

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
402291588  
Receive Date:  
01/23/2020  
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: CHEVRON USA INC	Operator No: 16700	Phone Numbers Phone: (832) 854-5620 Mobile: (832) 270-3436
Address: 100 CHEVRON ROAD		
City: RANGELY	State: CO	Zip: 81648
Contact Person: Adriane Gifford	Email: agifford@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

**PROJECT INFORMATION**  
Remediation Project #: 10501 Initial Form 27 Document #: 401379557

**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 type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation	<input checked="" 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: PIT	Facility ID: 102571	API #: _____	County Name: RIO BLANCO
Facility Name: RANGLEY WEBER STATION 47	Latitude: 40.094781	Longitude: -108.811852	
	** correct Lat/Long if needed: Latitude: 40.094902	Longitude: 108.811965	
QtrQtr: NWNE	Sec: 35	Twp: 2N	Range: 102W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

General soil type - USCS Classifications GC      Most Sensitive Adjacent Land Use Dry 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? Yes

**Other Potential Receptors within 1/4 mile**

No wells, White River approximately 600 ft. North and 1200 ft. West of Site Location.

# 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 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
Yes	SOILS	HC Impacts near MW-1	Soil Boring-Soil Samples

## INITIAL ACTION SUMMARY

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

Advancement of a total of six soil borings (SB-01 through SB-06) and installation of two down-gradient monitoring wells (MW-04 and MW-05) was completed to address the COAs described in document # 401203492 (REM PROJ # 8564). See the Soil Characterization Report - PIT CS-47.

## 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 ):

### Proposed Groundwater Sampling

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

Complete four quarters of groundwater monitoring and sampling to monitor 2018 remediation effectiveness.

### 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 0  
Number of soil samples exceeding 910-1 \_\_\_\_\_  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) \_\_\_\_\_

### NA / ND

NA Highest concentration of TPH (mg/kg) \_\_\_\_\_  
NA Highest concentration of SAR \_\_\_\_\_  
BTEX > 910-1 No  
Vertical Extent > 910-1 (in feet) \_\_\_\_\_

### Groundwater

Number of groundwater samples collected 28  
Was extent of groundwater contaminated delineated? Yes  
Depth to groundwater (below ground surface, in feet) 12'  
Number of groundwater monitoring wells installed 0  
Number of groundwater samples exceeding 910-1 5

-- Highest concentration of Benzene (µg/l) 0.000  
22  
ND Highest concentration of Toluene (µg/l) \_\_\_\_\_  
ND Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Xylene (µg/l) \_\_\_\_\_  
NA Highest concentration of Methane (mg/l) \_\_\_\_\_

### Surface Water

0 Number of surface water samples collected  
0 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?

Four quarters of groundwater monitoring and sampling were completed at Site monitoring wells in 2019. BTEX concentrations in all monitoring wells were less than the Concentration Levels. Chloride concentrations at monitoring wells MW-03 and MW-06 (ranging from 580 milligrams per liter [mg/L] to 880 mg/L) exceeded the Concentration Level of 562.5 mg/L, which was based on 1.25 times the concentration of chloride at MW-02 (450 mg/L) on September 21, 2018. Sulfate concentrations at MW-06 (ranging from 2,000 mg/L to 2,300 mg/L) were at or exceeded the Concentration Level of 2,000 mg/L, which was based on 1.25 times the concentration of sulfate at MW-02 (1,600 mg/L) on September 21, 2018.

Were background samples collected as part of this site investigation?

Chloride concentrations at monitoring wells MW-03 and MW-06 (ranging from 580 milligrams per liter [mg/L] to 880 mg/L) exceeded the Concentration Level of 562.5 mg/L, which was based on 1.25 times the concentration of chloride at MW-02 (450 mg/L) on September 21, 2018. Sulfate concentrations at MW-06 (ranging from 2,000 mg/L to 2,300 mg/L) were at or exceeded the Concentration Level of 2,000 mg/L, which was based on 1.25 times the concentration of sulfate at MW-02 (1,600 mg/L) on September 21, 2018.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 0 Volume of liquid waste (barrels) 4

Is further site investigation required?



# REMEDIATION PROGRESS UPDATE

## PERIODIC REPORTING

Frequency:  Quarterly  Semi-Annually  Annually  Other Four quarters of groundwater monitoring and sampling were completed at Site monitoring wells in 2019

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:

None

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 0

E&P waste (solid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_ 4

E&P waste (liquid) description Purged groundwater from Site monitoring wells. \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: Chevron's Rangely Water Plant \_\_\_\_\_

## 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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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? No

Is additional groundwater monitoring to be conducted? No

## 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 recontoured to original grade. The site will remain an operating collection station and will not be reclaimed until oil and gas operations cease.

Is the described reclamation complete? \_\_\_\_\_

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. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/15/2017

Date of commencement of Site Investigation. 05/15/2017

Date of completion of Site Investigation. 12/13/2017

### REMEDIAL ACTION DATES

Date of commencement of Remediation. 08/06/2018

Date of completion of Remediation. 12/31/2018

### SITE RECLAMATION DATES

Date of commencement of Reclamation. 08/06/2018

Date of completion of Reclamation. 12/31/2018

### OPERATOR COMMENT

Attention: Kris Neidel  
 (970) 871-1963  
 (970) 846-5097 (cell)  
 (970) 879-5327 (fax)  
 kris.neidel@state.co.us

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

Signed: Christopher Beall

Title: Associate Geologist

Submit Date: 01/23/2020

Email: Christopher.Beall@stantec.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: 05/14/2020

Remediation Project Number: 10501

### COA Type

### Description

	Closure request is not granted at this time. COGCC staff removed the request for closure in this form 27 to allow for approval. See additional COA's for required action.
	From Document 401894372, prior to the COGCC issuing a no further action (NFA), a soil boring shall be advanced in the areas with the most elevated impacts of TPH (SB-06, SB-1, SB-17, and in the vicinity of MW-01R). Samples shall be collected in the smear zone from about 12.5 feet below ground surface (bgs) to about 14.5 feet bgs and analyzed for BTEX, TPH-GRO, and TPH DRO.
	MW-01R and MW-06 have chlorides and sulfates exceedances above 1.25 x background; and MW-03, MW-04, and MW-05 have chlorides exceedances above 1.25 x background. The request for closure has been removed at this time. The operator shall continue monitoring the shallow ground water until Table 910-1 concentration levels have been met.
	The COGCC is in agreement using up-gradient MW-2 for setting background concentrations for Chlorides and Sulfates, but disagrees in how the operator determined the background levels. Instead of taking the highest concentration from the 2017 to 2019 sampling events, an average of the concentration values over the time period should have been considered. The average concentration for Chlorides is 281 mg/L x 1.25 = 351.25 mg/L. The average concentration for Sulfates is 1215 mg/L x 1.25 = 1518.76 mg/L.
	Per Rule 909.e.(1). Remediation and reclamation shall be complete upon compliance with the concentrations in Table 910-1.

## 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>
402291588	FORM 27-SUPPLEMENTAL-SUBMITTED
402293091	MONITORING REPORT

Total Attach: 2 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	Document # 401964963 Chevron states "Per the conference call on February 25, 2019 between Chevron and the COGCC... During the call, the COGCC agreed that additional soil sampling in the smear zone was not necessary, but would evaluate the groundwater monitoring data collected in 2019." COGCC staff, Kris Neidel's notes from the meeting stated the following, ""per Alex, No Soil Sampling at this time." and..." After one year of GW monitoring, evaluation of additional soil sample will be made"	05/14/2020
Environmental	Soil boring logs (Doc #401965010) from the May 2017 site investigation indicated hydrocarbon staining or odors in the core samples recovered at the following various depths:  SB-01 from 15'-17' PID=10, mentions HC odor. SB-02 from 16'-17' PID 147, mentions HC odor SB-03 from 15'-18' PID 468, mentions HC odor SB-04 from 16'-17' PID2.3, mentions HC odor SB-05 from 16'-19' PID 780, mentions HC odor SB-06 from 13'-14' PID 437  Doc #401965012 states "Stantec did not update the boring logs with the adjusted Ortho Height data collected in November 2017." However, Doc #401964963 states "...attached are revised boring logs with the updated elevations referenced."	05/12/2020
Agency	The February 13, 2019 Collection Station 47 – Response to Form 27 COAs (Document # 401894372) contradicts what was provided in SECTION 2.2 OF DOCUMENT #401894375.  "...soils with petroleum hydrocarbon (TPH) concentrations exceeding Concentration Levels were removed from the ground surface to groundwater." And not below the groundwater surface.	05/12/2020
Environmental	FROM SECTION 2.2 OF DOCUMENT #401894375. To remove any localized liquid hydrocarbons associated with the pit, three groundwater sumps were dug into the excavation floor (Figure 2). Approximately 50 barrels (2,100 gallons) of accumulated groundwater and liquid hydrocarbons were removed using a vacuum truck. Throughout the process, only slight traces of liquid hydrocarbons were observed on the groundwater surface.	05/12/2020

Total: 4 comment(s)