

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

403075874

Receive Date:

06/13/2022

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>	<b>Phone Numbers</b>
Address: <u>1700 LINCOLN ST STE 4550</u>		Phone: <u>(208) 2018280</u>
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80203</u>
Contact Person: <u>Jennifer Galles</u>	Email: <u>PrimaryContractor@marcomllc.net</u>	Mobile: <u>( )</u>

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 19616 Initial Form 27 Document #: 402762330

#### 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: <u>SPILL OR RELEASE</u>	Facility ID: <u>480275</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>E. Stieber Consolidation</u>		Latitude: <u>40.043547</u>	Longitude: <u>-104.857700</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>NWNE</u>	Sec: <u>23</u>	Twp: <u>1N</u>	Range: <u>67W</u>
		Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>

#### SITE CONDITIONS

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

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

## 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	TBD	Monitoring well samples
Yes	SOILS	100x90	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.

The flowline has been repaired and the impacted soil in the immediate area has been 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 samples have been collected from the excavation for confirmation purposes. Results indicate impacts remain along west wall of the excavation. Soil borings were performed on the west, north, and south of the excavation to provide further delineation; results indicate soil impacts remain in place, but are delineated. COGCC has granted permission to backfill the excavation (attached correspondence and related Form 19). 48-hours notice prior to backfill will be provided.

#### Proposed Groundwater Sampling

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

6 monitoring wells were installed at the site; 4 were removed during excavation activities. MW installation to occur within 6 weeks after backfill are completed, pending driller availability. 7 MWs will be installed - replacing the 4 that were destroyed, plus 3 additional wells, including one on the north side of CR8. Domestic well at nearby residence is sampled bi-weekly.

#### 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 61  
Number of soil samples exceeding 915-1 17  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 7500

### **NA / ND**

-- Highest concentration of TPH (mg/kg) 794  
-- Highest concentration of SAR 4.67  
BTEX > 915-1 Yes  
Vertical Extent > 915-1 (in feet) 12

### **Groundwater**

Number of groundwater samples collected 33  
Was extent of groundwater contaminated delineated? No  
Depth to groundwater (below ground surface, in feet) 8  
Number of groundwater monitoring wells installed 6  
Number of groundwater samples exceeding 915-1 3

-- Highest concentration of Benzene (µg/l) 330  
-- Highest concentration of Toluene (µg/l) 110  
-- Highest concentration of Ethylbenzene (µg/l) 13  
-- Highest concentration of Xylene (µg/l) 1200  
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?

Impacts have been observed on the western excavation wall via soil staining. Additional soil borings were completed and indicate delineation is reached. Impacts exist on the western neighboring property just outside the current footprint of the excavation.

☒ Were background samples collected as part of this site investigation?

4 background soil samples have been collected and analyzed.

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

Volume of solid waste (cubic yards) 2200 Volume of liquid waste (barrels) 407

☒ Is further site investigation required?

Monitoring wells are proposed to delineate impacts to groundwater.

## **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.

Soil: Removal and disposal, plus in-situ treatment with GAC  
Water: Pumping for disposal.

## **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.

Currently KPK has excavated and removed impacted soils. Additional pothole activities have occurred on the north side of CR8 to collect soil and groundwater samples for additional delineation; results indicate impacts exist in those areas. Therefore, an additional monitoring well will be installed in that area.  
GAC was applied to the western portion of the excavation.  
MW reinstallation to occur according to proposed plan.

## **Soil Remediation Summary**

☒ In Situ

☐ Bioremediation ( or enhanced bioremediation )  
☐ Chemical oxidation  
☐ Air sparge / Soil vapor extraction  
☐ Natural Attenuation  
Yes ☐ Other ☐ GAC application

☒ Ex Situ

Yes ☐ Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards)   
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  
Other

### **Groundwater Remediation Summary**

No ☐ Bioremediation ( or enhanced bioremediation )  
No ☐ Chemical oxidation  
No ☐ Air sparge / Soil vapor extraction  
No ☐ Natural Attenuation  
Yes ☐ Other ☐ GAC applied to smear zone.

### **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.

Currently 2 monitoring wells are installed on the site. Additional monitoring wells will be installed following backfill of the excavation.

## REMEDATION PROGRESS UPDATE

### PERIODIC REPORTING

#### Approved Reporting Schedule:

☐ Quarterly☐ Semi-Annually☐ Annually☒ Other

Bi weekly domestic well sampling results

#### ☐ Request Alternative Reporting Schedule:

☐ Semi-Annually☐ Annually☒ Other

Request change of frequency of reporting to monthly as domestic well results have all been below regulatory values. Following backfill and MW installation, we will request a change to quarterly.

#### 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 holds proper insurance and also complies with financial assurance stipulated by the Compliance Plan Agreement. Cost to closure cannot be calculated at this time as investigation is ongoing for groundwater.

Operator anticipates the remaining cost for this project to be: \$ 1 \_\_\_\_\_

### 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:

None

Volume of E&P Waste (solid) in cubic yards 2200

E&P waste (solid) description Hydrocarbon impacted soil

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: Front Range Landfill

Volume of E&P Waste (liquid) in barrels 407

E&P waste (liquid) description Hydrocarbon impacted water

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: NGL

## REMEDATION COMPLETION REPORT

### REMEDATION 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.

Impacted area will be reclaimed to 1100 series 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? \_\_\_\_\_

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. 08/01/2022

Proposed date of completion of Reclamation. 09/01/2022

## 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. 07/07/2021

Actual Spill or Release date, or date of discovery. 07/07/2021

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/07/2021

Proposed site investigation commencement. 07/07/2021

Proposed completion of site investigation. 08/01/2022

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/27/2021

Proposed date of completion of Remediation. 12/31/2022

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:

Update to include additional MW installation; extended end of remediation date to allow for additional remediation activities which may be necessary following site investigation and delineation.

**OPERATOR COMMENT**

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

Signed: Jennifer Galles

Title: Consultant

Submit Date: 06/13/2022

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: 07/08/2022

Remediation Project Number: 19616

**Condition of Approval**

<b>COA Type</b>	<b>Description</b>
	Per COA on Doc #402046558: "Due to exceedances of Table 915-1 concentration levels for groundwater in MW-4 and MW-6 - Operator shall check the box for Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1 in addition to Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912 under the Purpose Information section on the next Supplemental Form 27."
	Per COA on Doc 402988469: COGCC approves of the proposed monitoring well and soil boring locations. However, per COA on Doc #402965303 "Based on site characteristics, operator submittals, and COGCC inspections MW-1 and MW-2 do not properly define vertical and horizontal extent of impacts to groundwater.". As COGCC has previously requested: an additional monitoring well shall be installed between the domestic well and the excavation perimeter, as well as, an additional monitoring well to the north of CR 8. Operator shall include an updated map with these proposed locations for COGCC approval within 45 days of excavation completion." Operator has not provided an updated map to include an additional monitoring well between the domestic well and the excavation perimeter.
	Per COA on Doc 402988469: On the Form 27 Supplemental Report, specify the amount (volume or mass) and name brand of groundwater amendment added to the excavation. Attach the SDS for any additives applied to the excavation or injected at the site.  Note: This work was completed on 03/31/2022
	Operator shall define the vertical and lateral extent of impacts to soil. The map (Soil Sample Locations and Proposed Work 03.17.2022) attached to Doc 402988469 does not include soil boring or sample locations necessary to delineate metal exceedances observed in previously collected soil samples. Additionally, vertical delineation of soil impacts near BH-3 has not been achieved. Operator shall provide an updated soil sampling plan to address these data gaps on the next Supplemental Form 27.
	The proposed date of commencement of Reclamation in the Site Reclamation Dates section of Doc #403075874 indicates a commencement date of 8/1/2022. Reclamation cannot begin until the site investigation and remediation are complete. Operator shall update this section in the next Supplemental Form 27.
	Operator shall provide additional information about their general liability insurance coverage and whether that coverage is sufficient to cover the estimated remaining Remediation costs based on current available data as required per Rule 705.f. on the next Supplemental Form 27.
	All unaddressed COAs/CAs from previously approved forms/inspections still apply. Additionally, all COAs applied to the GRIP apply to this remediation project.
	COGCC does not agree to Operators request for transitioning domestic water well to monthly. Once MW-5R is installed and sampled Operator may request reduction in sampling; this is contingent on MW-05R establishing point of compliance
8 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.

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
403075874	FORM 27-SUPPLEMENTAL-SUBMITTED
403075875	ANALYTICAL RESULTS
403075876	ANALYTICAL RESULTS
403075881	MONITORING REPORT
403075925	CORRESPONDENCE
403075931	SITE INVESTIGATION PLAN
403077615	ANALYTICAL RESULTS

Total Attach: 7 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Environmental	Per comment on Doc #402988469: "Confirmation soil samples were collected on 3/2/2022 were not provided as an attachment to Doc #402988469. Operator shall provide these documents on the next Supplemental Form 27."	06/30/2022
Environmental	Per comment on Doc #402046558: "Operator shall add the following to the Other Potential Receptors within 1/4 mile section: Directly adjacent to County Road 8 and occupied residence, ~350' from mapped High Priority Habitat - Aquatic Native Species Conservation Waters, ~750' 100-year floodplain" Note: Approval of this Form does not supersede any Federal, State or Local regulations. COGCC recommends consultation with the US Fish and Wildlife Agency. Additionally, operator shall list Wildlife as threatened to impact under Rule 912.b.(1).A.	06/30/2022

Total: 2 comment(s)