

State of Colorado Oil and Gas Conservation Commission

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Document Number:

402940159

Receive Date:

01/28/2022

Report taken by:

Laurel Anderson

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>(208) 2018280</u> Mobile: <u>()</u>
Address: <u>1675 BROADWAY, STE 2800</u>		
City: <u>DENVER</u>	State: <u>CO</u> Zip: <u>80202</u>	
Contact Person: <u>Jennifer Galles</u>	Email: <u>PrimaryContractor@marcomllc.net</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 19616 Initial Form 27 Document #: 402762330

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>480275</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>E. Stieber Consolidation</u>		Latitude: <u>40.043547</u>	Longitude: <u>-104.857700</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>NWNE</u>	Sec: <u>23</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 Ag

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	TBD	TBD
Yes	SOILS	TBD	TBD

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 has been repaired and the impacted soil in the immediate area has been removed.

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 number of soil samples will be determined once impacts are delineated

Proposed Groundwater Sampling

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

The number of water wells to be installed to monitor GW will be determined once impacts are fully delineated. A minimum of 4 wells will be installed around the impacted area.

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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 6
Number of soil samples exceeding 915-1 3
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 900

NA / ND

-- Highest concentration of TPH (mg/kg) 768
NA Highest concentration of SAR
BTEX > 915-1 Yes
Vertical Extent > 915-1 (in feet) 8

Groundwater

Number of groundwater samples collected 6
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 8'
Number of groundwater monitoring wells installed 6
Number of groundwater samples exceeding 915-1 2

-- Highest concentration of Benzene (µg/l) 220
-- Highest concentration of Toluene (µg/l) 86
ND Highest concentration of Ethylbenzene (µg/l)
-- Highest concentration of Xylene (µg/l) 1200
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?

Impacts have been observed off property to the West.

☐ 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) 250 Volume of liquid waste (barrels) 100

☒ Is further site investigation required?

Excavation ongoing. Need to sample on north side of CR8. Need additional gw delineation

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.

Soil: Removal and disposal

Water: Pumping and removal through 2021 irrigation season, then BOS 200 and monitoring.

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.

Currently KPK has been excavating and removing impacted soils along with pumping free product on a daily basis. The excavation has been halted due to the danger of undermining an active irrigation line to the west. KPK had to backfill the excavation to eliminate damaging this irrigation line. The excavation was backfilled with 3" crushed concrete and a 6" slotted PVC pipe was installed in the backfill. KPK will pump free product and contaminated ground water from this PVC pipe daily M-F until the irrigation line is shut off for the season and the excavation can continue. KPK will dispose of the backfill material in accordance with 900 series rules when the excavation resumes.

Soil Remediation Summary

☐ In Situ

☒ Ex Situ

 Bioremediation (or enhanced bioremediation)

 Yes Excavate and offsite disposal

☐ Chemical oxidation
☐ Air sparge / Soil vapor extraction
☐ Natural Attenuation
☐ Other _____

If Yes: Estimated Volume (Cubic Yards) 250

Name of Licensed Disposal Facility or COGCC Facility ID # _____

☐ No ☐ Excavate and onsite remediation

☐ No ☐ Land Treatment

☐ No ☐ Bioremediation (or enhanced bioremediation)

☐ No ☐ Chemical oxidation

☐ Other _____

Groundwater Remediation Summary

☐ Yes ☐ Bioremediation (or enhanced bioremediation)

☐ No ☐ Chemical oxidation

☐ No ☐ Air sparge / Soil vapor extraction

☐ Yes ☐ Natural Attenuation

☐ Yes ☐ Other ☐ Pumping of free product and BOS200 _____

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.

Teh number and placement of GW monitoring wells will be determined when impacts have been delineated.

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?

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

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility:

Volume of E&P Waste (liquid) in barrels

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?

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.

Impacted area will be reclaimed to 1100 series 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? _____

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. 11/01/2021

Proposed date of completion of Reclamation. 11/01/2023

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. 07/07/2021

Actual Spill or Release date, or date of discovery. 07/07/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/07/2021

Proposed site investigation commencement. 07/07/2021

Proposed completion of site investigation. 03/31/2022

REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/27/2021

Proposed date of completion of Remediation. 09/30/2022

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

submittal of bi-weekly domestic well results

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

Signed: Jennifer Galles

Title: Consultant

Submit Date: 01/28/2022

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: Candice (Nikki) Graber

Date: 02/18/2022

Remediation Project Number: 19616

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

	The bore logs attached as Doc #402927173 are missing: depth to water, well construction details. The Operator shall provide the depth to water and the screen and riser intervals in the next Supplemental Form 27. Additionally, a bore log for Borehole # PB-1 for Project: Facility #4 North was also attached - the Operator shall provide the reasoning behind attaching the referenced bore log on the next Supplemental Form 27.
	In the Remediation Summary the Operator states that excavation activities are ongoing. However, the estimated volume of soil removed has not been update and soil disposal manifests have not been provided. The Operator shall update the relevant sections and attach all soil previous disposal manifests in the next Supplemental Form 27s.
	<p>The following COA's have not been addressed: (NOTE: the COA's have been revised for clarification and to request additional data)</p> <p>Due to observed free product in MW-3 and MW-4 emergency approval for additional work was granted via email by John Axelson on 9/16/2021 (Document #1585420). COGCC has not received an update on progress for this work. As of 1/26/2022 COGCC inspections have not observed any additional monitoring well installation. In accordance with Rule 914, if impacts are observed during monitoring well installation a step out monitoring well(s) shall be installed to define the horizontal extent of impacts to soil and ground water and the monitoring wells shall be installed within 14 days of observations. According to Rule 914 the installation of said monitoring wells is overdue. The Operator shall provide a plan and timeline for monitoring well installation on the next Supplemental Form 27. Additionally, the Operator will survey all the monitoring wells (existing and future) and calculate and display the groundwater elevation contours bi-weekly with sampling of domestic water well. NOTE: As of 1/19/2021 the bi-weekly calculation and display of the groundwater elevation contours has not occurred.</p> <p>-Operator shall perform a complete soil and groundwater characterization and delineation at the site to further determine groundwater gradient and flow direction as well as the full extent of impacts. In addition to the previously installed up-gradient, down-gradient, two cross gradient, and source well, additional monitoring wells shall be installed at the following locations: Between release area and the domestic water well (DWR Permit 215661; as mapped in COGIS) and on the north side of CR 8. If field screening is to be used in conjunction with laboratory reports to define the horizontal and vertical impacts, Operator shall provide field screening readings when submitting the Form 27 Supplemental Site Investigation.</p> <p>Operator shall continue to provide updated sample location map(s), groundwater contour maps, and table(s) containing analytical results with each Supplemental Form 27. Additionally, the Operator shall provide a table with the Lat/Long coordinates of all (existing and future) soil borings and monitoring wells, as well as, the domestic water well, and the stand pipe. Note: the Operator has not provided an updated Sample Location Map as of 1/19/2022.</p> <p>Operator shall sample the domestic water well (DWR Permit 215661) on a bi-weekly basis for the Organic Compounds in Groundwater (benzene, toluene, ethylbenzene, xylenes, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene). NOTE: The last</p>

round of sampling was for BTEX only. Additionally, the Operator has not provided analytical samples from bi-weekly sampling of DWR Permit 215661 for sampling performed on the following dates: of 8/3/21, 9/15/21, 12/6/21, 12/21/21, and 1/4/22. Operator shall attach these analytical results on the next Supplemental Form 27. Additionally, the Operator shall provide a table containing all analytical results from the Domestic Well (DWR Permit 215661) with each Supplemental Form 27.

Field Inspection No. 691201519 required Operator to submit disposal manifests by October 4, 2021. Waste manifests provided (Document #402859761) only document work done between 10/1/2021 and 10/28/2021. Operator shall submit all waste manifests to date in the next Supplemental Form 27s and any future waste manifests in subsequent Form 27s's. Additionally, the Operator shall update the waste disposal information section on the next Supplemental Form 27.

The following COA's are outstanding from the initial Form 27 (Doc 402762330):

- On the next Form 27s the Operator shall provide a construction log of the stand pipe including Total Depth, Slotted Interval, Diameter location (Lat/Long) within the excavation, and filter pack. Operator shall also provide details on how the stand pipe is capped and secured at the surface. The sketch attached as Doc #402862163 does not meet this criteria.

- Operator will continue to submit a minimum of one soil sample for laboratory analysis of Table 915- 1 Parameters from each soil boring advanced during monitoring well installation. (NOTE: To date the Operator has not submitted the previous samples for the full Table 915-1 Parameter list - The Operator shall submit subsequent samples for the full Table 915-1 suite). The sample collected will be from the interval(s) displaying the highest degree of impacts.

- Operator shall track the volume of fluids recovered daily and provide quantities in a table on the next supplemental Form 27.

- Under the Groundwater Remediation Summary the Operator has noted that BOS200 is being used. Operator shall provide an update on the method of use, application rate and frequency, and provide the SDS for the BOS200 with the next Supplemental Form 27.

The proposed date of commencement of Reclamation in the Site Reclamation Dates section of Doc #402923411 indicates a commencement date of 11/01/2021. Reclamation cannot begin until the site investigation and remediation are complete. Please update this section in the next Supplemental Form 27.

The Source Removal and Remediation Summary Sections of Doc #402940159 state: "Soil: Removal and disposal & Water: Pumping and removal through 2021 irrigation season, then BOS 200 and monitoring." and "Currently KPK has been excavating and removing impacted soils along with pumping free product on a daily basis. The excavation has been halted due to the danger of undermining an active irrigation line to the west. KPK had to backfill the excavation to eliminate damaging this irrigation line. The excavation was backfilled with 'crushed concrete and a 'slotted PVC pipe was installed in the backfill. KPK will pump free product and contaminated ground water from this PVC pipe daily M-F until the irrigation line is shut off for the season and the excavation can continue. KPK will dispose of the backfill material in accordance with 900 series rules when the excavation resumes."

However, Form 27s (Doc #402923411) submitted on January 19, 2022 states: "Soil: Removal and disposal." & "Water: Pumping and removal through 2021 irrigation season, then BOS 200 and monitoring" and "Currently KPK has been excavating and removing impacted soils along with pumping free product. Excavation activities are ongoing. Remediation will be recommended once impacts are delineated."

The Operator shall clarify these sections on the next Supplemental Form 27 and address whether or not pumping of free product and use of BOS200 is ongoing.

	<p>The Other Investigation Information section of Doc #402940159 states: "Impacts have been observed off property to the West." and "Excavation ongoing. Need to sample on north side of CR8. Need additional gw delineation"</p> <p>However, the previous Form 27s (Doc #402923411) submitted on January 19, 2022 states: "Impacts have been observed in soil at residential property to the west. Investigation will be performed across the street to the north to evaluate for impacts to that property." and "Domestic well is sampled bi-weekly; analytical results ND. Excavation activities ongoing. Further groundwater investigation is needed."</p> <p>The Operator shall clarify this section on the subsequent Form 27s. Additionally, the question of whether or not investigation derived waste was generated as part of this investigation has not been checked; However, the installation of 6 monitoring wells suggests otherwise. The Operator shall update this section and attached any waste manifests for investigation derived waste (drill cuttings/purge water) from the installation of monitoring wells.</p>
	<p>In the sample summary section of Doc #402940159- Both soil and groundwater samples were reported as exceeding the table 915-1 standards.</p> <p>Given these exceedances the Operator shall:</p> <ul style="list-style-type: none"> -Submit all subsequent soil and groundwater samples for the full Table 915-1 suite. -Install additional permanent groundwater monitoring wells to the southeast and across CR 8 in order to delineate impacts to soil and groundwater. -Collect background soil and groundwater samples for comparison
	<p>The proposed groundwater sampling section of Doc #402940159 states: "The number of water wells to be installed to monitor GW will be determined once impacts are fully delineated. A minimum of 4 wells will be installed around the impacted area."</p> <p>However, 6 monitoring wells have been previously installed to date. Additionally, the previous Form 27s (Doc #402923411) submitted on January 19, 2022 states: "Currently 6 monitoring wells are installed. Based on analytical results from September 2021, further delineation is needed to the southeast (downgradient)". The Operator shall update based on previous Form 27s and the COAs attached (Doc #402923411).</p>
8 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.

<u>Att Doc Num</u>	<u>Name</u>
402940159	FORM 27-SUPPLEMENTAL-SUBMITTED
402940205	ANALYTICAL RESULTS

Total Attach: 2 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	Passing the subject Form 27 serves to acknowledge receipt of the attached information 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.	02/17/2022
Environmental	Operator shall continue to upload all analytical results of the domestic water well to the COENV database and provide the Form 43 under Related Forms in all subsequent Supplemental Form 27's.	02/17/2022

Total: 2 comment(s)