

NATIONAL TRANSPORTATION SAFETY BOARD Investigative Hearing



Washington Metropolitan Area Transit Authority Metrorail train 302 that encountered heavy smoke in the tunnel between the L'Enfant Plaza Station and the Potomac River Bridge on January 12, 2015

Agency / Organization

Title



U.S. Department of Transportation

Federal Railroad Administration



Rail - Moving America Forward

The Federal Railroad Administration's (FRA) mission is to enable the safe, reliable, and efficient movement of people and goods for a strong America, now and in the future.

Railroads are Moving More People and Carrying More Goods Today Than in a Generation

- Amtrak ridership is up more than 50% since 2000
- Freight rail traffic is near an all-time high
- Rail must grow to balance the Nation's transportation options

Rail has Never Been Safer

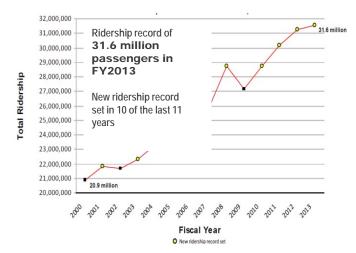
FRA is a data-driven agency. Every regulation and enforcement action we issue is based on facts and sound research using advanced statistical methods and modeling. We closely monitor data and trends to eliminate risk.

Two straight years of record-breaking safety performance, along with significant reductions in all types of accidents since FY 2008, proves that FRA's approach to oversight and enforcement is effective.

- Human Factor Caused Accidents ...down 38%
- Track Defects ... down 37%
- Equipment Defects ... down 41%

Amtrak Ridership Growth

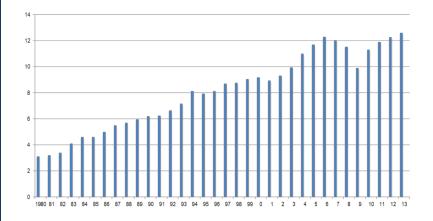
Source: Amtrak October 2013

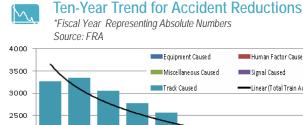


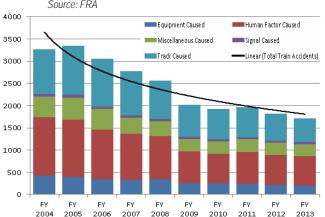


Intermodal Growth

TOFC/COFC Class 1 Railroad Loadings in Millions of Units Source: Association of American Railroads (AAR) "Railroad Facts" (2013 preliminary from "Weekly Railroad Traffic, 2013 Annual Summary")









Out-Performing Government Performance Results Act (GPRA) Goals: Ten-Year Railroad Safety Trends

*Normalized Numbers for Fiscal Year Source: FRA

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total ACC/INC	19.039	18.093	17.525	17.298	16.907	16.873	16.696	16.063	15.15	14.804
Train Accidents	4.274	4.253	3.772	3.479	3.256	2.928	2.783	2.762	2.487	2.31
Human Factors	1.721	1.648	1.38	1.297	1.23	1.041	0.948	0.995	0.919	0.887
Track Defects	1.314	1.398	1.318	1.258	1.094	1.036	0.972	0.957	0.843	0.725
Equipment Defects	0.548	0.499	0.433	0.418	0.435	0.366	0.37	0.342	0.286	0.269
Total Signal/Misc	0.692	0.707	0.641	0.506	0.497	0.484	0.494	0.469	0.438	0.429
Highway-Rail Incidents	4.024	3.8	3.797	3.523	3.24	2.986	2.9	2.881	2.772	2.68

Actively Addressing Challenges

Accidents related to human error and track defects account for more than two-thirds of all train accidents, while trespassing and highway-rail grade crossing incidents account for 96% of all railrelated fatalities.

Ensuring Continuous Safety Improvement

While rail safety is at an all-time best, we owe it to the public and rail workers to do better. Continuous safety improvement requires a comprehensive strategy designed to eliminate risks on railroads. We accomplish this by merging proven safety approaches – like our rail safety inspections and oversight programs – with performance-based measures that improve safety culture, harness technology and research, then apply the best of what we've learned to establish benchmarks, develop and ensure adherence to best practices, and implement new safety management programs. Here is our record:

Strong Oversight:

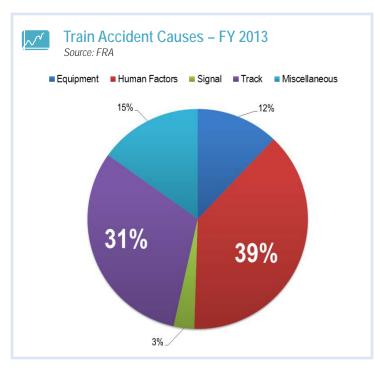
- 70,053 inspections (Sept. 2012-Aug. 2013)
- 7,684 cited violations (7,684)
- Automated Track Inspections (ATIP): 140,000 track miles covered FY12-13

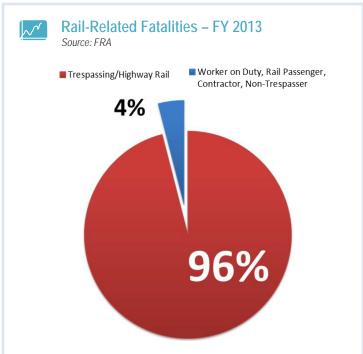
Harnessing Emerging Technologies and Research:

- Positive Train Control (PTC)
- Standardized Next Generation Passenger Rail Equipment
- Human Factors
- Next-generation Track and Equipment Inspections

Innovative Partnerships with Industry and Labor:

- Switching Operations Fatality Analysis (SOFA)
- Fatality Analysis Maintenance-of-Way Employees and Signalmen (FAMES)
- Operation Red Block
- **Flectronic Device Distraction**





Responding to Accidents

While we use data and research to ensure continuous safety improvement, we also learn from every accident. FRA investigators focus on identifying an accident's root-causes so we can eliminate risk and take all appropriate enforcement action. Our focus today is:

Passenger Rail Safety:

Operation Deep Dive on Metro North Commuter Railroad

Addressing the Safe Transport of Crude Oil by Rail:

- Railroad Safety Advisory Committee (RSAC) working groups on crew size, hazardous material, and train securement
- Operation Classification (the "Bakken Blitz")
- FRA's Call to Action on Safely Transporting Hazardous Materials
- Pipeline and Hazardous Materials Safety Administration's (PHMSA) Operation Safe Delivery
- Tank Car Integrity (PHMSA's DOT 111 Tank Car Advanced Notice Of Proposed Rulemaking [ANPRM])
- Emergency Preparedness and Response

Successfully Carrying out Congress's Mandates

The Rail Safety Improvement Act of 2008 (RSIA) required us to complete 42 tasks, including final rules, guidance, documents, model State laws, studies, and reports. Thirty of these tasks are now complete and the rest are progressing toward completion.

FRA RSIA SCORECARD

*Completed Tasks - 1/27/14

- ☑ Hours of Service Regulations for Passenger Train Employees
- ☑ Hours of Service Recordkeeping Requirements Revisions
- Certification of Conductors
- ✓ State Action Plans to Improve Highway-Rail Grade Crossing Safety
- ☑ Emergency Notification Systems at Highway-Rail Grade Crossings
- ☑ Performance-Based Rail Inspections & Rail Flaw Detection
- Concrete Ties
- ☑ Railroad Bridge Safety
- ☑ Initiate Rulemaking for 'Critical Incident' Stress Plans
- ✓ Positive Train Control (PTC): Define Statutory Terms
- ☑ Standards for Camps Cars Used as Employee Sleeping Quarters
- ☑ Increase Maximum Civil Monetary Penalties Per Rail Safety Violations
- ☑ Prohibit Violators of Hazmat Laws from Performing Safety Functions
- Procedural Requirements for Emergency Waivers
- ☑ Delegate Responsibility for Implementing RSIA to FRA
- ☑ Guidance on Pedestrian Safety at Passenger Stations
- ☑ Guidance on Crossing Safety & Trespassing Prevention Education
- ☑ Two Model State Laws for Highway-Rail Grade Crossing Safety
- ✓ Long-term Strategy for Improving Rail Safety
- Report: Railroads' Progress Implementing PTC
- ☑ Study Appropriateness of Protecting Information to Implement Risk Reduction Programs from Disclosure During Litigation
- ☑ Evaluate Laws for Rail Trespassing, Vandalism Affecting Rail Safety, & Violating **Grade Crossing Warning Devices**
- ☑ Report on Results of Research on Track Inspection Intervals
- ☑ Study of Methods to Improve Station Platforms
- ☑ Report on Research of Personal Electronic Devices in Locomotive Cab
- ☑ Report on Research of Effects of Repealing Provision Exempting Conrail from Certain Labor Laws
- ☑ Report on Research of Exposure of Railroad Employees to Radiation
- ☑ Report on Study of Safety Effects of Reducing Inspection Frequency of Locomotives in Limited Service by Railroad Museums
- ☑ Report: Model Plans to Help Railroads Respond to Passenger Accidents

Leading the Next Generation of Safety Improvements

Long-term, regulations and enforcement alone will not be the sole driver of continuous safety improvement. We are advancing a comprehensive safety approach that includes a continued focus on track defects and human factors, our biggest areas of exposure. Working with industry management and labor, we are developing a rail safety culture that goes beyond regulations to performance-based risk management programs tailored to each railroad's operating environment. Our activities include:

Regulations and Inspection Program:

- Training Standards for Safety Employees+
- Passenger Equipment Safety Standards for High-Performance Rail
- Train Horn Rule to Mitigate Community Impact While Maintaining Safety
- Use of Cameras on Trains
- Revisions to Signal System Reporting Requirement and Hours of Service Recordkeeping
- Drug Testing for Maintenance-of-Way Employees

Proactive Approach:

- Risk Reduction and System Safety Programs new tools for promoting freight and passenger rail safety+
- Fatigue Management including science-based hours of service regulation
- Confidential Close Call Reporting System (C3RS)
- Clear Signal for Action
- Harmonizing Railroad Operating Rules*

Capital Investments – Including Robust R&D:

- Advocating for Predictable and Reliable Funding*
- Sealing off Corridors*
- Positive Train Control*+
- Piloting Wayside and Vehicle Based Inspections and Test Technology that help prevent unsafe conditions that could lead to an accident
- Detection of Track Buckling
- Intelligent Transportation Systems (vehicle warning systems for drivers)
- Research on Locomotive Cab Ergonomics and Design



U.S. Department of Transportation

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RAIL — Moving America Forward.

The Federal Railroad
Administration's mission is
to enable the safe, reliable,
and efficient movement of
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strong America, now and in
the future.

For more information, visit us at www.fra.dot.gov.





