

State of Colorado Oil and Gas Conservation Commission

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Document Number:

403470674

Receive Date:

07/20/2023

Report taken by:

Laurel Anderson

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 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: KP KAUFFMAN COMPANY INC	Operator No: 46290	Phone Numbers
Address: 1700 LINCOLN ST STE 4550		Phone: (720) 8689848 x0110
City: DENVER	State: CO Zip: 80203	Mobile: (303) 5508872
Contact Person: John Peterson	Email: jpeterson@kpk.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: Initial Form 27 Document #: 403470674

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: FLOWLINE SYSTEM	Facility ID: 478836	API #: _____	County Name: WELD
Facility Name: Facility 5	Latitude: 40.077930	Longitude: -104.889640	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESE	Sec: 4	Twp: 1N	Range: 6W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use crop land - agriculture

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

Nearest Water Well: Permit No. 302576 is .38 miles to the northeast.
Nearest Surface Water: Little Dry Creek is .31 miles and runs along the south and west of the excavation.
Preemergent wetlands 888 feet southeast of release point.
1343 feet southeast to 100 year floodplain.

DENIED

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	undetermined	NA
Yes	SOILS	undetermined	NA

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 farmer noted the oil at the ground surface and flagged down KPK's pumper to address the release. The pipeline was immediately isolated and blown down to prevent further contamination. The stained soil was scraped up and hauled off immediately. The cause of failure is corrosion to the steel line with a hole at the 12 o'clock position. The impacted soils within close proximity to the leakpoint have been excavated and disposed offsite to mitigate the impacts from the release. The flowline has been repaired. Additional remediation of soil and groundwater is needed. Further site investigation is needed and ongoing.

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 will be collected from each of the four sidewalls of the existing excavation above the saturated interval. Soil samples will also be collected from the area north of the release site and east where oil on the ground surface was scraped and disposed offsite as part of the emergency response activities.

Soil samples will be collected from each proposed soil boring following field screening with a PID. The sample exhibiting the highest PID, staining/odor, or the sample from directly above the field-interpreted groundwater table will be submitted for analysis. No soil samples will be collected from the saturated zone.

All soil samples will be submitted to Origins Lab for Table 915-1 analytes.

Proposed Groundwater Sampling

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

Following completion of the soil borings, each boring will be converted into a 2" monitoring well. Each well will be developed following installation. At least 24 hours following development, KPK will purge each monitoring well of at least 3 casing volumes of water. Following purging, KPK will collect groundwater samples and submit them for analysis of the Table 915-1 organic and inorganic parameters.

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 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) 400

NA / ND

-- Highest concentration of TPH (mg/kg) 16740

-- Highest concentration of SAR 3.5

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 5

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 5

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 0

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)

Surface Water

0 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?

oil ran on the ground surface off location to the north and east. The release and extent of surface spill are off location. the impacted surface soil was scraped and disposed offsite at a landfill. The source area surrounding the release point has been excavated to the groundwater table. Additional impacts in soil were noted on the sidewalls and require additional excavation including to the west onto another property.

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

one sample was collected but detected petroleum hydrocarbons beleived to be the result of cross-contamination during sampling. The background sample will be recollected. Additional background soil samples will be collected surrounding the release area. See attached map for proposed background soil sampling locations.

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

Volume of solid waste (cubic yards) 1080

Volume of liquid waste (barrels) 10

☒ Is further site investigation required?

The site requires full horizontal extent of impact to soil and full extent of impact to the groundwater. KPK has proposed the installation of soil borings and monitoring wells to acheive the assessment of magnitude and extent. Soil samples from the walls of the excavation are also needed and will be collected in the coming days and will be analyzed for the full Table 915-1 list. Groundwater was present in the excavation at 5 feet bgs, therefore a network of monitoring wells is proposed herein. All water samples will be analyzed for Table 915-1 organic and inorganic parameters.

After the sidewall samples are collected, the extent of the excavation and the scrape area will be delineated using a GPS compliant with Rule 216. The excavation will be temporarily backfilled while KPK negotiates access to the property on the west, removes the fence and irrigation piping such that full remediation can be implemented. The remedial option selected will be dependent on the results of the site assessment yet to be completed.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The source area will be excavated to the extent practical and will be disposed at the Front Range Landfill. Soil samples will be collected from each of the four walls of the excavation and from the ground surface of the scrape area downgradient of the release point once the horizontal extent of impact in the vadose zone has been removed. Manifests for all soil excavated to date are included as an attachment. The groundwater table is 5 feet bgs. Soil was excavated to a depth of 6 feet bgs. Since the floor of the excavation was below the groundwater table, floor samples were not collected from the excavation. The excavation will be backfilled prior to the monitoring well installation such that a MW can be installed in the source area. KPK will notify ECOM prior to sampling or backfill activity.

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.

KPK intends to define the magnitude and extent of impact to groundwater prior to preparing a remedial plan. As data are collected, technical and economic feasibility evaluations will occur, a remedy selected and implemented, and a schedule provided.

Soil Remediation Summary

☐ In Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

☒ Ex Situ

Yes _____ Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____ 1500

Name of Licensed Disposal Facility or COGCC 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.

KPK will conduct quarterly groundwater monitoring of the monitoring wells to be installed as outlined in this workplan. Groundwater samples will be analyzed for Table 915-1 organic and inorganic parameters. A map of proposed soil borings/monitoring wells is attached.

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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. 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: \$ 10000

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:

impacted soil from cuttings will be disposed off site in Front Range Landfill. Development and purge water created during monitoring well sampling will be placed in the produced water vault at Facility 5 and transported offsite for disposal in NGL's injection well.

Volume of E&P Waste (solid) in cubic yards 1080

E&P waste (solid) description petroleum impacted soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Front Range Landfill

Volume of E&P Waste (liquid) in barrels 10

E&P waste (liquid) description petroleum impacted groundwater

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: NGL Water Solutions South Weld
SWD 1

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.

The site will be reclaimed in accordance with COGCC 1000 Series Reclamation Rules. The surface owner will be consulted as well on reclamation efforts.

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. 12/31/2024

Proposed date of completion of Reclamation. 12/31/2025

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. 06/21/2023

Actual Spill or Release date, or date of discovery. 06/20/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/20/2023

Proposed site investigation commencement. 08/14/2023

Proposed completion of site investigation. 10/23/2023

REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/20/2023

Proposed date of completion of Remediation. 12/31/2024

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

Impacted groundwater is present at the site. This Form 27 has been prepared to summarize proposed additional site investigation activities prior to remediation.

Source area soils are currently being excavated to the extent practicable. Surface impacted soil from the release have also been excavated. Approximately 1080 cubic yards of soil has been excavated to date and was transported to Front Range Landfill.

Impacted groundwater has been removed from the excavation due to the presence of oil on the water. Approximately 10 bbls were disposed at NGL South Weld SWD 1.

Soil impacts remain on the walls of the excavation including to the west onto an additional property separated by a fence. KPK will collect soil samples on the sidewalls of the current excavation extent and from the soil scrape areas north and east of the release point for Analysis of the Table 915-1 parameters. After sampling, KPK will delineate the current excavation extent with a GPS. After sampling and mapping of the excavation extent, KPK plans to backfill the excavation with clean fill while we negotiate property access and implement the site assessment to define the the full horizontal magnitude and extent of impact to soil and groundwater.

KPK plans to excavate impacted soil in the vadose zone at the release point until all sidewall samples report contaminant concentrations below Table 915-1. KPK will collect soil samples on the sidewalls of the full remediation excavation for Analysis of the Table 915-1 parameters.

Remedial alternatives will be evaluated and selected after the site has been assessed. KPK will identify an effective remedial solution and submit the proposal to the ECMC for approval prior to implementation. The remedial plan will have a more refined schedule than the schedule presented herein.

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

Signed: John Peterson

Title: Director EHS

Submit Date: 07/20/2023

Email: jpeterson@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:

Date:

Remediation Project Number:

COA Type

Description

0 COA	
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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

403470674	FORM 27-INITIAL-SUBMITTED
403471042	ANALYTICAL RESULTS
403471045	ANALYTICAL RESULTS
403471046	DISPOSAL MANIFESTS
403471047	DISPOSAL MANIFESTS
403471084	SOIL SAMPLE LOCATION MAP
403471106	PHOTO DOCUMENTATION
403471535	DISPOSAL MANIFESTS

Total Attach: 8 Files

General Comments

User Group

Comment

Comment Date

Environmental	Based on the below comments ECMC cannot approve this Form 27. Operator is directed to submit a replacement form.	07/21/2023
Environmental	Based on the scope of work proposed ECMC does not believe Operator anticipated the remaining cost for this project is adequate.	07/21/2023

Environmental	Operator described the following under beneficial reuse: "impacted soil from cuttings will be disposed off site in Front Range Landfill. Development and purge water created during monitoring well sampling will be placed in the produced water vault and transported offsite for disposal in NGL's injection well." This is a description of disposal, no beneficial reuse.	07/21/2023
Environmental	Photos provided by the operator indicate that impacted material is being stored on top of non-impacted soils and vegetation. Operator shall remediate this spill and store E&P waste accordance with Rule 913.b.(5).	07/21/2023
Environmental	Operator indicates excavation will only occur in the vadose zone, neglecting impacts in the capillary fringe.	07/21/2023
Environmental	Remedial action plan under Operator Comments is not in compliance with ECMC rules.	07/21/2023
Environmental	Operator has not included Spill ID 484636 as a related facility.	07/21/2023
Environmental	Lat long provided in this Form 27 maps approximately 1670 feet from the spill referenced in attachments.	07/21/2023

Total: 8 comment(s)

DENIED