



**National Transportation
Safety Board**

Memorandum

Date: June 2, 2021

To: Robert J. Hall, P.E.
Director, Office of Railroad, Pipeline and Hazardous Materials Investigations

Through: Sean Lynam, Chief
Pipeline and Hazardous Materials Division

From: Paul Stancil
Sr. Hazardous Materials Accident Investigator

Subject: **Closeout Accident Investigation Memorandum**
HMD21LR001
Crude Oil Unit Train Derailment with Fire, Custer, Washington
December 22, 2020

SYNOPSIS

On Tuesday, December 22, 2020, at about 11:38 a.m. local time, northbound BNSF Railway Company (BNSF) petroleum crude oil unit train U-TNDFEP-0-36T derailed 10 loaded tank cars at MP 111.75 on the BNSF Bellingham Subdivision, in Whatcom County, in the town of Custer, Washington (Figure 1). The train consisted of 2 head-end locomotives, one head-end buffer car, 106 loaded tank cars, one rear-end buffer car, and 2 distributed power locomotives. Three tank cars released an estimated total of about 29,000 gallons of petroleum crude oil, which ignited and burned uncontrolled for 2 hours. An evacuation was ordered for a 1/2-mile radius around the accident site, affecting 120 persons for about 4 hours.

No injuries were reported. Weather at the time of the accident was partly cloudy and 34 degrees Fahrenheit, with a 5-mph wind. BNSF estimated damages exceeded \$1.5 million.

INVESTIGATION

The NTSB conducted a limited investigation to document the performance of the DOT-117 tank cars in the derailment. Due to COVID-19 travel restrictions, investigators did not travel to Custer, Washington to examine the tank cars, but rather relied on close communication with local Federal Railroad Administration and Washington State Utilities and Transportation Commission hazardous materials investigators as they collected derailment damage data. A tank car derailment damage

factual report was prepared and placed into the public docket.¹ Additional supporting items contained within the docket include Federal Railroad Administration tank car damage assessment forms, photographs, aerial images of the derailment scene, tank car certificates of construction and alteration documentation, train consist and waybills, locomotive event recorder data, Bellingham Subdivision map and track chart, crude oil characteristics and tank car loading data, crude oil release amount calculations, Federal Railroad Administration equipment accident record form 6180.97, and Pipeline and Hazardous Materials Safety Administration incident report form 5800.1. The incident remains under investigation by the Federal Railroad Administration and the Federal Bureau of Investigation.

CONCLUSION

The goal of this Safety Board investigation was met by documenting the damage to the DOT-117 tank cars and making this documentation available to the public. Evidence gathered from this examination will also be used in support of other investigations evaluating the performance of tank cars in flammable liquids service. Therefore, staff recommends that this investigation be closed.

I Concur:

Robert J. Hall, P.E., Director
Office of Railroad, Pipeline and Hazardous Materials Investigations

Date

¹ See NTSB docket HMD21LR001 for the tank car derailment damage factual report and associated investigative information pertaining to the December 22, 2020, derailment of BNSF Railway freight train U-TNDFEP-0-36T and subsequent hazardous material release.