

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401036699

Date Received:

04/28/2016

Spill report taken by:

Spill/Release Point ID:

SPILL/RELEASE REPORT (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>	Phone Numbers
Address: <u>1775 SHERMAN STREET - STE 3000</u>		Phone: <u>(970) 506-9273</u>
City: <u>DENVER</u>	State: <u>CO</u>	Mobile: <u>(970) 373-6581</u>
Zip: <u>80203</u>		Email: <u>zack.liensenfeld@pdce.com</u>
Contact Person: <u>Zack Liensenfeld</u>		

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401034905

Initial Report Date: 04/25/2016 Date of Discovery: 04/22/2016 Spill Type: Historical Release

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NWSW SEC 31 TWP 2N RNG 68W MERIDIAN 6Latitude: 40.093056 Longitude: -105.053056Municipality (if within municipal boundaries): _____ County: WELD

Reference Location:

Facility Type: WELL☐ Facility/Location ID No _____☐ No Existing Facility or Location ID No.☒ Well API No. (Only if the reference facility is well) 05-123-09521

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

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

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? Yes

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

Estimated Oil Spill Volume(bbl): 0Estimated Condensate Spill Volume(bbl): 0Estimated Flow Back Fluid Spill Volume(bbl): 0Estimated Produced Water Spill Volume(bbl): UnknownEstimated Other E&P Waste Spill Volume(bbl): 0Estimated Drilling Fluid Spill Volume(bbl): 0

Specify: _____

Land Use:

Current Land Use: CROP LAND

Other(Specify): _____

Weather Condition: Warm and SunnySurface 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):

A reportable historic spill was discovered at the Armstead 1 well head while abandoning the well. Current recovery efforts are mitigating impacts.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

Date	Agency/Party	Contact	Phone	Response
4/22/2016	COGCC	Chris Canfield	-	Via Email
4/22/2016	Land Owner	NA	-	Via Phone Call

SPILL/RELEASE DETAIL REPORTS

#1	Supplemental Report Date: 04/28/2016		
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? NO 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): 25 Width of Impact (feet): 25

Depth of Impact (feet BGS): 7 Depth of Impact (inches BGS): _____

How was extent determined?

On April 22, 2016, a historic release was discovered during plug and abandonment activities at the Armstead #1 wellhead. Approximately 160 cubic yards of impacted material were removed and transported to the Front Range Regional Landfill in Erie, Colorado for disposal under PDC waste manifests. Four (4) soil samples (SS01 – SS04) were collected from the final excavation extent at approximately 5 feet below ground surface (bgs). Soil samples were field screened for volatile organic compound (VOC) concentrations using a photoionization detector (PID). Samples were submitted to Summit Scientific Laboratories in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, total petroleum hydrocarbons (TPH) – gasoline range organics (GRO) by USEPA Method 8260, and TPH – diesel range organics (DRO) by USEPA Method 8015. Analytical results indicated constituent concentrations were below COGCC Table 910-1 standards in the four soil sample locations. Groundwater was encountered in the excavation area at approximately 7 feet bgs. Between April 22 and April 27, 2016, approximately 320 barrels of groundwater were removed from the excavation area using a vacuum truck and transported to a licensed disposal facility. A groundwater sample (GW01) was subsequently collected from the excavation extent and submitted for laboratory analysis of BTEX. Analytical results indicated BTEX concentrations were below COGCC Table 910-1 groundwater standards. The excavation extent and soil and groundwater sample locations are illustrated on Figure 2. Soil analytical data is summarized in Table 1 and groundwater analytical data is summarized in Table 2. Laboratory reports are included as Attachment A. Based on the data described herein, PDC is requesting a No Further Action (NFA) determination for this release.

Soil/Geology Description:

Aquolls and Aquepts, gravelly substratum

Depth to Groundwater (feet BGS) 7 Number Water Wells within 1/2 mile radius: 16

If less than 1 mile, distance in feet to nearest	Water Well	<u>300</u>	None	<input type="checkbox"/>	Surface Water	<u>105</u>	None	<input type="checkbox"/>
	Wetlands	<u></u>	None	<input checked="" type="checkbox"/>	Springs	<u></u>	None	<input checked="" type="checkbox"/>
	Livestock	<u></u>	None	<input checked="" type="checkbox"/>	Occupied Building	<u>1575</u>	None	<input type="checkbox"/>

Additional Spill Details Not Provided Above:

CORRECTIVE ACTIONS

#1	Supplemental Report Date:	04/28/2016
Cause of Spill (Check all that apply)		
<input type="checkbox"/> Human Error	<input type="checkbox"/> Equipment Failure	<input checked="" type="checkbox"/> Historical-Unknown
<input type="checkbox"/> Other (specify) _____		
Describe Incident & Root Cause (include specific equipment and point of failure)		
<div>A historic release was discovered during the plug and abandonment of the wellhead.</div>		
Describe measures taken to prevent the problem(s) from reoccurring:		
<div>The wellhead was abandoned.</div>		
Volume of Soil Excavated (cubic yards): 160		
Disposition of Excavated Soil (attach documentation)		
<input checked="" type="checkbox"/> Offsite Disposal	<input type="checkbox"/> Onsite Treatment	
<input type="checkbox"/> Other (specify) _____		
Volume of Impacted Ground Water Removed (bbls): 320		
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:

OPERATOR COMMENTS:

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

Signed: _____ Print Name: Zack Liensenfeld

Title: EHS Professional Date: 04/28/2016 Email: zack.liensenfeld@pdce.com

<u>COA Type</u>	<u>Description</u>

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401037827	TOPOGRAPHIC MAP
401037828	SITE MAP
401037829	ANALYTICAL RESULTS

Total Attach: 3 Files

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

Total: 0 comment(s)