

State of Colorado
Oil and Gas Conservation Commission

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Document Number:
403201828

Receive Date:
12/07/2022

Report taken by:
Kari Brown

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 |
| Address: <u>1700 LINCOLN ST STE 4550</u> | | Phone: <u>(970) 261-3567</u> |
| City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80203</u> | | Mobile: <u>()</u> |
| Contact Person: <u>Craig Meis</u> | Email: <u>cmeis@kpk.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20120 Initial Form 27 Document #: 402795971

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>480127</u> | API #: _____ | County Name: <u>WELD</u> |
| Facility Name: <u>RMF Consolidation Line</u> | Latitude: <u>40.071160</u> | Longitude: <u>-104.900010</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>NWNW</u> | Sec: <u>9</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 Little Dry Creek

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

No residences or habitable structures are within a quarter mile of the site; County Road 12 is 1,575 feet to the northwest; SURFACE WATER: The site is 70 feet south of the Little Dry Creek, a USFWS-mapped freshwater emergent wetland (PEM1F). The site is located within the 100 year floodplain; The site is located within a High Priority habitat for Aquatic Native Species Conservation Waters; no Bald Eagle Roost sites are located within 1/4 mile of the site; no Bald Eagle Active Nest sites are located within 1/4 mile of the site. There are 0 domestic water wells within a quarter mile of the well.

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 | 300 yards | Measurement of excavation |

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 was repaired and excavation commenced for impact removal. Current analytical results indicate non-detect for all organics, however inorganic exceedances of table 915 remain in place and require additional investigation. KPK is currently investigating if high inorganic constituents are naturally occurring or more excavation will need to be done. The excavation was field screened by MarCom personnel on 11/9/2021, and was determined further excavation was required. Further excavation was conducted, and following a 48hr COGCC notification, soil confirmation samples were collected on 1/20/2022, and analytical from this sampling event exceeding table 915.1 limits. Additional excavations (See attachments). Additional excavation was conducted after confirmation samples and background samples (collected 3/8/2022 and 5/12/2022) indicated impacted soils were still in-situ at 1', 2', and 5' in the excavation. Additional confirmation samples were collected on 9/12/2022 from depths of 12 feet. The 9/12/2022 confirmation samples indicated further excavation with field screening is required. Further excavation to 14 feet bgs was completed and confirmation samples were collected on 10/18/2022. Analytical results from 10/18/2022 sampling indicated further excavation with field screening is required.

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):

Sampling was and will be conducted following a 48 notice provided to COGCC. Following confirmation and background sampling, additional excavation is required. Confirmation soil samples will be collected as described in the Rule 915.e.(2) Guidance Document and will be analyzed for TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble). At a minimum, one grab sample will be collected from each side of the excavation walls as well as from the base of the excavation area. If needed, extent borings may be installed, and soil samples collected to evaluate the extent of soil impacts.

Proposed Groundwater Sampling

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

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):

As described above, additional excavation in conjunction with field screening is required to remove impacted soil from the release. Once field screening indicates impacted soil has been removed, confirmation soil samples will be collected and submitted to a certified laboratory for Table 915-1 constituents.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 58
Number of soil samples exceeding 915-1 57
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 1350

NA / ND

-- Highest concentration of TPH (mg/kg) 51
-- Highest concentration of SAR 27.2
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 14

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?

Background samples were collected on 3/8/2022 and 5/12/2022. Site specific at depth backgrounds were collected using a Geoprobe. The most recent analytical results for bottom-of-hole samples at 14 feet bgs indicate there are levels of inorganic Table 915-1 constituents above background concentrations. Based on this information, additional excavation and investigation is required.

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 investigation is required based on the most recent confirmation sample analytics and background sample analytics. If groundwater is encountered during excavation, a grab sample will be collected and sent to the laboratory for Table 915-1 constituents.

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.

Impacted soil will be removed with an excavator. The line has been capped and repaired. Impacts will be removed until confirmation samples are below COGCC limits. Impacted soils will be disposed of at approved landfill 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.

The flowline has been repaired and KPK acknowledges additional investigation is required. Confirmation samples collected on 10/18/2022 had exceedances of SAR and EC in addition to other exceedances for various inorganic Table 915 constituents. Based on this information, additional excavation is required past 14 feet bgs. Once field screening readings indicate all impacted soil has been removed, additional confirmation samples will be collected. If groundwater is encountered, a grab sample will be collected and submitted to the laboratory for Table 915 constituents. Additionally, a groundwater monitoring plan will be submitted in the next Form 27 submittal if groundwater is encountered.

Soil Remediation Summary

| | |
|---|---|
| <input type="checkbox"/> In Situ | <input checked="" type="checkbox"/> Ex Situ |
| _____ Bioremediation (or enhanced bioremediation) | Yes _____ Excavate and offsite disposal |
| _____ Chemical oxidation | _____ If Yes: Estimated Volume (Cubic Yards) _____ 3025 |
| _____ Air sparge / Soil vapor extraction | _____ Name of Licensed Disposal Facility or COGCC Facility ID # _____ |
| _____ Natural Attenuation | No _____ Excavate and onsite remediation |
| _____ Other _____ | _____ Land Treatment |
| | _____ Bioremediation (or enhanced bioremediation) |
| | _____ Chemical oxidation |
| | _____ Other _____ |

Groundwater Remediation Summary

No _____ Bioremediation (or enhanced bioremediation)

No _____ Chemical oxidation

No _____ Air sparge / Soil vapor extraction

No _____ Natural Attenuation

No _____ 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 groundwater is encountered during excavation activities, a grab sample will be collected as soon as practical. If contaminated soil is in contact with groundwater or if free product/hydrocarbon sheen are observed, the release will be reported in accordance with Rule 912.b. Groundwater samples will be submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene by EPA Method 8260. A Groundwater Monitoring plan with a total of 5 wells, 1 upgradient, 2 cross gradient, 1 down gradient, and 1 at source (Additional wells may be necessary) will be submitted for approval, and Groundwater monitoring will continue until 4 clean consecutive quarters is achieved. COGCC will be provided a 72 Hour notice prior to the installation of Monitoring wells. Boring logs and monitoring well construction logs will be completed for each well and submitted in 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. 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: \$ 6000 _____

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

Volume of E&P Waste (solid) in cubic yards _____ 3025

E&P waste (solid) description Hydrocarbon impacted soils

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Front Range Landfill

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

REMEDIATION COMPLETION REPORT

REMEDIATION 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? No

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.

Upon receiving confirmation sample analytical that shows all impacts have been removed, KPK will submit request for Backfill to the state. Upon completion of the backfill KPK will consult with the landowner on seeding preference. Reclamation will commence 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. 02/20/2023

Proposed date of completion of Reclamation. 03/20/2023

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. 06/02/2021

Actual Spill or Release date, or date of discovery. 06/02/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/02/2021

Proposed site investigation commencement. 09/30/2021

Proposed completion of site investigation. 12/26/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/26/2022

Proposed date of completion of Remediation. 01/23/2023

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:

Confirmation sampling from 10/18/2022 indicates impacted soil remains in the excavation and further excavation is required to remove the impacts.

OPERATOR COMMENT

Background sampling analytics and recent confirmation sampling analytics indicate impacted soil remains in the excavation. Additional site investigation in the form of excavation, field screening, and confirmation sampling are required to ensure all impacted soil has been removed. If groundwater is encountered during the excavation, a grab sample will be collected and analyzed for Table 915 constituents. A groundwater monitoring plan will be submitted in the next Form 27 submittal if groundwater is encountered. This Form 27 submittal addresses previous COAs.

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

Signed: Josiah Reamy

Title: Project Manager

Submit Date: 12/07/2022

Email: primarycontractor@marcomllc.net

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: 20120

COA Type**Description**

| COA Type | Description |
|----------|-------------|
| 0 COA | |

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**

| | |
|-----------|--------------------------------|
| 403201828 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 403202005 | ANALYTICAL RESULTS |
| 403202006 | ANALYTICAL RESULTS |
| 403202007 | ANALYTICAL RESULTS |
| 403202008 | ANALYTICAL RESULTS |
| 403202009 | ANALYTICAL RESULTS |
| 403202848 | SOIL SAMPLE LOCATION MAP |
| 403202852 | SOIL SAMPLE LOCATION MAP |
| 403234376 | ANALYTICAL RESULTS |
| 403234385 | PHOTO DOCUMENTATION |
| 403253176 | DISPOSAL MANIFESTS |
| 403253409 | ANALYTICAL RESULTS |

Total Attach: 12 Files

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

| | | |
|---------------|---|------------|
| Environmental | This Form 27 cannot be approved based on the information submitted. Therefore Document ID #[403201828] will be denied. The Operator is directed to submit a replacement form. | 02/23/2023 |
|---------------|---|------------|

| | | |
|---------------|---|------------|
| Environmental | <p>COGCC has denied this form for the following reasons:</p> <ul style="list-style-type: none"> - Operator reported with this submittal that the line has been cut and capped however a COGCC site visit on 1/17/2023 (41 days post submittal) found the flowline still uncut. - The form contradicts itself. Both asserting that exceedances may be naturally occurring and that additional work is to be completed. Based on a review of the information presented, Operator has not collected samples since the most recent step out excavation therefore any asteration to impacts being removed is invalid. - Start dates and remediation dates are unfeasible. - Per CA on field inspection document 690102501 the following CA's remain unresolved: Operator shall address the measures taken to prevent a recurrence of failure (1102.I Corrosion Control) Operator shall provide a description of flowline repair/replacement work completed (1102.j. Repair) - COA from Document #403046549 remains unresolved: Per Rule 1102.o.(2)A. Operator shall submit a Form 44 (within 120 days of applying OOSLAT) identifying the off-location flowline/segment thereof that has been taken out of service and the outcome of the most recent integrity management test. Operator shall provide this Form 44 as an associated form on the next Form 27. | 02/23/2023 |
|---------------|---|------------|

Total: 2 comment(s)