clean fill material to match existing grade level. Stormwater BMPs and weed management will be installed and maintained until residential development begins. There will be no planting of seed because the developer will be excavating, replacing, and compacting all soil on this site in preparation for construction.

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? No

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? No

### 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. 07/11/2022

Actual Spill or Release date, or date of discovery. 07/11/2022

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/22/2022

Proposed site investigation commencement. 04/22/2022

Proposed completion of site investigation. 12/15/2022

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/22/2022

Proposed date of completion of Remediation. 12/15/2022

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:

release identified during P&A activities, additional time required for site investigation, remediation, laboratory analysis, and reporting.



## OPERATOR COMMENT

The following addresses COAs and comments from all previous F19s and F27s submitted for this site:

1. KPK does not dispute the submittal dates of the initial F19 and the supplemental F27.
2. Rule 912.b.(1).A was selected as an applicable reporting criteria on document 403261599
3. Rule 912.b.(1).G was selected as an applicable reporting criteria on document 403261599
4. KPK identified historical impact under the separator and produced water vault at the tank battery and reported in document 403261599
5. Photo documentation was reported with document 403261599. Additional photo documentation has been attached to this submittal.
6. Waste manifests for all impacted material are attached to this submittal. Soil excavation and transport offsite was conducted for the wellhead, flowlines, and tank battery area together. Soil was not segregated and quantified by equipment type. Therefore, all Sack G Unit 1 manifests were designated as such and KPK can not determine the approximate volumes of soil disposed for the Tank Battery (remediation ID 23438) and the wellhead and flowlines (remediation ID 26058). The full package of manifests for Sack G Unit 1 will be submitted under both remediation IDs.
7. Site figures showing adequate detail of soil sample locations and excavation extent are attached to this submittal.

The soil laboratory analytes remaining at the Tank Battery location above Table 915-1 include Sodium Adsorption Ratio, Specific Conductance, and pH. In each exceedance, results are only slightly above the Table 915-1 limits. These three analytes are included in Table 915-1 to protect surface vegetation growth. The exceedance of these analytes in soil at the site were collected at depths ranging from 4' to 6' bgs, which is below the root zone for most vegetation (<3 feet). Therefore, the presence of SAR ranging from 7.09 to 8.45; EC at 4.09 millimhos per cm; and pH ranging from 8.55 to 8.88 at the site will not adversely affect future vegetation growth.

In addition, the plot of land at the site will be redeveloped in the coming months as residential/commercial property with surface improvements such as buildings, streets, sidewalks, and parking lots. Vegetation growth planned for the future will be minimal and very shallow associated with this type of landuse, if any. Prior to redevelopment, the soil at the site will be overexcavated, replaced, and compacted to meet geotechnical requirements for development further reclaiming any residual elevated SAR, EC, and pH detected in these samples.

KPK requests closure of this Form 27 based on the information contained herein.

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

Signed: John Peterson

Title: Director EHS

Submit Date: 06/12/2023

Email: jpeterson@kpk.com

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:

Date:

Remediation Project Number: 23438

### 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

403429404	FORM 27-SUPPLEMENTAL-SUBMITTED
403429999	MAP
403430004	SITE MAP
403430010	MAP
403430015	SOIL SAMPLE LOCATION MAP
403430018	PHOTO DOCUMENTATION
403430019	PHOTO DOCUMENTATION
403430020	ANALYTICAL RESULTS
403430023	ANALYTICAL RESULTS
403430025	ANALYTICAL RESULTS
403430028	ANALYTICAL RESULTS
403430033	LOGS
403430059	DISPOSAL MANIFESTS

Total Attach: 13 Files

Date Run: 8/28/2023 Doc [#403429404]

Page 7 of 8

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	<p>ECMC has not conducted a thorough review of this form as conditions of approval on previously approved forms, corrective actions on previously approved field inspection reports, and/or comments on previously denied forms have not been addressed; As such Operator's request for closure has been removed and Doc #403430083 has been denied.</p> <p>Operator is directed to perform a detailed review of all conditions of approval/comments from previously approved/denied forms prior to submitting a replacement Form 27 for this remediation project.</p>	08/28/2023

Total: 1 comment(s)

**DENIED**