

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400635216

Date Received:

06/27/2014

Spill report taken by:

CHESSON, BOB

Spill/Release Point ID:

437873

### SPILL/RELEASE REPORT (INITIAL /w SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

#### OPERATOR INFORMATION

Name of Operator: <u>PDC ENERGY INC</u>	Operator No: <u>69175</u>	<b>Phone Numbers</b>
Address: <u>1775 SHERMAN STREET - STE 3000</u>		Phone: <u>(303) 831-3971</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80203</u>		Mobile: <u>( )</u>
Contact Person: <u>Brandon Brun</u>		Email: <u>brandon.brun@pdce.com</u>

#### INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400635216

Initial Report Date: 06/27/2014 Date of Discovery: 02/13/2014 Spill Type: Historical Release

#### Spill/Release Point Location:

Location of Spill/Release: QTRQTR NWSE SEC 9 TWP 4N RNG 65W MERIDIAN 6

Latitude: 40.324032 Longitude: -104.665242

Municipality (if within municipal boundaries): \_\_\_\_\_ County: WELD

#### Reference Location:

Facility Type: TANK BATTERY  Facility/Location ID No \_\_\_\_\_  
 No Existing Facility or Location ID No.  
 Well API No. (Only if the reference facility is well) 05-123-

#### Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? No

*Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): 0 Estimated Condensate Spill Volume(bbl): 0

Estimated Flow Back Fluid Spill Volume(bbl): 0 Estimated Produced Water Spill Volume(bbl): Unknown

Estimated Other E&P Waste Spill Volume(bbl): 0 Estimated Drilling Fluid Spill Volume(bbl): 0

Specify: \_\_\_\_\_

#### Land Use:

Current Land Use: CROP LAND Other(Specify): \_\_\_\_\_

Weather Condition: sunny, 40 degrees

Surface Owner: FEE Other(Specify): \_\_\_\_\_

#### Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State  Residence/Occupied Structure  Livestock  Public Byway  Surface Water Supply Area

*As defined in COGCC 100-Series Rules*

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

On February 13, 2014, a historic release was discovered during the removal of a buried produced water vessel at the Rupert 1, 2, 32-9 (API# 05-123-11064) tank battery. Wells Rupert 1 (API# 05-123-11064), Rupert 32-9 (API# 05-123-17842), and Harley S. Rupert 2 (API# 05-123-16711) produce to this location. The facility was immediately shut in and excavation of impacted soil commenced below the former tank location. Approximately 3,890 cubic yards of impacted material was removed and disposed of at the Front Range Regional Landfill in Erie, Colorado under PDC manifests. Groundwater was encountered during excavation activities at approximately 15 feet below ground surface (bgs). Approximately 250 barrels of groundwater were removed using a vacuum truck and disposed of a licensed water disposal facility. A topographic map of the site is included as Figure 1.

**List Agencies and Other Parties Notified:**

**OTHER NOTIFICATIONS**

Date	Agency/Party	Contact	Phone	Response
3/6/2014	COGCC	Chris Canfield	303-894-2100	voice message

**SPILL/RELEASE DETAIL REPORTS**

#1	Supplemental Report Date:	06/27/2014		
FLUIDS	BBL's SPILLED	BBL's RECOVERED	Unknown	
OIL	0	0	<input type="checkbox"/>	
CONDENSATE	0	0	<input type="checkbox"/>	
PRODUCED WATER			<input checked="" type="checkbox"/>	
DRILLING FLUID	0	0	<input type="checkbox"/>	
FLOW BACK FLUID	0	0	<input type="checkbox"/>	
OTHER E&P WASTE	0	0	<input type="checkbox"/>	

specify: \_\_\_\_\_  
 Was spill/release completely contained within berms or secondary containment? YES Was an Emergency Pit constructed? NO

*Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

**A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit**

Impacted Media (Check all that apply)  Soil  Groundwater  Surface Water  Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 80 Width of Impact (feet): 80

Depth of Impact (feet BGS): 15 Depth of Impact (inches BGS): \_\_\_\_\_

How was extent determined?

The vertical and lateral extents of the excavation were determined in the field using a photoionization detector (PID) to measure volatile organic compound (VOC) concentrations in soil. Between February 13 and February 27, 2014, 12 soil samples (SS01 - SS09, and SS15-SS17) were collected from the walls of the excavation at varying depths ranging between 9 feet below ground surface (bgs) and 15 feet bgs. In addition, two soil samples were collected from a test location at depths of 2 feet bgs and 8 feet bgs (TP01@2' and TP01@8') to further delineate a vertical extent. Soil samples were 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. Samples were also submitted for analysis of TPH-diesel range organics (DRO) by EPA Method 8015. Analytical results indicated concentrations were in exceedance of COGCC Table 910-1 soil standards in SS03 and SS08 for TPH (4,400 mg/kg and 2,140 mg/kg, respectively), and benzene (0.5 mg/kg), total xylenes (230 mg/kg) and TPH (5,200 mg/kg) in sample SS09. The test location samples (TP01@2' and TP01@8') also exhibited concentrations in exceedance of COGCC standards for benzene (0.31 mg/kg and 0.19 mg/kg, respectively) and TPH (1,180 mg/kg and 2,040 mg/kg, respectively). Constituent concentrations in the remaining soil samples collected from the sidewalls of the excavation were below the applicable COGCC Table 910-1 soil standards. Impacted soil adjacent to the sample locations with elevated concentrations (SS03, SS08, TP01@2' and TP01@8') was subsequently excavated. However, additional excavation of soil adjacent to SS09 was not permitted as a flow line, owned by others, was located directly northeast of the boundary wall. Consequently, excavation activities continued 10 feet to the northeast of the flow line.

Soil/Geology Description:

thedalund loam, 3 to 9 percent slopes

Depth to Groundwater (feet BGS) 15

Number Water Wells within 1/2 mile radius: 1

If less than 1 mile, distance in feet to nearest

Water Well 2210 None

Surface Water 2350 None

Wetlands \_\_\_\_\_ None  Springs \_\_\_\_\_ None   
 Livestock \_\_\_\_\_ None  Occupied Building 950 None

Additional Spill Details Not Provided Above:

Between February 27 and March 5, 2014 an additional twelve soil samples (SS10-SS14 and SS18-SS24), were collected from this northeastern excavation from ranging depths of 9 and 13 feet bgs. The samples were also submitted to Summit Scientific Laboratories in Loveland, Colorado for analysis of BTEX, TPH-GRO, and TPH-DRO. Analytical results indicated concentrations were below the applicable COGCC Table 910-1 soil standards. A summary of soil analytical data is presented in Table 1. Groundwater was encountered during excavation activities at approximately 15 feet bgs. Between March 3 and March 5, 2014, approximately 250 barrels of groundwater were removed and disposed of a licensed water disposal facility. Two subsequent groundwater samples were collected from the excavation area on March 5, 2014 (GW01 and GW02) and were submitted for laboratory analysis of BTEX constituents using EPA method 8260B. Analytical results indicate that benzene concentrations were in exceedance of COGCC Table 910-1 groundwater standards at GW01 and GW02 (7.4 ug/l and 16 ug/L, respectively). A summary of groundwater analytical data is presented in Table 2. The laboratory analytical reports are included as Attachment A. The extent of the excavation and soil and groundwater sample locations are illustrated on Figure 2.

### CORRECTIVE ACTIONS

#1 Supplemental Report Date: 06/27/2014

Cause of Spill (Check all that apply)  Human Error  Equipment Failure  Historical-Unknown  
 Other (specify) \_\_\_\_\_

Describe Incident & Root Cause (include specific equipment and point of failure)

produced water vessel failed causing subsurface impacts

Describe measures taken to prevent the problem(s) from reoccurring:

the produced water vessel was removed

Volume of Soil Excavated (cubic yards): 3890

Disposition of Excavated Soil (attach documentation)  Offsite Disposal  Onsite Treatment  
 Other (specify) \_\_\_\_\_

Volume of Impacted Ground Water Removed (bbls): 250

Volume of Impacted Surface Water Removed (bbls): 0

### REQUEST FOR CLOSURE

**Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.**

Basis for Closure:  Corrective Actions Completed (documentation attached)  
 Work proceeding under an approved Form 27  
 Form 27 Remediation Project No: \_\_\_\_\_

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

Signed: \_\_\_\_\_ Print Name: Brandon Brunns  
 Title: EHS Supervisor Date: 06/27/2014 Email: brandon.brunns@pdce.com

COA Type	Description

### Attachment Check List

**Att Doc Num****Name**

400635216	FORM 19 SUBMITTED
400635274	SITE MAP
400635275	ANALYTICAL RESULTS

Total Attach: 3 Files

**General Comments****User Group****Comment****Comment Date**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)