

State of Colorado  
Oil and Gas Conservation Commission

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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: <u>KP KAUFFMAN COMPANY INC</u>	Operator No: <u>46290</u>	Phone Numbers Phone: <u>(720) 434-2215</u> Mobile: <u>( )</u>
Address: <u>1700 LINCOLN ST STE 4550</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80203</u>
Contact Person: <u>Ray Gorka</u>	Email: <u>rgorka@kpk.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 11874 Initial Form 27 Document #: 401770788

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: Quarterly Update

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>455778</u>	API #: _____	County Name: <u>JACKSON</u>
Facility Name: <u>MCU #43 Injection Line</u>	Latitude: <u>40.770376</u>	Longitude: <u>-106.222167</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWNW</u>	Sec: <u>12</u>	Twp: <u>9N</u>	Range: <u>79W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

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

No residences or habitable structures are within a quarter mile of the site; County Road 19 is located 150 feet north of the site; County Road 19B is located 170 feet northwest of the site; SURFACE WATER: Abandoned Ditch, a USFWS-mapped riverine wetland habitat, is located approximately 1,145 feet southwest of the site. The 100 year floodplain is not located within 1/4 mile of the site; High Priority habitat is mapped over the site; Greater Sage Grouse Priority Habitat Management Area buffer is located over the site; Pronghorn Migration Corridors buffer is mapped over the site; Greater Sage Grouse General Habitat Management Area is mapped 555 feet north of the site; Greater Sage Grouse Lek Site buffers are located approximately 1,385 feet northeast of the site; No Bald Eagle Roost sites or Bald Eagle Active Nest site half mile buffers are within 1/4 mile of the site. CPW has been contacted about these mapped buffers. There is 1 domestic water well within a quarter mile of the site.

**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	30' x 5'	Field Screening and Sampling

**INITIAL ACTION SUMMARY**

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

During routine operations on 6/22/18, a produced water injection line failed and spilled 2.5 bbl of water at the intersection of County Road 19 and County Road 19B. The release was reported verbally on 6/22/18. The release is tied to the McCallum Unit #43. Upon discovery, the well and flowline were immediately shut-in and the standing water was removed with a vacuum truck. Impacted soil was removed and disposed of at the landfarm. Excavation efforts will take place to define the vertical and horizontal extent of the release.

**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 ):

Initial surface samples indicate impacted soil remains in place at the site. Final vertical and horizontal extent of excavation will be based on limits of excavation and on results from grab soil samples and photoionization detector (PID) field screening. Confirmation soil samples will be collected as described in the Rule 915.e.(2) Guidance Document and will be analyzed for TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble). At a minimum, one grab sample will be collected from each side of the excavation walls as well as from the base of the excavation area. If needed, extent borings may be installed, and soil samples collected to evaluate the extent of soil impacts. COGCC will be provided with a 48 hr notice prior to any sampling event.

**Proposed Groundwater Sampling**

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

If encountered, a grab groundwater sample will be collected from the excavation. Groundwater samples will be analyzed for Table 915-1 Organic Compounds in Groundwater and Table 915-1 inorganic parameters.

**Proposed Surface Water Sampling**

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

[Empty box for surface water sampling details]

**Additional Investigative Actions**

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

Additional investigation is required to determine the extent of the impacts. Once further excavation continues it may be warranted to delineate the extent of the excavation utilizing Geoprobng or drilling equipment, depending on excavation status, and analytical results.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 9  
Number of soil samples exceeding 915-1 9  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 150

### NA / ND

NA Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 14.5  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 4

### 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?

6 background samples were collected at 4 feet bgs. 1.25 times highest concentration of background analytics was utilized for site specific limits of Table 915-1 constituents.

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?

Initial surface samples indicate impacted soil remains in place at the site. Final vertical and horizontal extent of excavation will be based on limits of excavation and on results from grab soil samples and photoionization detector (PID) field screening. Confirmation soil samples will be collected as described in the Rule 915.e.(2) Guidance Document and will be analyzed for TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble). At a minimum, one grab sample will be collected from each side of the excavation walls as well as from the base of the excavation area. If needed, extent borings may be installed, and soil samples collected to evaluate the extent of soil impacts. COGCC will be provided with a 48 hr notice prior to any sampling event.

## 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.

The source of the impacts was shut in when the release was discovered. Free product was removed utilizing a Hyrdovac, and excavation commenced to eliminate hydrocarbons transporting across the site. The contaminated soil was removed and disposed of at the lease's landfarm. MarCom will provide the required 48-hour notification to COGCC prior to beginning work.

### 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.

Excavation will be performed to remove impacted soil from the release location. Impacted soil will be brought to a certified disposal facility. Excavation and disposal of impacted soil will proceed until PID field screening results indicate that soil impacts have been removed. Following notification to COGCC, confirmation samples will be collected and analyzed for Table 915-1 constituents. If groundwater is found to be impacted, a groundwater monitoring plan will be submitted for review and approval to address known impacts to groundwater. If additional excavation is required, the extent of the impacts will be delineated using soil borings.

**Soil Remediation Summary**

<input type="checkbox"/> In Situ	<input checked="" type="checkbox"/> Ex Situ
_____ Bioremediation ( or enhanced bioremediation )	Yes _____ Excavate and offsite disposal
_____ Chemical oxidation	_____ If Yes: Estimated Volume (Cubic Yards) _____ 20
_____ Air sparge / Soil vapor extraction	_____ Name of Licensed Disposal Facility or COGCC Facility ID # _____ 427373
_____ Natural Attenuation	No _____ Excavate and onsite remediation
_____ Other _____	_____ Land Treatment
	_____ Bioremediation (or enhanced bioremediation)
	_____ Chemical oxidation
	_____ 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.

If groundwater is encountered during remediation, groundwater samples will be collected, and a Groundwater Monitoring (GWM) Plan will be proposed to COGCC. Upon approval of the GWM plan, COGCC will be provided with a 72-hour notice before well installation.



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.

Upon receiving confirmation sample analytical that shows all impacts have been removed, KPK will submit request for Backfill to the state. Upon completion of the backfill KPK will consult with the landowner on seeding preference. Reclamation will commence following the 1000 series reclamation rules.

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. 10/16/2023

Proposed date of completion of Reclamation. 11/20/2023

## 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. 06/25/2018

Actual Spill or Release date, or date of discovery. 06/22/2018

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/22/2018

Proposed site investigation commencement. 08/12/2021

Proposed completion of site investigation. 07/17/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/14/2023

Proposed date of completion of Remediation. 09/18/2023

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:

Updated Implementation schedule to accommodate for frozen ground impacting Operator's ability to excavate and remove impacted soil. Excavation work should be able to resume in June 2023.

## OPERATOR COMMENT

Initial surface samples indicate impacted soil remains in place at the site. Final vertical and horizontal extent of excavation will be based on limits of excavation and on results from grab soil samples and photoionization detector (PID) field screening. Confirmation soil samples will be collected as described in the Rule 915.e.(2) Guidance Document and will be analyzed for TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble). At a minimum, one grab sample will be collected from each side of the excavation walls as well as from the base of the excavation area. If needed, extent borings may be installed, and soil samples collected to evaluate the extent of soil impacts. COGCC will be provided with a 48 hr notice prior to any sampling event. Implementation schedule has been updated to reflect the weather constraints for the site such as frozen ground prohibiting excavation until next year. If conditions permit excavation work earlier in the spring, Operator will update COGCC.

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

Signed: Josiah Reamy

Title: Project Manager

Submit Date: 10/27/2022

Email: PrimaryContractor@MarComLLC.net

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: Candice (Nikki) Graber

Date: 11/22/2022

Remediation Project Number: 11874

## COA Type

## Description

	This Form 27 Supplemental is being approved as submitted. However, the next Form 27 Supplemental must be populated with the Adequacy of Operator's General Liability Insurance and Financial Assurance data field under the Remediation Progress Update tab as required by Rules 703.b and 705.b. Note: Based on the scope of work proposed COGCC does not believe Operator anticipated the remaining cost for this project is adequate.
	On the next Form 27 Operator shall provide a detailed stand alone implementation plan proposing dates for completion of all field work to occur as soon as possible in Spring 2023.
	All unaddressed COAs/CAs from previously approved forms/inspections still apply. Additionally, all COAs applied to the GRIP apply to this remediation project
	Operator will provide notice to COGCC EPS Nikki Graber (nikki.graber@state.co.us) and COGCC EPS Kris Neidel (kris.neidel@state.co.us) at least 48 hours prior to, initiating excavation, soil boring, or any sampling events performed on location.
	Operator shall provide additional correspondence with CPW prior to beginning work.
5 COAs	

## 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
403209017	FORM 27-SUPPLEMENTAL-SUBMITTED
403209154	PHOTO DOCUMENTATION
403209156	OTHER
403209158	CORRESPONDENCE
403209159	SOIL SAMPLE LOCATION MAP
403209165	ANALYTICAL RESULTS
403210788	ANALYTICAL RESULTS

Total Attach: 7 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)