



PRELIMINARY REPORT

RAILROAD

DCA14MR004

The information in this report is preliminary and will be supplemented or corrected during the course of the investigation.

On December 30, 2013, about 1411 central standard time, a westbound BNSF Railway (BNSF) grain train, G-RYLRGT9-26A, derailed 13 cars at milepost 28.5 near Casselton, North Dakota. The grain train, operating on main track 1, consisted of two head-end locomotives, one rear distributed power locomotive, and 112 cars. One of the derailed cars, the 45th car from the head end, fouled main track 2. An eastbound BNSF petroleum crude oil unit train, U-FYNHAY4-05, operating on main track 2 collided with the derailed car that was fouling main track 2 and derailed the head-end locomotives and the first 21 cars of the train. The petroleum crude oil unit train consisted of two head-end locomotives, one rear distributed power locomotive, and 106 cars.



After the collision, the two crewmembers on board the petroleum crude oil unit train exited the lead locomotive uninjured before ruptured tank cars ignited. The crew from the grain train was not injured.

Local emergency officials coordinated a voluntary evacuation of about 1,400 people from Casselton. No injuries to the public were reported.

Figure: Fire from petroleum crude oil tank car explosion.
Photo credit: Dawn Faught

The accident occurred on the BNSF KO Subdivision where train movements were governed by the signal indications of a traffic control system. The maximum authorized speed for freight trains in the accident area was 60 mph. Event recorder data from the rear locomotives of both trains, as well as recorded data from the signal system, were examined to determine train speeds and signal aspects prior to the collision. The grain train was traveling about 28 mph when it went into an emergency brake application. The petroleum crude oil unit train was traveling about 43 mph when the train crew initiated an emergency brake application. The train was traveling about 42 mph when the collision occurred.

Damage was estimated at \$6.1 million. The accident occurred in daylight with weather conditions of overcast skies, a temperature of -1° F, and wind from the north at 7 mph.

National Transportation Safety Board (NTSB) investigators have completed the on-scene work near Casselton. The investigation will continue at the NTSB headquarters in Washington, D.C. Preliminary results of the investigation include the following:

- Twenty-one cars from the petroleum crude oil unit train derailed along with the two lead locomotives. Twenty of the tank cars were carrying petroleum crude oil; one was a hopper car carrying sand.
- Of the 20 tank cars that derailed, 18 were breached (punctured).
- Initial estimates are that more than 400,000 gallons of crude oil was released.
- From January 1–3, 2014, investigators interviewed the train crews and first responders. Interview transcripts will be included in the public docket upon release.
- A broken axle and two wheels were shipped to the NTSB materials laboratory in Washington, D.C., for further evaluation and analysis.
- Locomotive event and video recorders were also sent to the NTSB materials laboratory in Washington, D.C., for further analysis.

The parties to the investigation include the Federal Railroad Administration; the Pipeline and Hazardous Materials Safety Administration; the BNSF; the Brotherhood of Locomotive Engineers and Trainmen; the International Association of Sheet Metal, Air, Rail and Transportation Workers, formerly known as the United Transportation Union; and Trinity Rail Car.