FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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Document Number: 403695322
Receive Date: 02/26/2024
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 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 INFORMATON

Name of Operator: KP KAUFFMAN COMPANY INC Operator No: 46290
Address: 1700 LINCOLN ST STE 4550
City: DENVER State: CO Zip: 80203
Contact Person: John Peterson Email: jpeterson@kpk.com

Phone Numbers
Phone: (720) 8689848x0110
Mobile: (303) 5508872

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 34690 Initial Form 27 Document #: 403695322

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.
- [X] 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: 478843 API #: County Name: WELD
Facility Name: Facility 9 Latitude: 40.090170 Longitude: -104.882480
** correct Lat/Long if needed: Latitude: 40.090170 Longitude: -104.882480
QtrQtr: SWSW Sec: 34 Twp: 2N Range: 67W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM
Most Sensitive Adjacent Land Use cropland
Is domestic water well within 1/4 mile? No
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

County Road 14 is 1,000 ft N of site. County Road 19 is 1,100 ft E of site. 55 water wells are within 1/2-mile radius of site; nearest domestic water well is 1,570 ft SE of site (DWR and ECMC GIS tool). An unnamed ditch is located approximately 100' east of the site; Brantner Ditch is 1,150 ft SE of site. Nearest wetland is 265’ ft S of site. Nearest 100-year floodplain is 2090’ feet S of site. Site is located approximately 2450’ from the nearest High Priority Habitat. No springs or livestock within a mile. Depth to groundwater of 3.23 feet measured in Kerr McGee monitoring well BH9 located onsite in July 2023 (Document #403562218).

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [X] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA) _____
- [ ] **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	TBD	Analytical data
UNDETERMINED	SOILS	TBD	Analytical data

INITIAL ACTION SUMMARY

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

On November 11, 2022, Kerr McGee Oil & Gas Onshore Lp (KMG) submitted a Form 27 Site Investigation and Remediation Workplan (Document #403203869) for remediation project no 9246. KMG presented data indicating that groundwater impacts above Table 915-1 discovered in a newly installed monitoring well were associated with KPK's Facility 9 flowline header (Facility ID 478843) or Dwight G Hanks Tank Battery (Facility ID 443044), both located directly adjacent to the impacted monitoring well. KPK is submitting this Form 27 Site Investigation and Remediation Workplan (Document #403695322) proposing investigation at Facility 9 flowline header and Dwight G Hanks Tank Battery in response to a Warning Letter received by KPK from the ECMC dated 1.9.24. KPK reviewed historical data collected through July 2023 associated with Remediation Project #9246. KMG installed 27 monitoring wells (25 remaining) across the site as part of the investigation of the Hanks Pooling Unit #1 release. In July 2023, the depth to groundwater ranged from approximately 2' to 6' bgs, and the groundwater flow direction was to the east/southeast.

KMG monitoring well BH23 reported exceedances for benzene and 1,2,4-TMB. BH23 was installed approximately 5 feet from KPK's Dwight G. Hanks B 1 flowline and roughly 25 feet south of KMG's Hank's Pooling Unit #1 wellhead that was removed around 2013 according to aerial photographs (see attached figure).

KMG monitoring well BH24 reported chloride exceedances. BH24 is located upgradient of KPK's facilities. The elevated chloride results likely represent background concentrations. See attached figures for sampling locations.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

KPK proposes installing 5 monitoring wells surrounding BH23 (source, upgradient, downgradient and crossgradient) and 2 background monitoring wells. One soil sample will be collected from each of the 7 proposed monitoring well locations. Soil will be field screened and the interval reporting the highest PID reading will be submitted for full Table 915-1 analysis. If no impacts are reported, then the interval immediately above the groundwater table will be submitted. Samples will be analyzed for Table 915-1. See attached figure for proposed sampling locations.

Proposed Groundwater Sampling

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

Seven groundwater samples will be collected and analyzed for Table 915-1 from the impacted area in addition to two background samples. 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):

Additional Investigative Actions

[ ] Additional alternative investigative actions described in attached Site Investigation Plan (summary):

KPK will perform a pressure test on the Dwight G. Hanks B 1 flowline to ensure the flowline is not leaking.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 0

Number of soil samples exceeeding 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?

☐ 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?

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Investigative borings will be advanced to determine if impacts belong to KPK. If the source of the impacts is determined to belong to KPK, a soil and groundwater investigation will be completed to define impacts and determine an appropriate method of remediation. Impacted soil will excavated and disposed of offsite at a licensed disposal facility.

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.

Soil and groundwater samples will be taken at the proposed locations and analyzed for Table 915-1 in addition to a pressure test of the Dwight G. Hanks B 1 flowline to determine if the impacts near BH23 noted in the KMG Remediation Project #9246 were cause by the mentioned KPK flowline. Soil and groundwater samples will be collected from background, source, upgradient, cross-gradient and downgradient locations. The proposed investigative event will start in approximately one month. Further actions and timelines will be based on the analytical results.

Soil Remediation Summary

☐ **In Situ**

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

☐ **Ex Situ**

_____ Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____

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 _____

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 the source of the impacts is determined to belong to KPK, a groundwater investigation will be completed to define impacts and determine an appropriate method of remediation.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

[X] 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 and is based only on analytical costs to conduct closure sampling at this time, costs may change upwards 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: $ 20000

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

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels

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.

If impacts are determined to be KPK's responsibility and investigation/remediation are required, the site will be reclaimed in accordance with ECMC 1000 Series Reclamation Rules.

Is the described reclamation complete?

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. 05/01/2025

Proposed date of completion of Reclamation. 12/01/2025

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.

Actual Spill or Release date, or date of discovery.

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/25/2024

Proposed site investigation commencement. 03/25/2024

Proposed completion of site investigation. 05/26/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation.

Proposed date of completion of Remediation.

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

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: 02/26/2024 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: 34690

COA Type	Description
	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.
	Operator shall provide boring logs in accordance with standard environmental practices. This includes at a minimum; lithology description, USCS classifications, PID readings, sample collection depths, depth to water, and well construction.
	Operator shall provide a groundwater gradient map with the next Supplemental Form 27 (due in 90 days).
	Operator will submit a minimum of one soil sample for the Full Table 915-1 laboratory analysis from each soil boring advanced during monitoring well installation.
	Due to shallow groundwater reported in previously installed soil borings on location - Operator shall comply with Table 915-1 Protection of Groundwater Soil Screening Level Concentrations.
	Per Rule 913.d.(2) Operator shall submit a Supplemental Form 27 with an updated Implementation Schedule at least 14 days in advance of any schedule changes.
	In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule (every 90 days). ECMC selected Quarterly under Remediation Progress Update.
7 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
403695322	INVESTIGATION/REMEDIATION WORKPLAN (INITIAL)
403697497	SITE MAP
403697510	AERIAL IMAGE
403698447	SOIL SAMPLE LOCATION MAP
403735026	FORM 27-INITIAL-SUBMITTED

Total Attach: 5 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)