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The Rash of Recent Amtrak Crashes and How the Implementation of Positive Train Control Would Have Made a Difference

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In the past seven weeks, Amtrak train derailments and crashes in DuPont, Washington, and Cayce, South Carolina, have killed five people and injured close to 200, causing tremendous personal suffering for family members and demonstrating the tragic consequences of decades of Amtrak and rail industry ineptitude and negligence for failing to implement National Transportation Safety Board (NTSB) recommendations calling for Positive Train Control (PTC). PTC is an automated control system that monitors train position and speed to make sure the humans operating the trains are doing so in accordance with certain operating criteria such as speed limits and takes control of trains to reduce speed and/or stop them as necessary to provide for safe operations.

These seemingly simple-to-prevent train wrecks -- like Sunday's crash of Amtrak Silver Star Train 91 in Cayce South Carolina -- have been occurring in the U.S. for more than a century -- despite the fact that technology has been available to prevent them for decades as demonstrated in Europe and various parts of the U.S. including Amtrak's Northeast Corridor. It appears that the rail industry CEO's just don't want to spend the money and detract from their record profits and salaries. For example, CSX's January, 2018 report of $4.14 billion profit and $5 million CEO pay in 2017. CSX's profits alone would pay for the nationwide completion of PTC for all railroads, not just CSX's, and still leave CSX with over $1 billion to spend or save as they see fit. This hypocrisy and negligence will not go unrecognized by the victims of these entirely preventable train incidents and their families.

Sunday's crash of Amtrak Silver Star Train 91 in Cayce, South Carolina, based on preliminary news accounts and photos, appears to have been caused by the Amtrak train operating on the wrong track at about 59 mph when it came around a corner and impacted a stationary CSX freight train, killing two and injuring about 117 people. The cause of this tragedy is subject to NTSB investigation findings and conclusions, but the early data indicate it is another incident where PTC would likely have prevented the senseless crash.

Rewind about seven weeks to the Amtrak 501 tragedy for which we now have much more factual information...

The engineer and conductor who were in the lead locomotive of the Amtrak Cascades Train 501 that derailed at close to 80 mph in DuPont, Washington, on Dec. 18, 2017, killing three people and

injuring dozens more, have admitted to NTSB investigators that they did not see the 30 mph speed limit sign located about two miles before the 30 mph curve in which they derailed. The engineer has said he applied the train brakes as soon as he saw the 30 mph sign at the start of the curve, and inward-facing audio-video recorders indicate this occurred less than six seconds before the train derailed. By then it was too late to prevent the derailment and the engineer and conductor braced for impact.

The engineer had about four years of experience with Amtrak but only one practice run operating a train in this direction on this set of tracks. And the conductor had about six years of experience with Amtrak but presumably none on this set of tracks as the NTSB interview summary does not mention any such experience.

Ironically, Amtrak Cascades Train 501 was the highly anticipated and publicized inaugural Amtrak passenger run on a newly upgraded set of freight train tracks that Amtrak had never operated on before with paying passengers. The $89.1 million, Federally-funded Point Defiance Bypass project, was begun in 2011 and was originally scheduled for operation in early 2017 before delays pushed the first day of operation back to this accident date.

With more than six years of planning opportunity and stiff opposition from some locals who claimed this new Amtrak operation would result in accidents, Amtrak should have had significant safety redundancy in all aspects of this inaugural train movement. This was especially true with so many high profile local officials, news media and rail enthusiasts on board this train or monitoring its progress from stations along the new route. Instead, Amtrak had only one relatively inexperienced engineer in the lead locomotive with no supervisor or experienced engineer who had years, months or even weeks of experience on this section of track. Supervisory engineers and more experienced engineers existed within the ranks of Amtrak, the track owner, and freight operators who had been using this track for decades, but none were employed to assist this one engineer in assuring the safety of this inaugural train run.

Amtrak's lack of safety redundancy planning resulted in a single-point failure scenario where a predictable single human failure to see and act on a single speed limit sign two miles away from a low-speed curve over a major highway would result in a catastrophic derailment. Like several other catastrophic Amtrak incidents in which its engineers have gone into low speed curves at more than double the speed limit, the Amtrak Cascades Train 501 engineer indeed failed to see and act on the single speed limit sign two miles in advance of the 30 mph curve, and so the predictable catastrophic derailment occurred and once again many families are forever devastated by death and injuries to their loved ones.

Just like the May 12, 2015 Amtrak derailment in Philadelphia where the engineer went into a 50 mph curve at 106 mph, killing eight and sending another 185 people to emergency rooms with injuries. Just like the Dec. 12, 1990 Amtrak derailment in Boston where the engineer went into a 30 mph speed zone at 100 mph and eventually derailed in a 30 mph curve at 76 mph, injuring 453 people. Amtrak has been fully aware for decades that its engineers will not adhere to speed limits 100 per cent of the time due to various human errors and negligence, and that these errors and negligence can and have caused catastrophic crashes.

The fatal consequences of Amtrak's latest speeding negligence could have been avoided if the PTC equipment installed on this train had been in use at the time of the crash. The NTSB has recommended PTC implementation on U.S. railroads for more than 46 years and has cited lack of PTC in its Probable Cause statements for numerous rail crashes that have caused thousands of

injuries and deaths, as well as hundreds of millions of dollars of economic damage.

PTC has been in use in Europe for about 80 years and in less capable versions for over 100 years. PTC has been in use in parts of the U.S. and other countries for several decades, including parts of Amtrak's Northeast Corridor since 2000. All of Amtrak's Northeast Corridor PTC was in use at the time of Amtrak Train 501's crash. The Rail Safety Improvement Act of 2008 required PTC to be in place nationwide in the U.S. as of Dec. 31, 2015 - more than seven years of grace period in which to plan and implement.

Rail industry inaction and complaining about PTC cost led to the Oct. 29, 2015 PTC Enforcement and Implementation Act that extended the nationwide PTC deadline to Dec. 31, 2018, with extension allowances in certain cases through 2020, and financial penalties for non-compliance allowed to begin in 2021. The Act also requires railroads to submit revised PTC implementation plans and annual PTC progress reports to the Department of Transportation (DOT)/ Federal Railroad Administration (FRA). The DOT/FRA is required to publish all plans and progress reports within 60 days of receiving them. Clifford Law Offices and its experts look forward to reviewing the PTC implementation plans and progress reports for the Amtrak Cascades Train 501 and Amtrak Silver Star Train 91 equipment and track.

The PTC equipment on Amtrak Cascades Train 501 was not in use at the time of the derailment because some trackside PTC equipment that works in conjunction with the train's PTC equipment had not yet been "fully certified for use." The delay of PTC certification and use for this section of track and the decision to begin operations without it is a tragic example of poor safety planning and management, prioritization, execution, and overall project management. It's likely the same will be true of the section of track on which Sunday's Amtrak Silver Star Train 91 crashed, but we will have to wait for the NTSB investigation to produce additional data before definitively drawing that conclusion.

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