Testimony of
Marion C. Blakey, Chairman
National Transportation Safety Board
Before The
Subcommittee on Surface Transportation and
Merchant Marine
Committee on Commerce, Science, and Transportation
United States Senate
Regarding Railroad Safety
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Good morning Chairman Breaux and Members of the Subcommittee. It is a pleasure to represent the National Transportation Safety Board (NTSB) before you today on the subject of railroad safety.

According to the Association of American Railroads, there are more than 600 freight railroads operating today in Canada, Mexico, and the United States. North American railroads operate over 173,000 miles of track, and generate $42 billion in annual revenues. In the United States, railroads account for more than 40 percent of all freight transportation.

Federal Railroad Administration (FRA) data show that in 1996, there were 2,443 reportable train accidents, and in 2001 there were 2,962 reportable train accidents. Although there was a marked decrease in railroad fatalities in 1999 - from 1,008 to 932 - this figure has risen to 966 in 2001. Mr. Chairman, as railroad traffic and the amount of hazardous materials being transported continue to increase, the railroad industry and government must remain vigilant with their efforts to prevent accidents.

I want today to discuss three areas of concern to the Board - positive train control, track safety, and grade crossing safety.

The NTSB's safety recommendations are the most important results of its accident investigations. It is clear that adoption of our safety recommendations saves lives. We are working closely with the FRA to increase its current recommendation acceptance rate of about 71.5%, and to that end I met with Administrator Rutter on June 7, 2002, to discuss which of the open safety recommendations can and should be accomplished within the next two years. I believe the meeting was productive and will result in accomplishing several open safety recommendations.

Since its creation in 1990, the Safety Board's Most Wanted list has highlighted safety recommendation issues that have the greatest potential to save lives. Positive train control (PTC) systems have been on the list since 1990. PTC systems prevent train collisions by automatically interceding in the operation of a train when the engineer does not comply with a required signal indication. In past accidents, engineers failed to comply with signals because of poor visibility, distractions, or other human performance failures, such as fatigue. As you are aware, problems associated with human fatigue is also a Most Wanted issue.

Over the years, the Safety Board has repeatedly investigated railroad collisions that could have been prevented by a PTC system. Since 1969, when the Safety Board made its first safety recommendation related to PTC systems, the Board has investigated 15 relevant major railroad accidents related to PTC and completed a safety study -- resulting in 36 positive train control-related safety recommendations. Without the installation of PTC systems, preventable collision accidents will continue to occur and will continue to place railroad employees and the traveling public at risk.

The most recent safety recommendation regarding PTC was issued in May 2001 as a result of the collision that occurred January 17, 1999, near Bryan, Ohio. Since that safety recommendation was issued, the NTSB has launched investigators to six railroad collision accidents that may have been prevented had PTC systems been in place, including a recent head-on collision that occurred between a freight train and a commuter train in Placentia, California, on April 23, 2002.

As you may recall, at 8:20 a.m. a Burlington Northern Santa Fe (BNSF) freight train collided with a Metrolink commuter train, resulting in the fatal injuries of two Metrolink passengers. The BNSF train was traveling between 40 and 50 miles per hour when the engineer saw the Metrolink commuter train on the track put the train into emergency braking. Despite application of the train's emergency brakes, the BNSF train struck the Metrolink commuter train at 20 miles per hours, pushing it backward more than 300 feet and derailing its front passenger car.

Since the mid 1990s, more than 267 million dollars have been spent on PTC systems by industry and government. The Safety Board is encouraged by the efforts of some railroads to implement PTC systems that have a collision avoidance component, and several projects have advanced past the developmental phase into revenue service. For instance:

- Amtrak continues installation of the Advanced Civil Speed Enforcement System along the high-density Northeast Corridor (with 198 miles completed);
- Amtrak is also installing the Incremental Train Control System on the Michigan line between Chicago and Detroit (with 76 miles completed);
- New Jersey Transit continues installation of the Advanced Speed Enforcement System (with plans to install it on all 540 miles system-wide); and
- The Illinois Department of Transportation, the FRA, the AAR, and the Union Pacific are working to install a PTC system on the Chicago to St. Louis Corridor.

In September 1999, the FRA's Railroad Safety Advisory Committee (RSAC) completed a report titled "Implementation of Positive Train Control Systems. The report noted that:

- Approximately 40 to 60 accidents could be prevented by PTC each year;

- Approximately 7 fatalities and 55 injuries could be prevented annually by PTC;
- Testing has shown that PTC is successful; and
- PTC systems can be designed to provide interoperability among many systems.

As a result of the RSAC report, in August 2001, the FRA published a notice of proposed rulemaking (NPRM) to facilitate development and implementation of the National Differential Global Positioning System (GPS) Network. Previous PTC testing established that a properly augmented GPS can provide a viable, low cost train-borne location determination system for PTC.

Mr. Chairman, the Safety Board acknowledges progress in this area, and we recognize the complexities and costs involved in the implementation of PTC on the Nation's railroads. However, the safety Board is not satisfied with the current pace of development and implementation of collision avoidance technologies. It is important to remember that not only are we seeking to eliminate the fatalities and injuries in these collisions, but the devastating financial and environmental costs of hazardous materials accidents. To date, no plan for industry-wide integration has been developed. And, while progress has been particularly slow along rail lines that primarily serve freight carriers, even those lines with significant passenger traffic remain largely unprotected today -- some 12 years after PTC was first placed on the Safety Board's Most Wanted list.

Track safety is also an issue that has been addressed by the Board in numerous railroad accidents. According to the FRA, of the 2,962 reportable train accidents in 2001, 1,115 were track-related. Mr. Chairman, when Mr. Bob Chipkevich, Director of the Board's Office of Railroad, Pipeline, and Hazardous Materials Investigations, testified before this Subcommittee in March 2001, he commended the FRA for its efforts to revise track standards. He expressed concern, however, that the rule to revise track safety standards did not mandate the use of advanced track inspection technology, such as track geometry cars. We believe data identified by track geometry cars would enable a track inspector to more effectively identify track anomalies, monitor those track segments with potential defects, and monitor the results of track work performed.

The most recent railroad accident report adopted by the Board in which track conditions and inspection were issues resulted from an accident that occurred May 27, 2000, in Eunice, Louisiana. The derailment of a Union Pacific (UP) freight train resulted in explosions, fire, the release of hazardous materials, and the evacuation of about 3,500 people from the surrounding area. Total damages exceeded $35 million.

After the derailment, a thorough inspection of the jointed rail territory revealed track conditions that did not meet the requirements for the type of track used. Furthermore, it was more than likely that these track conditions existed for some time. The FRA's records for the 5 years preceding the accident documented a history of weak tie conditions and cracked joint bars in the jointed rail section at the accident location. During a walking inspection in 1996, the FRA discovered 36 broken joint bars and identified several areas with weak crossties. FRA inspectors inspected the track in January 1999 and discovered areas with insufficient crossties and defective joint bars. Although an FRA inspector found that the situation had been corrected in a follow-up inspection in March 1999, he found defective tie conditions at 11 locations and 2 cracked joint bars in other areas.

During the Safety Board's investigation, Union Pacific advised NTSB staff that the track at the scene was inspected daily. A post-accident inspection by the Safety Board's investigative team, however, revealed numerous track defects - including 403 cracked and broken splice bars. Since this accident Union Pacific has implemented a more stringent inspection program for jointed track.

Track issues are also being examined as part of our investigations of recent train derailments that occurred on January 18, 2002, in Minot, North Dakota, and on April 18, 2002, at Crescent City, Florida.

The derailment and release of hazardous materials in Minot, North Dakota, occurred on January 18, 2002, at approximately 1:39 a.m., central standard time. The accident involved a Canadian Pacific Railway freight train with two locomotives and 112 cars, 31 of which derailed. Several tank cars were breeched, releasing more than 250,000 gallons of anhydrous ammonia, creating a vapor cloud that was estimated to be 5 miles long, 2 ½ miles wide, and about 350 feet high. The accident resulted in one fatality. The Minot Rural Fire Department Fire Chief estimated that the anhydrous ammonia vapor cloud affected approximately 15,000 people, or 40 percent of the population of the City of Minot.

The train's operating crew stated that while traveling at approximately 40 miles per hour they felt a rough spot and were attempting to slow the train when the derailment occurred. The Board will hold a public hearing this summer regarding this accident and track issues will be addressed. We will keep the Committee advised of any developments as they occur.

Track issues are also being looked into as a result of the derailment in Crescent City, Florida, which involved an Amtrak auto train en route from Sanford, Florida, to Lorton, Virginia. The accident occurred on April 18, 2002, at approximately 5:40 p.m. eastern daylight time. The Amtrak train was operating over CSX Transportation track and was carrying 418 passengers and a crew of 34 at the time of the accident. The accident resulted in 4 passenger fatalities and over 28 injuries. The engineer told Safety Board investigators that he was operating under a clear signal indication when he saw a misaligned track approximately 60 feet in front of the engine. Before he could initiate the train's emergency brakes, he was thrown to the side of the locomotive cab. He then initiated the emergency brakes and felt the train derail.

The NTSB believes that the FRA needs to increase track inspections, and recommended -- as a result of the Eunice, Louisiana, accident -- that the FRA modify its track inspection program to consider the volume of hazardous materials shipments made over the tracks in determining the frequency and type of track inspections. We look forward to receiving the FRA's response.

Mr. Chairman, I would be remiss if I did not discuss a long-standing safety concern of the Board's -- grade crossing safety. Data indicate that every 160 minutes a collision between a train and a car or a truck occurs at one of the more than 259,000 highway/rail grade crossings in the United States, resulting in 419 fatalities in 2001.

The most recent railroad/highway grade crossing accident report adopted by the Board involved an accident that occurred on March 15, 1999, in Bourbonnais, Illinois, which resulted in 11 fatalities. The Safety Board's investigation revealed that the truckdriver had ample time to safely stop his truck and avoid an accident, but likely as a result of fatigue, he failed to respond appropriately to the signals and instead decided to cross ahead of the train.

On-going grade crossing accidents include accidents that occurred November 20, 2000, in Intercession City, Florida, that involved an Amtrak train and an oversize/overweight tractor-trailer combination vehicle at a protected crossing, and May 14, 2002, in Coosawhatchie, South Carolina, that involved an Amtrak train and a tractor-trailer carrying logs at an unprotected crossing.

Ideally, the Safety Board believes that closing crossings or separating rail traffic from highway traffic through bridges and overpasses are the most effective means to eliminate accidents between highway vehicles and trains. The Safety Board recognizes that closures or traffic separation is not always possible. Therefore, the NTSB has also recommended that grade crossings be equipped with active devices that warn motorists of on-coming trains. We have seen, however, that even those crossings with flashing lights and gates do not prevent all accidents. Many Board investigations of accidents that occurred at active crossings have involved drivers who did not comply with train-activated warning devices installed at the crossings. Drivers often drove around lowered crossing gates or ignored flashing lights. Because of these deliberate actions by

drivers, the Safety Board believes strong consideration should be given to the installation of devices that will prevent motorists from driving around lowered gates or median barriers.

As a result of the grade crossing accident in Bourbonnais, Illinois, the NTSB recommended that the Department of Transportation provide Federal highway safety incentive grants to States to advance innovative pilot programs. These programs are designed to increase enforcement of grade crossing traffic laws at both active and passive crossings. We recognize that not all passive grade crossings will be upgraded in the near future with active warning devices, and we believe that education and enforcement, such as the use of cameras to catch violators who drive around the gates, must be a part of any effective grade crossing improvement plan. Many motorists fail to understand the level of risk at grade crossings, and do not realize that a 150-car train traveling at 50 miles per hour will take about 1½ miles to stop. The Safety Board fully supports the education efforts of Operation Lifesaver and other endeavors to provide information about grade crossing safety to drivers, and has recommended that grade crossing questions be included on all drivers' license tests.

Thank you, Mr. Chairman. I will be happy to respond to any questions.

Speeches & Testimony