

State of Colorado Oil and Gas Conservation Commission

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Document Number:

402843630

Receive Date:

10/15/2021

Report taken by:

CHRIS CANFIELD

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>1675 BROADWAY, STE 2800</u>		Phone: <u>(303) 8254822</u>
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>
Contact Person: <u>Ray Gorka</u>	Email: <u>rgorka@kpk.com</u>	Mobile: <u>()</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12158 Initial Form 27 Document #: 401839887

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>TANK BATTERY</u>	Facility ID: <u>446608</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>GRANT</u>	Latitude: <u>40.116700</u>	Longitude: <u>-104.967740</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWNE</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 SM Most Sensitive Adjacent Land Use Residential

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

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	Unknown	Lab Analysis
Yes	SOILS	Unknown	Lab Analysis

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 located the flowline closest to the sample collected by the complainant and drilled a boring to sample groundwater at 15' and soil at 17'. A sample for each was collected and tested for BTEX (water and soil) and TPH (soil). 6 additional 2" temporary piezometers will be drilled in order to collect samples and evaluate the current condition of the soil and groundwater. See proposed locations in map attached, which includes an upgradient piezometer. All piezometers will be marked. Field logs and soil description will be provided once the borings have been completed. Soil samples will be analyzed for BTEX and TPH. Groundwater, if encountered will be analyzed for BTEX, Sulfate, Chloride and TDS.

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):

The total horizontal and vertical extent has not been established. Extent of impact will be based on limits of final excavation. Final vertical and horizontal extent of the excavation will be based on results from collected grab soil samples from the excavation walls. All soil Samples will be analyzed and verified complaint with COGCC Tale 915-1.

Proposed Groundwater Sampling

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

Quarterly groundwater monitoring will be performed at completed groundwater monitoring well locations. Groundwater samples will be analyzed for the full suite of Table 915-1 constituents.

Proposed Surface Water Sampling

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

Godding Hollow will be sampled on a quarterly basis. Surface water sample will be analyzed for the full suite of Table 915-1 constituents.

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 0

Number of soil samples exceeding 915-1 0

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

Approximate areal extent (square feet)

NA / ND

NA Highest concentration of TPH (mg/kg)

NA Highest concentration of SAR

BTEX > 915-1 No

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

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

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?

Based on measured groundwater elevations, monitoring well MW-1 is upgradient. Consequently, chlorides, sulfates and TDS concentrations in the samples collected from monitoring well MW-1 are considered to be background concentrations for this monitoring period.

☐ 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?

In an effort to determine the northern and western extent of contamination, up to 19 probe borings will be completed to depths of approximately 20 feet on Septemebr 14, 2021 (or at a later date upon approval). A detailed investigation plan and map illustrating the boring locations has been attached.

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.

KPK will begin excavation using known points of contamination based on February 25, 2019 samples from exploratory borings. KPK will continue soil excavation until horizontal extent of contamination is determined. Excavation activities will continue based on the results field screening results from ambient temperature head space measurements within the excavation area. All contaminated soil will be removed from the location. Vertical extent is believed to be below groundwater level.

REMEDATION 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 the removal of contaminated soil, grab samples will be collected to verify the completion of excavation activities. Analysis for grab samples included TPH -DRO, GRO & ORO, BTEX, pH, EC, and SAR. Upon verification that sample concentrations are below Table 910-1 thresholds, the excavation area will be backfilled with clean fill dirt. A groundwater monitoring plan will be submitted in a Supplemental Form 27 to address known groundwater contamination. Groundwater monitoring plan will include placement of piezometers, frequency of sampling, analysis of samples, and potential groundwater treatment timeline.

Remedial actions of impacted soil will commence on May 6, 2020 and will conclude as soon as practicable pending availability of necessary resources (e.g., dump trucks). Upon completion of the removal of impacted soil, impact to groundwater will be delineated to the north, east and south. If excavation activities require the removal of currently installed monitoring wells to the west, quarterly groundwater sampling and reporting will be suspended until monitoring wells can be reinstalled.

Soil Remediation Summary

☐ In Situ

☒ Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____ 3065

_____ 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.

Groundwater monitoring plan will be provided via supplemental Form 27 upon the completion of contaminated soil excavation. Groundwater will continue to be sampled on a quarterly basis with the existing groundwater monitoring wells. Groundwater sampling will continue until monitoring wells are removed for excavation activities.

11/02/2020 Update - In an effort to delineate groundwater impacts, a monitoring well needs to be installed upgradient of MW-2. A map with the proposed location of the new monitoring well has been provided.

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

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:

None

Volume of E&P Waste (solid) in cubic yards 3065

E&P waste (solid) description Impacted soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Front Range Landfill

Volume of E&P Waste (liquid) in barrels 3280

E&P waste (liquid) description Impacted groundwater

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: NGL Water Disposal Solutions

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? No

Is additional groundwater monitoring to be conducted? Yes

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.

Area disturbed outside tank battery location be re-contoured to match surrounding contour, ripped and reseeded. Area within tank battery location will be reconstructed for operational use.

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. _____

Proposed date of completion of Reclamation. _____

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. 02/08/2019

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/14/2018

Proposed site investigation commencement. 11/26/2018

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/01/2022

Proposed date of completion of Remediation. 11/29/2024

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

Waiting on resolution of historic contamination.

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

Signed: Ray Gorka

Title: Dir. Enviro. Compliance

Submit Date: 10/15/2021

Email: rgorka@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: CHRIS CANFIELD

Date: 12/03/2021

Remediation Project Number: 12158

Condition of Approval**COA Type****Description**

	<p>The Operator's statement that they are "Waiting on resolution of historic contamination." does not comply with Part f. (Potential Historic Contamination) of Section IV (Compliance Requirements) of the Compliance Plan Agreement (Cause No. 1V, Docket No. 201100261).</p> <p>Discovery of historic contamination and/or historic oil and gas equipment at remediation project locations will not be grounds to discontinue remediation activities. If current spills/releases have caused commingling of impacts with historic contamination at a remediation location, KPK will work to remediate all impacts unless relieved of that obligation by the Commission in connection with the designation of a third party as the Responsible Party under Rule 526.</p> <p>The must continue the process of reporting, investigating, and remediating spills or releases of E&P Waste (COGCC Rules 912 and 913).</p>
	<p>Operator shall continue quarterly groundwater monitoring for the duration of the remediation project. All groundwater samples shall be analyzed for Table 915-1 Organic Compounds in Groundwater and Groundwater Inorganic Parameters.</p>
	<p>The subject Form 27 does not satisfy the requirements of Rule 913.e. as well a COA applied to Supplemental Form 27 #402763207. Operator shall submit Quarterly Updates every 90 days including a detailed project summary and status, as required by Rule 913.e. Quarterly updates shall include a current map of the subject location including current excavation limits, soil boring locations, and monitoring well locations. GPS data used to create the map must comply with COGCC Rule 216. Operator will include historical and recent soil analytical data in a table format in Quarterly updates. Operator shall submit field notes of all field activities reported during a Quarterly Update.</p>
	<p>Passing the subject Form 27 serves to acknowledge receipt by the COGCC and does not imply approval of any requests therein. COGCC's review of and response to such requests will be made separately.</p>
4 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**

402843630	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)