

State of Colorado Oil and Gas Conservation Commission

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Table with columns DE, ET, OE, ES

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.)

RECEIVED 2/24/2014 DOCUMENT #2147897

Form with 11 numbered fields for operator, contact, well, and location information.

General Notice

Large form section containing checkboxes for location changes, spacing units, operator changes, abandoned locations, and subsequent reports.

Technical Engineering/Environmental Notice

Form section for technical notices, including checkboxes for intent to recomplete, change drilling plans, and request to vent or flare.

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

Signed: Brandon Brunns Date: 11-5-13 Email: brandon.brunns@pdce.com Print Name: Brandon Brunns Title: EHS Professional

COGCC Approved: Title Date:

CONDITIONS OF APPROVAL, IF ANY:

**TECHNICAL INFORMATION PAGE**



FOR OGCC USE ONLY

1. OGCC Operator Number:	69175	API Number:	05-123-15318
2. Name of Operator:	PDC Energy, Inc.	OGCC Facility ID #	430472
3. Well/Facility Name:	Capehart 1, 31, 42-29	Well/Facility Number:	05-123-20040
4. Location (QtrQtr, Sec, Twp, Rng, Meridian):	NWNE S2 T6N R66W 6th PM		

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

**5. DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

Between March 13, 2012 and March 14, 2012, PDC conducted excavation activities at the Capehart 1, 31, 32-29 (API # 05-13-20040, Facility # 430472, Remediation # 7431) tank battery located in the SWNE Quarter of Section 29, Township 6 North, Range 64 West, as illustrated on Figure 1. Approximately 110 cubic yards of impacted soil were removed and transported to the Waste Management Facility in Ault, Colorado for disposal under PDC waste manifests. Analytical results indicated constituent concentrations in soil sample locations collected from the walls of the excavation (SS01, SS03, SS04, SS08) and from test pits located north (SS06) and east (SS07) of the excavation were below COGCC Table 910-1 soil standards. Soil sample SS02 that was collected at 5 feet below ground surface (bgs) at the former base of the excavation exhibited elevated benzene and total petroleum hydrocarbon (TPH) concentrations. The excavation area was subsequently advanced to a total depth of 6 feet bgs and a final soil sample (SS05) was collected from the base of the excavation. Analytical results indicated constituent concentrations were below regulatory standards confirming excavation activities successfully mitigated petroleum hydrocarbon impacts in soil. Soil analytical results are summarized in Table 1. Three groundwater samples were collected during excavation activities and analytical results indicated benzene concentrations in two of the three samples were in exceedance of COGCC Table 910-1 groundwater standards. Groundwater analytical results are summarized in Table 3. Two horizontal remediation pipes were installed at 7 feet bgs below the production tanks location prior to backfilling. The horizontal remediation pipes and soil and groundwater sample locations from excavation activities are illustrated on Figure 2. Subsequent enhanced fluid recovery (EFR) events occurred in April and July 2012 and operational data from the events are summarized in Table 4. Three temporary monitoring wells were installed on August 6, 2012 to assess residual dissolved phase petroleum hydrocarbon concentrations on site. Quarterly groundwater monitoring commenced following well installation on August 15, 2013 at the three vertical well locations. In addition, quarterly surface water sampling at the adjacent pond commenced in first quarter 2013, per the request of the COGCC. Groundwater and surface water samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8260B. Quarterly groundwater analytical results are summarized in Table 2 and surface water analytical results are summarized in Table 3. Laboratory reports are included as Attachment A. Temporary monitoring locations, including the surface water sample location, and second and third quarter 2013 analytical data are illustrated on Figure 3. Based on the third quarter 2013 groundwater data, four consecutive quarters with constituent concentrations below COGCC regulatory limits at all sample locations have been reached. Based on 2013 analytical results, PDC is requesting a No Further Action determination for this site.