

# State of Colorado Oil and Gas Conservation Commission

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Report taken by:

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>	<b>Phone Numbers</b>
Address: <u>120 S DURBIN STREET</u>		Phone: <u>(307) 5775329</u>
City: <u>CASPER</u> State: <u>WY</u> Zip: <u>82602</u>		Mobile: <u>( )</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 type="checkbox"/> Other _____   |

#### SITE INFORMATION

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

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>467136</u>	API #: _____	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: _____		Longitude: _____	
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 SM 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? No

#### 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? No \_\_\_\_\_

## 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.

## 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. 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. Although the soil and water sample collection will be completed according to the schedule described elsewhere in this document, removal, remediation and/or disposal of additional soils or water will not occur until after the first Friday in December (see discussion in the Form 19s about landowner access limitations). All remediation work related to this spill will be completed within 3 years of the spill date (August 24th, 2019).

## Soil Remediation Summary



### In Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_



### Ex Situ

\_\_\_\_\_ Excavate and offsite disposal  
\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_  
\_\_\_\_\_ 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 pit inspection report

**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:

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 is currently being stored on the banks of Safety Pit #1. The stored vegetation will be disposed of. As discussed in the Form 19s previously submitted, the landowner access agreement stipulations prevent any large equipment entering the area until after the first Friday in December except for emergency purposes. Thus the removed vegetation cannot be disposed of until after the first Friday in December.

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

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 document provides the March, 2020 safety pit inspection log as required by the approved Form 27.

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: 03/27/2020

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: 04/03/2020

Remediation Project Number: 14686

### COA Type

### Description

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### 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

402354159	FORM 27-SUPPLEMENTAL-SUBMITTED
402354871	MONITORING REPORT

Total Attach: 2 Files

### General Comments

#### User Group

#### Comment

#### Comment Date

Environmental	COGCC acknowledges the recite of Monitoring logs, no other action was requested.	04/03/2020
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Total: 1 comment(s)