



**Department  
of Transportation**

**Federal Railroad  
Administration**

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**SAFETY ASSURANCE AND  
COMPLIANCE PROGRAM  
(SACP)**

**Year-2002 Accomplishments  
Year-2003 Audit Plans**



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**FEDERAL RAILROAD ADMINISTRATION  
SAFETY ASSURANCE AND COMPLIANCE PROGRAM**

**I. Executive Summary**

**Background** - The Federal Railroad Administration (FRA) is the arm of the Federal Government charged with promoting and ensuring the safety of the Nation’s railroad industry. This is accomplished through the promulgation and enforcement of safety regulations and the onsite monitoring of railroad operations. The goal is to prevent fatalities and injuries related to both railroad operations and the release of hazardous materials from rail cars, and to enhance the security of railroad operations nationwide. This involves cooperative efforts among FRA, railroads, States, local communities, railroad contractors and suppliers, other Federal agencies, as well as the public (especially members of the public who use highway-rail grade crossings or who enter onto railroad property).

One of the many tools FRA uses to maintain rail safety is the *Safety Assurance and Compliance Program*. The FRA established this program to facilitate permanent solutions to safety issues by using the expertise of the various facets involved on each of the major railroads to find the root causes of safety problems; develop solutions cooperatively with railroad management and employees; and focus both inspection activity and the use of enforcement tools on the most serious safety risks revealed by our inspections and our accident data.

This report was prepared in response to the request in the Conference Report of the Omnibus Appropriations Act for FY 2003 for a summary of the SACP activities in fiscal year 2002 and the Agency’s audit plans for fiscal year 2003.

**The Current State of Railroad Safety** - As judged by most indicators, long-term safety trends on the Nation’s railroads are very positive and, while no death or injury is acceptable, progress is being made to continue these positive trends. Although the numbers are preliminary, year 2002 proved to be one of the safest since FRA started collecting data.

- The total number of rail-related accidents and incidents dropped by 13.4 percent from year 2001 (13,926 vs. 16,087, respectively)—a historical low for this category.
- The accidents/incidents rate (total accidents and incidents per million train-miles) declined 14.1 percent (19.43 vs. 22.61).
- The lowest number of railroad-employee fatalities ever, 20, occurred.
- The employee-casualties rate (fatalities and injuries per billion work-hours) dropped by almost 14 percent.
- All rail-related fatalities in year 2002 numbered 948, a 2.4 percent reduction over year 2001.

Between 1978 and 2002:

- The number of reported train accidents dropped a staggering 76 percent, from 10,991 to 2,625.
- The train-accidents rate fell from 14.62 accidents per million train-miles to 3.66.
- The number of train accidents involving a release of hazardous materials declined from 139 in 1978 to 31 in 2002, despite a significant increase in the number of hazardous-materials tank-car shipments (more than two million per year).

Similarly, the grade-crossing safety picture has shown considerable progress. This improvement has resulted from a variety of sources, including public investment in crossing-warning devices and greater awareness of the risks present at crossings by highway users, caused by joint efforts of railroad managers and employees, FRA, the States, our Department of Transportation partners (the Federal Highway Administration, the Federal Transit Administration, the Federal Motor Carrier Safety Administration, and the National Highway Traffic Safety Administration), and Operation Lifesaver, Inc.

- In 1990, 698 persons died in highway-rail grade-crossing collisions.
- In 2002, the number was down to 352, despite an increase in exposure due to greater highway and rail traffic.

Unfortunately, not all of the major safety indicators are positive. In recent years, rail trespasser deaths have replaced grade-crossing fatalities as the largest category of deaths associated with railroading. For year 2002, 542 persons died while on railroad property without authorization, which was an increase of 6.1 percent over the previous year.

**The FRA Safety Program** - The safety program is the essential component of the Agency. The program has several elements, including setting safety standards and ensuring compliance with those standards; focusing attention on serious safety problems, whether or not they are covered by current standards; educating the rail industry on the Federal standards and the public on rail safety issues; focusing on emerging security issues; investigating accidents and employee fatalities; conducting research and development on safety issues; and setting the tone for safety efforts in the industry.

The program's most important element, of course, is its people. The FRA Office of Safety headquarters staff of 100 works on a broad range of activities, including rulemaking, compliance, data analysis, and program management. Our field force of approximately 485 (which includes safety inspectors, support staff, and managers) works on inspection and compliance activities, investigations, and outreach to communities and the public on safety issues.

The rapid growth of new railroads and traffic in recent years has increased demands on monitoring railroad-industry compliance with safety regulations. As a result, the efficient use of the limited number of Federal and State inspectors is critical. The Agency directs more than 415 Federal safety inspectors in 36 offices nationwide. FRA maximizes its inspection activities by working with approximately 160 certified State safety inspectors from 30 States who supplement the efforts of our field forces.

Together, these inspectors oversee more than 670 railroads with more than 220,000 employees; 265,000 miles of track with 250,000 highway-rail grade crossings; 100,000 railroad bridges; 1,300,000 freight cars; 20,000 freight locomotives; and 8,880 passenger locomotives, coaches, and self-powered coaches.

The FRA tracks the railroad industry's safety performance closely by requiring that railroads report accidents and casualties, by investigating major rail accidents, and by extensively inspecting railroads and shippers of hazardous materials. Activities are addressed in five primary disciplines: track, equipment, signals, hazardous materials, and operating practices. The FRA maintains a safety database available on its website ([www.fra.dot.gov](http://www.fra.dot.gov)). The FRA uses this information to guide its accident-prevention efforts, and it continually strives to fulfill its mission by making better use of the wealth of available data.

**Encouraging Compliance and Safety Improvements** - In encouraging the highest standard of safety in rail operations, FRA starts with the assumption that railroads and their employees want to promote safety for their own benefit, not just because a law or regulation requires it. We understand that the Code of Federal Regulations is not the sole source of wisdom on safe practices; there are in fact, safety problems not covered by existing rules that require solutions. Thus, the railroads have the responsibility for complying with the standards FRA sets, as well as additional issues that may pose threats to safety. To do so, the railroads undertake their own inspections and tests to ensure their operations meet these standards.

More than 670 railroads nationwide operate at least 1.3 million pieces of equipment over 265,000 miles of track. Because FRA's inspection force cannot possibly observe all railroad activity, we monitor railroads to determine their level of compliance with those standards and employ a variety of tools to encourage compliance. The FRA's primary tool for its inspections is a policy of focused inspection and enforcement. That is, we try to concentrate our efforts on detecting conditions that are the leading causes of accidents, injuries, and hazardous-materials releases. If noncompliance is found, we focus our attention on violations that may cause such events.

Our objective is to ensure that railroads identify serious safety issues, develop plans for remedial action, and implement these plans in a timely way. Where routine inspections reveal minor defects that pose little risk, FRA will address the noncompliance with railroad officials, and demand corrective action, absent formal enforcement proceedings. When more serious problems are found, they are elevated to higher railroad officials, providing them the opportunity to focus on matters that might not have come to their attention and correct them within a specified time frame. FRA understands that railroads are extremely large operations; and while their top officials may be committed to the highest level of safety, they may not be aware of the serious nature of local problems. This process also provides the opportunity for the Federal arm of government to assist in a permanent solution, rather than simply citing violations on a sporadic basis. However, FRA will not hesitate to use its enforcement tools if it discovers serious safety violations that cause an immediate and unacceptable risk that a railroad should

have found and corrected on its own; or where FRA has identified serious rail safety problems requiring action by a railroad to prevent an unacceptable risk from developing; or when a railroad has agreed to implement a specific remedial program to fix safety problems by a specific date, but has failed to make a solid effort do so.

Where enforcement is called for, the tool we use will depend on the circumstances. Civil penalties are the most frequently used tool. In CY 2002, for example, FRA collected more than \$7.8 million in penalties from railroads and hazardous-materials shippers. Our Office of Chief Counsel, based on the recommendations of our field inspectors and working closely with the Office of Safety, assesses and collects these penalties. As the safety statutes permit us to do, we settle nearly all these cases through negotiations with railroads and shippers. The settlement negotiations provide an excellent forum for addressing the most current and serious compliance issues that have not been resolved through more cooperative methods.

The FRA has several other enforcement tools. Our inspectors can issue special notices removing locomotives or freight cars from service until they are repaired, or lower the speed of track so that the track segment meets the standards. We sometimes enter into compliance agreements with railroads in which the railroad promises specific remedial actions and, should it fail to deliver on its promise, agrees to the imposition of a compliance order, emergency order, and/or particular fines. The FRA Administrator can address an imminent safety hazard by issuing an emergency order, with opportunity for review of the order after its issuance. Civil penalties are available against individuals who willfully violate the safety regulations, and FRA can disqualify individuals from safety-sensitive service if their violation of safety regulations demonstrates their unfitness for such service. Criminal penalties apply for certain willful violations of the hazardous-materials rules and knowing and willful violations of recordkeeping or reporting requirements. We have increasingly used these criminal penalties in recent years, especially for serious violations of the rules concerning the proper documentation of hazardous-materials shipments.

The subject of this report is one of the tools FRA employs as a cooperative approach—the Safety Assurance and Compliance Program (SACP). The basic principles of SACP are to find the root causes of safety problems; develop solutions cooperatively with railroad management and employees; and focus both inspection activity and the use of enforcement tools on the most serious safety risks revealed by our inspections and our accident data. While the SACP approach may take longer in some instances than giving the top railroad officials a date certain to correct problems, it is beneficial in instances of more systemic problems where rail labor and management can provide long-term operational solutions.

On each of the major railroads, SACP teams include FRA inspectors and managers, railroad officials, and employee representatives. The SACP teams provide a forum for resolving both compliance issues and safety problems. Issues can be resolved through informal agreements or formal action plans. At



the same time, FRA continues its normal review of railroad activities through regular inspections of facilities, vehicles, operations, records, and the investigation of complaints.

## **II. Class I Railroads (FY 2002 SACP Activities and FY 2003 Audit Plans)**

### **1) Burlington Northern Santa Fe Railroad (BNSF) - FY 2002 SACP Activities**

**BNSF Overview** - During 2002, the SACP Task Force partnership systematically addressed and resolved 58 safety and regulatory issues important to maintenance-of-way, mechanical, and the railroad's transportation department employees. Thirteen SACP partnerships at the Division level and nearly 100 Site Safety Committees addressed and resolved numerous issues that were not systemic in nature.

**Safety Agreements** - In 2002, safety agreements establishing a formalized structure for involving operating-craft employees in BNSF safety initiatives were entered into by the railroad, the United Transportation Union, and the Brotherhood of Locomotive Engineers. Under the agreements, operating-craft employees—appointed by their respective organizations—establish 'Site Safety Committees' to address local safety issues at railroad terminals and other locations within divisions. By the end of 2002, nearly 100 committees had been established, with more to be created in 2003. The SACP Task Force has incorporated these committees into its structure as an information resource for Division SACP teams. An issue-escalation process has been created to monitor the safety activities of the committees.

**Continued Use of the Network Operations Center (NOC) Safety Council** - The Task Force continued to utilize the Safety Council to resolve issues regarding train-dispatching practices at the NOC and the joint BNSF-UP Dispatching Center at Spring, Texas. No formal complaints were forwarded to the FRA by the NOC train dispatchers again in 2002.

**BNSF Task Force Monitors Injury-Reporting Policy** - Under this policy, employees with symptoms of muscular-skeletal injuries may delay reporting an incident to the railroad for up to 72 hours without fear of discipline for late reporting of the injury. Major features include a uniform policy to facilitate employees returning to the work force following a period of absence resulting from either on- or off-duty injuries or illnesses.

**Human-Factors-Caused Employee Injuries and Rail Equipment Accidents** - For 2002, the human-factors frequency ratio was 2.08 per 100,000 employee-hours, reflecting a significant 17 percent reduction in injuries and 26 percent reduction in severity. The railroad's goal for 2003 is 1.80, with a 15 percent reduction in the human-factors-caused injuries.

The frequency ratio of rail-equipment accidents caused by human factors for 2002 was 1.13 per million train-miles, down from 1.26 in 2001. The goal for 2003 is a 15 percent reduction.

**Reductions in Collisions, Injuries, and Fatalities at Public Crossings** - Since implementing this SACP initiative five years ago, the BNSF has reduced the number of collisions, injuries, and fatalities at public crossings by 12 percent, 11 percent, and 14 percent, respectively. Additionally, the railroad reported a 15 percent reduction in employee injuries resulting from highway-rail grade crossing collisions over the same five-year period.

**Grade Crossing Closures** - During 2002, the BNSF invested more than \$50 million in grade-crossing closure or accident-prevention programs. In 2002, the railroad successfully closed 431 public and private crossings, exceeding the 2002 goal of closing 420 crossings. Since the inception of this program in 1999, 1,745 crossings have been closed, leaving 31,648 public and private crossings in service. Like 2002, the goal for 2003 is to close 420 grade crossings.

**“Zero Tolerance” for Trespassers** - To combat trespassing, the BNSF adopted a SACP initiative on trespassing that included programs on public and law enforcement education; a trespasser-reporting and response process through the Resources Operations Center; the installation of “No Trespassing” signs; aggressive train inspections; improved environmental design and security equipment; and heightened enforcement.

**Hazardous Materials (HM) Security** - The HM SACP Team, working with railroad security and customer service representatives, devised a secure-access process through which security-sensitive hazardous-materials-shipment information and documents will be protected from unauthorized access, while ensuring that HM-movement records are readily accessible by our inspectors to conduct inspections and assessments of transporting HM. This joint effort will improve both the security of the transportation network and inspector access to information.

**Hazardous Materials Shipment Inspections** - The HM SACP Team continued monitoring the defect ratios in HM-shipment inspections, building on past practices to reduce defects. Intermodal-facility inspection teams (involving representatives from BNSF, major shippers, and FRA) conducted joint audits on the railroad, and joined with other railroads to identify opportunities for improving its procedures and training to address noncompliance with hazardous-materials transportation regulations.

**Motive Power and Equipment (MP&E) Inspections** - The MP&E SACP Team monitored FRA inspections and defect ratios for terminals and maintenance facilities during 2002 to identify opportunities for improved safety compliance. Through the SACP process, the mechanical team identified and addressed the root causes of defects and worked toward correcting these conditions. Management changes and the evaluation of mechanical-staffing levels resulted in operational improvements aimed at reducing defect ratios.

The MP&E SACP team has devised a plan to conduct process-improvement assessments at four separate terminals during CY 2003 as part of its continuous improvement process, in addition to monitoring defects and defect ratios.

**Roadway Worker Protection (RWP)** - To reduce the number of incidents involving roadway workers and on-track vehicles, a SACP team comprised of FRA, BNSF, and the Brotherhood of Maintenance of Way Employes (BMWE) researched the root causes of RWP incidents, including fatigue and work-load factors. As a result of this partnership, a number of issues were identified as contributing factors and a series of corrective actions have been implemented.

**GPS and Hi-Rail Vehicles** - In 2001, the BNSF introduced a Global Positioning Satellite-based system to enforce limits of authority issued to hi-rail vehicles. Since the inception of this program, there have been no hi-rail vehicle/train collisions in equipped territory, and incidents of hi-rail vehicles exceeding authority limits in equipped territory have been effectively controlled. The BNSF expanded this project during 2002, equipping 475 hi-rail vehicles. The railroad is planning to equip 400 to 600 more vehicles and maintenance-of-way machines during 2003, and is evaluating the feasibility of equipping at least one machine in each major maintenance-of-way gang in order to extend protection for both the gang and for hi-rail vehicles approaching work locations.

**Operations Tests and Inspections (OPTI) Program** - The Operating Practices Discipline completed its 2002 assessment of BNSF's OPTI program, having completed record inspections, field inspections, and records of performance analysis for the subdivisions identified in the OP Division's assessment plan. The FRA determined that the railroad has a solid OPTI program with good potential for reducing the risk of human-factors-caused accidents through aggressive rules-compliance enforcement. However, program implementation must be strengthened to drive down HF-caused accidents and incidents, and to achieve the railroad's goals of safe performance.

For 2003, BNSF and FRA will continue to monitor program implementation on a quarterly basis. This effort will be significantly enhanced by the railroad's ability to electronically deliver its records of operational tests in spreadsheets to FRA for evaluation and analysis.

**Signal and Train Control (S&TC) Inspections** - The S&TC SACP Team worked with rail management, labor, and FRA to evaluate FRA signal inspections, defect data, and BNSF signal-trouble report records (from BNSF's NOC Signal Desk). The team is identifying signal maintenance territories with inordinately frequent signal problems or defects to analyze their root causes. The team will evaluate staffing and workload issues and make appropriate recommendations to achieve improvements in operational safety and signal system reliability.

**Fatigue-Countermeasures Programs** - The BNSF has established approximately 80 work agreements that provide for train-and-engine crew assigned days off. These agreements cover both pool-service and extra-board employees. Specific work-rest schedules vary depending on the terms of

each agreement, e.g., seven on/three off, five on/two off, etc. In addition, these agreements have incorporated a 7:00 a.m. markup as a fatigue countermeasure to reduce employee fatigue. These agreements, incorporating assigned days off, cover approximately 50 percent of the workforce. To avoid interrupted rest, the BNSF adopted a policy not to initiate crew deadheads between 10:00 p.m. and 4:00 a.m.

The BNSF's policy of allowing train crews to nap on duty under controlled conditions as a fatigue countermeasure remains in place and has been expanded to: a) allow managers and employees involved in accident recovery and specific major projects to have designated meal and rest periods, and b) permit napping, under specified conditions, for mechanical and engineering craft employees.

In other railroad operations, the BNSF established standard policies for those managers and employees involved in accident recovery and major projects that requires the rotation of employees to allow for rest periods. The policy mandates minimum meals and rest periods of at least four hours off in any 24-hour period, with 30-minute nap periods available.

### **BNSF FY 2003 Audit Plan**

During the November 2002 System SACP meeting, the Mechanical Working Group agreed to create an inspection plan and team to evaluate car and train inspections and repair practices at designated sites. The team will critique company polices and processes for mechanical-department personnel, and will develop recommendations for improved processes and procedures for the local management/labor team. Inspections under this plan are intended to be nonpunitive regarding Federal safety standards, railroad policies, and safety rules (except for willful or egregious noncompliance).

The plan provides for local management and labor participation and meetings. Inspections conducted as part of this plan will be performed in a manner that will minimize the impact on normal operations of the railroad and interstate commerce. The overall mission of this plan is to enhance safe and productive operations for the BNSF and its employees.

## **2) National Railroad Passenger Corporation (Amtrak) - FY 2002 SACP Activities**

**Amtrak Eastern Region Overview** - Both Amtrak management and labor had limited time to work with FRA on partnership initiatives. Reorganization and cuts in personnel took a toll on Amtrak's Safety Department, which had functioned as its SACP facilitator and liaison with labor and FRA. Partnership committees ceased meeting and partnership projects were either put on hold or cancelled.

Both management and labor were not able to devote the necessary resources to develop new SACP initiatives. However, many issues which had previously been the subject of SACP deliberations were being implemented. Amtrak's Safety Department has been reduced in size. As a result, FRA worked primarily with line supervisors to address safety issues. Labor has raised no objection to this development.

The Joint Labor/Management Safety Council did not meet in 2002. This council functioned as the Amtrak SACP steering committee and its demise adversely affected communication between the SACP parties. Two of the three North East Corridor High Speed System Safety Working Groups did not meet in 2002, with only the Metropolitan Division working group conducting meetings. Management's commitment to the process had obviously been diverted to other issues, while labor only occasionally displayed interest in resurrecting the committees. Only the Amtrak MBTA Commuter Safety Committee continued to conduct monthly meetings with FRA participation; however, Amtrak loses the MBTA contract in July 2003 (See section on Massachusetts Bay Transportation Authority SACP).

The FRA continued its active participation in the New York City Emergency Response Sub-Committee of the Tunnel Life Safety Task Force. This joint committee, which includes representatives from Amtrak, the Long Island Rail Road, New Jersey Transit, the New York City Fire Department, the New York City Police Department, the New York City Office of Emergency Management, and FRA addresses issues associated with ventilation, fire suppression, communication, emergency access and egress, and operational protocols in the East and North River tunnels.

**Significant Improvements in Alcohol and Drug Program** - A recent audit of Amtrak's Part 219 (Alcohol and Drug Program) revealed that Amtrak had vastly improved this complicated program, thereby making it a SACP model for the industry.

**Amtrak's Material-Handling Cars** - FRA planned, developed, organized, and conducted dynamic ride-quality tests of these cars on both the CSXT and the Norfolk Southern Railroad between Albany, New York, and Chicago, Illinois. Testing identified concerns with wheel unloading, resulting in speed restrictions imposed by both freight railroads.

**Blue Signal Procedures** - Working with FRA, Amtrak has developed procedures within its newest yard in New Haven, Connecticut. An FRA MP&E inspector was at the initial training session to address employees' concerns and the importance of proper Blue Signal procedures. FRA also assisted Amtrak in developing inspection, testing, and defect-reporting procedures for its "forgotten fleet" of work-train locomotives at the Cedar Hill maintenance-of-way facility in New Haven.

**Amtrak's Wayside Signals** - Working with rail management and labor, the Amtrak SACP Committee resolved all signal-preview issues on the NEC between Boston and New Haven. The Amtrak SACP initiative included a joint assessment by FRA, Amtrak, and the BLE of all signals on the NEC between the two cities. As a result, the SACP committee made several recommendations to improve signal preview, including signal relocation; signal re-alignment; and the replacement of incandescent lamp-type signals with high-visibility LED-type signal systems. Consequently, several signal bridges were installed to enhance signal preview, numerous signals were re-aligned, and an LED-type signal system was installed at several locations. All the committee recommendations were implemented, resulting in an overall enhancement of signal preview and the safety of train operations.

**Positive Train Control (PTC)** - Significant issues were resolved by the Amtrak SACP Committee on implementing PTC on the NEC between Boston and Washington, DC. The implementation involved coordination between Amtrak, Connecticut DOT, the P&W Railroad, MBTA, and Conrail.

**Amtrak Western Region Overview** - The Amtrak West SACP Oversight Group met four times in 2002, with the last meeting on August 29, 2002, in Los Angeles, California. In July, Amtrak reorganized the territory overseen by this committee. The reorganization disrupted the SACP process; additionally, a key supporting senior-operations manager left Amtrak on the Western Region. Funding issues consumed Amtrak management and labor; however, both remained enthusiastic and supportive of the SACP process but did not have corporate direction or funding to proceed. Partnership projects were put on hold.

Due to personnel cuts in Amtrak's Safety Department, the SACP process will reconvene in the spring of 2003 on the Western Region at quarterly divisional safety meetings. There will be three divisions: Central (headquarters Chicago), Southwest (headquarters Los Angeles), Pacific (headquarters Oakland). The process will work directly with line supervision to address safety issues bypassing the Safety Department. Oversight membership will be made up of Amtrak management, Amtrak labor, and FRA.

**A Better Ride For Engineers** - After a year or more of analyses, including ride-environment measurements and mathematical modeling, an FRA/Amtrak team succeeded in reducing the harsh ride of the F-40 cab cars (Pacific Northwest, Talgo Trains). The team's success will eliminate potential crew-member injuries (sore backs, sore necks, and kidney injuries). Already, tests show a 36 percent improvement in ride quality. In 2001, this group began examining injuries to locomotive engineers that related to a "rough ride." Amtrak management, the BLE, the Volpe Center, and FRA worked to identify and address locomotive ride-quality issues with the Amtrak West Cascades Service. The joint partnership effort, which focused on locomotive suspension, track, and locomotive seats, has reduced the incidence of injuries. All F-40 cab cars in the Pacific Northwest had been modified by August 2002. F-40's on Amtrak Intercity (11) and in the Northeast (3) will also be modified as a result of this joint project.

**Improved Communications** - A SACP subgroup developed a system for reporting "rough track" to dispatchers at the Union Pacific and BNSF Railroads. This new system will assist rail managers in identifying areas that are causing speed delays.

**Train-and-Engine Identification Cards and Brochures** - Through the coordinative efforts of a SACP subcommittee and with the help of local railroad unions and management, new ID cards and brochures were designed. These documents are now included in T&E "Incident Response Packets," and are required by the California Highway Patrol after an incident occurs to protect the identity of Amtrak employees. They are being considered by other Amtrak regions.

### **3) Norfolk Southern Railway Corporation (NS) - FY 2002 SACP Activities**

**NS Overview** - The SACP continued its outreach by developing a formal partnership with the shop-craft labor organizations. This process has led to more effective communication between labor, management, and FRA. In September 2002, all NS shop-craft organizations elected to come under the railroad's "START" program, which provides alternatives to disciplinary action for rules infractions. The FRA, labor, and management have also established closer ties to resolve both regulatory and nonregulatory safety issues.

**NS Embraces New Process** - The SACP continued to review industry programs to find the best approaches to safety and operations. It now uses information technology to define, measure, analyze, improve, and control processes. This approach has resulted in managers focusing on data analysis to determine better ways to cut costs, improve productivity, and reduce accidents.

**SACP Partnership Addresses Training** - Created in June 2002, this partnership (FRA, NS senior management, and the shop-craft organizations) initially identified five issues, with two being assigned to a working SACP committee. Additionally, a revised training program was developed for shop-craft employees on moving locomotives in a shop or field location. Labor representatives were provided training and the opportunity to offer feedback. This has opened the lines of communication and resulted in several issues (block swapping, hours-of-service, and interpretations) being addressed immediately without the need for a formal complaint process.

**Electronic Hours of Service Recordkeeping of Transportation Employees** - To improve its recordkeeping, the NS will purchase a system currently under development for the Union Pacific. At a cost of \$2-3 million, the electronic system will be implemented in 18-24 months.

**NS Compliance with the Freight Car Safety Standards and Power Brake Law** - Through SACP, the railroad worked with both FRA and the States to tighten inspections at various locations, thereby making them more compliant with FRA standards.

**Computerized Efficiency-Testing Program** - A SACP review in 2002 uncovered problems with the computerized program for both Roadway Worker Protection (RWP) and Hazardous Materials (HM). After discussions with the SACP team, the railroad's senior management took immediate action to upgrade its program.

The FRA and SACP are also working with NS on developing an electronic transfer of efficiency-testing data in a spreadsheet format. This will greatly enhance FRA's ability to review the program, along with relieving the railroad of the unnecessary need of numerous requests and voluminous printing.

**New Locomotive Calendar-Day Inspection Form** - To rectify a continuing defect, the NS SACP implemented a new 92-day inspection form, which will be maintained in the locomotive cab. It also implemented a new two-section form to replace the current forms.

**Compliance with Train-Crew Documentation** - A SACP team is working to ensure that proper documentation is provided to train crews hauling hazardous-materials.

**Desk Consolidation and Electronic Train Sheets** - A SACP partnership began with the American Train Dispatchers Department to address desk consolidation and the implementation of electronic train sheets. A team leader, with past train dispatching experience, was assigned and maintains monthly contact with senior labor officers. This process has improved communication between the organizations.

**Cooperation Replaces Regulatory Enforcement** - Working through the FRA SACP Project Coordinator, a group was formed to address a serious problem concerning crane operators on rail gangs. The group (which included an inspector with extensive crane experience, a crane manufacturer's representative, and railroad employees) designed improvements and an employee training program. This partnership was successful without the need for regulatory enforcement.

**Training on Effective Communication** - As an outgrowth of the SACP process this eight-hour presentation taught NS officers how to be better listeners, communicators, and managers.

**Remote Control Locomotive (RCL) Operation** - In furtherance of Federal guidelines (FRA Safety Advisory 2001-01) and to ensure safe operations, the NS SACP implemented an 80-hour program involving classroom and on-the-job training at assigned work locations. Currently, RCL's are assigned at 37 yard/terminal locations. To ensure uniform RCL training, the NS began developing plans for the initial training at its McDonough, Georgia, training facility. Employees will then return to their assigned locations for further training under local supervision. The railroad had certified 328 management and labor employees as RCL operators by the end of the year. The FRA and NS senior management are discussing the possibility of using the McDonough Training Facility to provide FRA employees training on the operation of the RCL (classroom and on-the-job). This will provide FRA a better understanding of the RCL equipment and operation, while promoting FRA guidelines.

**“Thoroughbred Yard Enterprise System” (TYES)** - In 2002, the NS SACP fully implemented TYES to complement the “Thoroughbred Operating Performance System” (TOPS). These systems are being used to enhance train operations and provide better working conditions for employees.

### **Norfolk Southern FY 2003 Audit Plan**

#### **Operating Practices:**

- Multi-regional FRA and State review of the train dispatchers offices and electronic train recordkeeping. (Harrisburg, Pennsylvania, and Dearborn, Michigan)
- Multi-regional FRA and State review of NS Part 240 program. (Atlanta, Georgia)
- Multi-regional FRA and State review of NS efficiency-testing program; divisions selected based on 2002 data/rule violations. (Roanoke, Virginia)



**Hazardous Materials:**

- FRA and State review of NS hazardous-materials train documentation.

**Motive Power and Equipment:**

- Multi-regional FRA and State review of NS locomotive shop maintenance, 92-day inspections, with follow-up to previous review in 2002.
- Multi-regional FRA and State review of NS freight-car inspection based on previous activity and FRA findings in January 2003.

**Track:**

- Projected track review based on track data received February 25, 2003. Locations dependent on train accidents and FRA inspection reports.
- SACP mechanized-equipment-maintenance review based on BMW concerns.

**4) Union Pacific Railroad Company (UP) - FY 2002 SACP Activities**

**UP Overview** - The railroad's senior management continues to embrace the SACP process initiated in September 1997, and to work with rail labor and FRA in resolving regulatory and nonregulatory safety issues. The UP has been a strong proponent of information technology to measure, analyze, and enhance its work. This has resulted in the SACP focusing on data analysis to determine better ways to cut costs, improve productivity, and reduce accidents.

**Qualitative Change in the Culture** - The UP SACP Oversight Committee continues to serve as the foundation for qualitative change in the culture and working environment of the railroad between management and labor. The railroad's "Managerial Conduct Process" has been successful in counseling and training the majority of its disciplinary cases. In 2002, employee dismissals numbered 5 out of 72 cases presented. Current discipline-summary statistics for all rail crafts show that 55 percent of those employees involved consented to provisions contained in the "Discipline Diversion Program" and accepted training/conferencing instead of discipline.

**Field Training Exercise (FTX)** - This SACP labor/management program focuses on coaching, training, and mentoring in lieu of discipline. The program calls for a debriefing following each efficiency-testing exercise, which provides an opportunity to discuss job performance, safety, and rule compliance with an employee. It also serves as a useful training tool. The program's intent is to improve crew performance through education and counseling. Numerous debriefings have occurred under FTX, with no repeat infractions to date. After encouragement from the SACP Oversight Committee, the UP initiated the program systemwide on January 1, 2003.

**Grade Crossing Safety and Trespass Prevention** - The Grade Crossing SACP Working Group continued emphasizing areas of high-incident occurrences (trespassers, vehicular accidents, near misses) and, where multiple grade crossings exist, reviewed locations for feasible engineering upgrades and potential elimination of others. Also, seldom-used and poorly located highway-rail grade crossings

were targeted for closure. The working group focused significant attention on building community coalitions with local and State governments to improve highway-rail grade crossing safety, assist law enforcement and judicial personnel, and reduce trespasser occurrences.

Grade-crossing incidents were reduced from 634 in 2001 to 535 in 2002, a 15.6 percent drop, and grade-crossing fatalities fell from 76 to 69 during the same period, a 9.2 percent decline.

- The UP SACP continues its professional driver-training program with Swift Trucking Inc. to address safety issues of trains/tractor-trailers at or near grade crossings.
- The Grade Crossing SACP Working Group received the support of three prominent labor organizations, and encouraged employees to report "Near-Hit" cases at crossings to profile crossings for enforcement, prospective closures, or engineering upgrades.
- The UP is now working with Judges College in Reno, Nevada, to encourage judges to assess greater fines for violators of State, county, and municipal laws governing crossings.

**SACP Process Informational Packet** - The SACP Oversight Committee elected to send all service unit superintendents, safety captains, and shop directors an informational packet that addresses the objectives and goals of the SACP Oversight Group, along with key items related to how the SACP process affects local UP Safety Committee meetings.

Included with the information is a copy of the UP/SACP Safety Issue Escalation Form, and a poster containing SACP process/procedural guidelines, which will be displayed at all locations where UP safety meetings are held.

**Successful Track Compliance in 2002** - The SACP maintenance-of-way subgroup, with assistance from the UP's engineering staff, addressed regulatory track compliance, training, and staffing levels required to conduct rail inspections. Additionally, the group addressed issues on the enhancements to track inspectors' GPS Palm Pilot-based electronic track inspection/repair and recordkeeping system. Enhancements included computer-based training, regulatory requirements, remedial repair actions, territorial review, staffing, and the inclusion of siding, yard track, and switches.

**Locomotive/Car System Safety Action Plans** - The SACP locomotive/car subgroup designed these plans to address inadequate inspection, servicing, and testing. A training video was also created for operating-department employees relating to daily locomotive inspections. The video is mandatory viewing for crewmen during "Operating Rules Exam" training.

**Roadway Worker Protection (RWP) Initiatives** - The FRA used SACP principles to work with UP engineering personnel, the Brotherhood of Maintenance of Way Employees (BMWE), and the Brotherhood of Railroad Signalmen (BRS) to increase awareness among employees of regulatory requirements and the safe performance of duties. All parties agreed on the importance of communicating issues and concerns surrounding RWP, and they agreed to the following communication strategy: 1) increase the number of safety audits currently being conducted;

2) an engineering safety director would prepare educational material to be used in labor journals; 3) the BRS and BMWWE would both work on getting more information into their journals; 4) the RWP will be a topic at all union meetings; 5) the UP would initiate an internal television broadcast; and 6) UP engineering would issue safety bulletins relating to RWP requirements.

**Improvement to Work/Rest Predictability** - the SACP Predictability Subgroup continues to seek solutions to improve train line-up accuracy. The subgroup, working with a director of train management, identified a method to improve accuracy, thereby providing more precise line-up and carrier on-time performance without changing train schedules. The new process has been piloted in the Central Region since January 2002, and has been highly successful.

**Signal Maintenance Plan** - The Signal SACP Working Group continued its work on a plan to address signal-related issues at the lowest level possible. The plan requires the local manager and local signal maintainer to jointly plan the testing schedule for a territory. The maintenance territory is broken down by geographic location and testing requirements. The plan is to be implemented and monitored for carrier and regulatory compliance. The SACP Working Group is monitoring the plan's effectiveness at Sparks, Nevada, and intends to expand monitoring to San Antonio, Texas, and Portland, Oregon.

**New Signal Training Offered** - To reduce activation failures and false-proceed signal failures caused by human factors, a new training course was developed and administered to key employees and managers to raise awareness and standardize testing procedures among signal personnel. This training program is part of the basic signal-training course. The new training resulted in a 44 percent reduction in reported false-proceed occurrences, and a 33 percent reduction in those caused by human factors. In one FRA region, the number of failures dropped to only one in 2002, which was not the result of human factors.

**“Red Block” Working Group** - The Red Block SACP Working Group has set a goal to eliminate the problem of trains passing wayside signals, red flags, or anything that requires a stop action by an operating train crew. The working group has heightened the awareness of “Stop Signal” incidents and cab communications by working closer with managers, signal employees, operators, dispatchers, and train-and-engine employees. As a result, stop actions have been reduced systemwide in 2002 over 2001.

**SACP Locomotive/Car Inspection Audits** - These focused audits were conducted at eight locations throughout the UP system (Houston, TX; Los Angeles, CA; Fort Worth, TX; Roseville, CA; Kansas City, MO; North Little Rock, AR; Chicago, IL; and North Platte, NE). The purpose was to determine the effectiveness of the “*Seven Point Corrective Action Plan to Reduce High Car Defect Ratios*,” and the “*Locomotive Inspection Accountability Action Plan*.” These plans were drafted by the UP SACP Locomotive/Car Inspection and Testing Working Group, approved by the UP SACP Oversight Committee, and implemented by the UP. The focus team identified mechanical best practices, evaluated employer/employee relationships, identified systemic safety issues, and evaluated training.

The SACP team found that both action plans were in place among the selected locations, and were being introduced into daily inspections, testing, and maintenance practices. The team found improved working relations and communication among managers, supervisors, and employees, and systemwide uniformity of the carrier's quality-control processes.

**Additional Focused SACP Inspections** - Conducted in Sedgwick County, Kansas, these inspections uncovered numerous defects and other safety concerns, and resulted in the UP initiating an action plan that included a \$2 million rehabilitation project in the UP yards. Track-caused derailments in this county have since been reduced by 67 percent.

**Workload Study** - Based on SACP concerns over the BMW's performance in conducting track inspections, the UP agreed to complete a workload study of its track inspectors. The UP further agreed to hire more track personnel if the study showed a need for more inspectors.

**Car-Repair Shop Inspections** - Inspections revealed a number of cars being released with defects. The SACP worked with the write-up inspectors to improve the process and with rail management to set up training sessions for each of the repair tracks to improve air testing.

**Quality of Life Issues** - Throughout the year, SACP Fatigue subgroups pursued many issues on training, education, crew balancing, and lodging. Accomplishments included: 1) developing family-support programs; 2) monitoring three major pilot projects for Train, Engine, and Yard employees using the "Locally Initiated Scheduling" system (a schedule of work assignments); 3) creating a pilot program for "fatigue" education systemwide; and 4) identifying and monitoring the new Oak Tree lodging facilities and lodging upgrades at Dunsmuir, California; Kansas City, Missouri; and Wright, Wyoming.

**New Crew Management System** - This initiative, known as "Proactive Notification," is a pilot project on the Northern, Western, and Southern Regions of the UP. Proactive Notification is a new employee-menu feature used to enhance the Automated Voice Reporting System (AVR), which permits an employee to use a feature within the AVR to aid train and engine personnel in determining their availability for duty-call-time. This feature notifies train-and-engine personnel of their board standings (call to work) through three different methods. The purpose of the Proactive Notification is to mitigate fatigue and enhance the quality of life for employees.

Throughout 2002, the Crew Utilization Working Group addressed many crew-utilization/crew-management system issues, including the timely relief of crews before the expiration of their tour of duty under the Hours of Service Act. Accomplishments included: 1) a new process known as Electronic Van Management Systems, which permits an in-depth analysis of van availability by evaluating transport-service supplier-performance measures such as availability, waiting periods, crews held, and van terminal adjustments; and 2) review of locations where crews are being held on trains for excessive periods.

**Significant Improvements at the UP's Harriman Dispatch Center** - Using SACP, the railroad is realizing significant improvements in the operational efficiency and staffing levels of the dispatching center in Omaha, Nebraska. Accomplishments include: 1) improved standards for training, re-certification, and efficiency testing for all outlying dispatching offices and control-operator locations; and 2) merged rules/instructions governing train dispatchers and control operators into a single-source book. Efficiency testing between train crews, maintenance, and signal forces for track permits and train orders resulted in a 39 percent reduction in failure occurrences.

As part of the SACP process, a review of the carrier's Alcohol and Drug Random Testing Program was conducted with the Harriman Dispatching Center. The FRA found the railroad met the requirements of the complex Federal program; however, it identified a need for the carrier to enhance the random employee pool for train dispatchers. The carrier agreed with the FRA recommendations, adjusted the employee-pool base, and increased the frequency of testing.

**SACP Reviews Electronic Recordkeeping** - In year 2000, FRA approved electronic recordkeeping under the Hours of Service Act, which allowed the development of an official electronic hours-of-duty work/rest record for the UP's train-and-engine personnel. This conditional approval permits an electronically generated record in lieu of a paper record. In 2002, the SACP conducted a review of the program and resolved issues related to employee training, managerial oversight, timely input, input accuracy, errors, and omissions.

**Switching Operations Fatality Analysis (SOFA)** - To enhance the nationwide emphasis on switching operations, the UP SACP formed a new working group to ensure that SOFA recommendations were communicated throughout the UP system. [SOFA was published in 1999, and included the findings of FRA, the Association of American Railroads, and railroad unions regarding fatalities in switching yards.] The SACP's intent was to raise employee awareness of SOFA's findings and recommendations. Among the many improvements from the UP's renewed communication efforts: employee contacts increased dramatically; injuries fell by 19 percent; "Quality Safety Meetings" on switching procedures were conducted; daily internal television releases on SOFA were conducted; SOFA findings were reported on the UP's morning call to all operating personnel; and SOFA-related efficiency tests increase by 36 percent.

### **Union Pacific FY 2003 Audit Plan**

SACP Team Audits and Review/Monitoring:

- **Crew Management Systems:** Conduct review on workload, training, and staffing.
- **Harriman Dispatching Center:** Conduct review on workload, training, staffing, the "Read-back Efficiency Testing Program," and random drug testing.
- **Track:** Conduct reviews on the track-inspector electronic-inspection record system.

- **Motive Power and Equipment:** Review effects of FY 2002 focused team inspection on quality-control-measure implementation; regional monitoring being conducted through routine inspection activities.
- **Signal and Train Control:** Conduct field reviews of signal-maintainer territorial assignments (San Antonio, TX, and Portland, OR, planned).
- **Service Unit Safety Committee On-site Reviews:** Attend local service-unit safety committee upon identification of methodology and process breakdowns (issue escalation/member assignments).

## 5) CSX Transportation, Inc. (CSXT) - FY 2002 SACP Activities

**CSXT Overview** - The FRA continued to check the railroad's adherence to its May 1, 2001, SACP monitoring agreement. The CSXT complied with the agreement in all categories. The agreement addresses remedial actions for issues involving the adequacy of maintenance-of-way manpower levels; the replacement of rail, ties, and ballast; and track surface renewal.

**Pole-Line Elimination Project** - This SACP initiative resulted in the expenditure of nearly 70 percent of the railroad's \$25 million commitment. Brush teams are working to handle pole-line vegetation problems; however, circuit plans and defective insulated joint issues continue.

**SACP Electronic Recordkeeping/FRA Waiver Process Completed and Approved** - The CSXT has started FRA signal electronic recordkeeping on its Southern Region; the FRA will continue to monitor its implementation.

**More Timely Inspections** - Using the SACP process, the Brotherhood of Railroad Signalmen (BRS), the CSXT, and the FRA conducted a time-and-testing study in the field to determine how long it takes for a signal maintainer to perform FRA-required tests. The BRS was convinced that if a supervisor had a better way of tracking tests, the required inspections would be completed on time. A joint team conducted field time-and-testing, and developed an electronic recordkeeping pilot program. The team agreed that by capturing these records electronically it would enhance and improve the accuracy and timeliness of FRA reporting. Additionally, the CSXT would have the capability to build a field data base. This approach has resulted in more timely inspections.

**Improved Programs** - CSXT responded favorably to a SACP performance-review audits for Efficiency Testing, Alcohol and Drug, Engineer Certification, and Stop Signal violations, and made many changes to its programs.

The FRA has been working with the CSXT since 1997 to ensure that the railroad's program of operational tests and inspections, and its recordkeeping (49 CFR Part 217.9), are in compliance with Federal regulations. Year-2001 audits revealed several concerns and many deficiencies. The FRA conducted a follow-up SACP audit during 2002, which showed improvement.

As part of FRA's SACP, a review of the railroad's Alcohol and Drug Program was conducted with CSXT staff in the third quarter of 2002. The FRA inspection found that the railroad complied with this complex Federal program.

**Reduction of Hitch Discrepancies Remains a Major Safety Focus** - As a result of SACP, railroad supervisors continue to stress proper securement procedures during daily safety briefings for "Trailer-on-Flat-Car" (TOFC) and Container-on-Flat-Car (COFC). Also, all employees are now required to view a training video on hitch-securement procedures. The CSXT's car foremen received additional "train-the-trainer" TOFC/COFC securement training, and the railroad has placed additional emphasis on inspecting TOFC hitches for out-of-date lubrication.

**Damage-Prevention Teams In Place To Reduce Improper Loading** - SACP damage-prevention teams were established to identify problem shippers and to work with shippers to reduce improper loading. A 10 percent random-sampling inspection of hazardous-materials shipments is continuing at gates for proper blocking and bracing. Shippers of steel coils sign an indemnification agreement (assignment of responsibility) stating that loads offered for transportation are properly blocked and braced. All paper shipments are inspected for proper blocking and bracing at gates.

**Identifying Hazmat Shippers with Improper Hazmat Documentation** - The FRA worked closely with CSXT to identify hazmat shippers with improper hazmat documentation. The CSXT developed new hazmat policies and incorporated them into the railroad's Standard Operating Procedures Manual. The CSXT's regional safety managers received additional hazmat "train-the-trainer" instruction and all facility employees completed hazmat certification training.

**Hazmat Train Documentation** - FRA personnel are addressing hazardous-materials train documentation and placement issues on CSXT's Southern Region. The Region has identified inaccurate train documents and consists, which are issues previously identified under SACP. FRA personnel are taking a comprehensive look at hazmat car-position documentation to eliminate systemic inaccuracies. The FRA has received a commitment from the railroad's executive vice president for transportation that the CSXT will acquire new hand-held computers and provide training to improve the accuracy and timeliness of car reporting, which will help improve yard inventory.

**Special SACP Team Established to Address Mechanical-Caused Derailments** - To address the leading cause for FRA-reportable, mechanical-caused derailments (axle roller bearing failures), a CSXT team was established. Through its efforts, two new wheel-impact detectors were installed on entrances into high-occurrence train routes; one impact detector was relocated; and ten wayside defect detectors and 14 hot-wheel detectors were installed. The number of reportable accidents due to roller bearing failures has decreased.

**Improvement in Calendar-Day Locomotive Inspections** - These inspections have been traditionally a problem area for FRA enforcement. Despite years of inspections and the submission of numerous violations, little progress was made in improving daily locomotive inspections. The FRA

entered into a SACP partnership with CSXT mechanical managers under the auspices of the FRA SACP Project Coordinator. With FRA's assistance, the CSXT managers devised a centralized reporting system for daily inspections. Employees were trained on both reporting and inspection procedures. The FRA inspectors found significant improvement in the quality of CSXT's inspections, with the percentage of reports available for inspection now running 85-90 percent better.

**Multi-year Track Expansion** - The FRA is involved in a multi-year track-expansion effort on the CSXT in the South Florida Rail Corridor double-tracking project. The CSXT and Herzog Transit Services have begun the single largest segment of the project, which is to double-track approximately 50 miles of railroad. The balance of this work will take place over the next two years. FRA personnel have diligently worked with the CSXT to develop a successful SACP communications plan and on-track occupancy procedures to alleviate Roadway Worker Protection incidents that previously occurred on this project. FRA meets regularly with the CSXT, Tri-Rail, Florida East Coast Railroad, Herzog, Amtrak, and other contractors to address this and other safety issues faced on the corridor. In addition, FRA continues to address on-track protection issues involving CSXT's train dispatchers and maintenance-of-way employees.

**FRA Helps CSXT Comply with Repair-Track Air Tests** - FRA worked with SACP teams to help the railroad comply with repair-track air tests and to prepare the carrier for the new "Part 232" power-brake rule. A "Train the Trainer" class will start in May 2003.

**Safety of Intermodal Facilities** - SACP team audits at intermodal ramps continued to identify, mitigate, and eliminate safety hazards. The CSXT intermodal safety committees are now in place at each facility and OSHA-reportable injuries systemwide are down 27 percent.

**Remote Control Training Implemented** - The railroad aggressively implemented Remote Control Locomotive (RCL) operations in yards throughout its railroad system. In compliance with FRA Safety Advisory 2001-01 and SACP team recommendations to ensure safe operations, the railroad conducted extensive training on the use of RCL. Currently, 1,228 employees have been trained.

**Fatigue Countermeasure Project** - The CSXT, the United Transportation Union, and FRA initiated a pilot SACP fatigue-countermeasure project at the CSXT's Garrett terminal. The pilot project was funded by a grant from the FRA to the union. The pilot project will develop a fatigue model that can be used at other locations on the CSXT and other railroads.

**Reductions in Accidents/Incidents** - The FRA SACP safety focus in 2002 was concentrated in two areas, those accidents related to human factors and those caused by track defects. Both areas have realized significant reductions. Human-factors-caused accidents are down 15 percent (151 vs. 128), and track-caused accidents are down 30 percent (105 vs. 74).

### **CSXT FY 2003 Audit Plan**



## SACP Team Audits and Performance Reviews:

- The SACP team will conduct a performance audit on CSXT Engineer Certification records in Jacksonville, Florida.
- The Hazardous Materials SACP team found that the hazardous-materials crews were not being provided the proper documentation for hazardous-materials movements. The FRA, in conjunction with CSXT, focused efforts on improving the accuracy of the train crew documentation during 2001. Initially, the specific focus was directed at the CSXT trains departing the Conrail Shared Assets locations; however, the scope has been expanded to large terminals and interchange points. These areas were targeted because previous joint field inspections indicated that a majority of the hazardous-materials-shipping paper deficiencies occurred at these locations. In 2003, the team will expand its focus to address this issue.
- The Mechanical SACP plans an audit review of the railroad's shop practices and calendar-day inspections. Additionally, pre-departure inspections behind both train crews and carmen will be conducted.
- A focused inspection of crossing warning systems was completed in March 2003 in Selkirk, New York. The purpose of this SACP effort is to identify warning systems with a history of excessive false activations, with the goal of eliminating or reducing such activations.
- The FRA will review highway-rail grade-crossing-malfunction issues, audit various recordkeeping requirements, and evaluate the CSXT process.

## **6) Illinois Central (IC)/Canadian National Railroad (CN) - FY 2002 SACP Activities**

**Safety Rule Book Revision Process** - With the acquisition of several new U.S. properties by the CN, a SACP decision was made to revise and update the CNIC's Safety Rule Book. This decision was necessary because each of the former railroads was still operating under its own particular rule book. Additionally, the IC's maintenance of equipment, maintenance of way, and transportation rules, along with the rules from the Grand Trunk Railroad's engineering, mechanical, and transportation departments, lacked consistency. The safety rule books were difficult to use, and had no safety standards for the clerical craft.

A decision was made to devise a method for re-writing old rules. Teams were formed and a process was created to change the way rules were written. They are now accurate and up-to-date.

**Mechanical Audits** - Regular inspections by FRA indicated that CNIC equipment failed to comply with FRA regulations and exposed railroad employees to derailments, injuries, or possible death. The regularity of serious defective conditions found in outbound trains approved for departure by the CNIC's Mechanical Department was the deciding factor leading up to a June 2002 audit. FRA teams audited six different facilities. They inspected 1,659 freight cars and found 303 defects on 251 cars, a 15 percent defect ratio. Additionally, 58 locomotives were inspected and 69 defects were discovered, a 59 percent defect ratio.

The FRA discussed the audit findings with CNIC managers, advising them that FRA was principally interested in prompt corrective action rather than the typical submission of a proposed SACP Action Plan. The railroad promptly initiated its own internal audit and confirmed FRA's findings. A conference between senior FRA and CNIC managers was held. The CNIC outlined initiatives the railroad planned to take to gain compliance and enhance safety. FRA agreed to the planned initiatives and advised that a re-assessment to evaluate their efforts would be scheduled soon. The CNIC's proposed actions include: 1) conduct internal audits behind CNIC car and locomotive inspectors; cover all work shifts 24/7; conduct timely critiques with inspectors; 2) hold weekly conference calls with all participating audit team members; review results; 3) plan and/or modify strategy; and 4) share findings with FRA.

The FRA is conducting follow-up audits. Diligent inspections will be directed at one yard or facility until acceptable improvements have been made and maintained over time. The length of time and number of FRA inspections will be dependant upon the yard or facility's ability to improve to an acceptable safety level. Once that level has been reached and maintained, another yard or facility will be selected for concentrated inspection and enforcement activity. However, regular inspections will not be curtailed at other yards or facilities during this time.

### **III. Details for Other than Class I Railroads**

#### **1) Alaska Railroad Corporation (ARR) - FY 2002 SACP Activities**

**ARR Overview** - The SACP has been ongoing with the ARR since 1996. Despite changes in personnel (both management and labor), partnerships involving all crafts and management have continually been created, active, and successful in resolving safety issues.

**Improved Training** - Following FRA/ARR SACP meetings and regular inspections, the FRA requested that 12 safety-related problems be resolved. One issue was resolved when the railroad agreed to provide CPR training to employees who are required to handle or be exposed to toilet waste in passenger cars, or who provide emergency first aid and are concerned about contracting hepatitis. Also, any employee requesting a hepatitis vaccine will be provided one. Additionally, the engineering department created three field-safety positions to monitor safety conditions and provide training to employees. The ARR is currently providing training through a web-based program. New employees are given additional days of training before going into the field. The increase in training has proven to be a major factor in the reduced number of injuries.

#### **2) Dakota, Minnesota & Eastern Railroad (DME) - FY 2002 SACP Activities**

**DME Overview** - The FRA coordinated a SACP project with the railroad's management and craft employees to identify systemic safety and compliance concerns, make recommendations for corrective action where necessary, and monitor the effectiveness of those corrective measures. The project began in July 1999 prior to a period of rapid growth and expansion of operations.

**Successful Partnerships** - With involvement from all crafts and management, safety complaints have been reduced to insignificant levels. In 2002, the FRA investigated no complaints. Also, employee injuries per 200,000 employee-hours decreased from 8.54 in 1999 to 3.03 in 2002.

**Listening Sessions Result in Safety Improvements** - Fourteen listening sessions were conducted across the system in 2002 at locations where large groups of employees are headquartered. DME employees identified safety concerns and made suggestions for 81 safety improvements. In the first several months of 2003, additional listening sessions were conducted across the system, which generated 97 concerns for resolution.

**Employees Can Now Submit Safety Concerns** - As part of an FRA recommendation, the DME now allows any employee to record and submit to management for resolution any identified local or isolated safety concern. A standard form was developed for recording and tracking the employees' concerns. Forty-three forms were submitted in 2002, all of which were resolved.

**Additional Information** - During 2002, the DME purchased the Iowa, Chicago & Eastern Railroad. In September, the DME moved its headquarters from Brookings to Sioux Falls, South Dakota. The successful move of the dispatching center to Sioux Falls allowed operations to begin smoothly. No incidents or accidents have resulted from the move. Because of the cooperative relationship formed between the DME and FRA, all of the safety concerns related to the new dispatching computer system have been resolved.

### **3) Long Island Railroad (LIRR) - FY 2002 SACP Activities**

**LIRR Overview** - The FRA's participation in the LIRR SACP has resulted in the formation of the joint FRA/LIRR Management/Labor/Vendor New Fleet Committee. This committee meets approximately six times a year and includes representatives from FRA, three major unions, the LIRR Mechanical and Mechanical Engineering Departments, and two private companies. The committee has resolved many issues, including the repair and/or replacement of locomotive sun visors, engine compartment doors, and defective magnet valves in C-3 coaches. It has issued a "Transportation Troubleshooting" guide, and installed third-rail shoe-beam boots on the DM-30 locomotives. Several concerns being monitored include Locomotive Phase-3 crack issues; the EMD retrofit program; locomotive cab heaters; locomotive capacitor-isolation modifications; and the replacement of defective 480V wayside jumper cables.

**SACP Mechanical Safety Partnership Committee** - Consisting of representatives from FRA, LIRR management, and three major unions, this committee meets every six weeks to address safety issues within the railroad's mechanical department. Resolved issues include:

- The production and posting of "Blue Signal" diagrams at each yard location where mechanical department employees report to work. Locks have also been purchased and installed for the mechanical department for all yards for Blue Signal protection.
- A new "Car Mover" training program, with eventual use of a simulator for portions of the training.

- A new LIRR brake-test slip for compliance with the new 49 CFR Part 238 brake-test requirements.
- Project updates on the introduction of the LIRR's new M-7 fleet.

At these meetings, FRA has provided guidance and interpretations on the new Part 238 rulemaking, as well as answer any questions on other regulations that pertain to the LIRR's mechanical department.

#### **4) Massachusetts Bay Transportation Authority (MBTA) - FY 2002 SACP Activities**

**Advanced Civil Speed Enforcement System (ACSES) Equipment Issues** - Under the auspices of the Amtrak SACP, FRA worked with Amtrak and MBTA to facilitate the installation of ACSES onboard equipment on MBTA commuter locomotives and control cars. With a goal of meeting the requirements imposed by the ACSES Order of Particular Applicability, FRA facilitated weekly progress meetings, often including the vendors, to move the project forward. FRA provided regulatory guidance and frequently mediated disputes between the parties. By December 2002, 90 percent of MBTA locomotives and control cars were ACSES-equipped, with a majority of those operating in revenue service.

The FRA also worked to ensure that the ACSES wayside installation was successful following the resolution of several hardware and software problems. Again, FRA facilitated meetings with Amtrak and the vendors to expedite problem resolution.

**North East Corridor Cab Signal Flips** - With the implementation of the new cab-signal system between Boston, Massachusetts, and New Haven, Connecticut, trains began to experience severe cab-signal flips (a signal system defect). A SACP team consisting of Amtrak, equipment manufacturers, and FRA worked to determine the cause of these unnecessary flips. As a direct result of this partnership, a program was implemented to revise wayside-track circuit software at more than 300 locations. This corrective action has eliminated the unnecessary cab-signal flips and improved the reliability of the signal system.

**Wheel Lubricator Interfering with Crossing Warning** - Several highway-rail grade crossing activation failures were caused by an accumulation of grease on top of the rails, resulting in a loss of train detection. The presence of grease was caused by improperly maintained wheel-lubrication systems. The combination of poor warning-system detection and reduced train-braking adhesion at grade crossings represented a significant safety concern. Working with the SACP Program Manager, Amtrak and the MBTA Engineering Department crafted a Maintenance Assurance Plan for track-side wheel-lubrication systems. The plan includes enhanced monitoring of these devices and the implementation of detailed maintenance procedures systemwide.

#### **5) Metro North Railroad (MNCW) - FY 2002 SACP Activities**

**MNCW Overview** - As a result of SACP, MNCW implemented a “rebuild program” to correct the trend of tread-brake unit problems. Other accomplishments include:

- Through attendance at the carrier’s Safety Steering Committee meetings, FRA identified a trend in employee injuries. The railroad responded by forming safety audit teams, where supervisors are required to perform random safety inspections of work areas.
- Inspectors recommended engineering changes to the carrier’s wheel-true-machine control valve after a fatality occurred. The railroad has adopted this change, which enhanced the safe operation of the machine.
- The FRA has joined with the railroad to obtain compliance with “Blue Signal” and freight-train brake tests. The railroad’s published procedures were incorrect; new ones have been drafted and are awaiting approval from the carrier’s vice president. New gauges have also been ordered. Once approved, a systemwide training program will begin.
- An FRA/Management working group has been formed, whose intent is to promote communication between FRA and railroad management on safety concerns.

#### **6) New Jersey Transit (NJT) - FY 2002 SACP Activities**

As a result of the SACP with NJT, joint focused inspections started at one facility each month in 2003. Modifications will be made on both the Comet 5 and ALP 46 equipment under Federal regulations (Passenger Equipment Safety Standards, 49 CFR, Part 238). A continuity program is also underway for locating photo-luminescent signs for emergency egress.

#### **7) Port Authority Trans Hudson (PATH) - FY 2002 SACP Activities**

Because of the partnership between the FRA and PATH, several issues have been identified and corrected, including:

- Areas of noncompliance with airbrake maintenance identified on PATH’s fleet of 339 MU locomotives. PATH is performing the required maintenance.
- Specialized equipment for World Trade Center reconstruction.
- Identified hazards with employees riding in gondola cars carrying World Trade Center debris. Equipment was modified and procedural changes applied, which included providing a location for conductors to safely back up trains.

#### **PATH FY 2003 Audit Plan**

Through the efforts of FRA and PATH, an FRA/Labor/Management Working Group has been formed to promote better communication among all parties on safety concerns. The first meeting was held in January 2003, and addressed two issues:

- A plan was developed to correct the clearance height above the rail where the carrier's debris pushers were too low.
- Unsafe working conditions at Journal Square Yard (close or no clearance between equipment and where mechanics walk on the third rail to perform inspections). PATH has made rule changes; equipment can not be placed on adjacent track when performing inspections, and close-clearance signs will be posted.

#### **8) Providence and Worcester (PW) - FY 2002 SACP Activities**

In 2002, FRA worked with the PW on grounding locomotive trucks and car-body components and personal-injury hazards posed by operating in electrified territory. As a result, ground straps have been applied to the locomotive fleet.