

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:

403180616

Date Received:

09/28/2022

Spill report taken by:

DERANLEAU, GREG

Spill/Release Point ID:

482977

## SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 912.b. for reporting requirements of spills or releases of E&P Waste, produced Fluids, or unauthorized Releases of natural gas. Submit a Site Investigation and Remediation Workplan (Form 27) if Rule 913.c. applies.

### OPERATOR INFORMATION

Name of Operator: <u>PETERSON ENERGY OPERATING INC</u>	Operator No: <u>68710</u>	<b>Phone Numbers</b>
Address: <u>PO BOX 2169</u>		Phone: <u>(970) 669 7411</u>
City: <u>LOVELAND</u> State: <u>CO</u> Zip: <u>80539-2169</u>		Mobile: <u>( )</u>
Contact Person: <u>Ryan Dornbos</u>		Email: <u>Ryan@PEOperating.com</u>

☐ Transfer of Operatorship: Pursuant to Rule 912.f, this Supplemental Form 19 is being submitted to designate the Buying Operator as the responsible Operator for this Spill and Release.

### INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 403169688

Initial Report Date: 09/16/2022 Date of Discovery: 09/16/2022 Spill Type: Recent Spill

#### Spill/Release Point Location:

QTRQTR NENE SEC 25 TWP 3S RNG 51W MERIDIAN 6

Latitude: 39.768419 Longitude: -103.032741

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

Enter Lat./long measurement of the actual Spill/Release Point. Lat./Long. Data shall meet standards of Rule 216.

#### Reference Location:

Facility Type: PIT

☒ Facility/Location ID No 279810

Spill/Release Point Name: Produced Water Evaporation Pit

☐ Well API No. (Only if the reference facility is well) 05- -

☐ No Existing Facility or Location ID 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): >=100

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

Estimated Drilling Fluid Spill Volume(bbl): 0

Specify: 7871

Has the subject Spill/Release been controlled at the time of reporting? Yes

#### Land Use:

Current Land Use: NON-CROP LAND

Other(Specify): CRP

Weather Condition: Sunny, Warm, Storm previous night

Surface Owner: FEE

Other(Specify): Caerus WashCo LLC

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

09/16/2022: The produced water pit at the Church production facility gave way in the NW corner of the east pit, flowed into secondary containment. Flooded the pad and water has evaporated/percolated upon discovery. Approximately 1000 bbls left secondary containment and flowed out onto the pad, but did not leave the location.

09/28/2022: Upon further investigation it is evident that approximately 7871 bbls (4 ft of water in the 170 ft x 64 ft east pit) (COA #7) was released at the point of failure in the NW corner, and after filling the secondary containment, the walls failed on the east and west corners and the water left the Church facility location and entered the surrounding grassland. Attached map shows the extent determined based on our onsite investigation on 09/20/2022 (COA #1). Samples were taken from the point of breach west, northwest, and southeast where the water left the O&G location. (COA #2)

**List of Agencies and Other Parties Notified Pursuant to Rule 912.b.(7)-(11):**

**OTHER NOTIFICATIONS**

Date	Agency/Party	Contact	Phone	Response
9/16/2022	Caerus WashCo LLC	Natasha Nightingale	303-565-4600 Ex115	Called and notified at 19:25
9/16/2022	Washington County Emergency	Bryant McCall	970-630-8662	Called and notified at 19:13
9/16/2022	COGCC	Susan Sherman	719-775-1111	Called and notified at 19:20

**REPORT CRITERIA**

**Rule 912.b.(1) Report to the Director (select all criteria that apply):**

Yes Rule 912.b.(1).A: A Spill or Release of any size that impacts or threatens to impact any Waters of the State, Public Water System, residence or occupied structure, livestock, wildlife, or publicly-maintained road.

Waters of the State: n/a

Public Water System: n/a

Residence or Occupied Structure: n/a

Livestock: n/a

Wildlife: Threatened to Impact

Publicly-Maintained Road: n/a

Yes Rule 912.b.(1).B: A Spill or Release in which 1 barrel or more of E&P Waste or produced fluids is spilled or released outside of berms or other secondary containment.

Yes Rule 912.b.(1).C: A Spill or Release of 5 barrels or more of E&P Waste or produced Fluids regardless of whether the Spill or Release is completely contained within berms or other secondary containment.

No Rule 912.b.(1).D: Within 6 hours of discovery, a Grade 1 Gas Leak. For a Grade 1 Gas Leak from a Flowline, the Operator also must submit the Form 19 – Initial, document number on a Form 44, Flowline Report, for the Grade 1 Gas Leak

Enter the approximate time of discovery \_\_\_\_\_ (HH:MM)

Enter the Document Number of the Grade 1 Gas Leak Report, Form 44 \_\_\_\_\_

Was there a reportable accident associated with either a Grade 1 Gas Leak or an E&P waste spill or release? \_\_\_\_\_

Enter the Document Number of the Initial Accident Report, Form 22 \_\_\_\_\_

Was there damage during excavation? \_\_\_\_\_

Was CO 811 notified prior to excavation? \_\_\_\_\_

No Rule 912.b.(1).E: The discovery of 10 cubic yards or more of impacted material resulting from a current or historic Spill or Release. Discovery and reporting will not be contingent upon confirmation samples demonstrating exceedance of Table 915-1 standards.

Estimated Volume of Impacted Solids (cu. yd.): \_\_\_\_\_

No	Rule 912.b.(1).F: The discovery of impacted Waters of the State, including Groundwater. Discovery and reporting will not be contingent upon confirmation samples demonstrating exceedance of Table 915-1 standards. The presence of free product or hydrocarbon sheen on Groundwater or surface water is reportable. The presence of contaminated soil in contact with Groundwater or surface water is reportable. Check all that apply:
	<input type="checkbox"/> The presence of free product or hydrocarbon sheen Surface Water <input type="checkbox"/> The presence of free product or hydrocarbon sheen on Groundwater <input type="checkbox"/> The presence of contaminated soil in contact with Groundwater <input type="checkbox"/> The presence of contaminated soil in contact with Surface water
No	Rule 912.b.(1).G: A suspected or actual Spill or Release of any volume where the volume cannot be immediately determined, including a spill or release of any volume that daylight from the subsurface.
No	Rule 912.b.(1).H: Spill or Release resulting in vaporized hydrocarbon mists that leave the Oil and Gas Location or Off-Location Flowline right of way from an Oil and Gas Location and impacts or threatens to impact off-location property.
	<input type="checkbox"/> Areas offsite of Oil & Gas Location <input type="checkbox"/> Off-Location Flowline right of way
No	Rule 912.b.(1).I: A Release of natural gas that results in an accumulation of soil gas or gas seeps.
No	Rule 912.b.(1).J: A Release that results in natural gas in Groundwater.

## SPILL/RELEASE DETAIL REPORTS

#1	Supplemental Report Date: 09/28/2022		
<b>FLUIDS</b>	BBL's SPILLED	BBL's RECOVERED	Unknown
OIL	0	0	<input type="checkbox"/>
CONDENSATE	0	0	<input type="checkbox"/>
PRODUCED WATER	7871	0	<input 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? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u>			
<i>Secondary containment, <b>including walls &amp; floor regardless of construction material</b>, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i>			
<b>A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit</b>			
Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature			
Surface Area Impacted:    Length of Impact (feet): <u>360</u>		Width of Impact (feet): <u>435</u>	
Depth of Impact (feet BGS): <u>1</u>		Depth of Impact (inches BGS): _____	
How was extent determined?			
Extent was determined by visually inspecting the conditions of the soil where signs of moisture, recent standing water and/or moving water were present. Samples were taken to the West, NW, Breach point and SE where the produced water left the pad and entered onto the surrounding CRP. A background sample was taken to the North of the facility. The permeability of the soil and extremely low moisture content allowed for rapid percolation and prevented further travel from the breach point. The area as measured is 2.34 acres or 101,941 square feet including the production pad foot print. This equates to about 6 inches of water on average across the extent of the impact that would have percolated into the soil.			
Soil/Geology Description:			
Sandy Loam.			
Depth to Groundwater (feet BGS) <u>185</u>		Number Water Wells within 1/2 mile radius: <u>1</u>	
If less than 1 mile, distance in feet to nearest		Water Well <u>2523</u> None <input type="checkbox"/>	Surface Water _____    None <input checked="" type="checkbox"/>
		Wetlands _____    None <input checked="" type="checkbox"/>	Springs _____    None <input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Additional Spill Details Not Provided Above:

Due to the available capacity of the pits to take water, they are consistently operated with more than the required 2 ft of freeboard and usually 3-5 ft freeboard as an extra precaution. The pits were generally operated by switching between them bi-weekly to maintain similar levels in each, always below the 2 ft freeboard line. During the summer months we would see a maximum per-pit percolation/evaporation rate of about 1 ft/week, down to a few inches over the winter months. 1 ft/week in the smaller eastern pit equates to about 330 bbl/day and the lease reports an average of 350 bbl/d of produced water production. If the 2 ft freeboard line was approached in both pits the well was shut in until there was room for the water, as observed in the 2021/2022 fall/winter timeframe.

There was no free product to clean up. Final removal of the oil-stained soil and weeds was being conducted and fit into two five gallon buckets. (COA #3)

## CORRECTIVE ACTIONS

#1 Supplemental Report Date: 09/28/2022Root Cause of Spill/Release Natural Force Damage

Other (specify) \_\_\_\_\_

Type of Equipment at Point of Spill/Release: Other

If "Other" selected above, specify or describe here:

Earthen Pit Wall

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

At the time of the failure of the NW corner of the East pit wall at the Church Facility, there was nobody on site to witness the event. Weather data represented there were two large rain storms that passed through the area. Within 24 hours the pumper visited (on the routine daily visitation) and found there had been a release. Earlier in the week, the produced water had been switched to the West pit and was still discharging into that pit at the time of the release.

Our analysis indicates that the large volume of rainwater saturated the NW corner of the East Pit wall to the point that it started to erode and eventually gave way. Structural collapse is evident on the outside of the pit bank that was not caused by the released water. We have no evidence that the produced water level in the pit was ever high enough to crest the pit bank. We believe increased saturation due to the rainfall event was the cause of the structural failure of the pit wall.

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

Peterson Energy will monitor and record freeboard in the West pit daily and shut in the producing well when freeboard gets to 2.5'. Once the property receives approval of the unitization application we will discontinue daily disposal of water into the West pit. (COA #6)

Volume of Soil Excavated (cubic yards): 0Disposition of Excavated Soil (attach documentation) ☐ Offsite Disposal ☒ Onsite Treatment☐ Other (specify) \_\_\_\_\_Volume of Impacted Ground Water Removed (bbls): 0Volume 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, check all that apply)☐ Horizontal and Vertical extents of impacts have been delineated.☐ Documentation of compliance with Table 915-1 is attached.☐ All E&P Waste has been properly treated or disposed.☐ Work proceeding under an approved Form 27 (Rule 912.c).

Form 27 Remediation Project No: \_\_\_\_\_

☐ SUSPECTED Spill/Release did not occur or was below Rule 912.a.(5) reporting thresholds.

**OPERATOR COMMENTS:**

Peterson Energy would like to acknowledge and apologize for this form being submitted outside the 10 days from the initial release timeline. We have been in contact with Greg Deranleau regarding the initial Form 19 submission. Greg posed many questions and concerns and we also were doing our due diligence to determine why the pit wall was compromised and what the potential impacts were. At the time of submission of the initial Form 19 we reported what we knew to the best of our knowledge. At the first opportunity we visited the site and collected soil samples in the areas that came into contact with the produced water and an additional background. Our intention was to submit sample results with this supplemental form. We will submit results as soon as they are returned.

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

Signed: \_\_\_\_\_ Print Name: Ryan Dornbos  
Title: Petroleum Engineer Date: 09/28/2022 Email: Ryan@PEOperating.com

<u>COA Type</u>	<u>Description</u>
	Operator shall collect confirmation soil samples as described in the Rule 915.e.(2). Operator will analyze soil samples for TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble)).
	The operator should perform sampling and analysis to fully delineate the lateral and vertical extent of those impacts.
	Operator must provide the soil sample analytical results in the Form 27-Initial submittal.
3 COAs	

**Attachment List**

<u>Att Doc Num</u>	<u>Name</u>
403180616	FORM 19 SUBMITTED
403181449	MAP
403181450	PHOTO DOCUMENTATION

Total Attach: 3 Files

**General Comments**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)