

State of Colorado Oil and Gas Conservation Commission

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KRIS NEIDEL

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>WESCO OPERATING INC</u>	Operator No: <u>95520</u>	Phone Numbers Phone: <u>(307) 5775329</u> Mobile: <u>()</u>
Address: <u>120 S DURBIN STREET</u>		
City: <u>CASPER</u>	State: <u>WY</u> Zip: <u>82602</u>	
Contact Person: <u>Dave Weinert</u>	Email: <u>davew@kirkwoodcompanies.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 14686 Initial Form 27 Document #: 402170695

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 type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation | <input 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 checked="" type="checkbox"/> Other <u>submit monthly safety pit inspection logs</u> |

SITE INFORMATION

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

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>467136</u>	API #: <u></u>	County Name: <u>MOFFAT</u>
Facility Name: <u>Maudlin tank battery</u>		Latitude: <u>40.286268</u>	Longitude: <u>-108.025514</u>
		** correct Lat/Long if needed: Latitude: <u></u>	Longitude: <u></u>
QtrQtr: <u>NWSW</u>	Sec: <u>26</u>	Twp: <u>4N</u>	Range: <u>95W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications ML Most Sensitive Adjacent Land Use grazing

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

none

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	spill path	visual
Yes	SURFACE WATER	Safety pit #1 and Safety pit #2	visual

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 spill remediation completed to date includes recovery of spilled fluids, washing of the tanks and other equipment within the tank berms, excavation and disposal of approximately 260 cubic yards of contaminated soils from along the spill path, removal of some of the stained vegetation from the safety pits, hot water washing and flushing of the oil in the safety pits, use of absorbents and a mechanical skimmer to remove floating oil from the safety pits.

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):

Along the spill path from the tank to the field access road, one grab soil sample will be collected from 0-6 inches below ground surface at the middle of the spill path, a second grab soil sample will be collected from 0-6 inches below ground at the end of the spill path. A third grab soil sample will be collected midway on the spill path between the tanks and the safety pits. A fourth grab soil sample will be collected from the pit sidewall on the northwest corner of safety pit #2 at the water level present at the time of sampling. A fifth soil sample will be collected from the NW corner of Safety Pit #1. The soil sample locations are shown on the attached map. Because the spilled material along the spill flow path consisted of crude oil, soil samples #2, 3, 4 and 5 will be analyzed only for Total Extractable Hydrocarbons. Soil sample #1 will be analyzed for the entire table 910-1 soil analyte list. A background soil sample will also be collected for Table 910-1 metals analysis.

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):

Water flows periodically from Safety Pit #1 into Safety Pit #2. No water has flowed from Safety Pit #2 since the spill occurred. A single grab surface water sample will be collected from near the Safety Pit #2 discharge pipe (lower end of the safety pit). The sample will be collected vertically from the middle of the fluid level in the pit at the time of sampling as shown on the attached map. The water sample will be analyzed only for Total Extractable Hydrocarbons.

Additional Investigative Actions

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

The safety pits are being inspected daily for the presence of floating hydrocarbons, to measure the fluid elevation in each pit and to verify that no water is being discharged from Safety Pit #2. The inspection includes documentation of the water level in both pits. The inspections are being documented on the attached form. These forms will be submitted monthly beginning in October, 2019 to the COGCC until approval to cease submittal is received from the COGCC.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected _____ 0
Number of soil samples exceeding 910-1 _____
Was the areal and vertical extent of soil contamination delineated? _____
Approximate areal extent (square feet) _____

NA / ND

_____ Highest concentration of TPH (mg/kg) _____
_____ Highest concentration of SAR _____
_____ BTEX > 910-1 _____
_____ Vertical Extent > 910-1 (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 910-1 _____

_____ 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 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?

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.

The source of the spill was an overflow from tanks located within the tank berm that resulted from the failure of an injection pump. Stained soils along the spill path have been removed. Spilled fluids in the tank berm have been recovered and the area within the tank berm washed to recover residual spilled fluids. The crude oil floating on safety pits #1 and 2 has been mostly recovered. Stained soils in the safety pits have been excavated. Additional soil and vegetation from within the safety pits has been removed.

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.

Stained soils along the spill path have been removed. Stained soils from within the safety pits have been excavated. Additional vegetation and soils from within the safety pits has been removed. The spilled fluids within the tank berm have been recovered. The crude oil floating on Safety Pits #1 and #2 has been mostly recovered. Recovery of the remaining floating oil in the safety pits is on going using absorbent materials. Based on the sampling described elsewhere in this document, any soils still present along the spill flow path above the Table 910-1 standards for the analytes tested will be removed and disposed of as E&P waste and then resampling will be completed to verify Table 910-1 compliance. If the water tested in Safety Pit #2 is above the COGCC Table 910-1 standards for the analyte tested, then one volume of the Safety Pit #2 water will be removed from Safety Pit #2 and the water retested after the fluid level has returned to static conditions or the remaining catails will be removed from both safety pits and the water retested to verify compliance with Table 910-1 standards. If the soil samples collected from the safety pits #2 is above the COGCC table 910-1 limits for the analytes tested, then additional soil sampling will be completed around the sample with the exceedence to determine the areal and horizontal extent of the area exceeding COGCC limits and a supplemental Form 27 submitted which proposes a remediation method for the soils exceeding COGCC Table 910-1 limits based on the volume of soils to be remediated. All remediation work related to this spill will be completed within 3 years of the spill date (August 24th, 2019). Volumes and methods presented below are estimated and subject to change based on the results of investigation work.

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) _____ 300
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.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other monthly safety pit inspection report

Report Type: ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report
☒ Other safety pits

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:

The recovered oil will be/has been processed for sale. The recovered wash water, fresh water and produced water will be/has been injected in the field injection wells. Waste disposal manifests will be submitted to the COGCC under a separate Form 27. Removed vegetation and soil has been placed into a lined containment area and will be disposed of. Volumes provided below are estimated.

Volume of E&P Waste (solid) in cubic yards 260

E&P waste (solid) description contaminated soil from along spill path

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: R360 Environmental Solutions, LaBarge, Wyoming and possibly other licensed facilities.

Volume of E&P Waste (liquid) in barrels 950

E&P waste (liquid) description recovered oil, produced water, recovered fresh water and wash water

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Maudlin Gulch tank battery

REMEDIATION COMPLETION REPORT

REMEDIATION 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? _____

Is additional groundwater monitoring to be conducted? _____

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.

No seeding is planned as part of the remediation of this spill.

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? _____

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

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. 08/25/2019

Actual Spill or Release date, if known. 08/24/2019

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/24/2019

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 08/24/2019

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

This form provides the April 2020 safety pit inspection log as required by the approved Form 27. As noted on the log, additional vegetation and soil were removed from the safety pits during April.

The sections of this Form 27s labeled "Source Removal Summary" and "Remediation Summary" have been updated to reflect additional remediation work completed. The section labeled "Site Conditions" has also been revised to reflect current site knowledge. The section labeled "Waste Disposal Information" has been updated. The section labeled "Soil Remediation Summary" has been updated.

In addition to the R360 facility used for waste and excavated soil disposal as listed in the "Waste Disposal Information" and "Soil Remediation Summary" sections, The Integrated Water Management Class IIIb Oil and Gas Exploration and Production Waste landfill located in Duchesne County Utah or other facilities may be used for disposal of soil and waste materials from this project. This form does not provide room for listing more than one facility so the additional facility information is provided here.

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

Signed: ` Dave Weinert _____

Title: HSE Coordinator _____

Submit Date: ` 05/12/2020 _____

Email: davew@kirkwoodcompanies.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: KRIS NEIDEL _____

Date: 05/19/2020 _____

Remediation Project Number: 14686 _____

COA Type**Description**

	Future Remedial efforts discussed here are not approved, decisions regarding future remedial efforts will be approved once more information is gathered. (specifically the volumes of water removed comments in "Remediation Summary".)
	The area on the south east side of the upper pit, near the shop should be vertically and horizontally delineated. APROX area around 40.286754,-108.025211.
	Hydrocarbon has been witness in the booms on the pits, indicating there is residual oil around the pit. Continue to remove any visible amount of oil in pits.
	Oil staining has been observed by COGCC staff as recent as 5/15/2020. In areas around the pit in soils and on pit equipment. All visible hydrocarbon should be removed.

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**

402395059	FORM 27-SUPPLEMENTAL-SUBMITTED
402395064	LOGS

Total Attach: 2 Files

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

Environmental	Water samples were collected from both "emergency pits" on 5/15/2020.	05/19/2020
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Total: 1 comment(s)