

**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:  
403690515  
Receive Date:  
03/07/2024

Report taken by:  
Candice (Nikki) Graber

**Site Investigation and Remediation Workplan (Initial 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 ECOM 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>(720) 8689848</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80203</u>		Mobile: <u>(303) 5508872</u>
Contact Person: <u>John Peterson</u>	Email: <u>jpeterson@kpk.com</u>	

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 34666 Initial Form 27 Document #: 403690515

**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** Yes Multiple Facilities

Facility Type: PRODUCED WATER TRANSFER SYSTEM Facility ID: 446598 API #: \_\_\_\_\_ County Name: WELD

Facility Name: JOHNSON Latitude: 40.102800 Longitude: -104.968080

\*\* correct Lat/Long if needed: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

QtrQtr: SWSE Sec: 26 Twp: 2N Range: 68W Meridian: 6 Sensitive Area? Yes

Facility Type: OFF-LOCATION FLOWLINE Facility ID: 475954 API #: \_\_\_\_\_ County Name: WELD

Facility Name: Wellhead Line Latitude: 40.103130 Longitude: -104.968120

\*\* correct Lat/Long if needed: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

QtrQtr: SWSE Sec: 26 Twp: 2N Range: 68W Meridian: 6 Sensitive Area? Yes

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>485936</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Johnson 1 Flowline</u>	Latitude: <u>40.103217</u>	Longitude: <u>-104.968156</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>26</u>	Twp: <u>2N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

**SITE CONDITIONS**

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Commercial 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? Yes

**Other Potential Receptors within 1/4 mile**

6 commercial structures are located within 0.25 miles of the spill. The nearest occupied building is located approximately 380 feet east of the site. Tipple Parkway is located 330 feet to the south. The site is located within a freshwater emergent wetland, located 25 feet east of Godding Hollow Stream and within a 100-year floodplain. There are no High Priority Habitats within 0.5 miles to the spill. One well is located within 0.25 miles of the site. The nearest well is located 1150 feet east. Two wells are located within 0.5 miles of the spill.

# 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 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	Undetermined	Visual inspection
Yes	SOILS	Undetermined	Analytical

## INITIAL ACTION SUMMARY

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

At 12pm on 1/23/24 a KPK pumper noticed oil daylighting at ground surface. KPK immediately shut in the well, and isolated and blew down the pipeline. KPK crews scraped and staged the contaminated soil from the surface into a plastic tarp that was then hauled off for disposal at Front Range Landfill. Cause of failure is due to a poorly secured clamp on the line that was likely exacerbated due to recent freezing temperatures. A new clamp was placed on the line and secured. One source and one background sample were collected from the soil surface, and three surface water samples were collected weekly beginning 1/29/24 from Godding Hollow Stream located west of the spill (see attached figures). Available analytical results are included. Free product was observed on the groundwater within the excavation. KPK is skimming the product from the groundwater using a vac truck. The maximum dimensions of the excavation in each direction are 24'x35'x4'. The current excavation was mapped using a Trimble GPS unit and the size is 560 square feet. Manifests and disposal tickets are attached.

## 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 ):

A minimum of 8 discrete soil samples will be collected from the sidewalls/base of the spill excavation. 4 field screening soil samples from the sidewalls & 1 discrete soil sample from the base of the produced water vessel excavation will be collected following decommissioning. 7 monitoring wells will be installed (5 at spill location plus 2 background). 1 discrete soil sample will be collected from each of the 5 proposed MWs at the spill area. Soil will be field screened & the interval exhibiting the highest PID reading will be submitted. If no impacts are noted during field screening, the interval immediately above the water table will be submitted. The samples collected from the spill excavation, spill MWs & beneath the produced water vessel will be submitted for full Table 915-1 analysis. Background soil samples will be collected at similar depths as confirmation & MW samples & analyzed for Table 915-1 metals & soil suitability parameters. See attached figure for locations.

### Proposed Groundwater Sampling

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

Five monitoring wells will be installed in the spill excavation area (1 source, 1 upgradient, 1 downgradient and 2 crossgradient) and 2 background monitoring wells will be installed and sampled for Table 915-1 analysis. See attached figure for proposed sampling locations.

### Proposed Surface Water Sampling

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

Surface water locations Drainage 1, Drainage 2 and Drainage 3 in Godding Hollow Stream will continue to be collected on a weekly basis to monitor potential impacts to the nearby drainage until the extent of impact to groundwater is defined and the threat of impact to the stream has been mitigated. Samples will be analyzed for ECOM Table 915-1 organics. See attached figure for surface water sampling locations.

## 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 2

Number of soil samples exceeding 915-1 1

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 560

### NA / ND

-- Highest concentration of TPH (mg/kg) 11340

-- Highest concentration of SAR 19.9

BTEX > 915-1 Yes

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

3 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?

The source sample exceeded ECOM Table 915-1 Protection of Groundwater Soil Screening Level Concentrations for benzene, toluene, ethylbenzene, total xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzo(a)anthracene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and DRO, RRO, GRO, arsenic, barium, specific conductance, and SAR. The detection limit for dibenz(a,h)anthracene was above the screening level. The 3 surface water locations sampled weekly in Godding Hollow Stream have all been below detections limits for Table 915-1 organics. See attached figures and tables for sampling locations and analytical results.

Were background samples collected as part of this site investigation?

One background sample was collected. Arsenic, barium and pH exceeded Table 915-1 Protection of Groundwater Levels in the background sample collected at the ground surface. Analysis is provided.

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

Volume of solid waste (cubic yards) 61

Volume of liquid waste (barrels) 255

Is further site investigation required?

A minimum of 8 confirmation soil samples will be collected from the excavation. Soil samples will be collected from five monitoring wells at the spill excavation and two background wells. Four field screening soil samples and one discrete soil sample will be collected following the produced water vessel decommissioning. Groundwater from the 7 monitoring wells will be sampled quarterly. Weekly surface water samples will continue to be collected at the three locations along Godding Hollow Stream.

## REMEDIAL ACTION PLAN

### SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Approximately 61 cubic yards of impacted soil was removed from the release area and transported offsite for disposal. 255 barrels of groundwater were removed from the excavation. Confirmation soil samples will be collected to ensure soil impacts are removed. Manifests are attached.

### 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.

Operator is currently investigating the extent of impacts to soil and groundwater. Analytical data indicates impacted soils are present at the source. Operator proposes confirmation samples of the existing excavation and installation of monitoring wells for groundwater analysis to evaluate for impacts. Once soil and groundwater impacts are defined, remedial technologies will be evaluated to address impacts. ECOM will be provided 48-hour notice prior to any sampling event.

## Soil Remediation Summary

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 61

\_\_\_\_\_ Air sparge / Soil vapor extraction

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

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Excavate and onsite remediation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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.

Five monitoring wells (1 source, 1 upgradient, 1 downgradient, and 2 crossgradient) are proposed to determine if groundwater is impacted at the site. All 5 wells will be sampled quarterly for Table 915-1 analysis until 4 consecutive quarters of results are below Table 915-1 levels. Two background monitoring wells will be installed to establish inorganic background levels. See attached figure for proposed well locations.

# 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 ECMC rules. The cost for remediation is a preliminary estimate only, costs may change upwards or downward based on site-specific information. KPK makes no representation or guarantees as to the accuracy of the preliminary estimate. The project is 20% complete. Remaining tasks include the following.

- determining impacts to soil
- determining impacts to groundwater
- determining impacts to surface water
- additional remediation of impacted medias
- 4 consecutive quarters of clean groundwater and surface water samples
- reclamation of site.

Operator anticipates the remaining cost for this project to be: \$ 75000

## 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:

Volume of E&P Waste (solid) in cubic yards 61

E&P waste (solid) description Petroleum impacted soil

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

Non-ECMC Disposal Facility: Front Range Landfill

Volume of E&P Waste (liquid) in barrels 255

E&P waste (liquid) description Petroleum impacted groundwater

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

Non-ECMC Disposal Facility: NGL Energy Partners LP

# 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.

Reclamation will occur 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. 04/30/2025

Proposed date of completion of Reclamation. 05/31/2025

## 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. 01/23/2024

Actual Spill or Release date, or date of discovery. 01/23/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/23/2024

Proposed site investigation commencement. 01/23/2024

Proposed completion of site investigation. 04/30/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 01/23/2024

Proposed date of completion of Remediation. 05/31/2025

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**

Please see the attached COA response document summarizing KPK's actions based on previous COAs for the spill.

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

Signed: Katherine Kahn

Title: Senior Hydrogeologist

Submit Date: 03/07/2024

Email: kkahn@quandaryconsultants.com

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: Candice (Nikki) Graber

Date: 03/28/2024

Remediation Project Number: 34666

**COA Type****Description**

	Operator shall conduct a closure investigation for the produced water vault in accordance with Rule 911.a.(4) Guidance Document and provide photos of the removal.
	Based on field inspections obvious hydrocarbon impacts remain in all sides of the excavation and in the base. Operator's proposed soil samples are inadequate to determine vertical and lateral extent of impacts. In accordance with Rule 914, step out monitoring well(s) and/or soil borings shall be installed to define the horizontal extent of impacts to soil and groundwater.
	Proposed completion of site investigation of 4/30/2025 (463 days after spill discovery) is not in compliance with ECMC rules. Operator shall define the vertical and lateral extent of impacts in all directions for both soil and groundwater and provide documentation by the next supplemental Form 27 (due in 90 days).
	As previously required via COA on the Form 19 Initial: Operator will provide notice to ECMC EPS Kari Brown (kari.l.brown@state.co.us) and Nikki Graber (nikki.graber@state.co.us) at least 48 hours prior to backfill or any sampling events performed on location.
	In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule (every 90 days).
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**

403690515	INVESTIGATION/REMEDATION WORKPLAN (INITIAL)
403710413	SOIL SAMPLE LOCATION MAP
403710418	ANALYTICAL RESULTS
403710420	ANALYTICAL RESULTS
403710421	ANALYTICAL RESULTS
403710425	ANALYTICAL RESULTS
403710440	ANALYTICAL RESULTS
403711203	SITE MAP
403711220	DISPOSAL MANIFESTS
403711222	DISPOSAL MANIFESTS
403711414	SOIL SAMPLE LOCATION MAP
403711886	OTHER
403734679	FORM 27-INITIAL-SUBMITTED

Total Attach: 13 Files

Date Run: 3/28/2024 Doc [#403690515]

Page 8 of 9

## General Comments

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Environmental	ECMC inspections at this location indicates excavation and source removal have not been conducted since the initial excavation to open and repair the flowline and that work is not ongoing.	03/28/2024
Environmental	ECMC is accepting this Form 27 Initial in order to open a remediation project. Passing of this form 27 initial does not imply ECMC's agreement with root cause description, progress indicated at the location, or samples collected without adequate notice.	03/28/2024

Total: 2 comment(s)