

State of Colorado  
Oil and Gas Conservation Commission

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402879388  
Receive Date:  
11/24/2021

Report taken by:  
Candice (Nikki) Graber

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>(303) 8254822</u> Mobile: <u>( )</u>
Address: <u>1675 BROADWAY, STE 2800</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>
Contact Person: <u>Jeff Rickard</u>	Email: <u>jrickard@kpk.com</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:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input checked="" type="checkbox"/> Oil            | <input type="checkbox"/> Tank Bottoms                |  |
| <input checked="" type="checkbox"/> Condensate     | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |  |
|  | <input type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) | _____                                  |

### DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	TBD	TBD
Yes	SOILS	TBD	TBD

### 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 ):

The number of soil samples will be determined once impacts are delineated

#### Proposed Groundwater Sampling

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

The number of water wells to be installed to monitor GW will be determined once impactes are fully delineated. A minimum of 4 wells will be installed around the impacted area.

#### 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 0  
Number of soil samples exceeding 915-1 \_\_\_\_\_  
Was the areal and vertical extent of soil contamination delineated? \_\_\_\_\_  
Approximate areal extent (square feet) \_\_\_\_\_

**NA / ND**

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 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?

Impacts have been observed off property to the West.

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?

The investigation and excavation will resume one the irrigation to the west is shut off for the 2021 season. KPK will pump and dispose of free product and contaminated GW daily M-F until the investigation can resume.

**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

Water: Pumping and removal through 2021 irrigation season, then BOS 200 and monitoring.

**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 been excavating and removing impacted soils along with pumping free product on a daily basis. The excavation has been halted due to the danger of undermining an active irrigation line to the west. KPK had to backfill the excavation to eliminate damaging this irrigation line. The excavation was backfilled with 3" crushed concrete and a 6" slotted PVC pipe was installed in the backfill. KPK will pump free product and contaminated ground water from this PVC pipe daily M-F until the irrigation line is shut off for the season and the excavation can continue. KPK will dispose of the backfill material in accordance with 900 series rules when the excavation resumes.

**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) 250  
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 Pumping of free product and BOS200 \_\_\_\_\_

**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.

Teh number and placement of GW monitoring wells will be determined when impacts have been delineated.

# REMEDATION 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 \_\_\_\_\_

## 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: \_\_\_\_\_

# 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. 11/01/2021

Proposed date of completion of Reclamation. 11/01/2023

## 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. 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. 11/01/2021

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/27/2021

Proposed date of completion of Remediation. 07/26/2023

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**

Most recent lab results of the residential well sampling attached.

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

Signed: ` Jeff Rickard \_\_\_\_\_

Title: Regulatory \_\_\_\_\_

Submit Date: ` 11/24/2021 \_\_\_\_\_

Email: jrickard@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: Candice (Nikki) Graber \_\_\_\_\_

Date: 11/29/2021 \_\_\_\_\_

Remediation Project Number: 19616 \_\_\_\_\_

### Condition of Approval

**COA Type**

**Description**

	Operator shall upload all analytical results of the domestic water well to the COENV database within 45 days (1/13/2021) and provide the Form 43 under Related Forms.
	Passing the subject Form 27 serves to acknowledge receipt of the attached information by the COGCC and does not imply approval of any requests therein. COGCC's review of and response to such requests will be made separately.
	Operator shall continue to provide all waste manifests that have not previously been submitted as required by Rule 905.b.(3) for oily waste (soil and groundwater) hauled off site for disposal.
	Operator shall sample the domestic water well ( DWR Permit 215661) on a bi-weekly basis for the Organic Compounds in Groundwater (benzene, toluene, ethylbenzene, xylenes, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene). NOTE: The last round of sampling was for BTEX only

The following COA's have not been addressed:  
 Due to observed free product in MW-3 and MW-4 emergency approval for additional work was granted via email by John Axelson on 9/16/2021 (Document #1585420). COGCC has not received an update on progress for this work. As of 11/11/2021 COGCC inspections have not observed any additional monitoring well installation. Operator shall provide a plan and timeline for monitoring well installation on the next Supplemental Form 27 (11/24/21).

Operator shall provide updated sample location map(s), groundwater contour maps, and table(s) containing analytical results with each Supplemental Form 27. This shall be included in the next supplemental Form 27 (11/24/2021).

Operator shall update the waste disposal information on the next Supplemental Form 27 (11/24/21) and update this information with each supplemental Form 27.

Operator has not provided analytical samples from bi-weekly sampling of DWR Permit 215661 for sampling performed the weeks of 9/17/21 or 8/6/21. Operator shall provide these results on the next Supplemental Form 27 (11/24/21).

Under Groundwater Remediation Summary Operator has noted that BOS200 is being used. Operator shall provide update on method of use, application rate, and provide the SDS for the BOS200 with the next Supplemental Form 27 (11/24/2021).

The following COA's are outstanding from the initial Form 27:  
 - On the next Form 27 Operator shall provide a construction log of the stand pipe including Total Depth, Slotted Interval, Diameter location within the excavation, and filter pack. Operator shall also provide details on how the stand pipe is capped and secured at the surface. Operator will submit a minimum of one soil sample for laboratory analysis of Table 915- 1 Parameters from each soil boring advanced during monitoring well installation. The sample collected will be from the interval(s) displaying the highest degree of impacts.  
 NOTE: The sketch attached to this Form 27 (Document #402862163) does not satisfy this COA. This information shall be provided on the next Supplemental Form 27 (11/24/2021).  
 -Operator shall perform a complete soil and groundwater characterization at the site to determine groundwater gradient/flow direction and the full extent of impacts. In addition to an up-gradient, a down-gradient, two cross gradient, and a source well, monitoring wells shall be installed at the following locations:  
 Between release area and the domestic water well (DWR Permit 215661; as mapped in COGIS)  
 On the north side of CR 8  
 NOTE: No map has been provided to document the location of the monitoring wells or groundwater gradient. Free product was reported via email on 9/16/21 and analytical results from MW-4 and MW-6 report groundwater impacts over Table 915-1. COGCC cannot adequately determine the potential threat of these documented impacts to sensitive receptors without this additional information.

- In accordance with Rule 914, if impacts are observed during monitoring well installation a step out monitoring well(s) will be installed to define the horizontal extent of impacts to soil and groundwater. More than one well may be required to obtain a point of compliance. The monitoring well(s) shall be installed within 14 days. Operator will survey in the monitoring wells and calculate and display the groundwater elevation contours bi-weekly with sampling of domestic water well.  
 NOTE: Emergency approval was granted for this work on 9/16/2021 (Document #1585420).

- Operator shall track the volume of fluids recovered daily and provide quantities on the next supplemental Form 27.  
 NOTE: Field Inspection No. 691201519 required Operator to submit disposal manifests by October 4, 2021 . Waste manifests provided (Document #402859761) only document work done between 10/1/2021 and 10/28/2021. Operator shall provide waste manifests for all missing disposal (groundwater and soil) as well as a summary table on the next Supplemental Form 27 (11/24/2021).

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.

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
402879388	FORM 27-SUPPLEMENTAL-SUBMITTED
402879390	ANALYTICAL RESULTS

Total Attach: 2 Files

**General Comments**

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

Total: 0 comment(s)