

State of Colorado
Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

#8297

Received
2/26/2014

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.

OGCC Employee:

Spill Complaint
 Inspection NOAV

Tracking No: 436535

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): Vault Closure

GENERAL INFORMATION

OGCC Operator Number: 69175		Contact Name and Telephone	
Name of Operator: PDC Energy, Inc.		Name: Brandon Bruns	
Address: 1775 Sherman Street, Suite 3000		No: (303) 831-3971	
City: Denver State: CO Zip: 80203		Fax: (303) 860-5838	
API/Facility No: 05-123-20172	County: Weld		
Facility Name: Loustalet 42-15	Facility Number: 436535		
Well Name: Loustalet 42-15	Well Number: Loustalet 42-15		
Location (Qtr, Sec, Twp, Rng, Meridian): SENE S15 T5N R64W		Latitude: 40.396023	Longitude: -104.532317

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): NA

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.): Oil and gas production/Riparian

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Aquolls and Aquents, gravelly substratum

Potential receptors (water wells within 1/4 mi, surface waters, etc.): The nearest surface water is located 1,760' northeast of the tank battery.

Water wells are located approximately 1,680' southeast and 1,170' southwest of the location. Residential buildings are located 4,690' southwest of the location.

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

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	No impacts encountered	Excavation and soil sampling
<input type="checkbox"/> Vegetation		
<input type="checkbox"/> Groundwater		
<input type="checkbox"/> Surface water		

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

During the removal of the partially buried produced water vessel at the Loustalet 42-15 (API # 05-123-20172) tank battery, a soil sample was collected from below the former tank location to confirm the absence of petroleum hydrocarbon impacts. An aerial map of the site is included on Figure 1.

Describe how source is to be removed:

Impacted soils were not encountered during vault removal activities at the location. Consequently, no soil was removed from the location prior to collection of the confirmation sample. The facility orientation and soil sample location is illustrated on Figure 2.

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.:

On November 11, 2013, the buried produced water vault was removed and a subsequent soil sample was collected below the tank location at approximately 6 feet below ground surface (bgs). The soil encountered below the vault was field screened for volatile organic compound (VOC) concentrations with a photoionization detector (PID) and did not exhibit petroleum hydrocarbon impacts. The soil sample was submitted to Summit Scientific Laboratories in Golden, Colorado for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), and naphthalene by EPA Method 8260B. The sample was also analyzed for TPH-diesel range organics (DRO) by EPA Method 8015. Analytical results indicate constituent concentrations are below laboratory detection limits. A summary of soil analytical data is presented in Table 1. Groundwater was not encountered during excavation activities. The laboratory analytical report is included as Attachment A. The facility orientation and the soil sample location are illustrated on Figure 2. Based on the soil analytical results, PDC is requesting a produced water vault closure from the COGCC at this location.



REMEDIATION WORKPLAN (CONT.)

OGCC Employee: R. Allison

Tracking Number: Name of Operator: PDC Energy, Inc. OGCC Operator No: 69175 Received Date: 2/26/2014 Well Name & No: Loustalet 42-15 Facility Name & No.: Loustalet 42-15

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.): Groundwater not encountered during vault removal activities.

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. The area where the excavation was located has been backfilled and compacted with clean material and the ground surface was contoured to match pre-existing conditions.

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 [x] N If yes, describe: PDC feels no further Site investigation is required at this time. The facility orientation and soil sample location is illustrated on Figure 2. Soil analytical results are summarized in Table 1 and the analytical report is included as Attachment A. Based on the soil analytical results, PDC is requesting a vault closure at this location.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.): No waste was generated during closure activities.

IMPLEMENTATION SCHEDULE

Table with 4 columns: Date Site Investigation Began, Date Site Investigation Completed, Remediation Plan Submitted, Remediation Start Date, Anticipated Completion Date, Actual Completion Date. Values include 11/11/2013, NA, and 2/26/14.

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

Print Name: Brandon Bruns

Signed: [Signature] Title: EHS Professional Date: 2/26/14

OGCC Approved: Title: Northeast EPS Date: 3/26/2014