

**State of Colorado
Energy & Carbon Management Commission**

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Document Number:

403696783

Receive Date:

Report taken by:

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 ECMC 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
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>
Contact Person: <u>John Peterson</u>	Email: <u>jpeterson@kpk.com</u>	Mobile: <u>(303) 5508872</u>

PROJECT, PURPOSE & SITE INFORMATION**PROJECT INFORMATION**Remediation Project #: _____ Initial Form 27 Document #: 403696783**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>485746</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Lost Creek State 1-32 Flowline</u>	Latitude: <u>40.187928</u>	Longitude: <u>-104.342822</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENE</u>	Sec: <u>32</u>	Twp: <u>3N</u>	Range: <u>6W</u>
Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>		

SITE CONDITIONS

General soil type - USCS Classifications ML

Most Sensitive Adjacent Land Use cropland

Is domestic water well within 1/4 mile? Yes

Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

There no residences are within a quarter mile buffer; Weld County Road 386 is approximately 1,865' West of the site; Interstate 76 is approximately 5,960' South of the site. Surface water is present within a 1/2-mile of the site. The 100 year floodplain is 160' north of the site. The site is within a High Priority Habitat for Mule Deer Severe Winter Range; There are no Bald Eagle Active Nest site half mile buffers or bald eagle roost sites within a quarter mile of the site. There is 1 domestic water well within a quarter mile of the site. The National Wetlands inventory has identified a fresh water emergent wetland 925' south east 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	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.

KPK was pressure testing the flowline for Lost Creek State 1-32 and identified oil breaching the ground surface. The wells were shut in, KPK excavated the impacted soil (20'x13'x20'), and repaired the leak in the flowline. The impacted soils were placed on a plastic liner. External corrosion of the steel flowline is the root cause of the spill. Background and source samples were taken 12/12/23; nine samples were taken after excavation 12/18/23. The background was resampled 2/9/24 due to possible cross-contamination on the first background sample. All samples were analyzed for full Table 915-1. The vertical & horizontal extents of the excavation were based on limits of excavation & results from soil samples & PID field screening. The sample taken from the source area had multiple organics exceedances. BH1 @20' exceeded the Table 915-1 limit for 1-Methylnaphthalene. SW1 @20' exceeded the Table 915-1 limit for DRO and RRO. Arsenic and selenium exceeded Table 915-1 at multiple locations. No samples exceeded Table 915-1 for soil suitability parameters.

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 was collected on all four sidewalls at 5' and 15'. A base sample taken from the excavation floor at 20'. The source area was sampled at the surface as well as a background sample from northeast of the source location. Additional background soil samples will be taken at 5' and 15' bgs. Additional scraping will be performed before resampling any areas where lab results imply continued impacts: BH1 @20' (1-Methylnaphthalene) and SW1 @5 (DRO and RRO). Arsenic and selenium exceeded Table 915-1 at multiple locations. Samples will no longer be analyzed for soil suitability after the first batch of samples indicated soil suitability is not impacted. See attached figure for proposed sample locations.

Proposed Groundwater Sampling

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

If groundwater is encountered, KPK will propose the installation of monitoring wells.

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 12

Number of soil samples exceeding 915-1 7

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

Approximate areal extent (square feet) 348

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

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.

NA / ND

-- Highest concentration of TPH (mg/kg) 9930

-- Highest concentration of SAR 2.28

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 20

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)

OTHER INVESTIGATION INFORMATION☐ Were impacts to adjacent property or offsite impacts identified?☒ Were background samples collected as part of this site investigation?

A background soil sample was taken at the surface northeast of the source. Cross-contamination is suspected on both of the background samples. 6 Additional background samples will be collected for comparison from 3 locations at 5' and 15' below ground surface. See attachments for proposed locations.

☐ 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?

Additional soil samples will be taken to ensure full delineation.

REMEDIAL ACTION PLAN**SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

The source of the impacts was shut in when the release was discovered. Approximately 6953 cubic feet of impacted soil was excavated and stockpiled on a lined, bermed area onsite until excavation is complete. Manifests generated to date are included as an attachment but stockpiled soil remains on location. Additional excavation will be conducted to remove the impacted soils found at SW-1 @5' and BH-1 @20'. Background samples at depth will be taken during monitoring well installation to assess if inorganic exceedances are naturally occurring. Manifests will be included as attachments as they are generated.

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.

Following excavation and re-sampling, any remaining impacts will be evaluated. KPK plans to scrape an additional 5' off of the north wall to remove impacts observed in SW-1 @5'. To address impacts observed at BH-1 @20', KPK will scrape the floor of the excavation and re-sample the floor. If groundwater is encountered, KPK will propose the installation of monitoring wells.

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) _____ 2318

Name of Licensed Disposal Facility or ECMC Facility ID # _____

No _____ 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 _____

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 impacts to groundwater are encountered in the excavation, KPK will propose the installation of monitoring wells on a supplemental Form 27.

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. This project is approximately 75% complete. Additional tasks include:- Discrete confirmation samples will be collected following excavation surrounding BH-1 @20' and SW-1 @5'. Additional background samples will be collected from 3 locations at depth of 5' and 15' bgs for inorganic analysis. 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.

Operator anticipates the remaining cost for this project to be: \$ 25000

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:

No beneficial use for soil or recovered groundwater. No estimate on the amount of groundwater is available. Recovered groundwater is mixed with soil to dispose as solid waste.

Volume of E&P Waste (solid) in cubic yards 357

E&P waste (solid) description petroleum impacted soil

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: L.G. Everist and Front Range Landfill

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

E&P waste (liquid) description

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

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.

Excavation area will be backfilled with clean fill appropriate for the area. Upon completion of the backfill KPK will consult with the landowner on seeding preference. Reclamation will be conducted 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. 05/15/2025

Proposed date of completion of Reclamation. 08/20/2025

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. 12/12/2023

Actual Spill or Release date, or date of discovery. 12/12/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/12/2023

Proposed site investigation commencement. 12/12/2023

Proposed completion of site investigation. 11/20/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/12/2023

Proposed date of completion of Remediation. 11/20/2024

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

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

Signed: Cullen Chew

Title: Environmental Coordinator

Submit Date: _____

Email: cchew@kpk.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: _____

Date: _____

Remediation Project Number: _____

COA Type**Description**

0 COA	

ATTACHMENT 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**

403697805	ANALYTICAL RESULTS
403697807	ANALYTICAL RESULTS
403699920	ANALYTICAL RESULTS
403889304	DISPOSAL MANIFESTS
403889645	MAP
403889781	ANALYTICAL RESULTS

Total Attach: 6 Files

General Comments**User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)