FORM 27 Rev 6/99

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax 894-2109

FOR OGCC USE ONLY
Received 6/5/2014
#8503

OGCC Employee:

[X] Spill [ ] Complaint
[ ] Inspection [ ] NOAV

Tracking No: 400621194

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

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

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
Name: Brandon Bruns
No: (303) 831-3971
Fax: (303) 860-5838

API/Facility No: 05-123-14039
Facility Name: Von Feldt 13-12
Well Name: Von Feldt 13-12
Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSW S12 T6N R65W

County: Weld
Facility Number:
Well Number: Von Feldt 13-12
Latitude: 40.495106 Longitude: -104.618098

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Produced water
Site Conditions: Is location within a sensitive area (according to Rule 901e)? [X] Y [ ] N If yes, attach evaluation.
Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Agriculture, residential
Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Otero sandy loam, 1 to 3 percent slopes
Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface water is located approximately 38' east of the tank battery, a residence is located approximately 440' southwest, the nearest water well is approximately 1,335' north. The depth to shallowest groundwater is approximately 8' bgs.

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

Impacted Media (check):	Extent of Impact:	How Determined:
[X] Soils	Refer to Figures 2 and 3 and Table 1	Excavation and soil sampling
[ ] Vegetation		
[X] Groundwater	Refer to the attached Figure 3 and Table 2	Drilling and groundwater sampling
[ ] Surface water		

REMEDIATION WORKPLAN

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

On January 16, 2014, soil and groundwater impacts were discovered at the Von Feldt 13-12 facility (API #05-123-14039) during the removal of a buried produced water vault. An eForm 19 was submitted on June 5, 2914 and spill/release # 400621194 was issued by the COGCC. A topographic map of the site is included on Figure 1.

Describe how source is to be removed:

The source area was previously excavated and impacted material was transported and disposed of as described in the Form 19. The excavation extent and soil sample locations are 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 March 25, 2014, PDC installed five temporary monitoring wells (BH01 through BH05) for monitoring and remediation purposes, using direct push drilling techniques. Groundwater was encountered at approximately eight feet below ground surface (bgs). Monitoring well locations are shown on Figure 3. Groundwater monitoring was initiated on April 30, 2014 at the five temporary well locations. Groundwater samples were submitted to Summit Scientific Laboratories in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) using USEPA Method 8260B. Analytical results indicate BTEX concentrations are below COGCC Table 910-1 groundwater standards at the five monitoring locations. Groundwater analytical results are summarized in Table 2 and illustrated on Figure 3. Laboratory analytical reports are included as Attachment A. PDC will initiate monitored natural attenuation (MNA) to assess residual petroleum hydrocarbon impacts to groundwater. PDC will conduct quarterly groundwater monitoring at the five temporary monitoring locations until BTEX concentrations remain below COGCC Table 910-1 groundwater standards for four consecutive quarters.

Submit Page 2 with Page 1.

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REMEDIATION WORKPLAN (CONT.)

OGCC Employee: R. Allison

Tracking Number: 400621194
Name of Operator: PDC Energy, Inc.
OGCC Operator No: 69175
Received Date: 6/5/2014
Well Name & No: Von Feldt 13-12
Facility Name & No.: Von Feldt 13-12

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Groundwater was encountered during excavation and drilling activities at approximately 8 feet bgs. PDC will continue quarterly groundwater sampling at the five monitoring wells to assess the residual hydrocarbon impacts in groundwater using USEPA Method 8260. Groundwater sampling will continue on a quarterly basis for BTEX analysis by EPA Method 8260B until four consecutive quarters of groundwater concentrations are in compliance with the applicable COGCC Table 910-1 groundwater standards.

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 site was restored to its pre-release grade. PDC's tank battery has been re-built. Following four consecutive quarters of groundwater analytical data in compliance with the COGCC Table 910-1 groundwater standards, the temporary monitoring wells will be properly plugged and abandoned.

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 excavation extent and soil sample locations are illustrated on Figure 2. Temporary monitoring locations are illustrated on Figure 3. Soil analytical results are summarized in Table 1 and groundwater analytical results are summarized in Table 2. The analytical reports are included as Attachment A.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Impacted soil was disposed of at the Waste Management Facility in Ault, Colorado under PDC waste manifests.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began:	1/16/2014	Date Site Investigation Completed:	3/25/2014	Remediation Plan Submitted:	6/5/14
Remediation Start Date:	4/30/2014	Anticipated Completion Date:	NA	Actual Completion Date:	TBD

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: Brandon Bruns Title: EHS Supervisor Date: 6/5/14

OGCC Approved: Richard Allison Digitally signed by Richard Allison DN: cn=Richard Allison, o=COGCC, ou, email=rick.allison@state.co.us, c=US Date: 2014.06.27 15:49:25 -06'00' Title: Northeast EPS Date: 6/27/2014