

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
403163864  
Receive Date:  
01/18/2023

Report taken by:  
Candice (Nikki) Graber

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 16995 Initial Form 27 Document #: 402611133

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

Yes  Multiple Facilities

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-16238</u>	County Name: <u>WELD</u>
Facility Name: <u>JOHNSON 32-30</u>	Latitude: <u>40.110850</u>	Longitude: <u>-105.043375</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNE</u>	Sec: <u>30</u>	Twp: <u>2N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>LOCATION</u>	Facility ID: <u>332996</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>JOHNSON-62N68W 30SWNE</u>	Latitude: <u>40.110850</u>	Longitude: <u>-105.043375</u>	
** correct Lat/Long if needed: Latitude: <u>40.111050</u>		Longitude: <u>-105.043173</u>	
QtrQtr: <u>SWNE</u>	Sec: <u>30</u>	Twp: <u>2N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

## SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Cropland

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**

Approximately 7 residences, possibly 12 habitable structures are within a quarter mile of the site; County Road 16.5 is 540 feet south of the site SURFACE WATER: Gooding Dailey and Plumb Ditch. a USFWS-mapped riverine wetland, is approximately 160 feet east of the site. The 100 year floodplain is east approximately 315 feet of the site; High Priority habitat is mapped over the site: a Bald Eagle Active Nest site half mile buffer and a Bald Eagle Roost Site buffer are mapped over the site. CPW has been contacted about these buffers (discussed re-seeding work in the spring and hand auguring for confirmation sampling). CPW has not followed up with MarCom as of the date of this submission. There are 2 domestic water wells within a quarter mile of the site.

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input checked="" type="checkbox"/> Oil            | <input type="checkbox"/> Tank Bottoms                |  |
| <input type="checkbox"/> Condensate                | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |  |
|  | <input type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) | _____                                  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	SOILS	No Impacts	Analytical Testing

## INITIAL ACTION SUMMARY

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

In accordance with COGCC Rule 911, This form has been prepared to finalize the plugging and abandonment of the Johnson 32-30 wellhead, the removal of the associated flowline, the removal of the Tank Battery, separator, and Produced water vessel (There are no Offsite flowlines). All equipment is located on the same facility under the same facility (Wellhead) ID. The flowline has been permanently removed. In accordance with COGCC Rule 911.a., soil and groundwater (if present) samples will be collected and submitted for laboratory analysis to determine if concentrations and values are in compliance with COGCC Table 915-1. Visual inspection and field screening of soils around the wellhead, associated flowline, Tank Battery, Separator, and Produced water vault will be conducted during sampling activities. Soil vapor screening will also be performed around the wellhead. Landowner notification documentation in related form 6 and Form 42 Doc. 402366043, and Doc. 402367320.

## 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 will be field screened at the wellhead and associated flowline. Samples will be collected if indications of impacts to soil are present. If impacted soils are encountered, a waste characterization soil sample will be collected from the area exhibiting the highest degree of impact based on visual, olfactory, and/or field screening observations. In the absence of apparent impacts, a soil sample will be collected from the base of the excavation adjacent to the wellhead, adjacent to the separator riser, and the areas most likely to have been impacted during the operational life of the flowline. Soil samples will be submitted for 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 48 Hour notice prior to the installation of Monitoring wells. Soil data will be collected. Boring and well construction logs will be completed and provided in a supplemental form 27.

### Proposed Groundwater Sampling

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

If groundwater is encountered during excavation, 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 48 Hour notice prior to the installation of Monitoring wells. Soil data will be collected. Boring and well construction logs will be completed and provided in a supplemental form 27.

### 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 ):

If no impacts are observed, a minimum of one soil sample from the wellhead, separator riser, below the tank battery, and associated flowline excavations will be submitted for laboratory analysis of BTEX, naphthalene, and TPH - gasoline range organics (GRO: C6-C10) by United States Environmental Protection Agency (USEPA) Method 8260D, TPH - diesel range organics (DRO: C10-C28) and oil range organics (ORO: C28-C40), pH, specific conductance (EC), sodium adsorption ratio (SAR), boron, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene. If impacts are encountered, a minimum of one soil sample will be submitted for laboratory analysis of the full COGCC Table 915-1 analytical suite. Refer to comments for additional site sampling details. Operator will re-sample #003 on the south side of the former partially buried storage vessel to assess if the arsenic level in soil sample #003 was an outlier.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 20

Number of soil samples exceeding 915-1 19

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

Approximate areal extent (square feet) 400

### NA / ND

-- Highest concentration of TPH (mg/kg) 68

-- Highest concentration of SAR 2.73

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 15

### 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?

MarCom collected background samples on 3/1/21, 5/26/21, and 6/27/22. Additional background samples are required from shallower depths to compare to confirmation soil sample analytics.

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?

Operator will re-sample #001 through #004, and sample under the middle of the partially buried vessel at 3 feet bgs to reassess arsenic and PH. The center sample (proposed as 005) will be run for the full table 915-1. Soil will be field screened at the wellhead, battery, and associated flowline. Samples will be collected if indications of impacts to soil or groundwater are present. If impacted soils are encountered, a waste characterization soil sample will be collected from the area exhibiting the highest degree of impact based on visual, olfactory, and/or field screening observations. In the absence of apparent impacts, a soil sample will be collected from the base of the excavation adjacent to the wellhead, adjacent to the separator riser, and the areas most likely to have been impacted during the operational life of the flowline. Soil samples will be submitted to an accredited laboratory for analysis using standard methods appropriate for detecting the target analytes in COGCC Table 915-1. Proposed soil sample and screening locations are provided on Figure 2. Refer to comments for additional site sampling details.

## REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

### SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

If impacts are found, all impacted soil will be excavated and hauled to a certified disposal location. All removed groundwater will be disposed of at a certified disposal location. Waste disposal manifests will be provided with the next form submittal if soil and groundwater are encountered. Per COGCC comment on return to draft, Form 19 will be submitted for any suspected or actual spill of any volume where the volume cannot be immediately determined.

### REMEDICATION 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.

Potential impacts that meet the criteria in Rule 912.b. will be reported to the Director in accordance with that Rule and a site-specific soil and/or groundwater remediation plan will be developed and submitted to the COGCC via a supplemental Form 27 in accordance with Rule 913. If reportable impacts are not encountered, a supplemental Form 27 requesting closure will be submitted within 90 days following completion of sampling activities. Field screening and applicable laboratory analytical results will be reported in all submittals. E&P waste records of material transported off-site are kept on file and available upon request. Operator will submit Form 27 within 45 days of site investigation completion, detailing the findings and completion of the P&A activities. Refer to comments for additional site remediation details

**Soil Remediation Summary**

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 10

\_\_\_\_\_ 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 decommissioning and/or abandonment 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 48 Hour notice prior to the installation of Monitoring wells.



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.

The site will be reclaimed in accordance with COGCC 1000 Series Reclamation Rules. The Surface owner will also be consulted during reclamation activities.

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. 04/03/2023

Proposed date of completion of Reclamation. 05/08/2023

## 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. 06/15/2022

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/08/2021

Proposed site investigation commencement. 02/08/2021

Proposed completion of site investigation. 02/15/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 02/16/2023

Proposed date of completion of Remediation. 04/01/2023

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:

Updated implementation schedule to account for additional P&A sampling activities.

## OPERATOR COMMENT

Based on confirmation and background soil sampling analytics, there may be impacts in-situ from the operation of the partially buried produced water vessel. Soil sample #001-004 collected on 3/1/2021 exceeded the site-specific background limit for arsenic; and PH. However, there are no other exceedances or other indications of a produced water or E&P release. A hand auger will be utilized for sampling #001-005. A form 19 will be submitted if the analytical data indicates arsenic is elevated as a result of a release from the vessel.

Landowner has been contacted to update them on the status of the project. Notification date in the implementation schedule has been updated to reflect this. A copy of the landowner correspondence is attached. An additional perimeter confirmation soil sample will also be collected to satisfy COGCC request for 5 discrete soil samples from the base of the PBV. Duplicate attachments have been removed per COGCC request.

CPW has been contacted to see if there will be any restrictions for re-seeding activities in the spring. Remedial action plan section has been updated to reflect current site conditions. The attached analytical spreadsheet has been updated to calculate site-specific background concentrations. The potential receptors list has been updated and initial correspondence with CPW is attached. The reason for submittal has been updated per COGCC comment on Return to Draft email dated 12/5/2022.

3 Dirt Out manifests have been attached to show that clean fill dirt was utilized as backfill material. Waste disposal manifests have been requested and will be provided in a supplemental quarterly update Form 27 submission. Current values in the soil disposal sections are estimates based on the area of the PBV.

Notes for equipment other than the PBV:

This form is also associated with the removal of the associated onsite flowlines, tank battery, and separator (No offsite flowlines present). Soil screening was conducted at the wellhead, and at the removed produced water vessel. In order to fulfill COGCC 911.a requirements, MarCom is proposing additional screening be completed every 20' along the flowline, at each turn, and bend, at the ends, under the separator and tank battery, and at the wellhead. If impacts are not present, sample locations at the end of flowlines, turns, bends, and facility equipment be analyzed for Full Table 915-1 Constituents. Soil samples were collected at the Produced water vessel however elevated levels of Table 915-1 Inorganics remained in place. KPK needs to go back out and continue remediation on this under remediation number 16995. KPK personnel, field screened the wellhead and had average PID readings of 61 ppm. However, no samples were collected, and the site has since been backfilled. MarCom is proposing returning to the site, hand auguring at each of the proposed screening/sampling locations, including the wellhead to determine weather or not impacts remain on site. Following the completion of this investigation a Supplemental Form 27 requesting closure of the P&A will be submitted pending the findings.

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: 01/18/2023

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: 16995

### 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

403163864	FORM 27-SUPPLEMENTAL-SUBMITTED
403163919	MAP
403163940	DISPOSAL MANIFESTS
403163942	DISPOSAL MANIFESTS
403163943	DISPOSAL MANIFESTS
403163950	ANALYTICAL RESULTS
403250005	LOGS
403264936	CORRESPONDENCE
403268092	SOIL SAMPLE LOCATION MAP
403274354	CORRESPONDENCE

Total Attach: 11 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	This Form 27 cannot be approved based on the information submitted. Therefore Document ID #[403163864] will be denied. The Operator is directed to submit a replacement form.	03/01/2023
Environmental	<p>COGCC has denied this form for the following reasons:</p> <ul style="list-style-type: none"> <li>- COGCC returned this form to draft on 12/28/2022 noting "Correspondence with CPW and Potential Receptors say that the scope of work is only re-seeding of the area but the attached site assessment map, the proposed site investigation, and operator comments describe a site investigation for tank battery abandonment, flowline abandonment, and wellhead P&amp;A. The full form should be updated to reflect this and additional correspondence to CPW with a plan update is required." The resubmission of this form does not address the issues noted here.</li> <li>- Per meetings with CPW access is restricted until the nesting season ends so COGCC cannot approve the workplan until a timeline in compliance with these restrictions is proposed.</li> </ul>	03/01/2023

Total: 2 comment(s)