



Approved: March 19, 2024

Preliminary Report RRD24FR009

*This information is preliminary and subject to change.*

# Norfolk Southern Train Collisions and Derailment

Easton, Pennsylvania  
March 2, 2024

On March 2, 2024, about 7:11 a.m. local time, eastbound Norfolk Southern Railway (NS) intermodal train 268H429 collided with stopped NS intermodal train 24XH101 on the same track and derailed railcars that were subsequently struck by westbound NS mixed freight train 19GH501 on the Allentown Road Subdivision near Easton, Pennsylvania.<sup>1</sup> As a result of the first collision, train 268H429 derailed three railcars that fouled the adjacent main track 1.<sup>2</sup> Less than a minute later, a second collision occurred when train 19GH501 struck the derailed equipment while traveling westbound on main track 1. As a result of the second collision, train 19GH501 derailed six railcars and two locomotives. Three of these derailed railcars were placarded as hazardous materials tank cars: one containing ethanol residue and two containing butane residue.<sup>3</sup> The tank cars did not breach or release hazardous materials. The two derailed locomotives partially submerged in the Lehigh River and discharged locomotive diesel fuel into the water. Seven crewmembers were transported to a local hospital, treated for minor injuries, and released. NS estimated damages to equipment and track to be about \$2.5 million. At the time of the

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<sup>1</sup> (a) All times in this report are local times. (b) An *intermodal train* carries shipping containers used in intermodal freight transportation. (c) A *mixed freight train* includes several types of railcars and commodities.

<sup>2</sup> *Fouling a track* means the placement of an individual or equipment in such proximity to a track that the individual or equipment could be struck by a moving train or on-track equipment.

<sup>3</sup> The three hazardous materials tank cars were offered for shipment as having last contained UN1170, Ethanol Solutions, a Class 3 flammable liquid in packing group II, and UN1075, Liquefied Petroleum Gas, a Division 2.1 flammable gas, as specified in Title 49 *Code of Federal Regulations* Part 172.

collisions, visibility conditions were daylight and overcast; the weather was 35°F with light rain.



**Figure.** Site of the collisions. (Courtesy of Lehigh County Emergency Management.)

Train 24XH101 was traveling from Atlanta, Georgia, to Croxton, New Jersey, and consisted of 3 lead locomotives and 27 intermodal railcars. Its crew consisted of an engineer and a conductor.

Train 268H429 was traveling from Landers, Illinois, to Elizabeth, New Jersey, and consisted of 2 lead locomotives and 39 intermodal railcars. Its crew consisted of an engineer and a conductor.

Train 19GH501 was traveling from Croxton, New Jersey, to Enola, Pennsylvania, and consisted of 2 lead locomotives, 1 distributed power unit, and 199 mixed freight railcars. Its crew consisted of an engineer, a conductor, and a conductor trainee.

The track near the collision site has two main tracks. Train movements in the area are authorized by wayside signal indications with an overlaid positive train

control system and are coordinated by the NS dispatcher center in Atlanta, Georgia.<sup>4</sup> The maximum authorized speed in the area was 40 mph.<sup>5</sup>

Shortly before the collisions, train 24XH101 had stopped on main track 2 because of train traffic. Train 268H429, approaching from the west, proceeded through a signal that required it to operate at restricted speed.<sup>6</sup> Train 268H429 was traveling about 13 mph at the time of the first collision. Westbound train 19GH501 was not required to operate at restricted speed and was traveling about 22 mph at the time of the second collision, below the maximum authorized speed.

While on scene, National Transportation Safety Board investigators completed interviews; inspected locomotives and railcars; tested and downloaded data from positive train control and signal systems; and sent data from radio logs, locomotive event recorders, and outward- and inward-facing image recorders to the National Transportation Safety Board Vehicle Recorder Laboratory for analysis.

The National Transportation Safety Board's investigation is ongoing. Future investigative activity will focus on NS rules, procedures, and crew training related to train handling.

Parties to the investigation include the Federal Railroad Administration; NS; the Brotherhood of Locomotive Engineers and Trainmen; the Brotherhood of Railroad Signalmen; and the International Association of Sheet Metal, Air, Rail and Transportation Workers.

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<sup>4</sup> A *positive train control* system enforces speed limits and prevents a train from passing through a signal that requires it to stop.

<sup>5</sup> Maximum authorized speed was set by NS Keystone Division Allentown Road Subdivision Timetable Number 1, effective November 1, 2023, with revisions effective November 27, 2023.

<sup>6</sup> *Restricted speed* is defined by Federal Railroad Administration regulations in 49 *Code of Federal Regulations* 236.812. Restricted speed operations occur when a train operates below 20 mph (or at a lower limit set by operating rules) and at a speed that will allow it to stop within one-half the range of vision of the operator.