



Testimony

Before the Subcommittee on Surface Transportation and Merchant Marine Infrastructure, Safety, and Security, Committee on Commerce, Science and Transportation, U.S. Senate

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RAIL SAFETY

The Federal Railroad Administration Is Better Targeting Safety Risks, but Needs to Assess Results to Determine the Impact of Its Efforts

Statement of Katherine Siggerud, Director
Physical Infrastructure Issues



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Highlights

Highlights of [GAO-07-841T](#), a testimony before the Subcommittee on Surface Transportation and Merchant Marine Infrastructure, Safety, and Security, Committee on Commerce, Science and Transportation, U.S. Senate

Why GAO Did This Study

Although the overall safety record in the railroad industry, as measured by the number of train accidents per million miles traveled, has improved markedly since 1980, there has been little sustained improvement over the past decade. Serious accidents resulting in injuries and deaths continue to occur, such as one in Graniteville, South Carolina, in 2005 that resulted in 9 deaths and 292 injuries. The Federal Railroad Administration (FRA) develops safety standards and inspects and enforces railroads' compliance with these standards.

On January 26, 2007, GAO reported on FRA's overall safety oversight strategy. (See [GAO-07-149](#).) The report discussed how FRA (1) focuses its efforts on the highest priority risks related to train accidents in planning its oversight, (2) identifies safety problems on railroad systems in carrying out its oversight, and (3) assesses the impact of its oversight efforts on safety. GAO recommended that FRA (1) put into place measures of the results of its inspection and enforcement programs and (2) evaluate its enforcement program. In its response, the Department of Transportation stated that FRA agreed to develop such measures and would consider requesting additional resources to conduct an evaluation of its enforcement program.

This statement is based on GAO's recent report.

www.gao.gov/cgi-bin/getrpt?GAO-07-841T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Katherine Siggerud at (202) 512-2834 or siggerudk@gao.gov.

RAIL SAFETY

The Federal Railroad Administration Is Better Targeting Safety Risks, but Needs to Assess Results to Determine the Impact of Its Efforts

What GAO Found

In planning its safety oversight, FRA is focusing its efforts on the highest priority risks related to train accidents through initiatives aimed at addressing their main causes—human behaviors and defective track—as well as through improvements in its inspection planning approach. FRA's May 2005 National Rail Safety Action Plan, the agency's overall strategy for targeting its oversight at the greatest risks, provides a reasonable framework for guiding these efforts. FRA's initiatives to address the most common causes of accidents are promising, although the success of many of them will depend on voluntary actions by the railroads. In addition, under the action plan, FRA has adopted a new inspection planning approach in which inspectors focus their efforts on locations that data-driven models indicate are most likely to have safety problems.

In carrying out its safety oversight, FRA identifies a range of safety problems on railroad systems mainly by determining whether operating practices, track, and equipment are in compliance with minimum safety standards. However, FRA is able to inspect only about 0.2 percent of railroads' operations each year, and its inspections do not examine how railroads are managing safety risks throughout their systems that could lead to accidents. Such an approach, as a supplement to traditional compliance inspections, is used in the oversight of U.S. commuter railroads and pipelines and of Canadian railroads. GAO did not recommend that FRA adopt this approach because the agency's various initiatives to reduce the train accident rate have not yet had time to demonstrate their effects on safety.

FRA uses a range of goals and measures to assess the impact of its oversight, such as (1) goals to target its inspection and enforcement programs at reducing various types of railroad accidents and (2) related measures, such as rates of track-caused accidents, to monitor its progress. However, FRA's ability to make informed decisions about these programs is limited because it lacks measures of their direct results, such as the correction of identified safety problems. Furthermore, FRA has not evaluated the effectiveness of its enforcement program.

Track Inspector Examining Rail to Assess Its Safety Compliance

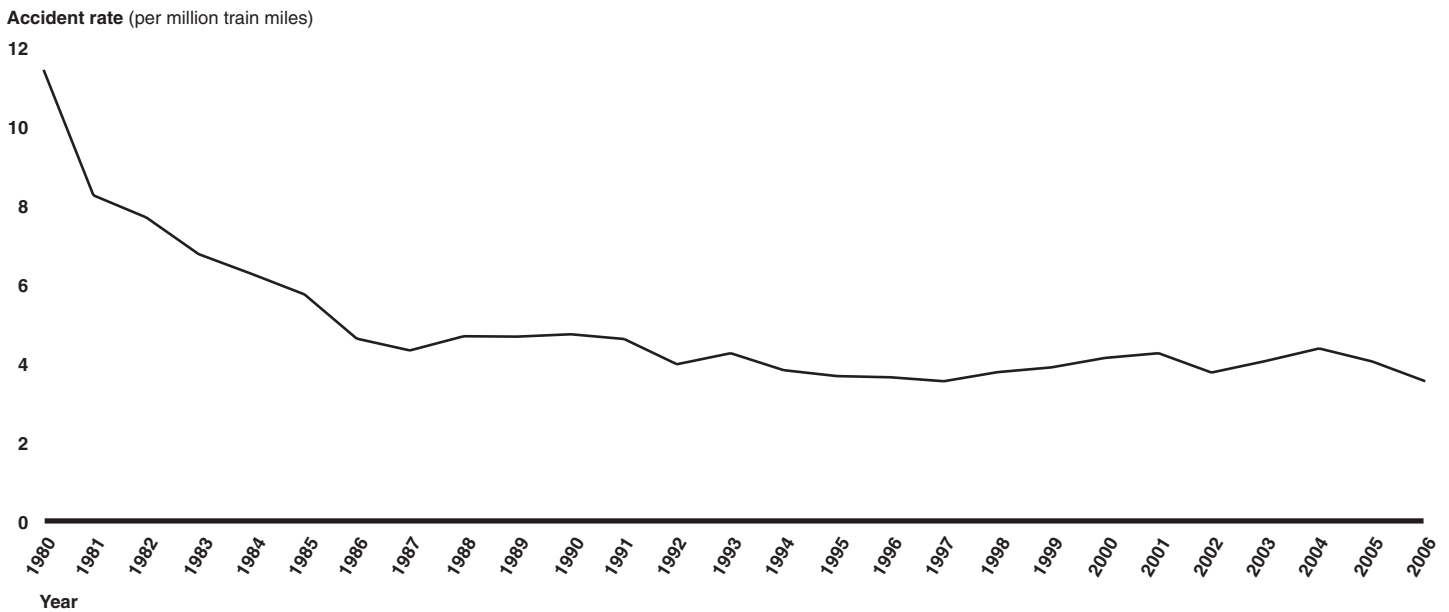


Source: FRA.

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to participate in this hearing today to discuss the Federal Railroad Administration's (FRA's) rail safety oversight activities. Although the overall safety record in the railroad industry, as measured by the number of train accidents per million miles traveled, has improved markedly since 1980, there has been little sustained improvement over the past decade. (See fig. 1.) Serious accidents resulting in injuries, deaths, and property damage continue to occur.

Figure 1: Train Accident Rates, 1980 through 2006



Source: FRA.

Note: The rate for 2006 is preliminary.

My remarks center on work we have recently completed on FRA's overall safety oversight strategy. Specifically, we examined how FRA (1) focuses its efforts on the highest priority risks related to train accidents in planning its safety oversight, (2) identifies safety problems on railroad systems in carrying out its oversight, and (3) assesses the impact of its

oversight efforts on safety. Our findings are discussed in more detail in our report, which was released in January.¹

Our work was based on a review of laws, regulations, and FRA plans and guidance as well as discussions with FRA officials and with a range of external stakeholders, including railroads, unions, and state railroad safety organizations. We reviewed FRA inspection and enforcement data for 1996 through 2005, the latest year for which complete data were available at the time of our review.² In addition, we examined risk management principles and safety oversight approaches used by other modal administrations within the Department of Transportation and other organizations that have similar safety missions in order to determine their possible application to FRA. Our work focused on FRA oversight efforts to reduce the rate of train accidents rather than those to reduce highway-rail crossing and trespassing accidents because (1) the Department of Transportation's Inspector General has recently assessed efforts to reduce highway-rail crossing accidents³ and (2) trespassing accidents primarily involve issues not related to railroad safety performance. As part of our review, we assessed internal controls and the reliability of the data elements needed for this engagement and determined that the data elements were sufficiently reliable for our purposes. We conducted our work from November 2005 through January 2007 in accordance with generally accepted government auditing standards.

In summary:

- In planning its safety oversight, FRA is focusing its efforts on the highest priority risks related to train accidents through various initiatives aimed at

¹See GAO, *The Federal Railroad Administration Is Taking Steps to Better Target Its Oversight, but Assessment of Results Is Needed to Determine Impact*, [GAO-07-149](#) (Washington, D.C.: Jan. 26, 2007).

²In preparing for this hearing, we did not attempt to obtain 2006 inspection and enforcement data because we lacked the time to determine the reliability of and analyze these data.

³See U.S. Department of Transportation, Office of the Inspector General, *The Federal Railroad Administration Can Improve Highway-Rail Grade Crossing Safety by Ensuring Compliance with Accident Reporting Requirements and Addressing Sight Obstructions*, MH-2007-044 (Washington, D.C.: May 3, 2007); *Audit of Oversight of Highway-Rail Grade Crossing Accident Reporting, Investigations and Safety Regulations*, MH-2006-016 (Washington, D.C.: Nov. 28, 2005); and *Report on the Audit of the Highway-Rail Grade Crossing Safety Program*, MH-2004-065 (Washington, D.C.: June 16, 2004).

addressing the main causes of these accidents as well as through improvements in its inspection planning approach. The agency's overall strategy for targeting its oversight at the greatest risks is the National Rail Safety Action Plan, which FRA issued in May 2005. This plan provides a reasonable framework for guiding the agency's efforts to improve its oversight. It includes initiatives to address the two main causes of train accidents—human factors and defective track—and FRA has pursued some additional initiatives to address these causes since issuing the plan.⁴ These initiatives—which include new regulations, research on new technologies and approaches for improving safety, and new vehicles for inspecting track—are promising. However, most of them have not yet been fully implemented, and their overall impact on safety will probably not be apparent for a number of years. Furthermore, the ability of many of these efforts to improve safety will depend on voluntary actions by railroads. In addition, the action plan announced a new approach for planning inspections that uses data-driven models to focus inspectors' efforts on locations that are likely to have safety problems.

- In carrying out its safety oversight, FRA identifies safety problems on railroad systems mainly through routine inspections that determine whether operating practices, track, and equipment, such as signals and locomotives, are in compliance with minimum safety standards. However, FRA inspections cover only about 0.2 percent of railroads' operations each year. Also, these inspections are not designed to determine how well railroads are managing safety risks throughout their systems that could lead to accidents. The American Public Transportation Association (APTA), the Pipeline and Hazardous Materials Safety Administration (PHMSA), and Transport Canada have implemented approaches to oversee the management of safety risks by U.S. commuter railroads, U.S. pipelines, and Canadian railroads, respectively.⁵ These oversight approaches complement, rather than replace, traditional compliance inspections and, therefore, provide additional assurance of safety.
- FRA uses a broad range of goals and measures to assess the impact of its oversight efforts on safety. For example, it has developed new goals to target its inspection and enforcement efforts at reducing various types of railroad accidents and related measures to track its progress. However,

⁴Generally, human factors are behaviors that affect job performance, such as incorrectly setting switches.

⁵Risk management can be described as a systematic approach for identifying, analyzing, and controlling risks.

FRA lacks measures of the direct results of its inspection and enforcement programs, such as measures of the extent to which these programs have resulted in the correction of identified safety problems. Furthermore, FRA has not evaluated the effectiveness of its enforcement program in achieving desired results. Both performance measures and evaluations can provide valuable information on program results that helps hold agencies accountable for the performance of their programs. In our recent report, we recommended that FRA develop and implement measures of the direct results of its inspection and enforcement programs and evaluate its enforcement program. FRA agreed to develop such measures and will consider requesting the additional resources necessary to evaluate its enforcement program.

Background

On average, 437 people have been injured and 12 people have been killed in train accidents each year over the past decade, from 1997 through 2006, exclusive of highway-railroad grade crossing and trespassing accidents. In recent years, a number of serious accidents raised concerns about the level of safety in the railroad industry. For example, as you are aware, in 2005, a train collision in Graniteville, South Carolina, resulted in the evacuation of 5,400 people, 292 injuries, and 9 deaths.

FRA develops and enforces regulations for the railroad industry that include numerous requirements related to safety, including requirements governing track, signal and train control systems, grade crossing warning device systems, mechanical equipment—such as locomotives and tank cars—and railroad operating practices. FRA also enforces hazardous materials regulations issued by PHMSA as they relate to the safe transportation of such materials by rail. FRA's inspectors generally specialize in one of five areas, called inspection disciplines: (1) operating practices, (2) track, (3) hazardous materials, (4) signal and train control, and (5) motive power and equipment. FRA's policy is for inspectors to encourage railroads to comply voluntarily. When railroads do not comply voluntarily or identified problems are serious, FRA may cite violations and take enforcement actions, most frequently civil penalties, to promote compliance with its regulations. FRA is authorized to negotiate civil penalties with railroads and exercises this authority. FRA conducts additional oversight of Class I railroads through the Railroad System Oversight program.⁶ Under this program, the agency assigns an FRA

⁶For 2006, the Surface Transportation Board defined Class I railroads as railroads earning adjusted annual operating revenues of \$319.3 million or more.

manager for each Class I railroad to cooperate with it on identifying and resolving safety issues.

FRA is a small agency, especially in relation to the industry it regulates. As of July 2006, FRA had about 660 safety staff, including about 400 inspectors in the field (in its regional, district, and local offices). In addition, 30 state oversight agencies, with about 160 inspectors, participate in a partnership program with FRA to conduct safety oversight activities at railroads' operating sites. In contrast, the railroad industry consists of about 700 railroads with about 235,000 employees,⁷ 219,000 miles of track in operation, 158,000 signals and switches, and over 1.6 million locomotives and cars.

FRA Has Made Progress in Targeting Its Oversight Efforts on the Basis of Risk

In planning its safety oversight, FRA focuses its efforts on the highest priority risks related to train accidents through a number of initiatives. FRA's May 2005 National Rail Safety Action Plan provides a reasonable framework for the agency's efforts to target its oversight at the highest priority risks. The plan outlines initiatives aimed at reducing the main types of train accidents, those caused by human factors and track defects. Since issuing the plan, the agency has pursued additional initiatives to target risks posed by these causes. However, these efforts are in varying stages of development or implementation and, while some individual initiatives may start showing results in the next year or two, their overall impact on safety will probably not be apparent for a number of years. FRA has also developed a new approach for planning its inspections, based on greater use of its accident and inspection data. While these initiatives are promising, it is too early to assess their impact.

⁷This number does not include contractor employees hired by the railroads.

FRA Is Making a Number of Efforts to Reduce Accidents Caused by Human Factors and Track Defects, but Results Are Not Yet Clear

In 2006, 71 percent of all train accidents in the United States were attributable to either human factors or track defects. Human factor accidents result from unsafe acts of individuals, such as employee errors, and can occur for a number of reasons, such as employee fatigue or inadequate supervision or training. Recent FRA initiatives to reduce accidents caused by human factors include

- proposed regulations aimed at reducing the most common causes of these accidents, such as improper positioning of track switches;⁸
- a 5-year pilot project to establish a confidential voluntary system for reporting and learning from close call incidents;⁹
- a study to develop a fatigue model that could be used by railroads to improve train crew scheduling practices and prevent worker fatigue;¹⁰ and
- a proposed pilot project to establish voluntary risk reduction programs at participating railroad worksites to help reduce human factor accidents, as well as other types of accidents.¹¹

Track defects, which can cause derailments, include rails that are uneven or too wide apart or rails or joint bars that are cracked or broken. Key recent FRA initiatives to reduce accidents caused by track defects include

⁸FRA issued this proposed regulation in October 2006 and plans to issue a final regulation by the end of 2007.

⁹According to FRA, a close call represents a situation in which an ongoing sequence of events was stopped from developing further, preventing the occurrence of potentially serious safety-related consequences.

¹⁰Railroad employees often work long hours and have unpredictable and fluctuating work schedules. FRA and the National Transportation Safety Board have identified employee fatigue as a significant factor in many train accidents. FRA does not have the authority to regulate railroad worker duty hours. However, the department recently proposed legislation to Congress to reauthorize FRA (S. 918 and H.R. 1516) that would give the agency authority to do so.

¹¹These programs will include efforts by railroads to prevent accidents through collecting and analyzing data on accident precursors—such as close call incidents, employee errors, or organizational characteristics—to better identify and correct individual and organizational characteristics that contribute to accidents. FRA plans to initiate this pilot project in fiscal year 2008, contingent upon funding. The department's proposed legislation refers to this initiative as the Safety Risk Reduction Program.

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- two additional track inspection vehicles that can precisely measure track during inspections¹² and
 - new regulations on inspections of rail joints in continuous welded rail track.¹³

These initiatives are in varying stages of development or implementation and use a variety of approaches, some quite innovative, for addressing the causes of human factor and track accidents. While they have the potential to eventually reduce these types of accidents, it is too early to predict their outcomes. The human factor initiatives, except for the proposed regulations, depend on voluntary actions by railroads, and, in some cases, labor as well, for their success.

FRA Has Made Progress in Targeting Its Inspections on the Basis of Risk

FRA has developed a new approach—the National Inspection Plan—for using available data to target its inspections at the greatest safety risks. The plan provides guidance to each regional office on how its inspectors within each of the five inspection disciplines should divide up their work by railroad and state. It is based on trend analyses of accident, inspection, and other data that predict locations where train accidents and incidents are likely to occur within each region and provide the optimal allocation of inspection resources to prevent accidents.

Previously, FRA had a less structured, less consistent, and less data-driven approach for planning inspections. According to agency officials, each region prepared its own inspection plan, based on judgments about appropriate priorities and analysis of available data. However, the use of data was not consistent from region to region. Inspectors had greater discretion about where to inspect and based decisions about priorities on their knowledge of their inspection territories.

FRA's new approach for planning its inspection activity allows it to better target the greatest safety risks and make more effective use of its inspectors. However, it is not yet clear whether the new approach will lead

¹²According to FRA, these additional vehicles allow the agency to triple the miles of track that it is able to inspect per year, to nearly 100,000 miles. FRA also inspects track conditions through manual inspections conducted on foot or in on-track equipment.

¹³In continuous welded rail track, rails are welded together to form one continuous rail that may be several miles long. There may be joints in this rail for several reasons, including the need to replace a section of defective rail.

to a prioritization of inspection levels across regions and inspection disciplines or improved safety.

FRA Relies Primarily on Direct Inspections to Identify Safety Problems and Does Not Oversee Railroads' Management of Safety Risks

In carrying out its safety oversight, FRA identifies a range of safety problems on railroad systems mainly through routine inspections to determine whether operations, track, and equipment are in compliance with safety standards. FRA's inspections do not attempt to determine how well railroads are managing safety risks throughout their systems. APTA, PHMSA, and Transport Canada have implemented approaches to oversee the management of safety risks by U.S. commuter railroads, U.S. pipelines, and Canadian railroads, respectively. These oversight approaches complement, rather than replace, traditional compliance inspections and therefore provide additional assurance of safety.

FRA's Oversight Identifies a Range of Problems on Railroad Systems

FRA primarily monitors railroads' compliance through routine inspections by individual inspectors at specific sites on railroads' systems. Inspectors typically cover a range of standards within their discipline during these inspections. This inspection approach focuses on direct observations of specific components of the train, related equipment, and railroad property—including the track and signal systems—as well as operating practices to determine whether they meet FRA's standards. (See fig. 2.) Inspectors also examine railroads' inspection and maintenance records. The railroads have their own inspectors who are responsible for ensuring that railroad equipment, track, and operations meet federal rail safety standards.

Figure 2: FRA Inspector Inspecting Train Cars



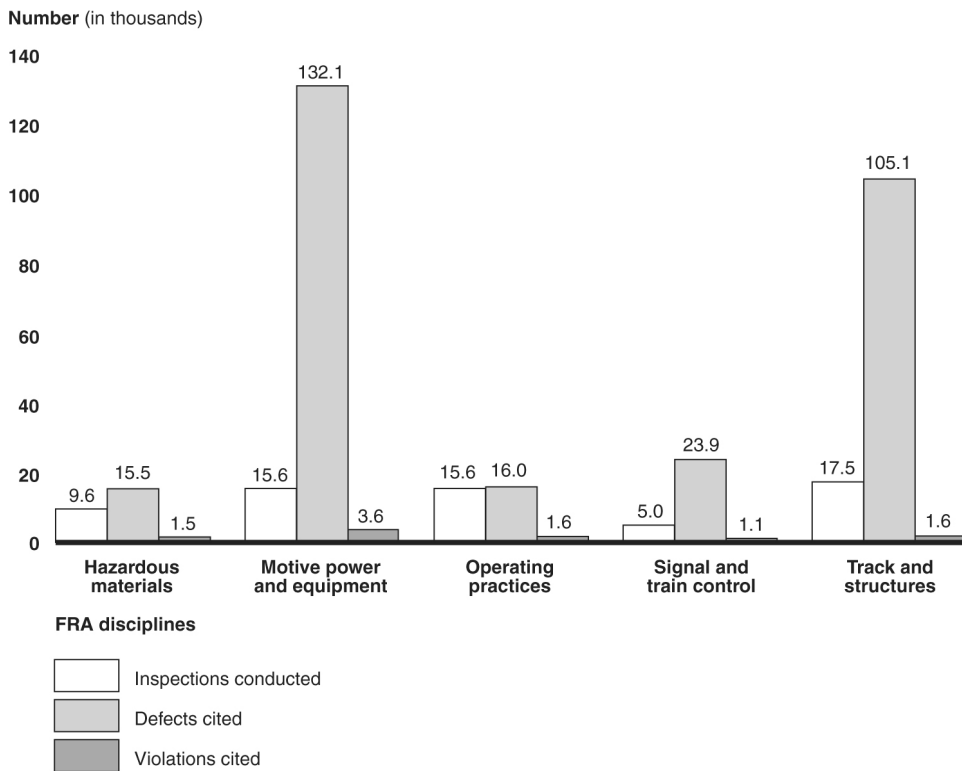
Source: FRA.

FRA also conducts more in-depth inspection efforts that generally focus on railroads' compliance in a particular area, such as their inspections of employees' adherence to operating rules. These efforts often involve a team conducting separate inspections at multiple sites, generally within one of FRA's eight regions. FRA also periodically conducts in-depth inspections of some systemwide programs that railroads are required to implement, such as employee drug and alcohol testing programs.

In 2005, federal and state inspectors conducted about 63,000 inspections. According to FRA, routine inspections constituted about 75 percent of the inspections of railroads, and in-depth inspections accounted for about 11 percent. The remainder of these inspections (14 percent) consisted of other types of activities, such as investigations of accidents and complaints. This approach to oversight enables FRA inspectors and managers to identify a wide range of safety problems. Inspectors identify specific compliance problems—conditions that do not meet FRA's standards—at sites they visit, by citing defects. Inspectors cite violations of safety standards for those defects that they believe warrant

enforcement action. They consider a number of factors in making this decision, including the railroad's history of compliance at that location and the seriousness of the noncompliance (such as whether it is likely to cause accidents, injuries, or releases of hazardous materials). Inspectors in some disciplines cite more defects and violations than others. (See fig. 3.)

Figure 3: Inspections Conducted and Defects and Violations Cited, by Inspection Discipline, in 2005



Source: GAO analysis of FRA data.

Note: These figures include inspections carried out by both federal and state inspectors. Inspectors are instructed to cite defects for most instances of noncompliance found, but have discretion in determining which instances to cite as violations warranting enforcement action.

The motive power and equipment discipline cites almost half of all defects and over a third of all violations. FRA officials told us that the standards in this inspection discipline are the most prescriptive, making defects and violations easier to find. However, these types of defects cause a much

smaller proportion of accidents than human factors and track defects.¹⁴ The most frequently cited violations include those for noncompliance with standards for locomotives and freight cars, track conditions, recordkeeping on the inspection and repair of equipment and track, and the condition of hazardous materials tank cars.

Several Other Organizations Have Implemented Comprehensive Approaches for Overseeing the Management of Safety Risks in Transportation Industries

FRA officials have noted that their approach of directly inspecting safety conditions and targeting locations that are most likely to have compliance problems provides a safety net and holds railroad management accountable. However, because the number of FRA and state inspectors is small relative to the size of railroad operations, FRA inspections can cover only a very small proportion of railroad operations (0.2 percent). Also, FRA targets inspections at locations on railroads' systems where accidents have occurred, among other factors, rather than overseeing whether railroads systematically identify and address safety risks that could lead to accidents.

Risk management can help to improve systemwide safety by systematically identifying and assessing risks associated with various safety hazards and prioritizing them so that resources may be allocated to address the highest risks first. It also can help in ensuring that the most appropriate alternatives to prevent or mitigate the effects of hazards are designed and implemented. A framework for risk management based on industry best practices and other criteria that we have developed divides risk management into five major phases: (1) setting strategic goals and objectives, and determining constraints; (2) assessing risks; (3) evaluating alternatives for addressing these risks; (4) selecting the appropriate alternatives; and (5) implementing the alternatives and monitoring the progress made and results achieved.

Other transportation oversight organizations have developed and implemented approaches for overseeing industries' overall management of safety risks. In particular, during the last 10 years, APTA, PHMSA, and

¹⁴FRA officials have explained that operating practices inspectors have had a limited ability to cite defects and violations because of the way regulations in this area are written. For example, as noted previously, the regulations contain general requirements about railroads' programs for inspecting employees' adherence to operating rules and do not specifically require that employees follow these rules. The agency expects that its proposed regulations on operating rules will improve its ability to enforce in this area, because the requirements will be more stringent than existing regulations.

Transport Canada have developed and implemented such oversight approaches for U.S. commuter railroads, U.S. pipelines, and Canadian railroads, respectively. These approaches complement, rather than replace, traditional compliance inspections. APTA provides guidelines to commuter railroads on managing the safety of their systems—including safety risks—and audits their plans for and implementation of this management approach.¹⁵ PHMSA requires that pipeline operators develop “integrity management” programs to manage risk in areas—such as those that are densely populated—where leaks or ruptures could have the greatest impact on public safety and inspects operators’ compliance with these requirements.¹⁶ In Canada, the department responsible for overseeing railroad safety, Transport Canada, requires that railroads establish safety management systems that include risk management and assesses these systems.¹⁷ APTA, PHMSA, and Transport Canada have emphasized that risk management provides a higher standard of performance than traditional safety regulation based on compliance alone.

We have reviewed PHMSA’s gas transmission pipeline integrity management oversight approach and have recently concluded that it enhances public safety.¹⁸ Operators told us that the primary benefit of the program is the comprehensive knowledge they acquire about the condition of their pipelines. APTA and Transport Canada officials have told us that their oversight approaches have not been formally evaluated to determine their effectiveness.

FRA has taken some steps in a limited number of areas to oversee and encourage risk management in the railroad industry. For example, the agency has several regulations in place that require railroads to use a risk-based approach for managing safety in some specific areas, such as the operation of high-speed passenger trains. In addition, as noted earlier, FRA has proposed establishing pilot risk reduction programs at participating

¹⁵APTA is a nonprofit organization representing the transit industry, including U.S. commuter rail systems.

¹⁶PHMSA administers the national regulatory program to ensure the safe transportation of hazardous liquids and natural gas by pipeline.

¹⁷Transport Canada oversees the safety and security of Canada’s rail, marine, highway, and aviation operations.

¹⁸GAO, *Natural Gas Pipeline Safety: Integrity Management Benefits Public Safety, but Consistency of Performance Measures Should Be Improved*, [GAO-06-946](#) (Washington, D.C.: Sept. 8, 2006).

worksites. Agency officials have told us that this pilot effort will allow the agency to examine how a risk management approach could be used voluntarily in the railroad industry to reduce human factor and other types of accidents.

Oversight of railroads' overall approach for managing safety risks on their systems, in addition to FRA's existing discipline-specific, compliance-based oversight, has the potential to provide additional assurance of safety. However, developing and implementing such a new oversight approach would be a major undertaking for the agency, and FRA's current initiatives to reduce train accidents need time to mature to demonstrate their effects. As a result, we did not recommend in our recent report that FRA adopt an approach for overseeing railroads' management of safety risks.

FRA Measures Its Progress in Achieving a Variety of Safety Goals, but Has Limited Information on the Direct Results of Its Oversight

FRA has a broad range of goals and measures that it uses to provide direction to and track the performance of its safety oversight activities. However, its ability to make informed decisions about its inspection and enforcement programs is limited because it lacks measures of the intermediate outcomes, or direct results, of these programs that would show how they are contributing toward the end outcomes, or ultimate safety improvements, that the agency seeks to achieve. Furthermore, FRA has not evaluated the effectiveness of its enforcement approach. Both performance measures and evaluations can provide valuable information on program results that helps hold agencies accountable for their programs' performance.

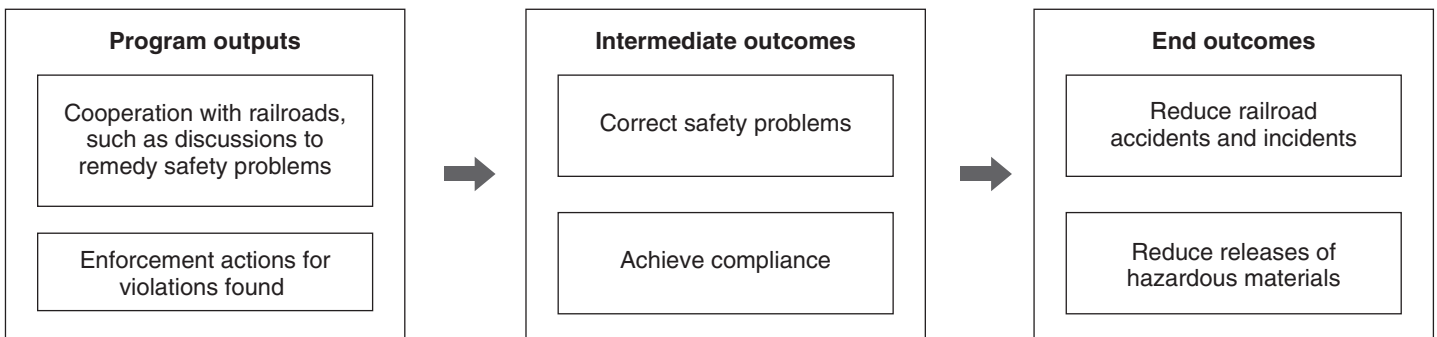
FRA Has Established a Range of Safety Goals and Measures, but Information on Direct Results Is Limited

To its credit, FRA has adopted a range of useful safety performance goals and related measures. These goals help the agency target its oversight efforts to achieve the department's goals of reducing (1) the rate of rail-related accidents and incidents and (2) the number of serious hazardous materials releases. For example, FRA has recently established new agencywide safety goals that are aligned with its five inspection disciplines and its grade-crossing efforts. These include goals to reduce the rates of various types of train accidents—including those caused by human factors, track defects, and equipment failure—as well as hazardous materials releases and grade-crossing incidents. These departmental and agency goals represent the key end outcomes, or ultimate results, FRA seeks to achieve through its oversight efforts. FRA has also established related measures that help the agency determine and demonstrate its progress in meeting the desired goals. In addition, it has established

similar goals and measures for each of its eight regional offices. FRA also uses various other measures to manage its oversight efforts, such as numbers of inspections performed and enforcement actions taken.

While FRA has developed a range of goals and measures related to its oversight of railroad safety, it lacks measures of the desired intermediate outcomes, or direct results, of its inspection and enforcement efforts—the correction of identified safety problems and improvements in compliance. (See fig. 4.) According to FRA officials, inspectors review reports on corrective actions provided by railroads and always follow up on serious identified problems to ensure that they are corrected. However, the agency does not measure the extent to which the identified safety problems have been corrected. FRA also lacks overall measures of railroads’ compliance. Officials have emphasized that the agency relies on inspectors’ day-to-day oversight of and interaction with railroads to track compliance.¹⁹

Figure 4: How FRA’s Inspection and Enforcement Programs Contribute to Rail Safety



Source: GAO analysis of FRA information.

Note: The program outputs and intermediate outcomes included in this figure are examples of the outputs and intended direct results of FRA’s inspection and enforcement programs. We identified these as outputs and intermediate outcomes based on discussions with FRA officials; FRA itself has not identified them as such.

Without measures of intermediate outcomes, the extent to which FRA’s inspection and enforcement programs are achieving direct results and contributing to desired end outcomes is not clear. We recognize that developing such measures would be difficult and that it is challenging for regulatory agencies to develop such measures. Nevertheless, some other

¹⁹FRA headquarters and regional officials also analyze defect data in each inspection discipline to identify emerging issues and plan inspection activity.

regulatory agencies in the Department of Transportation have done so. For example, the Federal Motor Carrier Safety Administration measures the percentage of truck companies that improve their performance in a follow-up inspection.

FRA Has Made Changes in Response to Evaluations but Has Not Evaluated Its Enforcement Approach

By examining a broader range of information than is feasible to monitor on an ongoing basis through performance measures, evaluation studies can explore the benefits of a program as well as ways to improve program performance. They can also be used to develop or improve agencies' measures of program performance and help ensure agencies' accountability for program results. Although FRA has modified several aspects of its safety oversight in response to external and internal evaluations, it has not evaluated the extent to which its enforcement is achieving desired results.

Under FRA's current "focused enforcement" policy, developed in the mid-1990s, inspectors cite a small percentage of identified defects (about 3 percent in 2005) as violations that they recommend for enforcement action, generally civil penalties. While this policy relies to a great extent on cooperation with railroads to achieve compliance and is intended to focus FRA's enforcement efforts on those instances of noncompliance that pose the greatest safety hazards, it is not clear whether the number of civil penalties issued, or their amounts, are having the desired effect of improving compliance. Without an evaluation of its enforcement program, FRA is missing an opportunity to obtain valuable information on the performance of this program and on any need for adjustments to improve this performance.

In the report we issued in January, we recommended that FRA (1) develop and implement measures of the direct results of its inspection and enforcement programs and (2) evaluate the agency's enforcement program to provide further information on its results, the need for additional data to measure and assess these results, and the need for any changes in this program to improve performance. In its response, the department concurred with the first recommendation but said that, because FRA needs to develop appropriate data, the agency would not be able to implement new measures before the end of 2008. The department stated that FRA lacks the resources to carry out our second recommendation but will consider requesting such resources for fiscal year 2009. As part of our normal recommendation follow-up activity, we will work toward FRA's adoption of our recommendations.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions that you or other Members of the Subcommittee might have.

GAO Contacts and Staff Acknowledgement

For further information on this statement, please contact Katherine Siggerud at (202) 512-2834 or siggerudk@gao.gov. Individuals making key contributions to this testimony were Judy Guilliams-Tapia and James Ratzenberger.

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