

State of Colorado Oil and Gas Conservation Commission

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402689339

Receive Date:

05/14/2021

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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

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>Jeff Rickard</u>	Email: <u>jrickard@kpk.com</u>	Mobile: <u>()</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 15743Initial Form 27 Document #: 402443583

PURPOSE INFORMATION

- | | |
|--|---|
| <input type="checkbox"/> 901.e. Sensitive Area Determination | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water |
| <input type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure | <input checked="" type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation | <input checked="" type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste | <input type="checkbox"/> Rule 906.c.: Director request |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____ |

SITE INFORMATION

N Multiple Facilities (in accordance with Rule 909.c.)

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>476918</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Robert G Berge #2</u>		Latitude: <u>40.074685</u>	Longitude: <u>-104.854142</u>
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>2</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 SPMost Sensitive Adjacent Land Use CroplandIs domestic water well within 1/4 mile? YesIs surface water within 1/4 mile? YesIs groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

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
UNDETERMINED	GROUNDWATER	Unknown	Undetermined
Yes	SOILS	10'x 10' area	Visual of initial excavation activities.
UNDETERMINED	SURFACE WATER	Unknown	Undetermined

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 immediately shut-in well upon notification of flowline release. A vac truck was brought in to remove any fluids that had pooled at the surface of the release location. Release occurred in close proximity to a active irrigation ditch (Brantner Ditch). Hydrocarbon fluid released from the flowline was leeching from the western ditch wall into the water. KPK installed multiple sections of booms to try and contain any hydrocarbon fluid that was being released into the water. Initial excavation work was conducted to remove impacted soil; however, due to increased water flow from the irrigation ditch, initial excavation work needed to be backfilled and the ditch wall reconstructed. Excavation will not be able to reuse until ditch ceases operations for the season.

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):

Additional details regarding site investigation activities, including soil borings to delineate the extent of impact, have been included in the attached Site Investigation Plan. Once the ditch has ceased operations for the season (est. late October 2020), excavation activities will begin to remove impacted material from the flowline release area. Final vertical and horizontal extent of excavation area will be based results of soil boring site investigation and on results from collected grab soil samples. All soil samples will be analyzed for TPH - DRO, GRO & ORO, BTEX, pH, EC, and SAR and verified compliant with COGCC Table 910-1. At a minimum, one grab sample will be collected from each excavation wall as well as from the base of the excavation area.

Proposed Groundwater Sampling

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

A temporary groundwater monitoring well is planned to be installed to collect at least one (1) groundwater sample. Groundwater sample will be analyzed for BTEX. Additional details regarding groundwater sampling have been included in the attached Site Investigation Plan.

Proposed Surface Water Sampling

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

Surface water samples will be collected per the requirements the COAs of the Spill/Release Report (Doc #402428176). Additional details regarding surface water sampling have been included in the attached Site Investigation Plan.

Additional Investigative Actions

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

Additional investigative actions to delineate the extent of impact while the ditch is still in service has been attached.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5

Number of soil samples exceeding 910-1 1

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 750

NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 6.41

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 8

Groundwater

Number of groundwater samples collected 1

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 8'

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 910-1 0

ND Highest concentration of Benzene (µg/l)

ND Highest concentration of Toluene (µg/l)

ND Highest concentration of Ethylbenzene (µg/l)

ND Highest concentration of Xylene (µg/l)

NA Highest concentration of Methane (mg/l)

Surface Water

3 Number of surface water samples collected

0 Number of surface water samples exceeding 910-1

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?

Additional details regarding site investigation have been included in the attached Site Investigation Plan.

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.

All impacted soil will be excavated and hauled to a certified disposal location.

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.

Excavation will be performed to remove all impacted soil. Impacted soil will be brought to a certified disposal facility to be disposed of. If groundwater is found to be impacted, a groundwater monitoring plan will be submitted for review and approval to address groundwater known impacts. Excavation activities to remove impacted soil will not be able to begin until the Fall when the irrigation ditch is dry.

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) _____ 375

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.

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other Request for Closure

Report Type: ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report

☒ Other Site Investigation Report

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 375

E&P waste (solid) description Hydrocarbon Impacted Soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Denver Regional 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: _____

REMEDATION COMPLETION REPORT

REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

Do all soils meet Table 910-1 standards? _____

Does the previous reply indicate consideration of background concentrations? _____

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? _____

Does Groundwater meet Table 910-1 standards? Yes

Is additional groundwater monitoring to be conducted? Yes

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 of excavation will be backfilled with clean fill dirt. Backfilled excavation area will be contoured, ripped, and seeded Any portion of the irrigation ditch deconstructed during the excavation process will be rebuilt using materials approved by the ditch company.

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 approve the seed mix? No

If NO, does the seed mix comply with local soil conservation district recommendations? No

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/23/2020

Date of commencement of Site Investigation. 07/23/2020

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 11/02/2020

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

KPK is requesting the closure of Remediation Project#15743. All relevant information is in the attached report as requested by the COGCC EPS staff.

Excavation was backfilled prior to COGCC approval at the request of the COGCC and the Bratner Ditch Company.

Correspondence with the ditch company is attached per COGCC EPS request.

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

Signed: Jeff Rickard

Title: Regulatory

Submit Date: 05/14/2021

Email: jrickard@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: 06/08/2021

Remediation Project Number: 15743

Condition of Approval

COA Type

Description

	The COGCC denies the operator's Final Closure Request for the subject remediation project.
	Operator will install monitoring wells (within the spill/release area, cross-gradient, down-gradient, and up-gradient) to properly characterize groundwater pursuant to Rule 915. If the initial analytical results are below COGCC Table 915-1 concentrations, then COGCC will consider a Final Closure Request. If any exceedances are detected, then four quarters of monitoring shall be required.
	Operator will verify the Bratner Ditch wall has been repaired to the ditch company's satisfaction. Note that Operator has submitted correspondence confirming the ditch company was notified at the time repairs began.
	Operator will implement appropriate Storm Water BMPs to stabilize the repaired section of the Bratner Ditch and prevent sediment from entering the ditch.
	Operator will submit disposal documentation for groundwater removed from the excavation prior to backfilling to verify compliance with Rule 905.b.(1).
	Operator will submit their field notes, photographs, and measurements including all field screening results as required by Rule 915.e.(1)A.

	Operator will clarify the nomenclature used to identify the subject remediation project and sample sites. A variety of names were used, for example Robert Berge #1 (instead of Robert G. Berge #2) listed as the project name/location on a Summit Scientific report of analytical results dated 02/09/2021. It is not clear if the use of different names represent aliases, clerical errors, or information related to other locations.
	Operator will verify the location of the background sample shown on Figure #2, Soil Sample Location Map. The latitude and longitude submitted for the background sample plot to the north of the excavation, not to the east as shown on the figure. Operator will also explain their rationale for a single background sample site that is located to the east of the Branter Ditch.
	Operator will explain the significance of a pressure chart (described as "other") attached to the subject Form 27. It looks like an integrity test was run at 30 psi with no drop in pressure over a 1 hour test period. It would meet the requirements for a satisfactory test only if the average operating pressure of the flowline is 30 psi or less, but such a test is not discussed in the report. Note that COGCC personnel did not witness the test.
9 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

402689339	FORM 27-SUPPLEMENTAL-SUBMITTED
402689341	OTHER
402689382	CORRESPONDENCE
402689715	SITE INVESTIGATION REPORT

Total Attach: 4 Files

General Comments

User Group

Comment

Comment Date

	General Comments – The Site Investigation Report submitted with the subject Form 27 includes two other reports submitted previously (Apex Report dated 09/08/2020, COGCC Document #402495278 and Apex Report dated 12/03/2020, COGCC Document #402546995). Prior submittals should be incorporated by reference to their COGCC document numbers. Interspersing verbatim copies of the prior submittals with new information resulted in a document that is 185 pages long with redundant numbering of pages and appendix/attachment titles. Note that page numbers were not assigned to 60 pages of new material. Document footers do not consistently match the subject remediation project (e.g. Frank J. Vogl used instead of Robert G. Berge #2). A table of contents would improve the usability of the document.	06/08/2021
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Total: 1 comment(s)