Lack of safety technology contributed to 2015 Amtrak crash in Philadelphia

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The National Transportation Safety Board decided this month that the most likely causes of an Amtrak train derailment on May 12, 2015 in Philadelphia was a radio transmission that distracted the train engineer and the lack of safety technology that could have prevented the operator from speeding. The crash killed eight people and injured 220 passengers.

The engineer, Brandon Bostian, a 32-year old resident of Queens, New York was operating the train, Amtrak No. 188, which was traveling from Washington DC to New York City and flew off the tracks while moving at 106 miles per hour, more than twice the speed limit for that stretch of track. He then applied the emergency brake which slowed the train down to 102 mph. But it was too late: four of the train's seven cars, including its locomotive, careened off the track in a tangled heap.

Bostian told investigators that he remembered a radio transmission from a commuter train operator who transmitted that a rock had just shattered his windshield. Bostian was concerned because one of his friends had lost partial eyesight in a rock throwing incident. The engineer did not tell the investigators about any other radio chatter that he might have heard.

The board's chairman, Christopher A. Hart, said that Bostian lost "situational awareness" when his attention was diverted by the radio transmission.

The Frankford Junction curve in the Philadelphia neighborhood of Port Richmond is one of the sharpest in Amtrak's Northeast Corridor. Investigators believed that Bostian accelerated because he thought that he was past the curve.

The lead investigator, Robert Sumwalt, told reporters, "He went in a matter of seconds, from distraction to disaster. This is not a complex error. It's a very basic error. But in this case it was a very costly error."

NTSB investigator Steve Jenner stated that "This is a standard human error. [Train engineers] have no more of the right stuff than pilots – or anyone else."

NTSB chairman Christopher Hart noted that even the best engineers are fallible and that, "it is a world in which the engineer relies in part on the memorized details of the route and a world in which a loss of awareness can take a terrible toll."

According to transcripts, Bostian told investigators, "I pushed the throttle forward in order to accelerate from 70 to 80. And I don't remember anything from that point until after the train was already in the curve."

He also told investigators, "After North Philadelphia, there are a few speed changes. One of the significant speed changes is there's a 65-mph curve that leads into an 80 mph straightaway that leads into a 50-mph curve. I think at Frankford Junction or around Frankford Junction area."

He further explained that, "For the 50-mph curve, it's difficult to see where the curve starts. As that track curves to the left, it kind of, you're looking into something of a black abyss. It would be easy to hit the curve a little bit hot by 5 or 10 mph if you weren't being careful and looking very carefully at the cues because it can sneak up on you."

The derailment could have been prevented if proper signal protection called Positive Train Control (PTC), which automatically stops trains from going too fast around designated speed limits, had been installed. Such technology was not in place in this area at the time of the crash.

One of the investigators, Ted Turpin said that had PTC been in use along that stretch of track, "we would not be here today."

NTSB chairman Hart said that unless the technology is fully in place soon, "I'm very concerned that we're going to be back in this room again, hearing

investigators detail how technology that we have recommended for more than 45 years could have prevented yet another fatal rail accident."

NTSB member Robert Sumwalt said "Based on what we know, had such a system been installed in this section of track, the accident would not have occurred."

Over the past 20 years, the NTSB has cited the lack of this technology as a contributing factor in 25 crashes. The installation of this technology has proceeded very slowly throughout the country. With President Barack Obama's signature last year Congress passed a bill that extended the original legislative deadline of 2015, and gave the railroads another 3 to 5 years to implement it.

Authorities have determined that Bostian was not on a cell phone, using drugs, or involved in alcohol use at the time of the crash. Although since the crash, Bostian has been suspended without pay by Amtrak for speeding, his fellow engineers have always held him in high regard for his concern for safety. Bostian often complained that the railroads were not moving fast enough to adopt PTC protections.

The NTSB also concluded that there was a problem with the train's emergency windows since four people were killed after they were ejected through them during the crash.

The safety agency found that the police were in error in transporting some people to the hospitals instead of waiting for ambulances. Just 23 of the 185 who ended up in a hospital were taken in ambulances. The rest were taken by other means such as city buses, police cars or vans. The NTSB found that only three of the 43 most seriously injured passengers had an ambulance transport them from the scene of the derailment. The agency is recommending better coordination of the police and the fire department.

The NTSB investigation has revealed, not for the first time, that without proper signal protection, especially in areas with sudden sharp turns such as the Frankford Junction Area, rail accidents such as the Amtrak one of 2015 are disasters waiting to happen.

Under conditions where train operators have little control over their break times but must submit to a prearranged schedule, how competent the operator may be is increasingly irrelevant to preventing accidents. As the NTSB board chairman has explained, all it takes, for whatever reason, is a moment's lack of awareness, especially in areas like Frankford Junction, to end up in tragedy.

Indeed, in the spring of 2015, Amtrak cut layover time for the engineers on the Northeast Corridor from an average of two- and a- half hours to only ninety minutes or less. On the day of the accident, Bostian was behind schedule and had much less break time than normal before operating the train that derailed.

The real crime is that the rail companies, in cahoots with the federal government, have allowed these dangerous conditions to continue. It has been estimated that it would take little more than $21 billion to repair and replace existing tracks and other infrastructure just in the Northeast Corridor, the busiest in the country.

This is another example of the vital infrastructure which is being sacrificed in order to meet the needs of the banks and big business or to pay for the ever expanding military industrial complex, as required by capitalism.