

# State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

402643191

Receive Date:

03/30/2021

Report taken by:

KRIS NEIDEL

## Site Investigation and Remediation Workplan (Initial 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: CHEVRON USA INC	Operator No: 16700	<b>Phone Numbers</b> Phone: (970) 675-3814 Mobile: (307) 871-5363
Address: 100 CHEVRON ROAD		
City: RANGELY	State: CO Zip: 81648	
Contact Person: Chris Patterson	Email: spwu@chevron.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 18600

Initial Form 27 Document #: 402643191

#### 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: SPILL OR RELEASE	Facility ID: 450198	API #: _____	County Name: RIO BLANCO
Facility Name: Fee 60 Injection Line 1		Latitude: 40.115658	Longitude: -108.841194
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: SWNE	Sec: 28	Twp: 2N	Range: 102W Meridian: 6 Sensitive Area? No

#### SITE CONDITIONS

General soil type - USCS Classifications CH

Most Sensitive Adjacent Land Use Non Crop Land

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

# 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	1026ft. x 2ft. x 0.5 ft	Field determined with tape measure

## INITIAL ACTION SUMMARY

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

On Sunday April 16, 2017 we had a release of 120 bbls injection water from the injection line at the Fee 60. No visible oil was released. We recovered 30 bbls of injection water. The area will be water washed and samples will be taken to ensure compliance with table 910-1. A soil sample location map and preliminary analytical results are included as an attachment.

## 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 ):

Preliminary soil samples were collected on May 22, 2017 from the spill path. A total of nine (9) grab samples analyzed for Table 910-1 parameters were collected at a depths from 0 to 6 inches below ground surface (ft-bgs). Results show elevated DRO, SAR and EC levels within the impacted area. Subsequent soil samples analyzed for SAR and EC at SS1-SS7 sample locations as well as for DRO at SS1 sample location will be collected during 2021 to monitor natural attenuation. The DRO resample at SS1 is intended to give a current representation of DRO levels in this area. Due to lack of noted stained soil during initial sampling event it is not believed that hydrocarbon impacts were widespread. If the DRO level at the SS1 location continue to remain above the Table 910-1 standard then a subsequent Form 27 outlining remediation approach will be submitted. SAR and EC impacted soils will be treated in-situ by Natural Attenuation. After initial water wash seasonal precipitation events

### 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 ):

## 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 9

Number of soil samples exceeding 910-1 7

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

Approximate areal extent (square feet) 2052

### NA / ND

-- Highest concentration of TPH (mg/kg) 17370

-- Highest concentration of SAR 58

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 0

### 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?

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

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

At this time no soil is intended for removal, however if the DRO level remains above Table 910-1 standards then impacted soil around the SS1 location will likely be removed. SAR and EC impacted soils will be treated in-situ by Natural Attenuation. After initial water wash seasonal precipitation events will be utilized. Subsequent soil samples analyzed for SAR and EC at SS1-SS7 sample locations as well as for DRO at SS1 sample location will be collected during 2021 to monitor natural attenuation. The DRO resample at SS1 is intended to give a current representation of DRO levels in this area. Due to lack of noted stained soil during initial sampling event it is not believed that hydrocarbon impacts were widespread.

## 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.

At this time no soil is intended for removal, however if the DRO level remains above Table 910-1 standards then impacted soil around the SS1 location will likely be removed. SAR and EC impacted soils will be treated in-situ by Natural Attenuation. After initial water wash seasonal precipitation events will be utilized. Subsequent soil samples analyzed for SAR and EC at SS1-SS7 sample locations as well as for DRO at SS1 sample location will be collected during 2021 to monitor natural attenuation. The DRO resample at SS1 is intended to give a current representation of DRO levels in this area. Due to lack of noted stained soil during initial sampling event it is not believed that hydrocarbon impacts were widespread.

## Soil Remediation Summary

☒ In Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
Yes \_\_\_\_\_ Natural Attenuation  
No \_\_\_\_\_ 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.

## REMEDATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☒ Annually ☐ Other \_\_\_\_\_

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

☒ Other REM Progress Rpt. \_\_\_\_\_

### 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: \_\_\_\_\_

## 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.

Site was reclaimed and seeded once repairs are completed.

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. \_\_\_\_\_

Actual Spill or Release date, if known. 03/16/2017

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/22/2017

Date of commencement of Site Investigation. \_\_\_\_\_

Date of completion of Site Investigation. 05/22/2017

### REMEDIAL ACTION DATES

Date of commencement of Remediation. \_\_\_\_\_

Date of completion of Remediation. \_\_\_\_\_

### SITE RECLAMATION DATES

Date of commencement of Reclamation. \_\_\_\_\_

Date of completion of Reclamation. \_\_\_\_\_

**OPERATOR COMMENT**

Please see attached

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

Signed: ` Chris Patterson

Title: Lead ENV Specialist

Submit Date: ` 03/30/2021

Email: spwu@chevron.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: 06/15/2021

Remediation Project Number: 18600

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

	If impacts remain elevated in 2021 sampling, Chevron shall propose Remediation methods, other than Natural Attenuation.
	Soil delineation shall include a sample, at appropriate depth, at the Spill/Release Point Location.
	By December 2021 the Operator shall collect samples and provide soil delineation results on a form 27.
	A description of remediation at SS1 shall be included in a supplemental report.
	Semi-annual reporting is approved, not annual.
5 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**

402643191	FORM 27-INITIAL-SUBMITTED
402643204	ANALYTICAL RESULTS

Total Attach: 2 Files

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

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)