

State of Colorado  
**Oil and Gas Conservation Commission**



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FOR OGCC USE ONLY

REM 70  
Received 8/31/2015  
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OGCC Employee:

Spill  Complaint  
 Inspection  NOAV

Tracking No:

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release  Plug & Abandon  Central Facility Closure  Site/Facility Closure  Other (describe): On-going Investigation and Remediation

OGCC Operator Number: <u>16700</u>	Contact Name and Telephone: <u>Marcelo Barberis</u>
Name of Operator: <u>Chevron USA Inc</u>	No: <u>713-372-0289</u>
Address: <u>1400 Smith Street, Room 07084</u>	Fax: <u>bmal@chevron.com</u>
City: <u>Houston</u> State: <u>TX</u> Zip: <u>77002</u>	

API Number: <u>COGCC Project No. 70</u>	County: <u>Rio Blanco</u>
Facility Name: <u>Wilson Creek</u>	Facility Number: <u>93352</u>
Well Name: <u>Wilson Creek Unit 16</u>	Well Number: <u>NA</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>E/2, SE/4, 27, 3 North, 94 West, 06</u>	Latitude: <u>NA</u> Longitude: <u>NA</u>

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Crude, Condensate, Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)?  Y  N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): E&P, recreation (BLM), ranching

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: \_\_\_\_\_

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Wilson Creek

Description of impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	<u>Refer to attached letter.</u>	_____
<input type="checkbox"/> Vegetation	<u>Refer to attached letter.</u>	_____
<input type="checkbox"/> Groundwater	<u>Refer to attached letter.</u>	_____
<input type="checkbox"/> Surface Water	<u>Refer to attached letter.</u>	_____

**REMEDATION WORKPLAN**

Describe initial action taken (if previously provided, refer to that form or document):  
Refer to attached letter dated June 25, 2015:  
"Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637"

Describe how source is to be removed:  
Refer to attached letter dated June 25, 2015:  
"Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637"

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:  
Refer to attached letter dated June 25, 2015:  
"Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637"



Tracking Number: Name of Operator: OGCC Operator No: Received Date: Well Name & No: Facility Name & No:

Page 2 REMEDIATION WORKPLAN (Cont.)

OGCC Employee:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.): Refer to attached letter dated June 25, 2015: "Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637" 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. Use additional sheet for description if required. Refer to attached letter dated June 25, 2015: "Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637" Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing. Is further site investigation required? [ ] Y [ ] N If yes, describe: Refer to attached letter dated June 25, 2015: "Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637" Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.): Refer to attached letter dated June 25, 2015: "Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637"

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: Date Site Investigation Completed: Date Remediation Plan Submitted: Remediation Start Date: Anticipated Completion Date: Actual Completion Date:

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

Print Name: Christopher Beall (Stantec) Signed: [Signature] Title: Associate Geologist Date: 06/25/15

OGCC Approved: Title: Date:

NOT APPROVED See Attached 8/31/15 [Signature]



**Stantec Consulting Services Inc.**  
2000 South Colorado Boulevard, Suite 2-300, Denver CO 80222

June 25, 2015  
File: 212201118

**Attention: Mr. Carlos Lujan, Ph.D.**  
Environmental Protection Specialist  
Northwest Region  
State of Colorado Oil and Gas  
Conservation Commission  
796 Megan Avenue Suite 201  
Rifle, CO 81650

**Reference: Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637**

Dear Mr. Lujan,

On Form 27 (Site Investigation and Remediation Workplan), dated April 1, 2015, Stantec Consulting Services Inc. (Stantec) and Chevron Environmental Management Company (CEMC) submitted to the State of Colorado Oil and Gas Conservation Commission (COGCC) the 2015 Work Plan for the Chevron North America Exploration and Production Company (Chevron), Wilson Creek Unit in Rio Blanco County, Colorado (COGCC Project No. 70). COGCC responded with conditional approval of the Work Plan in an email dated April 29, 2015.

The purpose of this letter is to respond to COGCC's additional conditions of approval for the Northeast (NE) Terraced Area (Spill #2213637), which stated that "**Within sixty (60) days, CEMC shall submit Form 27 to address impacted soils remaining in the seven (7) terraced pits, per Rule 905 b.(1).**"

On behalf of CEMC, Stantec provides the following response describing how CEMC plans to address the remaining impacted soils in the NE Terraced Area:

- A review of historical aerial photographs indicates that the pits and retention pond systems were removed from service and reclaimed prior to July 1, 1995. Accordingly, since the NE Terraced Area was reclaimed prior to December 30, 1997, the reclamation requirements as defined in COGCC 1000 Series Rules (1000 Series Rules) apply.
- Chevron intends to acquire approximately 10 acres of private land encompassing the portion of the NE Terraced Area that contains total petroleum hydrocarbon (TPH) impacted soil.



June 25, 2015  
Mr. Carlos Lujan, Ph.D.  
Page 2 of 2

**Reference: Conditionally Approved 2015 Work Plan for the Chevron North America Exploration and Production Company, Wilson Creek Unit, Rio Blanco County, Colorado. COGCC Project No. 70, Northeast Terraced Area, Spill #2213637**

- Chevron intends to perform a groundwater assessment to evaluate the soil to groundwater leaching pathway, and confirm if residual TPH concentrations are sufficiently low to not adversely impact groundwater quality in the area. The additional assessment will consist of installing one monitoring well, and performing one year of semi-annual groundwater monitoring and sampling at the new well.
- Upon property acquisition, Chevron will place institutional controls (IC) on the NE Terraced Area. Activities to apply IC will consist of conducting a land survey to accurately define the boundary of the area to be controlled, installing a fence around the area to restrict access, and preparation of a soil management plan to be used if there are any future construction activities performed in the area. The soil management plan is a brief document that describes the process for managing impacted soil, if encountered during construction activities. In addition, Chevron will pursue an agreement with the adjacent private landowner (e.g., Deed Restriction) to provide an additional IC buffer zone around the NE Terraced Area.

Should you have any questions, please contact Marcelo Barberis with CEMC at 713-372-0289 (bmal@chevron.com) or me at 970-214-1126 (christopher.beall@stantec.com).

Regards,

**STANTEC CONSULTING SERVICES INC.**

A handwritten signature in blue ink, appearing to read 'C. Beall'.

Christopher Beall, P.G.  
Associate Geologist  
Phone: (303) 285-4541  
Fax: (303) 758-4828  
Christopher.Beall@stantec.com

c. Marcelo Barberis, CEMC  
Fairl Dixon, Chevron  
Tom Madsen, Stantec

This correspondence is to respond to the proposed Work Plan submitted via Form 27 and its attached letter dated June 25, 2015 (see attached) to address the Northeast Terraced Area, Spill #2213637, REM #70. The Northeast Terraced Area Spill/Release was first reported to the COGCC on April 26, 2011.

The first bullet of the letter is reproduced here:

- A review of historical aerial photographs indicates that the pits and retention pond systems were removed from service and reclaimed prior to July 1, 1995. Accordingly, since the NE Terraced Area was reclaimed prior to December 30, 1997, the reclamation requirements as defined in COGCC 1000 Series Rules (1000 Series Rules) apply.

Based on that statement, it appears that Stantec/Chevron have concluded that no remediation is required. The COGCC disagrees. Here are some reasons:

The **1996 Rules** (see attached) state (Rule 1003. Interim Reclamation) that "All E&P waste must be handled according to the 900 Series Rules. Rule **1004. b.** (Production and special purpose pit closure) Rule state that "The operator shall comply with the 900 Series rules for the removal or treatment of E&P waste remaining in a production or special purpose pit before the pit may be closed for final reclamation." Rules **906.** (Closure of Pits and Removal of Vessels), **907.** (Spills and Releases; Reporting and Remediation) and **908.** (Management of E&P Waste) clearly state that E&P waste or produced fluid shall be controlled, contained, and remediated, and describe in length the different options. They also state that landowner shall be notified.

The **1993 Rules** (See attached) state (Rule **1004.** Reclamation - a.Pit Closure) that "All areas affected by operations shall be reclaimed as near as practicable to their original conditions ..." Rule 1004 a. (1) state that "All drilling waste, except cuttings, shall be removed from the reserve pit and disposed of properly in accordance with Rule 315.q. Rules 906, 907, and 910 describe the methods for treatment or disposal of E&P waste.

Rule 315 q. establishes that "Final site reclamation and restoration shall take place as soon as conditions reasonably permit, following the completion of drilling and completion operations, and all material and equipment associated with the drilling .... and other waste materials shall be removed."

Rule 321. (Open storage of oil or hydrocarbon substances) states that "Storage of oil or any other produced liquid hydrocarbon substance in earthen pits or reservoirs is considered to constitute waste, except in emergencies where such substances cannot be otherwise contained. In such cases, these substances must be reclaimed and such storage eliminated as soon as practicable after the emergency is controlled, unless permission to delay or continue is obtained from the Director.

It is clear that both the 1996 and the 1993 Rules establish that E&P waste must be either treated on/off site or removed and disposed in an approved landfill. The spirit of the Rules tells us that no E&P waste that can be reasonably may be left in place.

It is the COGCCs opinion that 1) performing a groundwater assessment and installing one monitoring well, 2) acquiring the property (which currently is partially owned by a landowner other than Chevron), and 3) place institutional controls, will not comply with the COGCC Rules that were in effect in the 90s nor do they comply with the current Rules Chevron has not provided a satisfactory Work Plan to remediate the highly impacted soil on the footprint of the seven former pits located in the NE Terraced Area and this area shall be remediated to current Rules and 910-1 standards.

Due to the concentration of hydrocarbons in soil (i.e. **25,792 mg/kg** at a depth of 6' bgs on terrace #3), onsite treatment may not be a recommended option.

The Form 27 is being rejected and will not be approved as submitted. A Form 27 Remediation Work Plan shall be submitted to effectively remove and/or treat the impacted soil delineated in the Northeast (NE) Terraced Area Phase II Assessment Report, prepared by Stantec for Chevron, and dated October 31, 2014. The Work Plan shall be submitted by October 31, 2015.