

State of Colorado Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

#8312

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.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

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

OGCC Employee:
Spill, Complaint, Inspection, NOAV
Tracking No: 436627

GENERAL INFORMATION

OGCC Operator Number: 69175
Name of Operator: PDC Energy, Inc.
Address: 1775 Sherman Street, Suite 3000
City: Denver State: CO Zip: 80203
Contact Name and Telephone: Brandon Bruns
API/Facility No: 05-123-12528
County: Weld
Facility Name: Steinmetz #1, 21-17
Facility Number: 436627
Well Name: Steinmetz #1, 21-17
Well Number: Steinmetz #1, 21-17
Location: NW/4 S17 T5N R64W
Latitude: 40.402488 Longitude: -104.574344

TECHNICAL CONDITIONS

Type of Waste Causing Impact: NA
Site Conditions: Is location within a sensitive area? [X] Y [] N
Adjacent land use: Oil and gas production/Agriculture
Soil type: Altvan loam, 0 to 1 percent slopes
Potential receptors: The nearest surface water is located 10' north of the tank battery.
Water wells are located 920' southeast and 1,200' south of the location. Residential buildings are located 1,220' north of the location.
Description of Impact: Impacted Media (check): [X] Soils, [] Vegetation, [] Groundwater, [] Surface water
Extent of Impact: No impacts encountered
How Determined: Excavation and soil sampling

REMEDIATION WORKPLAN

Describe initial action taken: Following the removal of the buried produced water vault at the Steinmetz #1, 21-17 (API # 05-123-12528) tank battery, a soil sample was collected from the base of the excavation to close out the use of this vessel. 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: On November 15, 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: Steinmetz #1, 21-17 Facility Name & No.: Steinmetz #1, 21-17

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 that 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

Date Site Investigation Began: 11/15/2013 Date Site Investigation Completed: 11/15/2013 Remediation Plan Submitted: NA Remediation Start Date: NA Anticipated Completion Date: NA 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: Brandon Bruns

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

OGCC Approved: Title: Northeast EPS Date: 4/3/2014