U.S. Department
of Transportation

**Federal Railroad
Administration**

ENHANCING RAIL SAFETY NOW AND INTO THE 21ST CENTURY:

THE FEDERAL RAILROAD ADMINISTRATION'S SAFETY PROGRAMS AND INITIATIVES

A REPORT TO CONGRESS

DOT/OST/FRA

October 1996

U.S. Department
of Transportation

**Federal Railroad
Administration**

Administrator

**400 Seventh St., S.W.
Washington, D.C. 20590**

OCT 25 1996

The Honorable Frank R. Wolf
Chairman, Subcommittee on Transportation
and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The enclosed report is submitted in response to the Senate Committee on Appropriations Report 104-126 accompanying the Department of Transportation and Related Agencies Appropriation Bill for FY 1996. The Committee requested that the Federal Railroad Administration (FRA) prepare a report that assesses the benefits of its new safety program. The program, known as the Safety Assurance and Compliance Program, complements correction of safety issues on a site-by-site basis with a comprehensive approach to systemic safety issues. The report underscores the safety partnership approach and is being implemented with sound results. The Safety Assurance and Compliance Program builds upon FRA's traditional safety inspection and enforcement program and continues to emphasize this program of site-based inspections followed by the use of enforcement tools, as appropriate.

The goal of *Enhancing Rail Safety Now and Into the 21st Century: The Federal Railroad Administration's Safety Programs and Initiatives* is continuous improvement of rail safety. FRA's safety partnerships, which include representation from Federal and State entities, rail labor, rail management, suppliers, customers, and the public, have resulted in identification and resolution of many systemic safety problems. More importantly, all of the parties have a vested interest in the process, thereby ensuring continued cooperative efforts to improve safety on the Nation's rail system.

An identical letter has been sent to Chairman Hatfield.

Sincerely,

Jolene M. Molitoris

Jolene M. Molitoris
Administrator

Enclosure

cc: The Honorable Ronald D. Coleman
Ranking Minority Member

U.S. Department
of Transportation

**Federal Railroad
Administration**

Administrator

**400 Seventh St., S.W.
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OCT 25 1996

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Chairman, Subcommittee on Transportation
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United States Senate
Washington, DC 20510

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Enclosure

cc: The Honorable Frank R. Lautenberg
Ranking Minority Member

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EXECUTIVE SUMMARY

ENHANCING RAIL SAFETY NOW AND INTO THE 21ST CENTURY

By law, the Federal Railroad Administration (FRA) has responsibility for ensuring railroad safety throughout the Nation. The United States railroad system consists of over 600 railroads with more than 250,000 employees, 200,000 miles of track, 1.2 million freight cars, and 20,000 locomotives. To monitor railroad compliance with federally mandated safety standards, FRA employs 400 inspectors operating out of 47 offices throughout the country.

FRA's traditional site-specific safety inspection program has produced substantial gains in railroad safety with real benefits for the American people. Between 1978 and 1993, the number of railroad accidents declined by more than 75 percent. The railroad accident rate per million train miles dropped by more than two-thirds, and the number of rail-related fatalities and injuries fell by three-fourths during this period. These substantial safety improvements occurred even as freight railroad traffic and train density increased to record high levels following economic deregulation of the industry as a result of the Staggers Rail Act of 1980.

Beginning in 1993, FRA renewed its efforts to promote even greater advances in railroad safety. With rail traffic expected to continue to grow through the remainder of the 1990s and beyond, FRA anticipated the need for new approaches to enhance its already effective site-specific inspections. Consistent with President Clinton's call for creating a customer-focused culture in all agencies and with Vice President Gore's National Performance Review, FRA reassessed its safety program to leverage the agency's resources and establish a team approach that focuses on results to meet FRA's expectations for a safer future.

To meet these challenges, FRA concluded that those most affected by rail issues would need to become more involved in the safety improvement process. FRA reached out to railroad employees and their labor organizations, railroad management, manufacturers, shippers and the traveling public to work as a team to enhance safety. The new Safety Assurance and Compliance Program (SACP) is intended to complement FRA's traditional safety enforcement program with a comprehensive approach in which SACP participants work with FRA to identify and correct root causes of problems across an entire railroad system. To facilitate this inclusion, FRA established "listening posts" around the country for rail safety inspectors to hear directly from rail labor organizations and railroad employees about potential safety issues and concerns. FRA also pioneered three new initiatives—Technical Resolution Committees (TRCs), Safety Partnerships, and the Railroad Safety Advisory Committee (RSAC)—to enhance communications and enable all concerned to become more directly involved in improving rail safety.

FRA monitors its aggressive national safety improvement program through a variety of safety measures. Overall, FRA's short-term performance objective is to reduce by 10 percent all rail-related fatalities from 1994 through 1998, using 1993 as a base year. Achievement of this

objective will result in a cumulative reduction of about 380 fatalities over the 5-year period. Although SACP began in early 1995, initial performance results are encouraging. Appendix D shows FRA's performance measure objectives for the 5-year period, 1994 through 1998. Compared to the 1993 base year, data for 1995 shows:

- rail-related fatality rates down by 17.8 percent;
- train accident rates down by 13.9 percent;
- rail passenger fatality/injury rates down by 7.9 percent;
- rail employee fatality/injury rates down by 30.3 percent;
- grade crossing accident rates down by 24.4 percent; and
- trespasser fatality rates down by 15.8 percent.

The sections that follow describe in more detail the new initiatives FRA has introduced to further reduce accidents, injuries and deaths in the railroad industry.

Promoting Regulatory Consistency—Technical Resolution Committees

In 1994, FRA created new Technical Resolution Committees (TRCs) in each of the five safety disciplines (track, operating practices, motive power and equipment, signal and train control, and hazardous materials) to resolve complicated questions of regulatory interpretation and application directly with the input and participation of rail labor and management. Like any agency that administers a complicated set of laws across a diverse nation, FRA has long confronted two recurring problems: (1) inconsistent application of established policy or law; and (2) unanswered questions of policy or law. TRCs serve as forums to identify and resolve these issues.

TRCs are extremely effective in resolving technical interpretations with labor and management representatives. For example, in April 1996, members of the TRC for the Track Discipline met to resolve 36 technical issues. Examples of successful outcomes include:

- Labor called on FRA to resolve the disposal of shower and sink water or "gray water" from camp cars at track repair sites since an interpretation in this area did not formerly exist. FRA's Track TRC, working with labor and management, developed an interpretation that was implemented by the industry.
- Rail labor and management wanted FRA to clarify how many bolts are needed for each rail end. The TRC concluded that each railroad must have a minimum of two tightly secured bolts irrespective of track class. This action from the TRC provides the rail industry with clear guidance for safe operations.

- It is critical that switch point components are properly installed and fit as designed otherwise safety is compromised. To assure this is understood, TRC developed written guidance for inspectors so that inspections would be uniform and focused on critical safety components.

TRCs represent an important component of FRA's initiative to ensure regulatory consistency, while at the same time receive input, participation and support of the railroad community.

Improving Communications—Safety Partnerships

Safety partnerships with labor, railroad management, states, contractors and suppliers are critical to achieving successful safety results. These safety partnerships entail a mutually beneficial arrangement designed to achieve the common purpose of rail safety. FRA has already established effective safety partnerships on several issues. Highlights include:

- The Brotherhood of Maintenance of Way Employes, CSX Transportation and FRA jointly inspected 11 bridges with the objective of improving the workplace safety environment. Participants agreed that a need existed in several areas of safety training on fall protection and general workplace safety. CSX Transportation has conducted the appropriate safety training and improved its procedures for detecting and correcting workplace safety hazards.

- FRA established a safety partnership with the City of Laredo, Texas; the Union Pacific Railroad (UP); and the Texas Mexican Railroad for grade crossing safety, pedestrian safety, intermodal congestion and railroad security. The resulting Laredo Rail Crossing Safety Plan identified, evaluated, and consolidated grade crossings within the metropolitan area. A goal was established to close 34 of the 108 grade crossings in Laredo. UP agreed to contribute $500,000 for the consolidation.

- In 1993, FRA established a safety partnership with Kentucky Operation Lifesaver, the City of Louisville Public Works Department, Kentucky Transportation Cabinet, and the Jefferson County Public Schools Transportation/Training Section for grade crossing safety. This resulted in the closing of 28 of Louisville's 163 crossings. After the initial success of the Louisville closings, the program was expanded statewide. To date, a total of 525 railroad crossings have been permanently closed in Kentucky.

In summary, safety partnerships effectively mobilize resources across established institutional boundaries to promote meaningful improvements in rail safety with the ultimate goal of zero accidents, zero injuries and zero deaths.

Collaborative Regulatory Development—The Railroad Safety Advisory Committee

In 1996, FRA established the Railroad Safety Advisory Committee, or RSAC, to develop new regulatory standards, through a collaborative process, with all segments of the rail community

working together to fashion mutually satisfactory solutions on safety regulatory issues. Based on the success of the committee which FRA initiated in 1994 to develop negotiated regulatory standards for trackside railroad workers, FRA created RSAC to address a broader agenda of pending safety issues.

FRA believes that RSAC holds great potential for streamlining the regulatory process and expediting a number of FRA's most important rulemaking projects. At its first meeting on April 1 and 2, 1996, RSAC accepted four tasks: Revisions to Freight Power Brake Regulations; Revisions to Track Safety Standards; Revisions to Railroad Communications, and Regulations Governing Tourist, Excursion, Scenic and Historic Services. At the RSAC's second meeting on July 24 and 25, 1996, the Tourist, Excursion, Scenic and Historic Railroads Working Group received the fifth RSAC accepted task, Revisions to Steam-Powered Locomotive Inspection Standards. The second meeting also offered a review of other important safety topics. These include the status of passenger equipment and emergency preparedness issues (including Revisions to Emergency Order No. 20), grade crossing/signal crossing safety issues, a review of revisions to tank car/hazardous materials rules, qualification and certification of locomotive engineers, and changes to accident/incident reporting requirements, which take effect on January 1, 1997.

Since the inaugural meeting on April 1-2, the Power Brake Working Group, Radio Communications Working Group, and Track Standards Working Group have been involved in intense negotiations. FRA has devoted substantial resources to facilitating the RSAC process because the agency believes that regulatory standards developed with the consensus and "buy in" of those affected ultimately will develop higher quality standards, and greater compliance.

The Safety Assurance and Compliance Program

Building on the TRCs, safety partnerships, and the RSAC, FRA's new Safety Assurance and Compliance Program (SACP) represents the most significant initiative from the perspective of safety enforcement. Since FRA's inception in 1966, FRA traditionally relied upon site-specific inspections and penalties to assure compliance with railroad safety regulations. To aid in the strategic allocation of limited inspector resources to areas of greatest safety risk, FRA prioritized all inspections based on accident and injury data, results of previous inspections, and traffic volume. This National Inspection Plan (NIP) emphasized traffic involving hazardous materials and passengers and allocated the amount of time spent by each of FRA's inspection disciplines on each railroad within each state.

The new SACP approach, which FRA designed in 1994 and began to implement in 1995, is intended to complement correction of safety issues on a site-by-site basis with a comprehensive approach to systemic safety issues. SACP participants identify and correct problems across entire railroad systems through cooperative actions of key stakeholders. By focusing on the root causes of railroad safety concerns, which may extend throughout an entire railroad system across conventional organizational or geographic boundaries, FRA can help address potential safety concerns before they become safety problems, i.e., adopting a proactive safety approach. SACP

is fact-based and draws upon the information developed by labor and state partnerships and FRA inspection teams to develop comprehensive, cooperatively developed solutions. SACP builds upon FRA's traditional safety inspection and enforcement program, in order to develop the data and facts necessary to support the heart of the SACP—the safety audit process.

Addressing Root Causes—The Safety Assessment

In 1994 and 1995, FRA conducted over 600 listening sessions with thousands of railroad labor and management personnel. These listening sessions are an important element of the safety profiles since they serve as a starting point for FRA to identify safety problems in conjunction with its analysis of safety data. Next, FRA convenes a senior management meeting to present the safety profile findings to labor and senior railroad officials. Rail labor representatives attend and participate in these meetings. Railroad officials respond to these findings by developing a Safety Action Plan (SAP), which outlines the corrective measures that will resolve the safety problems. The SAP becomes a "contract" between FRA, labor, and industry to remedy safety defects.

The safety assessment process involves joint inspections by FRA, railroad labor and railroad management. These safety inspection audits determine the extent and significance of a railroad's compliance with the SAP. This process enables FRA to effectively resolve safety concerns arising from particular practices or equipment used throughout an entire railroad's operating system. Overall, inspection focus is on a railroad's safety performance.

To illustrate this process, a northeastern railroad safety assessment uncovered a number of systemic signal and grade crossing issues. The railroad agreed to develop a SAP, which incorporates the following FRA safety recommendations:

- replace signal cables showing evidence of deteriorating insulation resistance;
- test soft core iron signal relays in accordance with FRA prescribed intervals;
- install light-out protection at specific interlocking locations;
- replace a particular type of track relay, which is prone to manufacturing defects;
- improve the quality of employee training and carrier instruction manuals for the testing and inspection of signal systems;
- develop a plan to monitor and test the integrity of the transaction return bonding system; and
- improve inspection of interconnected grade crossing circuits.

Through September 1996, FRA has completed or is scheduled to conduct 34 senior management meetings with various railroads. The findings of initial safety assessments are discussed at these

meetings. These initial assessments included seven of the nine commuter authorities over which FRA has jurisdiction, Amtrak, and all of the nation's largest railroads.

Enforcement and Compliance

SACP initiatives complement FRA's existing enforcement program. Team and individual inspector-based inspections still comprise about 80 percent (see Appendix A) of FRA's safety program. This traditional approach to safety allows FRA to enter and examine rail facilities, equipment, rolling stock, operations and pertinent records to ensure compliance with railroad safety regulations. Civil penalties, which FRA can assess against any entity (including individuals) that violates safety laws, continue to serve as strong tools to ensure the railroad industry adheres to rail safety regulations. Civil penalties are issued according to the seriousness of the safety infraction, the type and degree of hazard, the actual harm caused by a safety problem, the railroad's level of compliance with safety regulations, its history of compliance, and whether alternate remedies are more appropriate to ensure the immediate removal of unsafe conditions. FRA is making a greater effort than ever on focusing enforcement actions on the most serious violations.

In addition to civil penalties, FRA employs a variety of other enforcement tools which are separate from the effective use of team inspections as part of the SACP. These include Special Notices for Repair, Emergency Orders, Compliance Orders, Disqualification Orders, and Injunctions. A brief description of each follows:

- Special Notices for Repair allow FRA and state inspectors to order the removal of defective freight cars and locomotives from service and to authorize a reduction in speed over defective track segments.

- Emergency Orders (EO) direct railroads or other responsible entities to take specific, immediate actions to abate emergency situations involving a hazard of death or injury. The EO is the most powerful tool available to the FRA Administrator, and, given its limitation to true emergencies, is used sparingly.

- Compliance Orders are investigatory procedures that authorize FRA to remedy a railroad's repeated failure to comply with FRA's safety regulations including hazardous material regulations.

- Disqualification Orders are issued by FRA where an individual's violation of the safety regulations demonstrates that person's unfitness for safety sensitive service.

- Injunctions are issued by the Federal District Court when the Secretary of Transportation, through the Attorney General (or, under certain circumstances, a state safety agency), requests the court to restrain a violation or enforce the rules and standards relating to railroad safety.

FRA has used all of these tools to ensure safety compliance. For example, during 1995, FRA issued 107 Special Notices for Repair of motive power and equipment (MP&E).

Although EOs are rare, FRA issued three EOs in 1996. A brief description of each follows:

- EO 18 was issued in February 1996 following a freight train accident at Cajon Pass, California. A similar accident occurred at the same location in December 1994. EO 18 requires all Burlington Northern Santa Fe trains operating through Cajon Pass to have the capability to initiate emergency brake applications from the rear as well as the front end of the train.

- EO 19 ordered the Tonawanda Island Railroad to cease operating over an unsafe railroad bridge in upstate New York.

- EO 20 was issued following two separate commuter train accidents in New Jersey and Maryland. It imposed requirements on all passenger railroads to ensure that engineers are fully aware of signal indications after leaving a station and that passenger car emergency exits are properly marked, tested and functioning.

Today, FRA continues to emphasize its enforcement program of site-based inspections followed by the use of enforcement tools, as appropriate. In 1995 alone, the FRA conducted 54,549 site-based inspections on track, signal, motive power and equipment, operating practices and hazardous materials throughout the United States. Inspections were done by teams and individual inspectors based on the most appropriate method to achieve acceptable safety practices. In 1995, FRA collected $5.23 million in civil penalties.

Conclusion—SACP Represents the Optimum Approach to Rail Safety

The singular goal of SACP and FRA's existing site-based inspection and enforcement program is to improve rail safety by reducing systemic hazards in rail facilities, equipment, rolling stock and operations. SACP safety partnerships, which include representation from labor, Federal and state governments, the rail employees and their organizations, suppliers and contractors, and the public, have resulted in identifying and resolving many systemic safety problems. More important, the program vests ownership in the process of improving safety in all parties which in turn ensures continued cooperative efforts to improve the safety of the Nation's rail system.

Since 1993, improvements in rail safety have yielded a steady decline in rail accidents, fatalities and injuries per million train miles. Achievements include:

	1993 Rate Base Year	1995 Rate	Percentage Improvement
Rail-Related Fatalities	1,279	1,114	12.9 %
Rail Employee Fatalities/Injuries	15,762	10,795	31.5
Trespasser Fatalities	523	493	5.7
Rail Hazardous Material Releases	1,154	1,021	11.5

FRA's policy is zero tolerance for accidents, injuries, or deaths on the Nation's rail system. Clearly, the SACP approach has been successful, but much work remains. As the serious railroad accidents which occurred early in 1996 illustrate, FRA must continually emphasize vigilance to promote and enhance railroad safety. FRA will accelerate its aggressive efforts, through enforcement as well as safety partnerships with rail labor and management, to improve the safety awareness and management programs on each of the more than 600 railroads in the United States.

ENHANCING RAIL SAFETY NOW AND INTO THE 21ST CENTURY

I. REQUEST FOR REPORT

The U.S. Senate Committee on Appropriations requested that the Federal Railroad Administration (FRA) prepare a report that assesses the benefits of the agency's new enforcement posture, and document evidence that a vigorous enforcement program is still being conducted by FRA, while it simultaneously seeks cooperation from regulated entities (Senate Report 104-126, accompanying the Department of Transportation (DOT) and Related Agencies Appropriations Bill, 1996). The relevant directive for FRA action from the Committee's report states:

> "...the Committee requests the FRA Administrator to prepare a report to the House and Senate Committees on Appropriations before May 1, 1996 [subsequently extended to August 1, 1996], that assesses the benefits of its new enforcement posture and documents evidence that a vigorous enforcement program is still being conducted by FRA, while it simultaneously seeks cooperation from regulated entities.
>
> FRA should submit documentation providing that there is an appropriate balance between the resources used to promote cooperation and educational assistance and those used for enforcement. The report should detail improvements or lack thereof, in compliance for each of the railroads for which FRA approved a Safety Action Plan..."

II. THE EARLY SAFETY PROGRAM AND ACCIDENT TRENDS

FRA's primary mission is railroad safety. To accomplish that mission, FRA issues and enforces railroad safety regulations. The agency's rules carry out provisions of the Federal Railroad Safety Act of 1970 and related statutes enacted prior to 1970.[1] FRA also investigates major train accidents, assists the industry in training its workforce on safety laws and educating the public on dangers associated with railroading, conducts research, and encourages cooperative efforts on the part of the industry's various components to advance safety.

The railroad system of the United States consists of over 600 railroads, with more than 250,000 employees, 200,000 miles of track, 1.2 million freight cars, and 20,000 locomotives. To monitor the railroads' compliance with Federally mandated safety standards, FRA employs 400 inspectors operating out of 47 offices throughout the country.

The railroad industry has made great strides in safety since 1978. For example, deferred maintenance on main lines and equipment is now rare. Railroad purchases of new locomotives,

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[1] Regulations enforcing those statutes are found at 49 C.F.R Parts 213 through 240. In addition, FRA enforces the Hazardous Materials Transportation Act as it pertains to the safe shipment or transportation of hazardous materials by rail.

freight cars, and passenger rolling stock incorporate much improved materials and technology. Finally, research into the causes of track buckling, advances in track components, and any number of other improvements have permitted railroads to move more people and goods with a high degree of safety.

FRA initiatives have promoted these rail safety gains. FRA's regulations establish a level of safety to which all must conform. Participation in joint research, improved standards for tank cars, alcohol and drug testing requirements, locomotive engineer certification requirements, field compliance and partnership efforts directed at a broad range of safety hazards, and other actions have all driven down the accident and casualty totals.

Initially, railroad safety regulations dictated minimum requirements for operating practices, track, and equipment. For example, the steel wheels of freight cars must meet a maintenance specification. Federal railroad safety regulations state that the wheel flange (which wears down as the car is operated) must have a thickness of seven eighths of an inch, at a point three eighths of an inch above the tread of the wheel. This is a physical specification that the inspector and railroad personnel can readily check with a simple flange gauge. A railroad is deemed to be operating safely when operating practices, track, and equipment are in compliance with the safety regulations currently in effect.

Although statutory intent was to improve railroad safety, the early emphasis of the post-1970 safety program was on issuing detailed equipment and track specifications, and certain operating protocols.

Since its inception in 1970, the FRA has traditionally relied upon site-specific inspections and penalties to assure compliance with railroad safety regulations. To aid in the strategic allocation of limited inspector resources to areas of greatest safety risk, FRA developed a National Inspection Plan (NIP). Using a risk allocation model, NIP prioritized all inspections based on accident and injury data, results of previous inspections, and traffic volume. Emphasis was placed on traffic involving hazardous materials and passengers. Annual NIP goals allocated the amount of time that should be spent by each of FRA's inspection disciplines (track, motive power and equipment, operating practices, signal and train control, and hazardous materials) on each railroad within each state.

FRA's traditional inspection and enforcement program yielded very positive results. Between 1978 and 1993, the total number of railroad accidents and the railroad accident rate per million train miles decreased by 75.3 percent and 69.7 percent, respectively. Rail-related casualties showed similar improvements with total rail-related fatalities and injuries decreasing by 22.2 percent and 75.4 percent, respectively, between 1978 and 1993. However, most of this improvement occurred between 1978 and 1987. These substantial safety improvements have occurred even as freight railroad traffic and train density have increased to record high levels, following economic deregulation of the industry as a result of the Staggers Rail Act of 1980.

	1993	1987	1978
Total Train Accidents	2,785	2,647	11,277
Accident Rates	4.54	4.55	15.00
Fatalities	1,279	1,165	1,645
Injuries	19,121	26,033	77,582

In 1975, FRA automated the railroad accident databases. Databases subsequent to 1975 show that total railroad industry train accidents fell from a peak of 11,277 in 1978 to 2,531 in 1992.[2] Between 1986 and 1995, total train accidents declined 5.2 percent, from 2,761 to 2,618. Between 1987 and 1995, total train accidents declined 1.1 percent, from 2,647 to 2,618.[3] About 68 percent of total train accidents occur at 10 miles per hour, or less, and about 50 percent occur in rail yards. Under these circumstances, employee fatalities are rare. Only 4 percent of total train accidents occur at speeds greater than 50 miles per hour, where concern for human injury and fatality is greatest. Listed on the following page are statistics showing major accident/incident "cause" categories.

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[2] A "train accident" involves the movement of on-track equipment that results in damage to railroad equipment or property equal to an amount above the current reporting threshold, revised periodically for inflation. The present threshold is $6,300.

[3] U.S. Department of Transportation, Federal Railroad Administration Office of Safety, *Accident/Incident Bulletin No. 160, Calendar Year 1991*, and *Accident/Incident Bulletin No. 163, Calendar Year 1994*, Table 3.

RAIL EQUIPMENT TRAIN ACCIDENTS

	1995	1993	1987	1986	95vs87	95vs86
Total Train Accidents **	2,618	2,785	2,647	2,761	- 1.1%	- 5.2%
Human Factor Caused Train Accidents	944	865	856	816	+10.3	+15.7
Signal & Track Defect Caused Accidents	883	1,017	938	1,016	- 5.9	-13.1
Mechanical & Electrical Failure Caused Accidents	279	360	430	433	-35.1	-35.6

** Certain highway rail collisions qualify under the technical definition of "train accident." However, to avoid double counting and because they stem from different causes, FRA has excluded those occurrences from the "train accident" numbers that follow.

The number of train accidents may be a function of traffic volume. To examine changes in traffic volume, FRA also compared the total number of train accidents to train miles.[4] The number of train miles is a proxy for rail traffic. Chart 1 (page 39) shows train accident rates, based on the number of train accidents per million train miles. Despite an increase in rail traffic, the data show a downward trend in train accident rates between 1986 and 1995. The number and proportion of train accidents attributable to track and equipment-related causes dropped dramatically between 1978 and 1986. However, train accident rate trends subsequent to 1986 imply that continued emphasis on this approach is not reducing the number of accidents fast enough to meet agency performance goals.

The proportional rise in human factor caused accidents, since 1986, now comprise the largest single causal factor for railroad accidents. They also represent a disproportionate number of the most serious accidents. There is no doubt that increasing safety through infrastructure investment is a more clear-cut and quantifiable safety challenge than is the challenge of effectively dealing with human factor issues.

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[4]Train miles = the distance a train travels in miles, regardless of the length of the train.

III. THE CHANGING ENVIRONMENT

The corporate world has been changing quickly in recent years. Many major corporations have adopted the key tenet of total quality management, which focuses on customer's needs.

Meanwhile, longstanding assumptions about the role and value of government and its programs are being challenged. President Clinton requires Federal agencies to learn from and adapt successful corporate strategies to make the government more efficient and effective. He is championing the creation of a customer-focused culture in all agencies, and signed into law the Government Performance and Results Act of 1993 (GPRA), which requires agencies to develop strategic plans for achieving measurable results. He urges the formation of effective labor/management partnerships in the Federal workplace. He issued an executive order on regulatory process and reform that strongly encourages agencies to use more collaborative methods of rulemaking and to issue cost-beneficial rules. Finally, he directed Federal regulatory agencies to adopt an enforcement policy that focuses on results, not punishment.

Through his emphasis on customer service and other measures, President Clinton radically changed how government employees think about the customers they serve. FRA is a leader in developing a customer service plan and educating all of its employees on the principles of customer service. However, FRA knows that, even if it cannot always produce the outcomes that its compelled customers, e.g., railroads and hazardous materials shippers, may want, it owes them fairness, equity, willingness to listen, willingness to solve problems, open working relationships and respect.

Site-specific inspections have been the mainstay of FRA's safety monitoring efforts. However, site-specific inspections only assess the condition of a specific piece of track, or equipment, or execution of an operating practice at a particular point in time. Also crucially important is a comprehensive view of a railroad's safety status. While site-specific inspections alone cannot provide systemwide solutions to systemic safety problems, they do provide an important source of safety information for FRA databases and are a useful means of addressing localized safety problems. Site-specific inspections remain an important tool for monitoring compliance with railroad safety regulations. However, the addition of "comprehensive safety reviews" leverages resources and makes FRA's program more effective by giving impacted parties an opportunity to provide input, suggest solutions, and have ownership in resulting safety successes.

In response to the proportional rise in human factor caused accidents, railroad industry restructuring, the need to address systemic safety problems, and new legislative and regulatory requirements,[5] FRA examined ways to improve the railroad industry's safety record. Ten Administrator's Roundtable Discussions with rail labor, rail management, industry research

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[5] For example, the Government Performance and Results Act of 1993 (Public Law 103-62) requires FRA to measure agency performance against an annual performance plan.

experts, suppliers, contractors and other stakeholders, along with internal audits, and scores of external meetings with individuals and groups in every element of the railroad industry, coupled with FRA's databases and experience, produced a compelling mandate for change.

IV. TRANSFORMATION OF THE SAFETY PROGRAM

FRA is transforming the Federal railroad safety program. The goal is a safety program that is more inclusive of the agency's customers, more fact-based, and ultimately more effective, while also less intrusive, less hierarchical, and less adversarial. While FRA notes the achievements of its safety program to date, continued success in any increasing rail safety depends on evolving our programs to meet the challenges of a rapidly changing railroad industry.

FRA is using teamwork to meet the transformation challenge: regulatory teams both under Railroad Safety Advisory Committee (RSAC) and on matters not referred to RSAC; inspection teams under the Safety Assurance and Compliance Program (SACP); interpretive teams for Technical Resolution Committees (TRCs); and ad hoc teams to address other issues. As indicated by the volume of literature on effective team building, teamwork requires clarity of purpose, excellent listening skills, willingness to compromise to reach solutions the parties can "live with," sound planning, and a shared sense of ownership of the ultimate products. As is true in all effective partnerships, the foundation of effective teams is trust.

Inspection teams are an extremely effective tool for increasing safety, and Regional Administrators have the discretion to deploy inspection teams. This type of inspection activity may be appropriate in compliance reviews, special assessments and system safety assessments. Team inspections do affect a region's total inspection goals since inspectors on team inspections are diverted from their regular site inspection schedule. Consequently, team inspections are generally reserved to target serious safety problems where immediate remedial action is required. A team inspection has the following characteristics:

- Normally initiated by the region following a "regular" inspection.
- May involve a single, or multiple discipline review.
- State inspectors are invited to join team.
- May be inter-regional in scope.

A. Technical Resolution Committees (TRCs)

FRA, which administers a complicated set of laws across a diverse Nation, has long been faced with two recurring problems: (1) inconsistent application of established policy or law; and (2) unanswered questions of policy or law.

In 1994, FRA established Technical Resolution Committees (TRCs) in each of its technical disciplines (track, signal, hazardous materials, equipment, and operating practices). TRCs serve as forums for identification and resolution of policy and law issues. Team methodology is used, and consensus recommendations are the goal. The TRCs meet at least twice a year in each discipline. Teams consist of FRA experts in the discipline from headquarters and the field. Teams are assigned a manageable number of issues and given great latitude to devise solutions. Members of the FRA Field Liaison team serve as facilitators of discussions, and FRA attorneys are present to advise on legal issues. Labor and management representatives, with relevant technical knowledge, are invited to the TRCs. The industry participants are there to provide factual input and reality testing of possible solutions, but are not part of the voting to reach consensus. The TRC forwards its recommendations to the Associate Administrator for Safety and the Deputy Chief Counsel. The recommendations are adopted whenever they are consistent with overall policy and are legally sustainable. The process has had some notable successes, e.g., quick resolution of issues involved in implementing new regulations on testing, inspection, and maintenance of grade crossing signal devices. The inclusive process brings many field personnel into the picture, increasing their understanding of issues involved in policy formation.

TRCs are extremely effective in resolving technical interpretations with labor and management representatives. For example, in April 1996, members of the TRC for the Track Discipline met to resolve 36 technical issues. Examples of successful outcomes include:

- Labor called on FRA to resolve the disposal of shower and sink water or "gray water" from camp cars at track repair sites. FRA's Track TRC formulated a solution which FRA has already begun to implement.

- Rail labor and management wanted FRA to clarify how many bolts are needed for each rail end. TRC concluded that each rail end must have a minimum of two tightly secured bolts irrespective of track class. This guidance from the TRC provides the rail industry with clear guidance for safe operations.

- It is critical that switch point components are properly installed and fit as designed, otherwise safety is compromised. To assure this is understood, TRC developed written guidance for inspectors so that inspections would be uniform and focused on the critical safety components.

TRCs represent an important component of FRA's initiative to ensure regulatory consistency, while at the same time receiving input, participation and support of the railroad community.

B. Safety Partnerships

A partnership entails a mutually beneficial arrangement with another organization or individual designed to achieve a common purpose. Partnerships can occur with the agency's customers and with non-customers, e.g., other agencies. FRA has forged effective partnerships with railroad labor and management on several issues (such as training on proper inspection of locomotives)

and with other agencies. The 1994 Grade Crossing Action Plan and the current Grade Crossing Task Force are leading partnership examples. Successful partnerships require trust, openness of mind, and a mutual willingness to contribute positively to the joint venture. The principle of partnership suffuses all of the initiatives FRA has adopted to promote inclusiveness in its regulatory program.

FRA values the contributions of railroad labor in addressing safety problems affecting all workers. In addition to SACP, rail labor is represented on Technical Resolution Committees (TRCs) and the Railroad Safety Advisory Committee (RSAC).

State Partnerships

Thirty-one states employ 135 inspectors in a Federal/state partnership to promote compliance with nationally uniform rail safety standards. FRA encourages states to participate with FRA as it transforms the rail safety program. FRA has actively recruited states to participate in each Technical Resolution Committee meeting. State inspectors and two national state organizations, the American Association of State Highway and Transportation Officials and the National Association of Regulatory Utility Commissioners, are represented on the Railroad Safety Advisory Committee.

Effective communications are essential to coordinate safety audit teams. Therefore, it is crucial that FRA and states share a fully integrated communication system. FRA continues to actively encourage the maximum practicable state involvement in all SACP activities.

C. Railroad Safety Advisory Committee (RSAC)

In March 1995, FRA announced that it was moving its regulatory program in a direction that would entail greater collaboration with the regulated community in arriving at mutually satisfactory solutions to regulatory issues. In June 1995, FRA announced that, to move in that direction, it would establish the Railroad Safety Advisory Committee (RSAC) to provide the agency with advice and recommendations from the industry on a range of regulatory issues. Building on the success of its first formal negotiated rulemaking, which concerned the safety of roadway workers, FRA envisions a process that produces consensus on the underlying factual issues, a range of options, and the recommended solution. Those most directly affected by a possible rule would be able to help shape it from its inception. Moreover, just as FRA will learn from the direct contact with the affected parties, those parties directly learn the perspectives of others and experience the challenges of rulemaking. FRA is part of the working group directly responsible for each proposed rulemaking, thereby ensuring that the interests of the agency, Congress, and the public are represented. Where consensus cannot be achieved, FRA will act without the benefit of the RSAC's views. However, FRA believes that consensus-based rulemaking serves the public interest. The resulting rule is likely to be better understood, more widely accepted, more cost beneficial, and more correctly applied. The result is a paradigm shift in FRA's regulatory role.

In recent years, FRA has always had a substantial regulatory agenda consisting of rulemakings and reports to Congress on regulatory issues. The items on this agenda derive from Congressional mandates, FRA's own ideas, and issues raised by various partners in the railroad community. Although sometimes characterized as a "backlog," the list is actually an agenda of regulatory action that contains some old items and some new ones. At this writing, it contains only two rulemaking actions on which FRA has not achieved the statutory deadlines—track and power brake. The number of items on the list fluctuates as final rules are issued and new items are added, but at any given time there are 30 to 40 projects on the agenda.

The rulemaking process that all Federal agencies must follow is a lengthy one involving drafting proposed rules, reviewing drafts within the executive branch, permitting time for comment (and in some cases hearings), reviewing comments and hearing testimony, and drafting and reviewing final rules. Issuance of a final rule may not end the process, if petitions for reconsideration or experience over time indicates a need for revisions.

While FRA has accomplished a great deal on the regulatory front in recent years, FRA recognizes the need to find ways to shorten the regulatory process wherever that can be done without sacrificing regulatory quality. FRA believes that RSAC holds great potential for achieving substantial gains in timeliness. Although the collaborative process can itself require significant amounts of time to be successful, it potentially provides an acceleration of various stages of the regulatory process as reviewers can be assured that the interests of major affected groups have been fully considered. Likewise, after a rule is proposed, the comments and hearing testimony should be much less voluminous and argumentative than under the traditional approach. Accordingly, the time it takes for FRA to analyze those comments and draft a final rule that is responsive to them should be greatly reduced. Finally, a consensus-based rule is far less likely to be challenged and more likely to be implemented smoothly than a rule that arises from a less collaborative process. FRA is very hopeful that RSAC will provide a major expediting effect on the completion of some of its most important rulemaking projects. Results should be measurable by year's end.

The RSAC was formally established on March 25, 1996, and held its inaugural meeting April 1 and 2, 1996. At their first meeting, the committee accepted four tasks: Revisions to Freight Power Brake Regulations, Revisions to Track Safety Standards, Revisions to Railroad Communications, and Regulations Governing Tourist, Excursion, Scenic and Historic Services. RSAC held its second meeting on July 24 and 25, 1996. The Tourist, Excursion, Scenic and Historic Railroads Working Group received the fifth RSAC accepted task, Revisions to Steam-Powered Locomotive Inspection Standards. The second meeting also offered a review of other important safety topics. These included the status of passenger equipment and emergency preparedness issues (including revisions to EO 20), grade crossing/signal crossing safety issues, a review of revisions to tank car/hazardous materials rules, qualification and certification of locomotive engineers, and changes to accident/incident reporting requirements, which take effect on January 1, 1997. Since the inaugural meeting on April 1-2, the Power Brake Working Group, Radio Communications Working Group, Track Standards Working Group, and the Tourist and Historic Railroads Working Group have been involved in intense negotiations. Notices of

Proposed Rulemakings (NPRM) for revisions to power brake rules, track standards, and radio communications will be presented at the next RSAC meeting, scheduled for October 30 through November 1, 1996.

D. Safety Assurance and Compliance Program (SACP)

In March 1995, FRA announced the Safety Assurance and Compliance Program (SACP), a new approach to safety inspection and encouraging compliance. The cornerstone of the SACP is its methodology for detecting and focusing on the root causes of systemic safety problems, especially over an entire large railroad system. Through September 1996, FRA has completed, or is scheduled to conduct, 34 senior management meetings with various railroads in order to explain SACP objectives and processes. The findings of initial safety assessments were also discussed at these meetings. These initial assessments included seven of the nine commuter authorities over which FRA has jurisdiction, Amtrak, and all of the Nation's largest railroads. FRA does not perform a SACP assessment of all railroads.

SACP is a "systems" approach to safety.[6] SACP has three major program objectives. These are consistency in regulatory applications, improving communications, and focusing on the root causes and solutions to systemic safety problems. To meet these objectives, FRA has inspectors evaluate data from routine site-specific inspections and initiate further action if problems appear to be systemic in nature.

Safety Profile

Rail labor and management work with FRA and states in the development of railroad Safety Profiles which include the following: safety strengths; safety weaknesses; a list of accidents reported by each railroad; and other specific safety concerns. The Safety Profile summarizes the findings of previous site-specific inspections and identifies safety problem areas. Summaries of "listening session" interviews with railroad employees and management are also incorporated into railroad Safety Profiles.

FRA has conducted over 600 listening sessions with thousands of railroad labor and railroad management personnel in both 1994 and 1995. These listening posts serve as a starting point for FRA to identify systemic safety problems and address the root causes. The goal is to determine the extent and significance of each safety concern as well as development of alternatives for appropriate countermeasures.

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[6] "System" analyses puts entire "operating systems" under scrutiny to pinpoint weaknesses in present technology. Applied to railroad inspections, the systems approach will examine the track, equipment, signals, and operating practices at railroads. A variant of this methodology assumes new technology and asks what would be the effect on present systems.

Senior Management Meeting (SMM)

Once FRA identifies root causes to systemic safety problems, a railroad Senior Management Meeting (SMM) is requested. SMMs are an integral part of the SACP. At the SMM, FRA presents the railroad Safety Profile to labor and senior management of the railroad. The railroad responds to FRA by submitting a Safety Action Plan (SAP).

Safety Action Plan (SAP)

FRA and railroad management, with participation from rail labor and states, negotiate the SAP. SAP becomes a "contract" between railroad management, FRA, and railroad labor that remedies safety defects. The following items are included in the SAP: long-term measures to correct concerns, interim measures to ensure safety, the designation of a responsible officer, and an implementation schedule. After reviewing each SAP, FRA will accept, or reject the plan. If approved, FRA will notify a railroad on how the agency will verify corrective measures, and when verification will occur. If disapproved, FRA and railroad management, with participation from rail labor and states, will renegotiate the SAP. Following review and approval of a SAP, FRA inspector resources are allocated to monitor compliance. FRA's safety compliance activities focus on monitoring a railroad's safety performance as stipulated in its safety action plan contract.

For unresolved portions of the SAP, FRA may initiate enforcement actions. The selection of the most appropriate enforcement tool for encouraging safety compliance will depend on the circumstances.

FRA stands ready to take any necessary enforcement action where the remedial action on the identified issues does not emerge or wanes, and in all other situations where it would normally do so.

Safety Audit Process

The Safety Audit process is the primary tool used by FRA to monitor a railroad's compliance with its Safety Action Plan. A goal of the Safety Audit process is to enable FRA, each railroad's management, and each railroad's labor representatives to quickly resolve systemic safety problems outlined in the Safety Action Plan.

FRA suspends the assessment of most civil penalties during the Safety Audit. To illustrate this process, a northeastern railroad Safety Assessment uncovered a number of systemic signal and grade crossing issues. The railroad agreed to develop a SAP, which incorporates the following FRA Safety Assessment recommendations:

- replace signal cables showing evidence of deteriorating insulation resistance;
- test soft core iron signal relays in accordance with FRA prescribed intervals;

- install light-out protection at specific interlocks;
- replace a particular type of track relay, which is prone to manufacturing defects;
- improve the quality of employee training and carrier instruction manuals relative to the testing and inspection of signal systems,
- develop a plan to monitor and test the integrity of the transaction return bonding system; and
- improve inspection of interconnected grade crossing circuits.

These remedies were to be completed within a reasonable time period under the review of an FRA manager. Experience, to date, shows a high degree of compliance with railroads often ahead of schedule.

E. Measuring Transformation of the Safety Program

FRA's inspection program is divided into five railroad inspection disciplines. These are signal and train control, motive power and equipment, operating practices, hazardous materials, and track. FRA's inspectors are hired in one of the five disciplines. In addition, each region is assigned a Highway Rail Grade Crossing Safety and Trespass Prevention Program Manager. Appendix A shows the percentage of decline in 1994-1995 of site-specific inspections as resources are shifted to SACP and the related activities of Technical Resolution Committees, the Railroad Safety Advisory Committee, safety partnerships, and customer service. Between 1994 to 1995, about 20 percent of the agency's resources were involved in the transformation from site-specific to railroad system assessments and related activities. A list of railroads undergoing a SACP review in 1995-96 is shown in Appendix B.

To evaluate the safety program's effectiveness, FRA uses measures, which are the agency's Government Performance and Results Act goals. These goals include a reduction in the following:

- Number of freight train accidents per million freight train miles.
- Number of railroad passenger fatalities and injuries per billion passenger miles.
- Number of railroad employee fatalities and injuries per million work hours.
- Number of highway rail grade crossing accidents per an "exposure" index (i.e., annual train miles times trillion highway vehicle miles of travel).
- Number of trespasser fatalities per million train miles times the total U.S. population.

- Number of hazardous material rail car releases per billion hazardous material ton-miles.

Overall, FRA's short term performance objective is to reduce by ten percent all rail-related fatalities from 1994 through 1998, using 1993 as a base year. Achievement of this objective will result in a cumulative reduction of about 380 fatalities over the 5-year period. Although SACP began in early 1995, initial performance results are encouraging. Appendix D shows FRA's performance measure objectives for the 5-year period, 1994 through 1998. Compared to the 1993 base year, data for 1995 shows rail-related fatality rates down by 17.8 percent, train accident rates down by 13.9 percent, rail passenger fatality/injury rates down by 7.9 percent, rail employee fatality/injury rates down by 30.3 percent, grade crossing accident rates down by 24.4 percent, and trespasser fatality rates down by 15.8 percent.

V. SAFETY PARTNERSHIP EXAMPLES

A. Successes

High Speed Rail Joint Labor/Management Training Program

As part of FRA's High-Speed Rail Demonstration Project on Amtrak's Chicago to Detroit corridor, FRA's Office of Research and Development has entered into a partnership with Amtrak and the Brotherhood of Railroad Signalmen (BRS), a rail labor organization representing the carrier's signal and communication employees, to develop a training program. The purpose of the training program is to provide signal employees with the skills and knowledge necessary to build and maintain a state-of-the-art communication-based train control system that will provide positive train separation for high speed-rail operations over a portion of the corridor.

The BRS has committed personnel and resources to help develop the training program. Thus far, the labor organization has appointed a project manager experienced in developing training programs and curriculum and has undertaken a skill assessment of the employees who will be responsible for installing and maintaining the new system. Amtrak has offered the use of its training facilities and training personnel. FRA will provide funds for the initial development and delivery of a module training curriculum and materials, which can be adopted throughout the industry for positive train control.

Benefits:

This safety partnership process has facilitated the development of a training program that is vitally important to the development of high-speed rail technology, and it has done so at the lowest possible cost to the taxpayers. One of the goals of FRA's Office of Research and Development is to promote the development of technology, which would allow state, regional and local transportation authorities to devise cost effective high-speed rail networks. A reliable Positive Train Separation (PTS) system is an essential element in high-speed rail technology since it would permit greatly increased train speeds and traffic densities while maintaining a higher level of safety than is currently possible with conventional train control technology. On that basis, the joint

FRA/labor/management training program will produce the following benefits for the traveling public: (1) As with any complex prototype system, the development process does not end in the laboratory or factory, but continues in the field test bed where it is fine-tuned and "de bugged" under operational conditions. This partnership training program will produce the knowledgeable, well trained work force that is vital for field development stage of the PTS system; (2) The FRA/labor/management partnership intends to develop a model training program and curriculum that can be utilized wherever the PTS technology is deployed. In the future other transportation authorities may deploy a high-speed rail PTS system without incurring the expense of developing a new training program; and (3) The FRA/labor/management partnership benefits the taxpayers by leveraging federal funds. The contributions of the labor organization and the railroad provide expertise, material and manpower that otherwise would have to be purchased with Federal funds.

Safety Training

In 1995, the American Short Line Railroad Association (ASLRA) asked FRA to use an educational grant appropriated by Congress to develop a standardized 12-hour educational program for nationwide dissemination. FRA worked closely with ASLRA leadership to develop the program.

The resulting standard 12-hour educational program covers regulations in all five technical areas (hazardous materials, motive power and equipment, operating practices, signal and train control, and track). The presentation packages have been printed and distributed to each of FRA's eight regions; 40 FRA regional inspectors (5 per region) have been provided presentation skills training; and each region has been provided with equipment necessary to deliver the training. This program will permit more than 500 shortline railroads to better understand FRA's regulations, making it easier for them to comply.

Equipment Safety

Adversarial conditions between first line mechanical supervisors and car inspectors on the Kansas City Southern Railway were adversely affecting the efficiency and accuracy of train yard inspections with a resulting poor compliance rate for Federal safety regulations.

FRA proposed and facilitated a partnership council composed of railroad labor, labor representatives, first line supervisors and senior mechanical managers to encourage open and frank discussion of issues. As a result of this process, compliance with Federal regulations is significantly improved. For example, at DeQueen, Arkansas, FRA inspectors inspected 70 freight cars and found 25 defective for a 36 percent defect ratio. At Monroe, Louisiana, inspectors found a 28 percent defect ratio on freight cars. Their followup inspections, after the formation of a safety partnership council, revealed an average defect ratio of 15 percent.

Bridge Worker Safety

A joint FRA, CSX Transportation, and Brotherhood of Maintenance of Way Employes inspection of 11 bridges identified 123 bridge conditions that the carrier corrected. In response to an FRA request for bridge worker safety training for bridge supervisors and bridge tenders, CSX Transportation established a training program. All bridge tenders completed training by April 1, 1996.

Track Gang Safety

During a track Safety Audit, only a portion of CSX Transportation track gangs had acceptable rescue retrieval systems. CSX Transportation responded quickly to ensure that supervisory and track foremen had the necessary fall protection retrieval gear and training in their possession.

Equipment Safety

In October 1995, FRA inspectors began to encounter extremely high defect ratios for open top hoppers in Conrail ore service, commonly called "ore jennies," at South Philadelphia, Pennsylvania, and Mingo Junction, Ohio. Defects included such serious conditions as inoperative air brakes, excessive brake piston travel, defective plain bearing conditions, and various safety appliance defects. Although 2000 cars are dedicated to ore jennies service, the overall condition of the fleet is poor.

FRA formed a task force of motive power and equipment inspectors to gather information about the ore jennies fleet. Rather than issue individual violation reports, FRA treated this discovery as a systemic equipment problem. Initially, Conrail attempted to repair the cars to keep at least part of the fleet in service. Eventually, Conrail determined to remove the entire fleet from service.

Presently, 200 cars have been salvaged, and an additional 600 cars have been identified and placed into storage until they can be accepted by the salvage facility. The remaining 1200 cars, according to Conrail's Safety Action Plan, have been removed from service and scrapped.

Equipment Safety

After experiencing several derailments of unknown cause involving open top hopper cars, the President of the New York Susquehanna and Western Railroad requested FRA's assistance. FRA responded by dispatching a task force for a safety assessment. FRA determined that worn hopper car truck components, none of which alone were condemnable, but together, resulted in excessive truck slewing, had caused the accidents. Under a Safety Action Plan, the carrier replaced the worn hopper car truck components and has not experienced a similar derailment.

Equipment Safety

Driven by information collected at listening sessions, FRA established inspection teams to conduct Safety Audits at major yards on the Union Pacific Railroad (UP). At the conclusion of these inspections, FRA disseminated all of the information to the Chief Mechanical Officer of the UP and his staff at UP headquarters in Omaha, Nebraska, in August 1995. The General Vice President of the Brotherhood of Railway Carmen was also in attendance as an active participant.

At this meeting, FRA outlined the areas of noncompliance that were found through the Safety Audit. UP responded by submitting an action plan with participation from the Brotherhood of Railway Carmen to correct the noncompliance. Milestones were set to track the success of the action plan. FRA conducts followup inspections to determine if UP is living up to the action plan.

Grade Crossing Safety

FRA established a partnership between the City of Laredo, Texas, the UP and Texas Mexican Railroad to address problems of motor vehicle (grade crossing) and pedestrian safety, intermodal congestion, and railroad security.

This resulted in the development of a comprehensive Laredo Rail Crossing Safety Plan to identify, evaluate, and consolidate at-grade crossings within the metropolitan area boundaries. The goal has been established to close 34 of the 108 at grade crossings in Laredo; UP agreed to contribute $500,000 for this consolidation project. This agreement will provide significant improvement in vehicular and pedestrian safety, improve intermodal mobility, facilitate the movement of international cargo, and enhance railroad security.

Hazardous Materials Safety

FRA hazardous materials inspections conducted on the Gateway Western Railway Company disclosed numerous instances of noncompliance with Federal hazardous material safety regulations regarding improper hazardous material shipping descriptions being shown on car movement waybills, switch lists and conductor's wheel reports. The problem, if allowed to exist, would impact the availability of proper hazardous material information to emergency response personnel during an incident, the proper placement of hazmat cars in a consist, etc.

The carrier immediately responded to FRA's concerns in this area and commenced corrective actions.

Small railroads

FRA's Region Three has formed a partnership with the Southern Short Line Association to create the Southern Region Short Line Safety Council. The goals of the council are: achieve better communication with council members; establish a consistent regulatory program across the Region; discuss the interpretation and application of safety standards; identify small railroad

training needs and design plans to meet those needs; provide a forum for the exchange of safety innovations, share technological applications; and, establish safety performance benchmarks for small railroads.

B. Unsuccessful Partnership Efforts

Generally, the response to cooperative efforts between railroad labor, railroad management and FRA regarding SACP has been good. However, FRA has documented partnerships that have not achieved their safety goals.

Tonawanda Island Railroad

In response to concerns raised by the New York State Department of Transportation, FRA inspected and found an unsafe bridge on the Tonawanda Island Railroad system. The railroad agreed not to operate over the bridge until it was properly repaired and inspected by FRA. When the railroad resumed operations over the bridge without making repairs, FRA issued Emergency Order (EO) 19 on February 12, 1996. Until rescinded, EO 19 directs the railroad to discontinue operations over the bridge.

Southern Pacific

During a listening session with the Brotherhood of Railway Carmen at West Colton, California, FRA attention was directed to a Southern Pacific Railroad (SP) practice of allowing defective freight cars to be released from the yard at West Colton. A team of FRA motive power and equipment personnel was assembled and made inspections. Numerous defective cars were observed being permitted to leave the yard. SP was requested to submit a Safety Action Plan. FRA performed follow-up inspections after the action plan had been implemented and found that the problem had not been corrected. FRA is now pursuing vigorous enforcement actions, including violations, against the SP and SP personnel who allowed these practices to continue.

VI. RAILROAD SACP PROJECT SUMMARIES

The following are summaries of selected senior management meetings and lists some of the major recommendations and solutions from the initial meetings of selected carriers.

A. A Southwestern Railroad

Initial inter-regional team "listening sessions" with labor began on August 14, 1994, by FRA Regions 4, 5, 6, 7, and 8. The meetings were conducted in Arkansas, Arizona, California, Colorado, Illinois, Kansas, Louisiana, Missouri, Oregon, Texas, and Utah.

Additional meetings outside of listening sessions were conducted in October 1994, through December 1995. These discussions included mechanical issues, training for various test procedures, communications, labor partnerships, computer-assisted dispatching, train makeup

versus train profiles, fatigue and a hours of service act pilot project, train line ups, awaiting deadhead transportation, and hours of service records.

On February 15, 1995, FRA held a senior management meeting (SMM) with railroad management and labor. Fifteen problem issues were reviewed and became the cornerstone of its safety profile. On June 9, 1995, FRA conducted a second SMM to brief the carrier's President and Senior Staff on the goals and objectives of SACP.

The southwestern railroad submitted a Safety Action Plan (SAP) to address 15 systemic safety issues. On July 13, 1995, FRA initiated an inter-regional compliance review plan to monitor the railroad's progress. The following describes actions taken by the southwestern railroad.

Systemic Issues:

Action Issue 1: Field to Dispatcher Communications—inability to communicate with dispatchers

Status: The railroad installed a new communication system. In December 1995, use of Dual Tone Multi Frequency radios were implemented systemwide, enabling use of an actual "911" emergency call-in feature. This feature almost totally eliminates most "false alarms," which the train dispatchers had been receiving.

Action Issue 2: Computer-Assisted Dispatching Software Upgrade

Status: The railroad is developing software to upgrade the computer-assisted dispatching system. Enhancements include a major code line enhancement program to upgrade their current system to a high-speed protocol/sequence. The carrier has three power supply backup systems. There have been no reports from train dispatchers of loss of train identification.

Action Issue 3: Discrepancies between train profiles and actual train makeup

Status: The railroad initiated enhancements to its Transportation Service Center (TSC). TSC is notified of any changes in the train makeup, continually improving the integrity of consist information. The carrier also initiated refinements in their Computer Assisted Yardmaster System (CAYS). This action has resulted in reducing the number of employees involved in the generation of train profiles in an effort to reduce the opportunity for error. To further improve this process, it plans to (1) send Automatic Equipment Identification (AEI) scanner exception reports to terminal officers for corrective action, (2) perform periodic checks by terminal officers, (3)

conduct reviews by terminal managers, superintendents and division staff regarding deficiencies, and (4) conduct quarterly progress evaluations.

Action Issue 4: Hazardous Material Tracking System does not always reflect proper hazardous materials information on cars

Status: The railroad initiated refresher instruction sessions for each waybill representative responsible for data entry of hazardous material description on the shipping papers. Waybill managers were instructed to perform monthly audit samples of billing for hazardous material to ensure adherence to entry of required data. The railroad customer service section will participate in an industrywide plan toward standardized training via personal computer.

Action Issue 5: Incomplete Brake Tests/Train Inspections—its car inspectors making initial terminal brake tests from moving vehicles without looking at both sides of the equipment or stopping to inspect brake apparatus

Status: The railroad initiated ongoing training and in-house monitoring by mechanical personnel to ensure compliance. Each division will arrange for a saturation program (concentrated efforts) to reinforce "Inspections of Freight Cars." All training and testing will be documented.

Action Issue 6: Locomotive Daily Inspections

Status: Road Foremen and Trainmasters initiated a training program on the requirements of performing locomotive daily inspections. Questions concerning daily inspections will be added to the engineers recertification examination. Annual ride checklist for engineers will include daily inspection requirements. The railroad established an efficiency test to ensure that daily locomotive inspection requirements will be met.

Action Issue 7: Moving Defective Equipment

Status: The corrective measure is the training of transportation officers and yardmasters in detecting defective equipment. All transportation officers and yardmasters received training. A railroad operating practice rule covering the movement of defective cars was issued.

Action Issue 8: Locomotive Wheel Defects

Status: The railroad's Mechanical Department Compliance Group conducted audits of all locomotive facilities. The audits ensured that each facility is following the guidelines in the Diesel Maintenance Procedure Manual.

This has resulted in reduced wheel defects. FRA continues to monitor and verify the reporting and maintenance procedures regarding defective locomotive wheels.

Action Issue 9: Poor Quality Control/Contract Maintenance Shops

Status: The railroad has formed a Mechanical Department Compliance Group to audit all contract shops on a regular basis. FRA is monitoring "contract" maintained locomotives, placing emphasis on recordkeeping, procedures, training materials, and final shipping check sheets.

Action Issue 10: Crosstie/Fastener Condition

Status: The railroad began a major tie placement program between Portland, Oregon, and California (estimate 130,000 ties programmed). This work concluded in 1995. The railroad intends to operate a track geometry car over this section of main line three times yearly. FRA will monitor the crosstie fastener condition program with site-specific audits.

Action Issue 11: Highway Rail Crossing Safety

Status: FRA extended the names and services of FRA's Grade Crossing Managers to the railroad. It continues to participate actively in both state and national Operation Lifesaver programs. In addition, the railroad is targeting professional drivers, school bus drivers, and transit district drivers for crossing safety awareness through mass education efforts such as the news media, and making presentations to groups representing schools, civic clubs and company safety meetings.

Action Issue 12: Fatigue and Hours of Service Pilot Projects

Status: The railroad implemented an 18-Hour Rest Rule to allow engineers time off at the home terminal (a negotiated issue). It shortened 6 inter-divisional run districts on the railroad over the past 18 months, and hired additional train, engine, and yard employees. The carrier has made improvements in its Transportation Service Center with the installation of a new tracking system, which has made significant reductions in 12-hour tieups. The railroad reviewed the lifestyle programs of other major railroads and recommendations from the ARR.

Action Issue 13: Train Lineups

Status: The railroad's Transportation Service Center has reorganized and added an additional seven around-the-clock "Chief Dispatchers." Responsibilities of

these jobs include the timely update of crew lineups. The "DIGICON" Training Dispatching System has been upgraded. The railroad is designing a measurement system (manual), which will allow spot checking of lineup accuracy. Partnership efforts from FRA resulted in the carrier developing a labor management committee that meets on a regular basis which deals with train lineup and related issues.

Action Issue 14: Awaiting Deadhead Transportation

Status: The railroad created eight positions entitled, "Chief Dispatcher Road," whose duties are to assist in the development and supervision of a daily operating plan for identifying the potential hours of service tieups. They also arrange for crew transportation.

Action Issue 15: Hours of Service Records

Status: The railroad initiated a study on how to improve its existing electronic time keeping system to provide hours of service records electronically. FRA's Operating Practices Division is providing guidance in the electronic recordkeeping initiative.

B. A Southwestern Railroad

On February 6, 1995, FRA began a SACP Safety Assessment of the railroad. The assessment included labor outreach initiatives, i.e., "listening sessions" conducted at strategic locations, and coordinated inspections by teams of FRA and State Inspectors across its entire rail system. The safety assessment was preceded by an introductory meeting with the railroad's top management to explain the goals and process of SACP.

On July 12, 1995, FRA held a senior management meeting with the carrier's management and labor leaders. FRA discussed safety issues and concerns, which had been developed through the FRA Safety Assessment. The carrier was presented with five safety issues for which a detailed action plan was requested. Those issues were as follows:

- Inadequate and ineffective operational tests and inspections.
- Improper use of General Orders for nonoperational information.
- Poor daily inspections of locomotives due to lack of training.
- Poor freight car inspection practices due to lack of training.
- Extremely poor communication between track inspection and maintenance forces and train dispatchers.

In addition, the carrier was presented with 23 safety concerns, for which FRA requested attention and corrective actions. On September 1, 1995, the railroad delivered an action plan for all 28 issues and concerns. Since that meeting, FRA has continually monitored all 28 issues and concerns for progress in correction and preventative measures. Descriptions of the five systemic issues follow.

Systemic issues:

Action Issue 1: Operational Tests and Inspection Program

Status: The railroad's program for periodic operational tests and inspections was inadequate and ineffective. Its officers responsible for conducting efficiency tests were not meeting the published goal for the number of tests; were not achieving day/night equality; were not recording all tests conducted, such as testing control operators or dispatchers; nor were they conducting quality tests necessary to assure employee knowledge of the rules and instructions.

The carrier prepared a draft of a revised "Field Surprise Test Instruction Manual," which was sent to FRA Region 5 for review.

FRA comments were returned to the carrier, who published the manual on January 1, 1996, incorporating most but not all of FRA's comments. Those issues not incorporated were discussed and the reasons for rejection noted. Regional inspectors are now performing follow-up inspections to determine the effectiveness of the revised program. Initial indications are that while a much improved quality and quantity of testing activity is being maintained, the carrier is still deficient in its supervision and testing of dispatchers. One follow-up inspection has been conducted in a dispatching facility to determine a variety of conditions and further inspections are planned during the current calendar year. FRA Regions 3, 5, and 6 conducted follow up inspections on March 4, 1996.

On January 16, 1996, an FRA Operating Practices Inspection Team performed a week long inspection in the Dispatcher's offices of the railroad in connection with an accident investigation. At that time our inspectors found most of the items contained in our original issue were being adequately and effectively addressed.

Bids are being received by the carrier for the installation of a new radio tone button dispatcher call system, which will allow recognition of emergency calls by the dispatcher. Additional new Dispatcher positions have also helped to alleviate the congestion in communications.

Action Issue 2: General Orders

Status: FRA found that the railroad's General Orders often contained information or instructions that had no relationship to the movement or operation of trains. Operating employees failed to read and sign each General Order as required by existing carrier rules. Its Officers failed to supervise compliance with the railroad's Operating Rule 6 which stated in part, "All employees duties require that they must be familiar with General Orders and other notices before starting each day's work. . ."

A general order was immediately issued by the carrier requiring each employee to read and sign General Orders before commencing work. Effective September 1, 1995, the railroad's Superintendent of Rules, Vice President and Assistant Vice President of Transportation were instructed to monitor General Orders issued for compliance with the definition of such publications. And, effective with its publication on January 1, 1996, the railroad's Field Surprise Test Instruction Manual has monitored General Order compliance by Train and Engine men through the railroad's Field Surprise Test #14. As a result of this and other comments by FRA, it made a decision to adopt the General Code of Operating Rules on March 1, 1996, in order to better relate to current operating conditions and enable better joint track compliance by its employees on neighbor "host" railroads.

On January 16, 1996, the FRA Inspection Team found a much improved system of General Orders and Superintendent Bulletins. One error was noted in which a General Order and the current timetable appears to be in conflict. The carrier corrected the conflict immediately.

Action Issue 3: Locomotive Daily Inspections

Status: Daily locomotive inspections were not being conducted by engineers and mechanical department employees who, FRA found, had not been properly trained in the correct procedures for conducting locomotive inspections. In addition, no quality control program was in place to ensure that defects identified during inspections were properly repaired and signed off on as required.

The railroad developed and implemented a three-phase plan, which began with site inspections conducted by the Superintendent of Locomotive Shops at all points where locomotives were inspected and maintained. On-site training was given to deficient employees identified during those inspections. In the second phase, which began on September 21, 1995, check off forms and quality control procedures where implemented. Phase 3 established a Locomotive Action Team of railroad management and one employee for each craft.

On September 15, 1995, Superintendent Circulars were issued that designated outlying points where Locomotive Daily Inspections were to be performed by the Engineer and explained the required recordkeeping procedures. FRA is currently performing follow-up inspections that will determine the adequacy and success of those carrier measures.

During the week of January 22, 1996, an FRA Inspection Team was extremely critical of the poor quality of carrier locomotive inspection activity in light of the promised changes which would have corrected or relieved the level of noncompliance. During the inspection, a total of 52 locomotives were inspected, of which 44 contained defects, and five violation reports were filed. It was necessary to issue one Form 6180-8, SPECIAL NOTICE FOR REPAIR. The most startling and most disappointing aspect of these inspection results is that the majority of these locomotives had just been released for service from the locomotive facility at Shreveport, the major locomotive facility on the railroad. The inspection of each locomotive by the FRA followed an inspection by either the railroad Locomotive Engineers or Maintenance of Equipment Inspectors. The lax attitude toward inspection activity was demonstrated by the following: during the first three days of inspections, no "non agreement" supervisor accompanied the FRA Inspectors. Railroad interest was only evident after violation notifications were filed.

FRA Regional Inspectors continue to be concerned about the training of locomotive engineers as inspectors. Several that were interviewed expressed reservations about knowing exactly what to look for and were equally unsure of how to handle the reporting that was required.

There is no evidence that any effort has been made to organize a recommended management/labor partnership, despite the outstanding success a similar program has had in Freight Equipment Maintenance (Issue No. 4).

The aspects of this issue will continue to be of high priority until improvement is demonstrated.

Action Issue 4: Freight Car Inspection/Compliance

Status: High ratios of freight car defects have been identified. In addition, train crews had not been properly trained in inspection procedures and were not conducting freight car inspections at various locations.

The railroad developed an action plan with a completion time goal of one year. The plan included six items:

A. Assignment of carmen to inspect and repair "rock cars" at one location.

B. Purchase of a device to straighten ends on "rock cars."

C. Schedule "Road Truck" to work at one location weekly.

D. Employ machinist at one location to service locomotives.

E. Add supervisor trainees at one location.

F. Provide training to trainmen on inspection and brake test requirements.

Follow-up inspection activity is continuing. Initial findings show a marked improvement in all aspects although desired compliance levels have not been reached. Partnership meetings are now scheduled for the immediate future that will address these issues and other maintenance conditions.

A labor/management partnership effort, although late in its formation, has proven to be one of the most successful results of the entire project. A partnership of the Car Maintenance Department supervisors and employees has become extremely effective and has resulted in obvious improvements to the quality and quantity of car inspections. Labor representatives highly regard the change in management attitude towards employee suggestions and note an overall employee satisfaction with the safety improvements. Issues are quickly addressed and effectively handled for correction at all points on the system.

Great improvements were also found in the general condition of freight equipment. Of a total of 1,037 cars inspected in January of 1996, only 153 had defects. Many of the defects were minor for a defect ratio of 15 percent. Where the railroad's Car Inspectors had inspected these cars, as opposed to train crewmen, defect ratios were an extremely low 3 percent. However, a fleet of rock train cars in captive service were found to still be in an operating cycle between various locations that did not have a qualified car inspector other than train crew members. Inspection of just the 'rock' cars, independent of other general freight equipment, found defect ratios as high as 70 percent.

The carrier has a rebuilding program underway, which should greatly reduce the defective condition of equipment in "rock" service. FRA will continue to monitor "rock" cars for signs of improvement in overall condition and inspection quality.

In other equipment areas of concern, several bulletins and circulars that had been promised, immediately following the 1995 Senior Management Meeting, were

found to be still unissued and in 'draft' form. Only when the FRA Team Coordinator expressed surprise and dissatisfaction were these documents signed and issued as instructions to the railroad employees.

Action Issue 5: Dispatcher Communications

Status: Communications between track maintenance personnel in the field and the dispatcher required immediate and effective alteration to enable quick replies. By not answering calls promptly, the dispatcher was jeopardizing prompt placement of slow orders or other emergency track orders affecting the operation and safety of trains. Comments from carrier officials and observations by FRA Inspectors indicated that the workload of dispatchers was far too heavy and was the root cause for poor communications.

The carrier immediately began training additional dispatchers to relieve the extremely heavy workload of first shift dispatchers and took other steps to improve the quality of radio transmissions. Follow-up inspection activity shows an improved level of communication. However, an accident causing serious injury involving maintenance-of-way employees led FRA to perform an in-depth assessment of a Dispatcher's Office in January 1996 and to follow that inspection with a meeting with senior carrier officials. FRA is continuing to monitor this extremely serious situation for possible solutions and opportunities for partnering.

An FRA Inspection Team in January, 1996, found greatly improved communications between Dispatchers and Track Inspectors/Maintenance Crews. Although the activity of each dispatcher remains high and delays are still frequent, they are of reduced duration. Two redundant radio reporting points have been provided for routine maintenance-of-way instruction, which has done much to relieve the primary dispatcher channel of overlapping conversation. Track foremen and inspectors are reporting improved response time and attention by the dispatchers.

C. An Eastern Railroad

On October 31, 1995, FRA met with the staff of the railroad and labor representatives at the carrier's facilities. The purpose of this meeting was to (1) provide an explanation of the SACP process, (2) discuss safety issues and concerns developed through an FRA assessment conducted in conjunction with the SACP, and (3) stress the role of partnerships between FRA, management and labor in identifying and resolving safety problems.

The safety issues and concerns addressed during this meeting were derived from previous listening sessions held by FRA with the carrier, its employees and its labor representatives. These safety matters were formalized into a report that was forwarded to the railroad and labor for their review and comment prior to the meeting on October 31.

The report cited 11 recommendations for improving operating practices and procedures by the railroad. Among the areas addressed by the recommendations were (1) noncompliance with 49 CFR Part 229, Railroad Safety Standards; (2) 1,000 mile train brake inspections and tests; (3) bridge worker safety; (4) deadhead transportation for railroad workers; and (5) accident/incident reporting.

On April 23, 1996, FRA held a meeting with representatives from the railroad in New Orleans, Louisiana. This was the first formal "quarterly meeting" with the railroad to continue the dialogue and working relationships that had been developed at the October meeting. In the future, the railroad's quarterly meetings will rotate to locations in each of the five regions where the railroad operates. Quarterly meetings will foster better communications and understanding between FRA and the railroad regarding safety issues.

The following describes the systemic issues uncovered during the Safety Audit.

Action Issue(MP&E): 1,000 Mile Train Brake Inspection and Tests

Status: FRA personnel met with the railroad to discuss implementing changes to ensure that 1,000 mile brake tests are performed and properly recorded and that the railroad provided electronic recordkeeping security. As a result of this discussion, the railroad performed computer programming changes to ensure that the location of the 1,000 mile brake test is scheduled, performed and recorded in the railroad computer record, and that automatic message generation is built into the software to respond to plan changes so that the location is notified to perform the required inspection. In addition, the automatic message generation has been designed to automatically generate a message to the Chief Mechanical Officer for failure notification. The new computer program was activated on January 8, 1996, and final output modifications were activated on January 15, 1996.

The railroad also made programming changes that provided security to prohibit the ability to modify or change the FRA required 92-day inspection date. In addition, the railroad created a computer report to list all noncomplying locomotive incident reports daily.

Action Issue (Track) 1: OSHA Concerns

Status: The Brotherhood of Maintenance of Way Employes (BMWE) has brought several Occupational Safety and Health Administration (OSHA) related bridge complaints to the attention of FRA since July 1995. Joint inspections with OSHA have revealed numerous conditions existing on bridges that had the potential of causing personal injury. The deficiencies noted included unsafe walkways, ladders and handrails. Also, high voltage

electrical equipment was exposed to personal contact due to missing guards and cover plates.

Eleven bridges had been jointly inspected by FRA, OSHA, the railroad and BMWE by February 1996, with 123 conditions corrected. In addition, the railroad hired a consultant that has inspected all 58 movable spans on the railroad system. FRA and OSHA deficiencies have been noted and the repairs have been ranked for prioritized correction.

Action Issue (Track) 2: Bridge Worker Safety

Status: FRA/the railroad/BMWE joint inspection of 11 bridges revealed 123 bridge conditions, which were corrected on or before November 9, 1995. In addition, FRA asked the railroad to provide training for Bridge Supervisors and Bridge Tenders on safety hazard identification relating to the performance of work by the railroad Bridge Tenders. A training program was developed on December 22, 1995, and reviewed with the railroad Bridge Supervisors on December 28, 1995. The railroad has committed to train all bridge tenders on the system.

FRA found that all track gangs do not have acceptable retrieval systems in their possession and have not been properly instructed as to an alternate method for conducting a rescue. By November 3, 1995, all the railroad supervisory personnel had been contacted and informed of their responsibility for determining the best method of fall protection retrieval for each work site. By November 15, 1995, all the railroad foremen had also been trained.

A joint/management working group has been established by the railroad that is responsible for preparing written guidelines for fall protection and best retrieval practices in common situations. A bridge climbing training program was developed by the railroad's Technical Training Center and was printed and distributed on December 20, 1995. It has also committed to ensuring that Fall Protection Training is included in its 1996 Safety Certification program. An audit was performed to ensure that proper specifications for proper securement of lifelines was in the hands of all work forces as of November 15, 1995.

D. A Western Railroad

On January 9, 1996, FRA requested a senior management meeting with the railroad and representatives of the Brotherhood of Locomotive Engineers (BLE) and the United Transportation Union (UTU). FRA conducted a Safety Audit in the following general areas: engineer certification, training of engineers and conductors, efficiency testing, dispatcher operations and training, locomotive inspections, signal pole maintenance in the St. Louis area, and

hazardous materials shipping documents. These areas were selected by FRA following a review of inspector reports.

A meeting was held on March 29, 1996. FRA provided the carrier with a draft report of the Safety Audit in advance of the meeting to help develop partnerships with management and labor in addressing and resolving safety concerns.

In addition to discussing safety issues and concerns developed through the FRA Safety Audit, FRA provided an explanation of the SACP process and stressed the role of partnerships between FRA, management and labor in identifying and resolving safety issues.

FRA's safety audit revealed three major issues: employee training, rules compliance and enforcement, and rail and cross-tie conditions on main line track. These issues require the railroad to submit a Safety Action Plan describing how they will be corrected. Another 22 secondary issues were identified. The secondary issues do not require the development of another Safety Action Plan.

In late April 1996, the railroad submitted an action plan for the three systemic issues. By mutual agreement, rail and cross-tie conditions on main line track was withdrawn and reclassified as a secondary issue. FRA will conduct followup inspections of the railroad to ensure compliance with the proposals cited in the action plan.

E. A Northeastern Railroad

On April 3, 1996, the Federal Railroad Administration (FRA) met with senior managers and rail labor leaders from the railroad at the carrier's facilities. The meeting discussed safety issues and concerns developed through an FRA safety assessment conducted under the auspices of the Safety Assurance and Compliance Program (SACP).

FRA explained the SACP process, emphasizing FRA outreach to both railroad employees and middle managers. FRA indicated that a complete safety assessment and labor outreach initiative would commence as soon as collective bargaining negotiations between the railroad and its labor organizations were concluded.

The railroad has been working in cooperation with FRA and the Brotherhood of Railroad Signalmen for more than four months to address signal and grade crossing issues. This cooperative initiative could well serve as the framework to address many of the safety issues raised during the SACP safety assessment.

The railroad was asked to submit Safety Action Plans to address signal and grade crossing issues that resulted from FRA investigations into a series of grade crossing and signal failures. These issues include:

- Replacement of signal cable with deteriorating insulation resistance.

- Testing of soft core iron signal relays in accordance with FRA prescribed intervals.
- Installation of light-out protection at specified interlockings.
- Replacement of a particular model of track relays prone to manufacturing defects.
- Improving the quality of employee training and carrier instruction manuals relative to the testing and inspection of signal systems.
- Development of a plan to monitor, test and ensure the integrity of the traction return bonding system.
- The inspection of interconnected grade crossing circuits.

The carrier consented to develop Safety Action Plans in accordance with FRA recommendations concerning the issues identified above.

F. An Eastern Railroad

On April 16, 1996, a senior management meeting was held at the railroad's headquarters. During the meeting, FRA's Safety Assurance and Compliance Program (SACP) was explained.

The railroad was provided with its safety profile that included accident/incident data, casualty statistics, and FRA recorded defects for each discipline.

A listening session with labor representatives was held in May. The labor listening session, designed to include labor representatives in the SACP process, emphasizes safety concerns—not collective bargaining issues. The railroad management agreed to jointly address any safety issues that followed the labor session.

G. An Eastern Transit Authority

On March 8, 1996, labor and management representatives of the transit authority held a senior management meeting with FRA to discuss the following:

- How the Safety Assurance and Compliance Program (SACP) will strengthen existing partnership initiatives between FRA and transit authority management and labor.
- Previous safety success stories: improvements on transit authority in accident/incident reporting, track conditions, signal system upgrades.
- Areas where transit authority can improve.
- The role of FRA to facilitate safety progress.

An analysis of the accident/incident data from the past five years available in the FRA database show that by most measures, the transit authority is comparable to other commuter railroads in the Northeast. However, in certain key areas, FRA found that the transit authority had not made progress during this period. These areas included injuries to employees and passengers from slipping and falling, operation of equipment (including passenger car doors and windows), striking or being struck, and the use of hand tools.

The transit authority responded favorably to FRA's report. It enthusiastically supported FRA's new way of doing business. The transit authority was grateful for FRA's analysis and recommendations. One transit authority manager stated that the SACP report read more like a paid consultant's report than a traditional enforcement action.

The transit authority agreed to provide FRA with a Safety Action Plan. FRA will monitor its progress.

In a successful meeting to improve labor support for the SACP process, a follow-up meeting was held on April 4, 1996. At this session, the transit authority formed a Joint Committee of labor and management to address the issues discussed in the FRA report. The Joint Committee will continue in existence to assume general oversight responsibility for all transit authority safety initiatives.

VII. ENFORCEMENT AND COMPLIANCE

SACP's use of safety partnerships and teaming does not suggest that FRA has de-emphasized enforcement tools. SACP initiatives complement FRA's existing enforcement program. Team and individual inspector-based inspections still comprise 80 percent of FRA's safety program. This traditional approach to safety allows the FRA to enter and examine rail facilities, equipment, rolling stock, operations and pertinent records to ensure compliance with railroad safety regulations.

Civil penalties, which can be assessed against any entity (including individuals) that violates the safety laws, continue to serve as strong tools used by FRA to ensure that the railroad industry adheres to rail safety regulations. Civil penalties are issued according to the seriousness of the safety infraction, the type and degree of hazard, the actual harm caused by a safety problem, the railroad's level of compliance with safety regulations, its history of compliance, and whether alternate remedies are more appropriate to ensure the immediate removal of unsafe conditions. Civil penalties range up to $20,000 per violation ($25,000 for hazardous materials violations) and may be assessed against companies and individuals. FRA is making a greater effort on focusing enforcement actions on the most serious violations.

In addition to civil penalties, FRA employs a variety of other enforcement tools. These include Special Notices for Repair, Emergency Orders, Compliance Orders, Disqualification Orders, and Injunctions. A brief description of each follows:

- Special Notices for Repair allow FRA and state inspectors to order the removal of defective freight cars and locomotives from service and to authorize a reduction in speed over defective track segments.

- Emergency Orders (EO) direct railroads or other responsible entities to take specific, immediate actions to abate emergency situations involving a hazard of death or injury. The EO is the most powerful tool available to the FRA Administrator, and given its limitation to true emergencies, is used sparingly.

- Compliance Orders are investigatory procedures that authorize FRA to remedy a railroad's repeated failure to comply with FRA's safety regulations including hazardous material regulations.

- Disqualification Orders are issued by FRA where an individual's violation of the safety regulations demonstrates that person's unfitness for safety sensitive service.

- Injunctions are issued by the Federal District Court when the Secretary of Transportation, through the Attorney General (or, under certain circumstances, a state safety agency), requests the court to restrain a violation or enforce the rules and standards relating to railroad safety.

FRA has appropriately used all of these tools as conditions warrant. They are necessary to ensure safety compliance; e.g., during 1995, FRA issued 107 Special Notices for Repair of motive power and equipment (MP&E). The following examples illustrate Special Notices for

Repair:

- During a routine locomotive inspection in 1995, a single locomotive was found to have an excessive amount of oil on walkways, handrails, and in the engine. The western railroad was ordered to remove that locomotive from service using the Special Notice of Repair until the problem was rectified.

- An inspection on a southwestern railroad in 1996 found that a locomotive failed to meet FRA safety requirements. The inspection found a fuel tank contamination, a disconnected sump drain hose, a broken brake shoe, exposed high voltage equipment, a missing rectifier door, a missing compressor control cover, and a number of defects not found on required locomotive daily reports. The railroad was ordered to remove that locomotive from service using the Special Notice of Repair until the problem was rectified.

Although EOs are historically rare, FRA issued three EOs in 1996. A brief description of each follows:

- EO 18 was issued in February 1996, following a freight train accident at Cajon Pass, California. A similar accident occurred at the same location in December, 1994. FRA

sent a team of 64 inspectors (54 inspectors from FRA and 10 from California) to analyze the operations of all railroads that traverse Cajon Pass. As a result of this analysis, EO 18 requires all Burlington Northern Santa Fe trains operating through Cajon Pass to have the capability to initiate an emergency brake application from the rear as well as the front end of the train.

- EO 19 ordered the Tonawanda Island Railroad to cease operating over an unsafe railroad bridge in upstate New York.

- EO 20 was issued following two separate commuter train accidents in New Jersey and Maryland. It imposed requirements on all passenger railroads to ensure that engineers are fully aware of signal indications after leaving a station and that passenger car emergency exits are properly marked, tested and functioning.

In monitoring compliance with EOs, FRA will take strong enforcement action on any violations detected. When FRA, rail labor, and rail management cooperate to identify and resolve systemic safety issues, FRA receives safety improvements without using enforcement tools. However, where cooperative efforts fail, FRA will not hesitate to use all enforcement tools available.

A. Safety Audits

Under SACP, violations detected during Safety Audits are presented to railroads. Enforcement actions are withheld, while the railroad formulates a Safety Action Plan. The exception to this policy is a flagrant safety violation, e.g., willful or life-threatening violations. Flagrant safety violations require enforcement action even during Safety Audits. However, if the railroad is cooperating in good faith to address audit issues, flagrant safety violations are rare.

Other Safety Audit issues may result in enforcement actions. For example, an unacceptable railroad Safety Action Plan may require resorting to less cooperative methods to gain compliance. Also, FRA may begin enforcement actions if, in FRA's view, the railroad Safety Action Plan is not effectively carried out. In such situations, FRA is likely to take very aggressive action. If civil penalties are the tool chosen, railroads can expect FRA to cite relatively large numbers of violations. However, with a continuous open line of communication between FRA and the railroad during the monitoring phase, ineffective railroad Safety Action Plans are unlikely.

This enforcement policy encourages railroads to cure compliance and other safety problems. However, the Safety Audit and railroad Safety Action Plan will not cover all areas of a railroad's operations. Routine, site-specific inspections will still occur in nonaudit areas.

B. Focused Enforcement

FRA inspectors may detect violations of safety laws during regular inspections. Violations may also be discovered when investigating complaints, or when investigating accidents. In deciding whether enforcement action is the best method of addressing non-compliance and, if so, what

enforcement action to use, inspectors consider these factors (set forth in 49 C.F.R. Part 209, Appendix A):

- The inherent seriousness of the violation.
- The kind and degree of potential safety hazard presented by the violation under the circumstances.
- Any harm to persons or property already caused by the violation.
- The offending person's general level of compliance.
- The offending person's recent history of compliance with the particular rules involved, especially at the particular location involved.
- Whether a remedy other than a civil penalty (ranging from a warning letter to an emergency order) is appropriate under the circumstances.
- Other factors relevant in the immediate circumstances.

Having considered these factors, the inspector may exercise discretion to seek an enforcement remedy.

SACP's goal is not to achieve a particular volume of enforcement actions, but rather a compliance program in which enforcement discretion is applied uniformly by all inspectors in which judgment is exercised wisely, and to address important problems that collaborative methods may not have been able to solve. This is accomplished by taking a more proactive approach to counseling inspectors on the exercise of effective safety assurance and compliance at the regional level.

In moving toward focused enforcement, FRA is making better use of its accident and injury data. FRA's databases are providing inspectors with more insight into the types of violations that are actually causing large numbers of accidents and injuries. FRA distributes data summaries to inspectors showing the leading causes of train accidents and injuries by cause code and regulatory section. The data are industrywide and broken down by railroad. The data show two full years and point out any distinct trends. With this information, inspectors are better equipped to weigh the criteria described above. FRA encourages inspectors to give this information great weight. Finally, some enforcement actions are also necessary on matters that do not actually cause accidents or injuries, e.g., recordkeeping and inspection requirements. Those matters that are serious safety concerns are more likely to be the prime candidates for enforcement actions.

Focusing on more important matters as candidates for enforcement action is simply a wise use of FRA's limited resources. This more focused exercise of safety assurance and compliance may increase or decrease the overall number of enforcement actions.

C. Small Railroad Enforcement

FRA's guidance to field inspectors emphasizes the unique nature of small railroads. That guidance encourages inspectors to help small railroads find ways to achieve compliance. FRA exercises special care in enforcement discretion where small entities are involved. Civil penalties can have a disproportionate impact on small rail operations. However, there are situations where a small railroad or shipper may be fined to gain compliance.

On April 21, 1995, President Clinton directed Federal agencies to take special actions regarding the enforcement of small business regulations. The President's memorandum of that date stated the following:

> "To the extent allowed by law, each agency shall use its discretion to modify the penalties for small businesses in the following situations. All or part of a penalty may be waived when the violation is corrected within a reasonable period. The agency may waive up to 100 percent of the financial penalties if the amounts waived are used to bring the entity into compliance. These provisions do not apply to violations involving criminal wrongdoing or a significant threat to health, safety, or the environment."

The principles of the President's memorandum are the policy of FRA. FRA has discretion not to seek civil penalties or take other enforcement action when it detects a non-compliance. In addition, FRA has the authority to adjust civil penalties for amounts equal to or greater than $500 per violation. FRA already exercises this authority in nearly every case. How much of the initial penalty is waived depends on many appropriate mitigating factors. However, efforts to achieve compliance are among the most important factors considered.

D. Integration of the Strategy's Elements

The effective transformation of FRA's safety program depends upon the integrated use of the various elements now available as tools. A shortline may need help on a compliance issue. An inspector who provides that help, e.g., explanation of the relevant law and suggestions for how to monitor compliance, has used the customer service tool. This straightforward example also involves elements of partnership and effective communication.

More commonly, perhaps, the correct approach to a particular problem may involve the use of several transformation tools over an extended period. For example, an issue may arise in a listening session (customer service) that is part of an audit under the SACP. The issue involves either a perceived, or real regulatory policy void, or inconsistent application of law or policy. The SACP team refers the issue to the appropriate TRC. The TRC, using a team approach and receiving factual input from affected customers, reviews the issue. If it concludes that the issue can only be effectively resolved through a regulatory change, the TRC will then recommend that the agency consider regulatory action. FRA will then decide if the TRC recommendation is ripe for referral to the RSAC. RSAC accepts the task and sends the task to the appropriate working group. The working group decides to have the task handled by a task force made up of labor,

management, and FRA experts on the specific subject. Working by consensus, the task force compiles the relevant factual information and develops options and a recommended course of action for FRA. The task force may, as a part of its work, actually visit railroad sites to gather data. RSAC adopts the working group's recommendation and sends it to the Administrator. FRA issues a proposed rule based on the recommendation. After an opportunity for a hearing, FRA issues a final rule that resolves the issue. Because the final rule is based on consensus, acceptance and understanding of the new rule are widespread. Also, compliance with the rule is generally high. The entire process has been suffused with the concepts of customer focus, effective communication, teamwork, and a collaborative partnership.

E. FRA's Continued Vigorous Enforcement

The Committee asked FRA to provide evidence that a vigorous enforcement program is still being conducted by FRA. Today, FRA continues to emphasize its enforcement program of site-based inspections and penalties. In 1995 alone, the FRA conducted 54,549 site-based inspections on track, signal, motive power and equipment, operating practices and hazardous materials throughout the United States. (This number represents about 20 percent fewer site-based inspections conducted in 1995 than in 1994, based on the agency's successful redistribution of safety resources as part of the SACP and other related safety activities). In fiscal year 1995, FRA collected $5.2 million in civil penalties for violations of the railroad safety laws. While this total is less than totals earlier in the decade, the amount is close to the average amount collected by FRA over the last two decades. The reason for the decrease in 1995 is that, in the immediately preceding years, FRA was settling a large backlog of enforcement cases that had built up in the late 1980s and early 1990s.

In addition to the cases it closed, FRA also initiated cases with a total penalty demand of nearly $11 million in 1995. FRA currently has some $19 million in open cases. However, approximately $6 million of that amount involves cases alleging certain hours of service violations that have been rendered moot by a 1996 decision from the Supreme Court (Brotherhood of Locomotive Engineers Vs. Atchison, Topeka, and Santa Fe Railway Company, 116 S. Ct. 5 95, 1996). FRA will soon terminate those cases. We are working hard to settle the remainder this fiscal year, including a sizable number of relatively small cases against small railroads and hazardous materials shippers that have accumulated while cases against larger railroads and other safety matters received priority attention.

This change is in line with the move toward the more cooperative compliance approach embodied in the SACP. However, as explained above, the trend will be reversed if railroads fail to implement agreed-upon action plans. In that case, FRA will exercise its discretion to cite penalties for relatively large numbers of noncomplying conditions or use other enforcement tools to address the situation. Where penalties are assessed for violations related to failure to implement an action plan, FRA will take a very hard negotiating position. The railroad's lack of commitment to safety partnership, as evidenced by the failure to implement its compliance plan, will be given great weight by FRA's attorneys in determining penalty assessment. Moreover, as the SACP's emphasis on focused enforcement takes hold, the number of violations cited as a

result of site-specific inspections may increase if seriously unsafe conditions are detected with any frequency.

In addition, FRA has begun to make greater use of its other enforcement tools. For example, FRA has issued three emergency orders in 1996. However, the emergency order is not a tool that can be used as readily as civil penalties. FRA must be able to demonstrate the actual existence of an emergency situation involving a hazard of death or injury while no such showing is necessary as a prerequisite for citing a civil penalty. More important, FRA emphasizes safety hazards before they become emergencies. However, FRA's use of this important enforcement tool in 1996 demonstrates that FRA remains vigorous in enforcing the railroad safety laws.

VIII. CONCLUSION

FRA plays a part in achieving rail safety gains. FRA's regulations establish a level of safety to which all must conform. Participation in joint research, improved standards for tank cars, alcohol and drug testing requirements, locomotive engineer certification requirements, field compliance and partnership efforts directed at a broad range of safety hazards, and other actions have all driven down the accident and casualty totals.

FRA's safety program, to date, has significantly increased railroad safety. Total train accidents fell from a peak of 11,277 in 1978 to 2,618 in 1995. However, continued success of the safety program depends on adjusting to sweeping changes in the environment in which FRA acts. The changes include railroad industry restructuring, new legislative and regulatory requirements, and the need to address systemic safety problems. The key is to establish a climate, culture, and process that are conducive to cooperative problem solving on safety issues.

SACP and the related processes of RSAC, TRCs, customer service, and partnerships begin the transformation of the Federal safety program. The goal is a safety program that is more inclusive of the agency's customers, more fact-based, and ultimately more effective, while also less intrusive, less hierarchical, and less adversarial.

The transformation to SACP benefits all concerned. Performance-based safety enforcement leads to more effective and efficient use of FRA's limited safety inspector resources. The change in inspection emphasis is especially important to major railroads. Large railroads, which span several FRA regions and have widely dispersed operations, are encouraged to concentrate on the safety concerns of customers and employees. When fully implemented, performance-based safety enforcement should improve the railroad industry's safety record, which is a significant benefit to the public.

Performance-based safety enforcement leads to more effective and efficient use of FRA's limited safety inspector resources by concentrating on safety concerns that create the greatest risk to railroad employees, customers, and the general public.

Between 1994 and 1995, about 20 percent of FRA's resources were involved in the transformation from site-specific to railroad system assessments and related activities. Because the system safety assessments are ongoing for these initial projects, comprehensive statistics are not available to detail improvements, or lack thereof, in compliance for each of the railroads for which FRA approved a Safety Action Plan. However, using the same GPRA criteria that is guiding all agency activities, the early data suggest that SACP and the related processes of RSAC, TRCs, customer service and partnerships is a step forward to improving railroad safety.

The singular goal of SACP and FRA's existing site-based inspection and enforcement program is to improve rail safety by reducing systemic hazards in rail facilities, equipment, rolling stock and operations. SACP safety partnerships, which include representation from Federal and state governments, the labor/rail industry and the public, have resulted in identifying and resolving many systemic safety problems. By vesting ownership in the process of improving safety in all parties, the program ensures continued cooperative efforts to improve the safety of the Nation's rail system.

Since 1993, improvements in rail safety have yielded a steady decline in rail accidents, fatalities and injuries per million train miles. They are as follows:

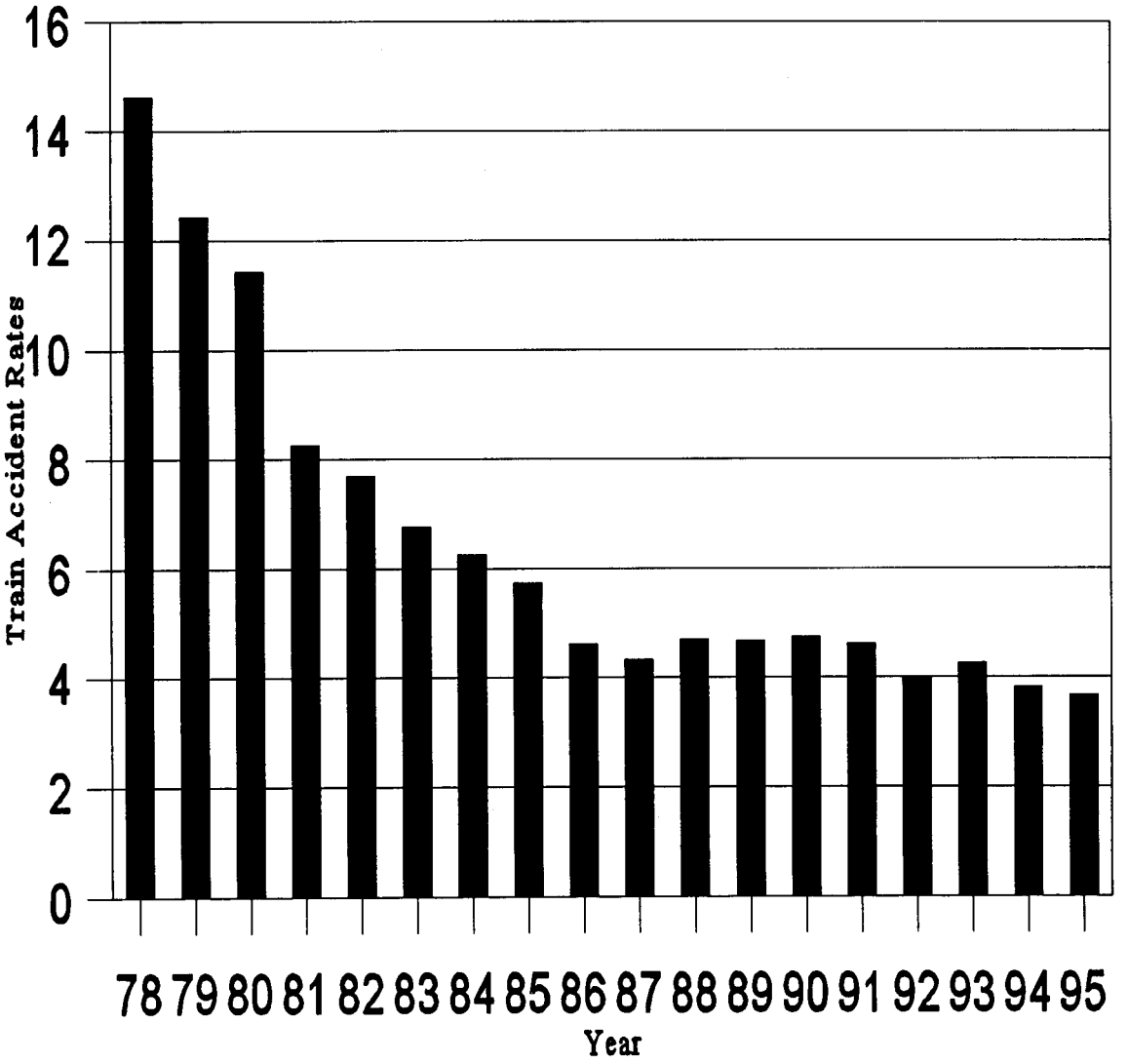
	1993 Rate Base Year	**1995 Rate**	**Percentage Improvement**
Rail-Related Fatalities	1,279	1,114	12.9 %
Rail Employee Fatalities/Injuries	15,762	10,795	31.5
Trespasser Fatalities	523	493	5.7
Rail Hazardous Material Releases	1,154	1,021	11.5

FRA's policy is zero tolerance for accidents, injuries, or deaths on the Nation's rail system. Clearly, the SACP approach is increasing safety, despite several serious railroad accidents, occurring in early 1996, underscoring the need for continued vigilance. However, with our goal of zero tolerance, we know we must increase our efforts to achieve that goal.

CHART 1

TRAIN ACCIDENT RATES

1978-1995



1995 is preliminary.
Train Accident Rate = Train Accidents Per Million Train Miles.
Train Accident Rates excludes highway rail collisions.

APPENDIX A

INSPECTOR RESOURCES BEING SHIFTED FROM SITE-SPECIFIC INSPECTIONS TO SACP AND RELATED ACTIVITIES*

	Inspections 1994	Inspections 1995*	% Resources Being Shifted
Track:			
Number of inspections	15,449	11,936	22.7
Miles inspected	329,019	254,096	
Records inspected	169,849	129,549	
Defects recorded	88,611	64,674	
Signal:			
Number of inspections	6,553	5,036	23.1
Units inspected	86,456	51,833	
Records inspected	92,939	61,417	
Defects recorded	11,522	19,441	
Motive Power and Equipment:			
Number of inspections	16,956	14,748	13.0
Locomotives inspected	33,597	27,999	
Cars inspected	832,197	670,427	
Defects recorded	134,185	114,516	
Operating Practices:			
Number of inspections	17,710	12,674	28.4
Complaints received	4,177	1,519	
Defects recorded	17,621	33,416	
Hazardous Materials:			
Number of inspections	12,047	10,155	15.7
Tank cars inspected	99,356	75,162	
Defects recorded	17,073	20,249	

* Includes examinations under the Safety Assurance and Compliance Program (SACP), activities of Technical Resolution Committees, the Railroad Safety Advisory Committee, Partnerships, and Customer Service. 1995 inspection data is preliminary

Note: Unit inspection time vary substantially within each discipline. FRA changes inspection emphasis each year. Thus, year to year inspection comparisons can vary greatly.

APPENDIX B

SAFETY ASSURANCE AND COMPLIANCE SENIOR MANAGEMENT MEETINGS FY 1995 & 1996

Railroad	Date of Meeting	Status
Chicago & North Western	October 25, 1994	Meeting Held
Southern Pacific	February 15, 1995	Meeting Held
Iowa Interstate	April 26, 1995	Meeting Held
Conrail	May 26, 1995	Meeting Held
Kansas City Southern	July 12, 1995	Meeting Held
Florida East Coast	July 18, 1995	Meeting Held
Tri Rail Commuter	July 19, 1995	Meeting Held
Union Pacific	August 23, 1995	Meeting Held
Montana Rail Link	October 11, 1995	Meeting Held
CSX Transportation	October 31, 1995	Meeting Held
Central Oregon & Pacific	January 23, 1996	Meeting Held
Dakota, Minnesota & Eastern	January 25, 1996	Meeting Held
Gateway Western	January 31, 1996	Meeting Held
METRA (Chicago)	February 22, 1996	Meeting Held
SEPTA	March 8, 1996	Meeting Held
Wisconsin Central	March 29, 1996	Meeting Held
Long Island Commuter	April 3, 1996	Meeting Held
Springfield Terminal	April 16, 1996	Meeting Held
Chicago Belt	May 29, 1996	Meeting Held
Norfolk Southern	June 20,1996	Meeting Held
Alaska	July 16, 1996	Meeting Held
New Jersey Transit	July 18, 1996	Meeting Held
Amtrak	July 1996	Meeting Held
Rail Tex	August 16, 1996	Meeting Held
Elgin, Joliet & Eastern	August 20, 1996	Meeting Held
Canadian National (GTW)	August 1996	Meeting Held
Duluth, Missabe Iron Range	August 1996	Meeting Held
Burlington Northern	September 1996	Meeting Held
Indiana Harbor Belt	September 1996	Pending
Canadian Pacific (Soo/D&H)	September 1996	Pending
Illinois Central	September 26, 1996	Pending
MetroLink (SCRRA)	September 1996	Pending
Metro North	September 1996	Pending
Atchison, Topeka & Santa Fe	September 1996	Pending

APPENDIX C

GUIDELINES FOR ROUTINE SITE-SPECIFIC SAFETY INSPECTIONS ALLOCATING INSPECTOR RESOURCES

INSPECTION STRATEGIES

BACKGROUND

Section 208(b) of the Federal Railroad Safety Act of 1970 (45 U.S.C. 421 *et seq.*) (Safety Act) authorizes officers, employees, or agents of the Secretary of Transportation to enter upon, inspect, and examine rail facilities, equipment, rolling stock, operations, and pertinent records to ensure compliance with railroad safety regulations. The Secretary's authority under the Safety Act has been delegated to the Federal Railroad Administrator (49 C.F.R 1.49(m)).

The combined inspection forces of FRA and participating states can examine significantly less than 1 percent of the industry's transportation activity. Therefore, FRA and State inspectors decide the extent to which the railroads fulfill minimum Federal safety requirements by examining railroad inspection programs.

FRA and participating State routine inspections consist of:

- Examining a reasonable sample of railroad operating conditions and practices to decide compliance with Federal safety regulations and whether operations are being conducted safely.
- Defining the scope of compliance problems and other safety problems.
- Resolving compliance and other safety problems.

CURRENT ROUTINE SAFETY ASSURANCE AND COMPLIANCE STRATEGIES

Regional Administrators deploy field resources to:

- Provide reasonable coverage of assigned territories.
- Ensure that acute compliance problems and other significant safety issues are identified and resolved.
- Verify corrective action.

When railroads do not comply with Federal safety regulations regularly, whether inadvertently, deliberately, or negligently, FRA must act appropriately to assure a safe railroad operating

environment using the SACP process. Outlined below are FRA's routine site-specific safety strategies.

EVALUATION OF ACCIDENT/INCIDENT AND INSPECTION DATA

Regional Administrators and staff analyze FRA data such as reportable train accidents that occur in their region. Based on a primary train accident cause code assigned by a railroad, regional staff use this data along with prior inspection data and other available information to guide their activities.

Adequate and balanced routine inspections provide valuable information in the search for systemic safety problems and identification of localized safety problems. Balanced inspection coverage is achieved through data analysis. Headquarters provides Regional Administrators (RAs) with an overview analysis of safety risk data as a guide for planning inspections. Regions are also expected to research FRA's databases to find potential operational problems that indicate systemic and other safety problems.

Railroad Safety Action Plan initiatives are designed to correct systemic safety problems. Through the Safety Audit, FRA monitors a railroad for compliance using site-specific inspections. When a violation is found, FRA uses the same enforcement discretion as for issues that are not Safety Audit related. The difference between a Safety Audit and a regular site-specific violation is how the inspector processes a violation. The Safety Audit requires an inspector to consult with team coordinators before issuing a violation. A regular site-specific inspection violation would not require consultation with a team coordinator.

Train accidents trigger another type of site-specific inspection, an accident investigation. FRA's accident investigations have three components. These are comprehensive investigation, remedial action, and followup. Whether all three components are used depends on accident severity and the extent to which the accident cause can be expected to persist.

Comprehensive accident investigations may uncover systemic safety problems. FRA recognizes that an employee fatality may not be an isolated event. For example, when an employee fails to stay clear of moving equipment and a fatality occurs, did a series of questionable actions or procedures precede the fatality? To prevent a recurrence of this type of accident, the focus in accident investigations is to find the root cause. Accident investigations can help decide how, if at all, railroad operations should change. FRA monitors the remedial actions that a railroad takes to prevent the occurrence of similar accidents. Once the root cause is determined, an appropriate corrective action can be initiated. Accident prevention is achieved by appropriate corrective actions, which may involve short and long-term changes in railroad operations.

MODIFICATION OF SITE-SPECIFIC INSPECTION OBJECTIVES

Regional Administrators may find it necessary to vary from FRA's data analysis recommendations. Modifications may be necessary because of changes in risk factors, not yet reflected by the lists of data gathered by FRA, or because of changes in circumstances such as:

- Accident/incident data showing strong and unexpected trends.
- Inspection data showing strong and unexpected trends.
- Changes in railroad operating practices or facilities, such as rerouting of through traffic, consolidation of major terminals, introduction of new equipment, and major track rehabilitation programs.
- Changes in participating State resources allocated to the enforcement program.

GENERAL SAFETY STRATEGY PRINCIPLES

FRA has responsibility for promoting safe railroad operations. Compliance with the railroad safety laws and regulations is the responsibility of each railroad's officers, employees, agents, or contractors. FRA monitors through investigation and surveillance. FRA promotes safe practices through the Safety Assurance and Compliance Program.

As part of investigative and surveillance activities, FRA inspectors attempt to catalogue noncompliance into the following categories:

- An isolated occurrence.
- Part of a larger problem.
- A deliberate act of noncompliance.
- A negligent omission to comply.
- An unavoidable problem that could not have been detected with maximum effort.

When possible, compliance tools will be selected in a manner consistent with the nature of the circumstances surrounding noncompliance.

STATUTORY TOOLS

FRA possesses specific enforcement powers under the Railroad Safety Act of 1970, Hazardous Materials Transportation Act and other related Federal statutes. FRA's Office of Chief Counsel can help with the interpretation of these statutes and the assessment and collection of penalties.

CIVIL PENALTIES

Section 209 of the Railroad Safety Act of 1970, as amended, provides penalties for any person (including a railroad and any manager, supervisor, official, or other employee or agent of a railroad) failing to comply with safety rules, regulations, orders, or standards.

Railroads

Commonly, inspectors will identify defective conditions that represent violations of regulations. When deciding whether to recommend civil penalties, inspectors will consider the following factors:

Degree of Inherent Seriousness — The seriousness of a violation is related both to the type of defect or practice, and the degree of variation from acceptable practice.

Kind and Degree of Potential Hazard Under Specific Circumstances — A defect or practice that might not be exceptionally serious under certain circumstances might result in an accident under other circumstances. Only the inspector will have access to all facts necessary to make this finding. It is the inspector's responsibility to articulate these facts in the Violation Report, if civil penalty action is warranted. For instance, the operation of passenger trains or the movement of hazardous materials may be relevant to the nature of the hazard.

Any Actual Harm — Violations of safety regulations that lead to loss of life, personal injury, or property damage, will generally warrant civil penalty recommendations.

General Level of Current Compliance

A railroad's general level of compliance at the time of the inspection will influence the decision to recommend a penalty.

History of Compliance

Improvement in a railroad's compliance record may warrant withholding a penalty recommendation. Conversely, a deteriorating compliance record may trigger a penalty recommendation.

Whether an Alternate Remedy is More Appropriate

Sometimes, assessment of substantial civil penalties may deprive the railroad of resources needed for compliance (see discussion of small railroad issues). In other cases, the use of civil penalties may be insufficient to address an imminent hazard (see alternatives to civil penalties below).

Other Factors

Inspectors in consultation with their supervisors may identify other factors that could mitigate civil penalties.

Individuals

Civil penalties may be assessed against individuals only for "willful violations" of safety rules, regulations, orders, or standards. Civil penalties against individuals range from monetary penalties to disqualification from work. The following guidance has been provided to FRA inspectors with respect to the range of individual penalties (General Bulletin No. 92-11):

1. Inspectors are responsible for identifying circumstances suggesting the need for possible action, bringing these circumstances to the attention of supervision, and developing such documentation as may be necessary to take the action determined to be appropriate. Inspectors will be provided guidance as to the appropriate use of particular penalties on a case-specific basis.

2. Individual civil penalty actions will be commenced only where the offending conduct is willful. "Willful" conduct includes behavior that shows reckless disregard of the requirements of the laws, or regulations, even if it cannot be shown that the violation was deliberate. However, where the individual has been directly ordered by a superior to violate, the conduct will ordinarily not be regarded as willful (See 49 C.F.R. § 209, Appendix A).

3. Disqualification is an option only where FRA can show the individuals's unfitness for safety sensitive service. Although many disqualification actions will involve willful behavior, willfulness is not a prerequisite to such an action. Moreover, willfulness alone will not suffice to show unfitness.

4. Warning letters will be employed for a first offense where there is doubt as to the offending employee's knowledge of the law or where the offense is not highly serious and a warning is deemed adequate to prevent a recurrence.

5. Civil monetary penalties will be recommended for repeat offenses involving the same regulation or a closely related regulation and for particularly serious initial offenses (e.g., where the individual orders use of a piece of defective equipment after and FRA inspector issues a special notice for repairs).

6. Disqualification will be recommended where the individual has engaged in repeated violations of FRA regulations, or has committed a particularly serious violation. These offenses show that the individual is unfit to continue safety sensitive functions. The following examples may warrant initiation of a disqualification proceeding:

- A pattern of conduct involving repeated orders to subordinates to violate railroad safety laws or regulations. Two incidents may be adequate to support action where FRA provided warning after the first incident, depending upon the severity of the conduct.

- On-duty use of alcohol or drugs resulting in loss of life or serious injury to other persons.

- Continued violation of a particular regulation for which a civil penalty was previously assessed.

7. Other consequences of the conduct may be considered with respect to the necessity of initiating FRA enforcement action. For instance, an engineer who operates a train at 45 m.p.h. on a track segment limited to 30 m.p.h. will be subject to decertification by the railroad under 49 C.F.R. § 240. An employee who is determined to have used a controlled substance in violation of 49 C.F.R. §219.102 will be subject to removal from covered service pending evaluation and any needed treatment. Absent additional facts, in circumstances where the safety laws and regulations have already resulted in substantial penalties against the individual involved, investing limited compliance resources in a civil penalty or disqualification action would normally be wasteful and redundant. However, each case will be examined to decide what action is necessary to promote safety.

ALTERNATIVES TO CIVIL PENALTIES

Special Notice for Repairs

49 C.F.R. § 216.11 through 216.15 authorizes FRA and State inspectors to order the removal of defective freight cars and locomotives from service. Inspectors are also authorized to order speed reductions over defective track segments.

Emergency Order

49 C.F.R. § 216.21 through § 216.27 describes the procedure that authorizes the FRA Administrator to order the cessation of railroad operations over a line segment. Railroad safety inspectors, supervisors and Regional Administrators are responsible for recommending the issuance of Emergency Orders.

Emergency Orders can be issued when known safety problems have unexpectedly worsened, or when unusual or sudden events seriously threaten public or employee safety.

Compliance Order

49 C.F.R. § 209.201 through § 209.215 describes the investigatory procedure which authorizes the FRA to remedy the repeated failure to comply with the Federal Railroad Safety Act of 1970, or Hazardous Material Transportation Act requirements. While the use of this tool may involve major investments of agency program and legal resources, its use can be justified whenever compliance problems can be linked to inadequate funding of safety or investment programs.

Injunction

Section 210 of the Federal Railroad Safety Act of 1970, as amended, permits United States district courts to have jurisdiction to restrain violations of, or to enforce rules, regulations, orders, or standards relating to railroad safety. Injunction requests to United States district courts are made by the Secretary of Transportation to the United States Attorney General speaking for the United States, or upon application by a State agency.

APPROACHES TO INVESTIGATION AND SURVEILLANCE

ROUTINE INSPECTIONS

- Inspectors should become familiar with all railroad operations within assigned territories.
- Inspectors must notify supervisors of any pattern of safety rule violations, following the recommendation of civil penalties.
- Inspectors must notify supervisors of "emergency" situations immediately.

COMPLAINT INSPECTIONS

To the maximum extent possible, FRA will investigate alleged violations of Federal railroad safety laws and regulations. This policy:

(I) Recognizes railroad employee and the public's interest in railroad safety.

(II) Assists FRA in locating unsafe conditions or practices.

When investigations reveal significant violations of Federal railroad safety rules, regulations, orders or standards, a civil penalty will normally be recommended.

Conversely, when instances of minor noncompliance with Federal railroad safety rules, regulations, orders, or standards are uncovered, inspectors and field supervisors will allow the railroad to take corrective actions before pursuing civil penalties.

TEAM INSPECTIONS

Regional Administrators have the discretion to deploy inspection teams. Teams are generally reserved to target serious safety problems where immediate remedial action is required. A team inspection has the following characteristics:

- Normally initiated by the region.
- May involve a single, or multi-discipline review.
- State inspectors are encouraged to join team.
- May be inter-regional in scope.

ROUTINE SITE-SPECIFIC SAFETY INSPECTIONS

The purpose of the routine safety inspection program is to monitor compliance with the agency's rules, regulations, orders and standards. FRA favors correcting safety violations to collecting monetary penalties. Before recommending civil penalties, Regional Administrators should consider using the following.

a. Safety team inspections, or other intensified inspection activities of a single railroad (or group of affiliated railroads).

b. Regional Administrators are permitted to hold violation reports in abeyance while negotiations are initiated with the railroad. Normally, violation recommendations are forwarded to FRA's Office of Chief Counsel for penalty assessment.

c. Regional Administrators will advise appropriate railroad managers of violation recommendations and the approximate penalty assessment.

d. Railroads will be given the opportunity to correct inspection deficiencies. All programs (generally a "letter" signed by an authorized officer of the railroad) must include interim measures to provide for safe operations. At a minimum, the railroad program should specify:

- Interim measures required for safe operations.
- Measures set up to correct inspection deficiencies.
- The railroad contact responsible for executing the corrective program.
- The schedule for implementation of the program.

e. Regional Administrators are authorized to delay forwarding violation recommendations to FRA's Office of Chief Counsel only while progress is being made to correct deficiencies uncovered by the team inspection. If the railroad fails to submit a timely program to correct inspection deficiencies, the violation recommendations should be forwarded to FRA's Office of Chief Counsel for penalty assessment.

f. Regional Administrators have discretion to review and approve a railroad's program to correct inspection deficiencies. Regional Administrators should provide the affected railroad written acknowledgment of acceptance of the railroad's program. The FRA letter of acceptance should (1) list the pertinent inspection reports by inspector, report number, and date of inspection, (2) notify the railroad of the approximate date for reinspection and (3) include the following disclaimer:

> "Nothing in this communication shall be construed to authorize or excuse noncompliance with Federal railroad safety laws or regulations, to apply to or affect in any way matters not specifically addressed herein, or to in any manner constrain the discretion of the Federal Railroad Administration to pursue enforcement actions about noncompliance other than that documented in the inspection reports listed on the enclosure."

g. Regional Administrators will establish an appropriate follow-up inspection plan to monitor the railroad's program to correct inspection deficiencies.

The statute of limitations for violations of the Federal railroad safety laws and regulations (except for the Hours of Service Act) is 5 years. Railroads submitting programs to correct inspection deficiencies should be expected to complete these programs within that period unless there is (1) FRA/railroad agreement to the contrary, or (2) significantly changed circumstances that, in FRA's judgment, are sufficient to warrant ending the railroads's efforts.

The Regional Administrators (or Acting Regional Administrators), shall maintain records of offers and acceptance for any matters handled under this procedure in the files of the regional office for not less than 5 years. Those files shall include the followup inspection plan and summary notations reflecting operations under that plan.

ACCIDENT AND FATALITY INVESTIGATIONS

The Reports Branch, Office of Safety Analysis, will assign accidents/incidents for investigation based on criteria approved by the Associate Administrator.

For every accident/incident investigated:

(1) Decide the direct cause.

(2) Decide underlying reasons.

(3) Recommend actions to prevent recurrence.

When a violation of railroad safety laws or regulations is determined to be the cause of an accident or casualty, a civil penalty is normally recommended.

INTEGRATION OF COMPLIANCE TOOLS AND INVESTIGATIVE/SURVEILLANCE APPROACHES

When significant safety issues and needed remedial action have been identified, FRA may exercise statutory powers to promote compliance. Direct oral and written communication are the primary means of transmitting agency requests to railroads, though other means may be necessary if there is an immediate threat to railroad employees, or the public.

SMALL RAILROAD DEFINITION

Railroads with fewer than 400,000 annual employee hours may be called regional railroads, short-line railroads, and scenic, excursion, museum, and tourist railroads. However, this designation does not apply to commuter railroads.

Small railroads require special attention and assistance because of many factors. These include:

- Inadequately developed procedures and control systems for management of Federal safety regulations.
- Limited financial resources for safety related infrastructure or capital improvements, particularly following large expenditures for start-up costs of newly formed railroads.
- No familiarity with FRA safety inspections.

PRINCIPLES GUIDING INSPECTIONS OF SMALL RAILROADS

Small railroad inspections are guided by the following compliance and enforcement activities:

Small Railroad Start-up

1. An FRA inspector will visit each newly formed small railroad prior to start-up. Railroads will be instructed on the requirements for complying with Federal railroad safety laws and regulations.

2. The inspector will evaluate the need for supplementary training of railroad personnel in Federal safety requirements by discipline-specific safety inspectors.

3. Within 90 days of start-up, an FRA inspector will evaluate each newly formed railroad's compliance with FRA safety requirements, i.e., procedures are in place for reporting under Part 225, compliance with Power Brake and Freight Car Safety Standards, records are maintained for Hours of Service Act and track inspection frequency requirements, and that operating rules and training programs have been filed with FRA. Where serious deficiencies are noted, the FRA inspector will arrange to have pertinent, discipline-specific regional specialists visit the newly formed railroads to assist with compliance to FRA's safety requirements.

Established Small Railroads

1. Help railroads in the interpretation and applicability of Federal requirements, particularly new regulations, to their operations.

2. Provide training opportunities for personnel of small railroads through state or regional forums.

3. Following the identification of special needs for enhanced surveillance by inspection disciplines on individual railroads, offer training and other assistance.

4. Identify systemic problems underlying noncompliance with safety regulations.

5. Take any action within delegated authority to abate unsafe conditions.

6. Civil penalty actions will be used as necessary to encourage compliance with safety regulations.[1]

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[1] Civil penalties may have a disproportionate effect on small railroads—a single count may have greater effect on a small railroad than multiple counts would have on a Class I railroad.

INSPECTION FREQUENCY OF SMALL RAILROADS

RAs, or their designated representative, will (1) advise the railroad of Federal Safety rules, particularly newly instituted regulations, (2) verify compliance with regulations particularly in the FRA inspector's field of expertise, and (3) decide whether detailed inspections should be made for any of the inspection disciplines.

APPENDIX D

FRA PERFORMANCE MEASURES
(1994 thru 1998)

	1993 (Base Year) Number	Rate	1994 Number	Rate	1995 Number	Rate	% Difference Rate 1995 Vs. 1993	1998 (Goal) Number
Rail-Related Fatalities[1]	1,279	2.08	1,226	1.87	1,144	1.71	-17.79%	1,151
Train Accidents[2]	2,785	4.54	2,669	4.07	2,618	3.91	-13.88	2,414
Rail Passenger Fatalities/Injuries[3]	617	44.79	502	35.74	565	41.26	- 7.88	423
Rail Employee Fatalities/ Injuries[4]	15,762	30.33	13,111	25.28	10,795	21.15	-30.27	12,927
Grade Crossing Accidents[5]	4,892	3.80	4,979	3.22	4,631	2.87	-24.47	4,377
Trespasser Fatalities[6]	523	3.30	529	3.10	493	2.78	-15.76	494
Rail Hazardous Material Releases[7]	1,154	17.12	1,157	14.66	1,021	12.94	-24.42	1,110

[1]Total rail-related fatalities per million train miles.
[2]Number of train accidents per million train miles (includes highway rail collisions).
[3]Combined passenger fatalities and injuries per billion passenger miles.
[4]Combined employee fatalities and injuries per million work hours.
[5]Highway rail grade crossing accidents per train miles times annual highway vehicle miles traveled.
[6]Trespasser fatalities per million train miles times total U.S. population.
[7]Number of rail cars that release hazardous material per billion hazardous material ton-miles.