

**Before the Transportation and Infrastructure Committee
Subcommittee on Railroads, Pipelines, and Hazardous Materials
U.S. House of Representatives**

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**Reauthorization of the
Federal Railroad Safety
Program**

**Statement of
The Honorable Calvin L. Scovel III
Inspector General
U.S. Department of Transportation**



Chairwoman Brown, Ranking Member Shuster, and Members of the Subcommittee:

We appreciate the opportunity to testify today on the reauthorization of the Federal Railroad Safety Program. We commend this Subcommittee for its continued work in improving railroad safety. Improvements in safety are important because railroads employ about 232,000 workers and use over 173,000 miles of track in operations that affect the lives of millions of Americans. In 2005, railroads traversed 790 million train miles, up 18 percent since 1996. This impact will grow substantially in the future. While railroads today transport about 42 percent of the Nation's freight, the Department estimates that between 1998 and 2020 the amount of freight transported by rail will increase by about 50 percent.

In addition, nearly 1.7 million carloads of hazardous materials¹ are transported by rail in the United States each year. Although the industry's record for transporting hazardous materials has been good, the catastrophic consequences that can arise from the release of hazardous materials from rail cars are a significant safety issue. From 2003 through 2006, the railroads reported 145 rail incidents that involved hazardous materials, resulting in 19 fatalities and 423 injuries. Although these numbers, on their face, are not large, these incidents resulted in the evacuation of 17,384 people from their homes and businesses, caused at least \$17 million in track damages, and resulted in about \$71 million in equipment damages.

As we reported in our FY 2007 Top Management Challenges issued to the Department,² the Federal Railroad Administration (FRA) must continue implementing its safety initiatives since train accidents are still on the rise overall. As the FRA Administrator noted before this Subcommittee in June 2006, the rail industry's safety record has improved, but significant train accidents continue to occur and the train accident rate has not shown substantive improvement in recent years. To illustrate, even though in 2005 the number of train accidents decreased by 4 percent and the rate of train accidents per million train-miles traveled decreased by 7 percent, the overall data for 1995 through 2005 show that train accidents increased by 31 percent and the rate of train accidents grew by 11 percent (see Attachment 1).

Our body of work on FRA's oversight programs has found grade-crossing safety to be a "centerpiece" of rail safety. The second highest percentage of train accident *fatalities*—42 percent from 1995 through 2005—is due to collisions at

¹ The Department has classified about 3,500 materials as hazardous, ranging from mild irritants to poisonous and radioactive materials.

² OIG Report No. PT-2007-004, "Top Management Challenges," November 15, 2006. OIG reports can be accessed on the web at www.oig.dot.gov.

grade crossings.³ During this 10-year period, collisions and fatalities at grade crossings were significantly reduced, by 34 percent and 38 percent, respectively. Most recently, however, these numbers have increased. From 2003 to 2005, collisions rose by 2 percent and the number of fatalities jumped by 7 percent.

We issued reports in 1999⁴ and 2004⁵ on grade crossing safety, and in July 2005, we presented testimony before this Subcommittee.⁶ We also issued an audit report to FRA in November 2005⁷ and plan to issue a fourth report next month on FRA's activities to oversee safety at the Nation's grade crossings. Chairwoman Brown, our testimony today will draw from the body of work we conducted over the last several years on rail safety.

Today, I want to focus on two issues that we see as key for the reauthorization of the FRA rail safety program: (1) improving grade crossing safety through better compliance with safety regulations and by working with states and (2) identifying safety trends through data analysis.

Grade crossing safety can be improved by ensuring compliance with FRA reporting requirements and by working with states to address problems, such as sight obstructions at grade crossings. On average, one person dies and three people are injured in the United States every day in grade crossing collisions. During the course of our work, we have reviewed two of FRA's reporting requirements related to grade crossing collisions.

The first requirement is that railroads immediately call the National Response Center⁸ (NRC) to report serious grade crossing collisions.⁹ (The National Transportation Safety Board defines "immediately" as within 2 hours.) This is a critical mechanism to help FRA determine whether a Federal investigation is

³ Trespassing fatalities is the leading category of rail-related fatalities for that period, accounting for 52 percent. Our 1999 report discusses the challenge of reducing trespassing fatalities (OIG Report No. RT-1999-140, Report on Rail-Highway Grade Crossing Safety, September 30, 1999). In terms of safety improvements and fatality reductions, the potential for the greatest impact would come from improving grade crossing safety since trespassing is a difficult behavior to address.

⁴ OIG Report No. RT-1999-140, "Rail-Highway Grade Crossing Safety," September 30, 1999.

⁵ OIG Report No. MH-2004-065, "Audit of Oversight of Highway-Rail Grade Crossing Safety Program," June 16, 2004.

⁶ OIG Testimony, CC-2005-060, "Highway-Railroad Grade Crossing Safety Issues," July 21, 2005.

⁷ OIG Report No. MH-2006-016, "Audit of Oversight of Highway-Rail Grade Crossing Accident Reporting, Investigations, and Safety Regulations," November 28, 2005.

⁸ As part of the Department of Homeland Security, NRC is the Federal Government's 24-hour point of contact for environmental discharges anywhere in the United States and its territories. In addition, through agreements containing criteria that serve as triggers for reporting, NRC notifies FRA and other Federal agencies of fatal train accidents and grade crossing collisions.

⁹ Under FRA's criteria for immediately reporting to NRC, serious grade crossing collisions are train accidents or incidents at crossings that result in one fatality and/or five or more injuries.

needed at the accident scene. We reported in November 2005 that between May 1, 2003 and December 31, 2004 railroads failed to notify NRC immediately in 21 percent of reportable grade crossing collisions as required, most involving fatalities or multiple injuries.

The second requirement is that railroads report every grade crossing collision to FRA within 30 days of the end of the month in which the collision occurred. Timely and accurate reporting of grade crossing collisions serves the important purpose of ensuring that railroad inspections are properly targeted. Our work identified 12 railroads between 1999 and 2004 that did not report 139 collisions to FRA on time, with some being reported nearly 3 years late. These collisions resulted in 2 fatalities and 20 injuries, as ultimately reported by the railroads. Although these numbers are not large, FRA does not routinely review grade crossing collision records maintained by the railroads to ensure compliance with its reporting requirements. We found that FRA does not know whether the 15,406 grade crossing collisions reported by railroads from 2001 through 2005 include all collisions that occurred during those years. We also found that FRA investigated less than 1 percent of all grade crossing collisions from 2000 through 2004.

In the report we plan to issue next month, we will recommend, among other actions, that FRA issue a violation every time a railroad does not report a grade crossing collision in accordance with Federal requirements. A violation notice triggers the assessment of civil penalties, and railroads that repeatedly fail to report accidents appropriately should receive higher penalties.

Further, 27 states currently lack state-level laws for maintaining sight distances at grade crossings. For those states, our ongoing work points to the immediate safety benefits to be achieved if FRA were to promote the establishment of state laws addressing sight obstructions, such as overgrown vegetation and structures that block pedestrians and motorists' view of approaching trains. At the national level, voluntary guidelines exist, but they are not enough. FRA should collaborate with the Federal Highway Administration and the American Association of State Highway and Transportation Officials to issue mandatory national standards for maintaining sight distances at grade crossings.

FRA must aggressively implement its data-driven approach and trend identification. Our audit results since 1998 have repeatedly shown that FRA must make greater use of data analysis to help target its regulations and oversight on problem areas—a proactive rather than reactive strategy. Such an approach would aid in identifying some of the most prevalent causes of train accidents and enable FRA to devise corrective measures. Our ongoing analyses show that human

factors and track problems were responsible for 72 percent of the train accidents that occurred from 1996 through 2005.

By using trend analysis to track predictive indicators in problem areas, FRA could identify potential safety “hot spots.” For example, circumstances related to the January 6, 2005, Norfolk Southern Railway accident in Graniteville, South Carolina, both illustrate and underscore the value of trend analysis. Even though FRA began issuing safety advisories within 5 days after this accident, this was a reactive measure. Had FRA used the data it already had—that switch problems started trending up in 1997 and took a large jump in 2003—it could have addressed these problems years before the accident occurred. FRA must continue to implement and refine its data-driven approach, so that empirical data can be used to target inspection and enforcement activities where they are most needed.

In February 2005, we recommended a more data-driven approach in our report to the Secretary and Acting FRA Administrator on our review of FRA’s safety enforcement data. In May 2005, FRA responded to our recommendation and launched its National Inspection Plan. The Plan uses predictive indicators to assist FRA in allocating inspection and enforcement activities within a given region by railroad and by state. This is a step in the right direction for FRA. It is too soon, however, to tell exactly how effective these measures will be in the long term. We plan to revisit FRA’s progress as it continues to implement its National Inspection Plan.

I would now like to discuss these issues in further detail.

FRA Must Continue To Focus its Grade Crossing Oversight Activities on Further Reducing Collisions and Fatalities

Although significant progress was made over the last decade—1995 to 2005—grade crossing collision statistics increased from 2003 to 2005. During the latter period, collisions rose from 2,977 to 3,041 (2 percent) and the number of fatalities increased from 334 to 357 (7 percent), with 2004 higher than 2005. These increases and the upward trend in the volume of train and highway traffic indicate that more must be done at the Federal and state level to improve grade crossing safety. Our body of work on grade crossing safety has shown the need for FRA to develop more focused strategies to further reduce collisions and fatalities.

Ensure compliance with reporting requirements. We reviewed two of FRA’s reporting requirements. The first is that railroads immediately call the National Response Center to report serious grade crossing collisions. Immediate notification is necessary so that FRA can determine whether a Federal investigation is needed at the collision scene. In November 2005, we reported on the need for FRA to clarify its requirement that railroads immediately call the

National Response Center to report grade crossing collisions that result in fatalities and multiple injuries. Specifically, we found that 21 percent of serious crossing collisions were not reported at all, let alone in a timely way. Our analysis showed that 115 of the 543 serious grade crossing collisions that occurred between May 1, 2003 and December 31, 2004 should have been reported to the National Response Center, but were not in its database.

To its credit, FRA implemented a process to reconcile reporting of fatal and other serious grade crossing collisions to the National Response Center. We recommended that FRA compare the grade crossing collision reports submitted monthly to its database with those reported to the National Response Center and assess and collect civil penalties when railroads fail to report to the National Response Center.

The second requirement is that railroads report all grade crossing collisions to FRA within 30 days of the end of the month in which the collision occurred. Complete information on grade crossing collisions is important to state transportation officials when spending Federal funds for grade crossing safety improvements.¹⁰ For example, after five unreported grade crossing collisions in Iowa were finally submitted to FRA, the Iowa Department of Transportation used the information provided by the railroads as the basis for allocating funds for safety improvements at two of the five grade crossings.

Our ongoing work continues to identify problems with the completeness of FRA's accident reporting system. We found that railroads are not providing timely written reports to FRA for all grade crossing collisions. Specifically, our work identified 12 railroads between 1999 and 2004 that did not report 139 collisions to FRA on time, with some being reported nearly 3 years late. Although these numbers are not large, FRA does not know whether all collision reports have been submitted, as required, because it has not routinely reviewed the grade crossing collision records maintained by the railroads to ensure compliance with its reporting requirements.

FRA's oversight activities should include periodic reviews of the records maintained by the railroads to ensure that all grade crossing collisions are reported to its accident reporting system in a timely manner. Further, by ensuring that accurate and complete reports are submitted in a timely manner for all grade crossing collisions, FRA and states will have access to accurate data for identifying dangerous grade crossings and emerging accident trends. This is

¹⁰ FRA oversees rail safety and FHWA provides funding to states for grade crossing safety improvements under Title 23, USC, Section 130, but the responsibility for improving grade crossings and eliminating hazards rests primarily with the states.

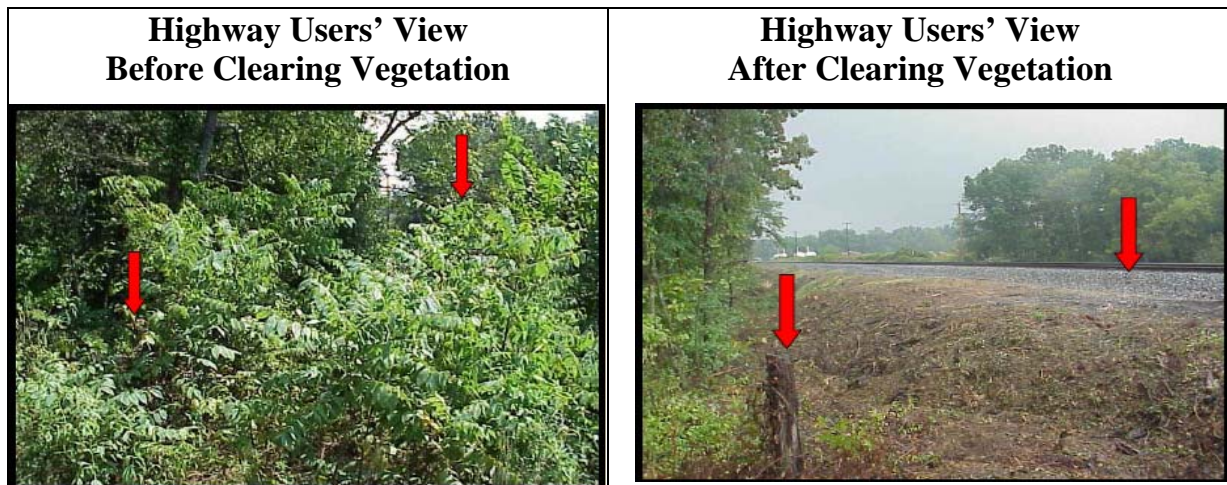
clearly an area where additional enforcement and civil penalties should be considered.

Develop strategies to increase FRA's involvement in grade crossing collision investigations. In our November 2005 report, we also found that FRA should develop strategies to increase its effort to investigate grade crossing collisions. From 2000 through 2004, FRA investigated less than 1 percent of all train accidents and grade crossing collisions. During the same time period, FRA investigated only 5 percent of the crossing collisions reported to the National Response Center. Instead, it relied heavily on accident reports received from the railroads to evaluate the circumstances, probable causes, and responsible parties for most crossing collisions. Further, FRA did not broaden its review of those collisions by verifying the causes through routine review of independent sources of information, such as police reports or locomotive event recorder data.

With a current inspector workforce of 385, of which 62 are assigned to inspect signal and train control devices, FRA has a limited capability to investigate the approximately 3,000 crossing collisions that occur each year. In our November 2005 report, we recommended that FRA use a pilot program to collect and analyze independent information on crossing collisions obtained from railroads (including event recorder data and collision reports) and local or state law enforcement agencies. FRA concurred and initiated its pilot study in 2006. FRA should report the results of this study as soon as possible.

Work with the states to establish laws to address sight obstructions. We found that greater attention is needed to ensure that highway users have a full view of approaching trains at the Nation's grade crossings. When grade crossings are not protected by automated warning devices, it is imperative that highway users have a clear view of approaching trains in order to determine when it is safe to cross. As illustrated in Figure 1 on page 7, vegetation growth at grade crossings can significantly reduce a motorist's ability to see the track and any approaching trains.

Figure 1. Photographs of Highway Users' Sight Distances at a Grade Crossing Before and After Vegetation Was Cleared



Source: Illinois Commerce Commission

Based on FRA's data, sight obstructions can be a contributing factor in grade crossing collisions. Of the 15,406 grade crossing reports submitted by the railroads from 2001 through 2005, 688 noted a sight obstruction, such as standing railroad equipment and overgrown vegetation.¹¹

Mandatory national standards have not been established to maintain sight distances at the nearly 76,000 public grade crossings that are not protected with automated warning devices. Twenty-three states have passed laws for maintaining sight distances at grade crossings, but the majority of states have no laws. In those states without laws, highway users must rely on sight distances at grade crossings established by a combination of (1) voluntary guidance from the Federal Highway Administration (FHWA) and the American Association of State Highway and Transportation Officials and (2) the policies and practices implemented by individual railroad companies.

Since 27 states currently lack state laws for maintaining sight distances at grade crossings, more needs to be done. For those states, our ongoing work points to the immediate safety benefits to be achieved if FRA were to promote the establishment of state laws addressing sight obstructions, such as overgrown vegetation and structures that block pedestrians and motorists' view of approaching trains. At the national level, voluntary guidelines exist, but they are not enough. FRA should collaborate with the Federal Highway Administration and the American Association of State Highway and Transportation Officials to

¹¹ FRA's grade crossing accident report requires the railroads to document the conditions at the accident scene. The report does not require the railroads to identify a primary or secondary cause.

issue mandatory national standards for maintaining sight distances at grade crossings.

Establish reporting requirements for FRA's national grade crossing inventory system. Accurate and complete inventory data on the characteristics¹² of all grade crossings, public and private, are needed to further improve safety. In our June 2004 report on the Highway-Rail Grade Crossing Safety Program, we recommended that FRA establish mandatory reporting requirements for railroads and states through rulemaking or legislation to improve the accuracy and completeness of its national grade crossing inventory data. These data are used by state officials to develop priority listings of crossings that need safety improvements because they have a high probability of collisions. Although both FRA and FHWA have made efforts to improve the voluntary reporting of grade crossing inventory information to FRA's national database, reporting requirements have not been established. According to FRA, 32 percent of the private crossing records in the national inventory database have not been updated since 2001, and 21 percent of the private crossing records have never been updated.

Mandatory reporting is even more important under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which changed the apportionment procedures for Section 130¹³ funds. SAFETEA-LU requires 50 percent of the \$220 million authorized to be apportioned to the states for grade crossing safety improvements based on a ratio of the number of public grade crossings in a state to the total number of public crossings nationwide.

Require states with the most dangerous grade crossings to develop an action plan. In our June 2004 report that assessed the Highway-Rail Grade Crossing Safety Program, we recommended that FRA identify the states that have the most grade crossing accidents year after year, particularly at crossings that have experienced multiple accidents. We also recommended that FRA work with each of these states to develop an action plan that identifies specific solutions for improving safety at those crossings that continue to have accidents. FRA agreed and in March 2006 completed work with the Louisiana Department of Transportation and Development on the first such state action plan.

In developing Louisiana's action plan, FRA's grade crossing accident data were analyzed to identify public grade crossings with multiple collisions from 1999

¹² Inventory data on the characteristics of grade crossings include a combination of active warning devices, passive warnings, or both. Typically, active warning devices consist of automatic gates, flashing lights, and highway traffic signs. Passive warnings are primarily crossbucks, stop signs, advanced warning signs, and pavement markings.

¹³ The Department provides set-aside funding to states for grade crossing safety improvements, primarily through FHWA, under Title 23, USC, Section 130.

through 2004. This analysis identified 177 public grade crossings that accounted for 432 collisions during this period. These 432 collisions were analyzed and several safety focus areas were identified: the majority of collisions occurred in only 16 of the 64 Parishes in Louisiana, and 85 percent of collisions occurred at grade crossings without automatic gates. Louisiana transportation officials took actions to improve safety at 130 of the 177 crossings that experienced multiple collisions. Four were closed, 50 were equipped with gates, 61 were equipped with flashing lights, and 15 were scheduled to receive other safety improvements in 2006.

FRA should move forward by initiating individual action plans for those states that continue to have the highest number of grade crossing collisions, as we recommended in our 2004 report (see Attachment 2 for a list of our recommendations since 2003).

FRA Must Aggressively Implement its Data-Driven Approach and Trend Identification

Our audit results since 1998 have repeatedly shown that FRA would benefit from an inspection program that places substantially greater emphasis on data analysis to target its inspection resources—a proactive rather than reactive strategy. Such an approach would aid in identifying some of the most prevalent causes of train accidents and enable FRA to devise corrective measures. Our ongoing analyses show that human factors and track problems were responsible for 72 percent of the train accidents that occurred from 1996 through 2005. By using trend analysis to track predictive indicators in problem areas, FRA could identify potential safety “hot spots.” A number of predictive indicators could yield beneficial preventive measures, including improperly lined switches and unusually high “defect ratios” resulting from safety inspections.¹⁴

In February 2005, we reported that FRA’s inspection program was structured to function in a manner that was (a) discretionary with individual inspectors in regard to routine inspections and (b) reactive in terms of how it conducted focused inspections. Currently, 385 inspectors oversee the Nation’s vast network of train miles. It is critical that FRA’s limited inspection and enforcement resources be carefully targeted to address those safety problems most likely to result in accidents and injuries.

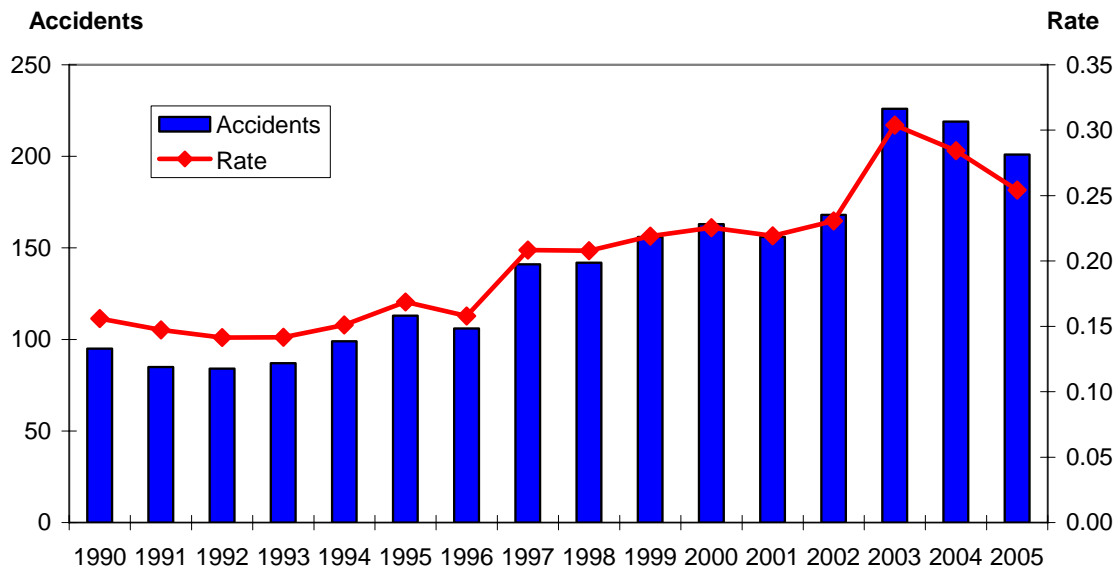
In our February 2005 report, we recommended that targeting be achieved through systematic use of trend analysis, along with other data analysis tools, to examine key indicators of a railroad’s safety condition (for example, its accident rate, defect ratio, and employee injury statistics). FRA would benefit from a data-

¹⁴ A defect ratio is a measure of noncompliance and is expressed as a percentage of units inspected.

driven inspection program that makes substantially greater use of objective analysis of empirical data and metrics to target its inspection and enforcement activities. This approach would enable FRA to better allocate its inspection resources and decide appropriate levels of enforcement.

The value of trend analysis—a key to proactive action. Circumstances related to the January 6, 2005 Norfolk Southern Railway accident in Graniteville, South Carolina, both illustrate and underscore the value of trend analysis. Within 5 days after the accident, FRA issued a safety advisory to all railroads concerning improperly lined switches stating, “An improperly lined switch invites disaster and can be easily avoided.”^[15] All railroads need to adopt the safety measures outlined in this advisory.” Trend analysis of rail safety data identifies improperly lined switches as the second leading cause of railroad accidents in general, and the leading cause of accidents resulting from human error. Figure 2 below shows a clear upward trend from 1997 through 2005 in the number and rate of accidents attributed to improperly lined switches.

Figure 2. Number and Rate (Per Million Train Miles) of Railroad Accidents Caused by Improperly Lined Switches



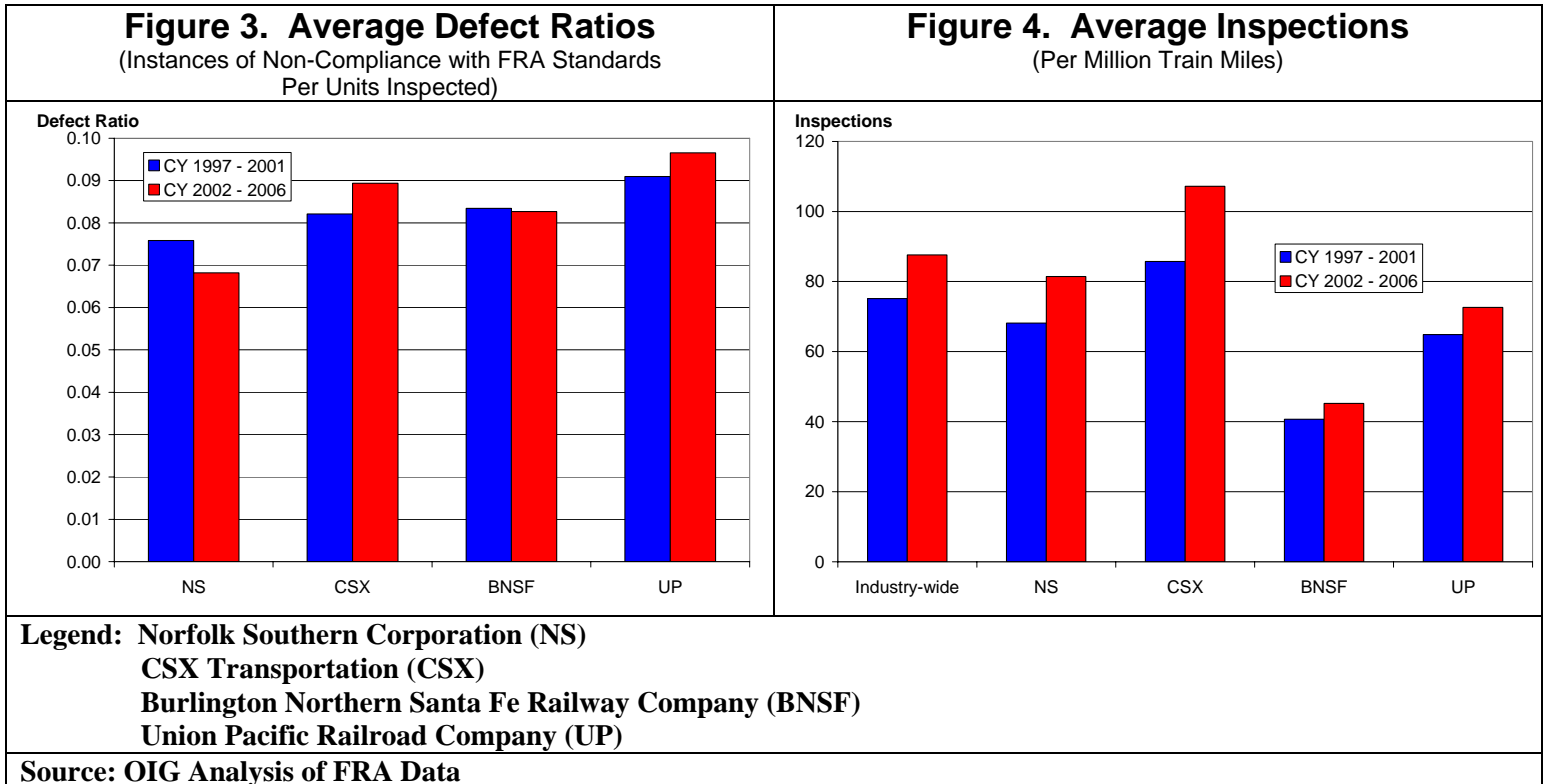
Source: OIG Analysis of FRA Data

The chart also shows that the upward trend of improperly lined switches started in 1997 and took a large jump in 2003—2 years before the Graniteville accident occurred. By analyzing its data, FRA will be able to conduct predictive analyses

¹⁵ FRA Notice of Safety Advisory 2005-01, “Position of Switches in Non-Signaled Territory,” January 11, 2005.

and identify early indicators of problems, such as improperly lined switches, and order corrective action *before* accidents occur.

Defect ratios—a key indicator of a railroad’s safety that should be used to better target inspections. Defect ratios should be a key factor in determining the number of inspections that railroads receive, but we still see a gap between defect ratios and average inspections. Our 2005 review looked at several rail safety metrics and found that one—safety enforcement data—showed that serious safety problems have long existed for all four major railroads. For example, Union Pacific had the highest average number of train accidents (weighted per million train miles) of the four major railroads during Calendar Years (CYs) 1998-2000 and CYs 2001-2003. Yet, Union Pacific had been inspected proportionally less, ranking third in FRA inspections per million train miles between those periods. This is demonstrated in Figures 3 and 4 below.



We find it counterintuitive that the railroad with the *most track miles* and the *worst accident rate and defect ratio* would be inspected at a lower rate than two of the three other major railroads that had fewer miles and better rates. Trend analysis leading to the targeting of resources on high-risk areas is particularly critical, because FRA inspection resources are limited.

FRA has taken steps to address the problem. FRA has been responsive to our 2005 recommendations to implement a data-driven approach. Specifically, we recommended that FRA submit to the Secretary a comprehensive plan for implementing a fully functioning program that makes meaningful use of analysis of available safety, inspection, and enforcement data. As noted by the FRA Administrator in his June 2006 testimony:

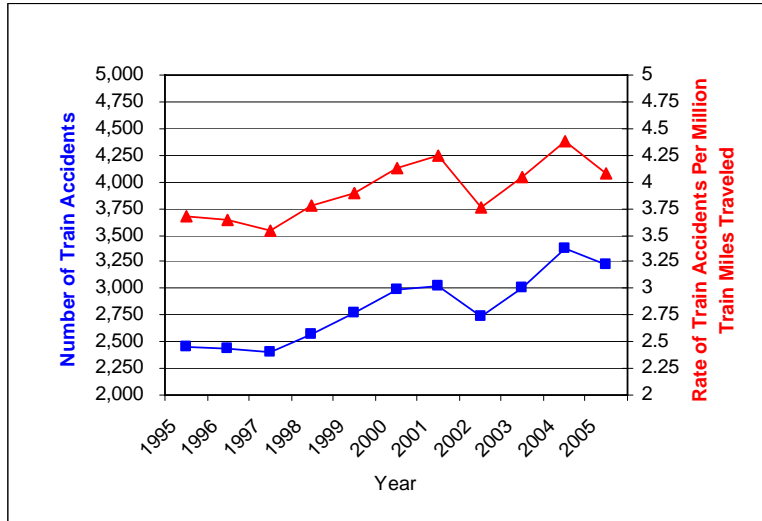
FRA continually seeks ways to direct its inspection and enforcement efforts toward the issues and locations most in need of attention. To this end, FRA instituted the National Inspection Plan (NIP), an inspection and allocation program that uses predictive indicators to assist FRA in allocating inspection and enforcement activities within a given region by railroad and by State.

This is a step in the right direction for FRA, but since the Plan was implemented only in March 2006, it is too soon to tell exactly how effective these measures will be in the long term.

This concludes my statement. I would be pleased to answer any questions.

Attachment 1

Number and Rate of Train Accidents 1995 through 2005



Source: FRA

Attachment 2

Status of OIG Audit Recommendations to FRA Calendar Years 2003 through 2006

Date	Title/Report No.	Recommendation(s)	Status
December 10, 2003	Review of Slow Orders and Track Reclassification, MH-2004-007	1. Review CSX ballast replacement practices, and follow up on ballast deficiencies noted during previous FRA safety audits and inspections.	1. Closed. In response to our audit, FRA began efforts to review CSX ballast practices.
		2. Monitor railroad R-1 reports on a continuous basis to identify potential problems in roadway investment, such as ballast, and use the information to target safety inspections on individual railroads.	2. Closed. In response to our audit, FRA began monitoring railroad R-1 reports to identify potential problems in roadway investment.
June 16, 2004	Audit of the Highway-Rail Grade Crossing Safety Program, MH-2004-065	3. Identify the states with the most dangerous grade crossings and require each of these states to develop an action plan that identifies specific solutions for improving safety at these crossings.	3. Open. Although FRA completed a state action plan with the Louisiana Department of Transportation and Development in March 2006, this recommendation has not been fully implemented. FRA must provide the OIG with a list of the states developing state action plans and the target dates for implementing them.
		4. Encourage states to increase safety awareness through educational programs, develop legislation to modify risky driver behavior through photo enforcement, and increase traffic enforcement strategies.	4. Open. The 2004 Grade Crossing Action Plan includes initiatives to expand education outreach by adapting traditional outreach techniques and energizing enforcement by expanding on successful programs with law enforcement agencies and the judicial branch. To close this recommendation, FRA must provide us written documentation on the actions it has taken to implement this recommendation. We also request that FRA provide us information on the states that have adopted new strategies, what those strategies were, and when they were implemented.

Date	Title/Report No.	Recommendation(s)	Status
		5. Encourage states to set annual goals for closing grade crossings and strengthen their financial incentives to local governments for closures.	5. Open. The 2004 Grade Crossing Action Plan includes an initiative to close unneeded crossings. To close this recommendation, FRA must identify the states that have developed annual goals for closing crossings, and determine which states have been successful in implementing financial incentives for closing crossings.
		6. Identify a method for including the Federal Transit Administration's (FTA) data on light and heavy <i>rail transit</i> crossing accidents and fatalities in the new action plan's goals and statistics.	6. Open. The 2004 Grade Crossing Action Plan did not discuss including light and heavy <i>rail transit</i> incidents with other grade crossing collision data. In April 2005, FRA and FTA informed the OIG that their administrations had jointly posted annual grade crossing incidents, injuries, and fatalities on FRA's website to address our recommendation. However, our review of FRA's website shows that the data has not been updated since July 18, 2005.
		7. Promote reporting requirements for railroads and states through rulemaking or legislation.	7. Open. Although both FRA and FHWA have made efforts to improve the voluntary reporting of grade crossing inventory information to FRA's national database, reporting requirements have not been established. To close this recommendation, FRA must issue a rule or obtain legislative approval from Congress for requiring reporting of grade crossing inventory data.
		8. Ensure that states comply with the annual reporting requirement for their Section 130 fund expenditures.	8. Closed. FHWA sent a letter to the states on September 30, 2004, advising them of the annual requirement to submit evaluation reports on their progress in implementing the highway-rail crossing program, as required under 23 USC 130. After a review of FHWA documents, we found that 38 states submitted their 2005 reports, which was a significant improvement from what we reported in June 2004. In 2006, 45 states and the District of Columbia complied with this annual reporting requirement.
November 28, 2005	Audit of Oversight of Highway-Rail Grade Crossing Accident Reporting, Investigations, and Safety	9. Require the railroads to report any grade crossing collision to NRC that results in a fatality at the scene or death within 24 hours of the accident.	9. Open. FRA plans to clarify its NRC reporting requirements, to include the immediate reporting of any grade crossing collision that results in a fatality at the scene or death within 24 hours of the accident. To close this recommendation, FRA must publish new reporting requirements in the Federal Register for Title 49, Part 225.9 of the Code of Federal Regulations.

Date	Title/Report No.	Recommendation(s)	Status
	Regulations, MH-2006-016	10. Continue monthly reconciliation of the FRA database with NRC records and strongly enforce requirements to report to the NRC by assessing civil penalties.	10. Closed. FRA has continued its monthly reconciliation of the FRA database with NRC records. FRA has also started assessing fines against the railroads for failing to comply with the reporting requirement.
		11. Using a pilot program, collect and analyze independent information on crossing collisions to evaluate the causes of collisions, types of warnings in place, and railroads' compliance with Federal safety regulations.	11. Open. FRA is conducting a pilot study to verify the accuracy of the railroads' grade crossing collision reports by comparing these reports to state and local police reports. FRA's Office of Safety will monitor the progress of this pilot study and determine whether the findings support a broader application of the program.
		12. Increase enforcement of existing safety regulations against railroads by recommending more violations and more civil penalties.	12. Open. In May 2005, the Secretary announced a National Rail Safety Action Plan, which included an initiative to implement a National Inspection Plan. In March 2006, FRA completed its application of this plan to all the FRA inspection disciplines. Once the National Inspection Plan has taken its full effect, FRA expects a reduction in both the number and rate of train accidents.

The following pages contain textual versions of the graphs and charts found in this document. These pages were not in the original document but have been added here to assist screenreaders.

**Testimony on the Reauthorization of the Federal Railroad Safety Program
Section 508 Compliant Presentation**

Figure 2. Number and Rate (Per Million Train Miles) of Railroad Accidents Caused by Improperly Lined Switches

Year	Accidents	Rate
1990	95	0.16
1991	85	0.15
1992	84	0.14
1993	87	0.14
1994	99	0.15
1995	113	0.17
1996	106	0.16
1997	141	0.21
1998	142	0.21
1999	156	0.22
2000	163	0.23
2001	156	0.22
2002	168	0.23
2003	226	0.30
2004	219	0.28
2005	201	0.25

Source: OIG analysis of FRA data

Figure 3. Average Defect Ratios (Instances of Non-Compliance with FRA Standards Per Units Inspected)

Railroad	Calendar Year 1997-2001	Calendar Year 2002-2006
Norfolk Southern Corporation (NS)	0.08	0.07
CSX Transportation (CSX)	0.08	0.09
Burlington Northern Santa Fe Railway Company (BNSF)	0.08	0.08
Union Pacific Railroad Company (UP)	0.09	0.10

Source: OIG analysis of FRA data

Figure 4. Average Inspections (Per Million Train Miles)

Railroad	Calendar Year 1997-2001	Calendar Year 2002-2006
Industry-wide	75	88
Norfolk Southern Corporation (NS)	68	81
CSX Transportation (CSX)	86	107
Burlington Northern Santa Fe Railway Company (BNSF)	41	45
Union Pacific Railroad Company (UP)	65	73

Source: OIG analysis of FRA data

Attachment 1. Number and Rate of Train Accidents 1995 through 2005

Year	Accidents	Rate
1995	2,459	3.67
1996	2,443	3.64
1997	2,397	3.54
1998	2,575	3.77
1999	2,768	3.89
2000	2,983	4.13
2001	3,023	4.25
2002	2,738	3.76
2003	3,011	4.05
2004	3,374	4.38
2005	3,225	4.08

Source: FRA