On August 22, 2017, about 12:10 a.m. eastern daylight time, Southeastern Pennsylvania Transportation Authority (SEPTA) electrically powered single-car train 155 (train 155) struck unoccupied SEPTA single-car train 148 (train 148) that was stopped at the track 1 passenger platform of the 69th Street Transportation Center. The collision occurred on the Norristown Line in Upper Darby, Pennsylvania. Both railcars were damaged, but remained on the rails. The train operator and 42 passengers were transported to local medical facilities. None of the injuries were reported as life threatening.

About the time of the accident, the Philadelphia airport, located 5 miles south, reported wind from the southwest at 7 miles per hour, visibility of 10 miles, scattered clouds at 1,700 feet, and temperature 79°F.

Figure. Accident scene. (Photograph from the SEPTA Transit Police Department.)
The Norristown Line is a two-track, 13-mile, 600-volt direct-current electrically powered rail line. The line operates regular train service seven days a week between Norristown, Pennsylvania, and Upper Darby, Pennsylvania. The line operates frequent local and skip-stop service to 22 railroad stations between the Norristown Transportation Center and the 69th Street Transportation Center. Train operations are governed by the SEPTA Rail Operations Manual and the SEPTA Surface Operations Manual-Suburban Victory Division Special Instructions. The traffic control system was installed in the mid-1990s and provides bidirectional operation using a track circuit-based, color light signal system. A wayside signal system based on cab signaling provides train separation, overspeed, and stop-signal overrun protection ensures signal compliance. The on-board vehicle system provides compliance and enforcement through an automatic train control system (ATC) employing a five-cab signal system.

The operator of train 155 had completed eight runs between the Norristown Transportation Center and the 69th Street Transportation Center using the same single-railcar train. On the operator’s last run for the shift, train 155 was destined for the 69th Street Transportation Center when the accident occurred. In a postaccident interview with National Transportation Safety Board (NTSB) investigators, the operator said he did not encounter any braking problems with train 155 in any of the previous eight runs.

During the last train run to the 69th Street Transportation Center, there was some light precipitation, as shown in video from the train’s forward-facing camera. As the train approached the Gulph Mills Passenger Station, 17 stations away from the 69th Street Transportation Center, the operator began braking for a station stop. However, the operator was unable to stop the train at the Gulph Mills Passenger Station and slid past the passenger platform. The operator reported the missed station and notified the controller at the SEPTA operations control center of slippery rail. The operator was given permission to reverse controlling ends on train 155 and to return and service the Gulph Mills Passenger Station platform. The controller stated that typically, if several slippery rail reports are received, an announcement regarding slippery rail is transmitted to all train operators. However, in this situation, this was the only report of slippery rail received.

The controller directed the operator of train 155 to complete the Gulph Mills Passenger Station stop and continue toward the 69th Street Transportation Center. About 0.4 miles from the 69th Street Transportation Center, the train operator began receiving a series of reduce speed cab codes from the ATC system. The signal was Stop at 6S, the last track-side signal before the 69th Street Transportation Center. The last track switch was lined for the track 1 passenger platform, where unoccupied train 148 was stopped.

The operator stated he attempted to stop the train, but went through signal 6S, continued into the station, and collided into train 148, which was shoved back but did not strike the bumping post at the end of the station track.

Parties to the investigation are the Federal Transit Administration, SEPTA, the International Association of Sheet Metal, Air, Rail and Transportation Workers, the Pennsylvania Department of Transportation, and the Transport Workers Union.