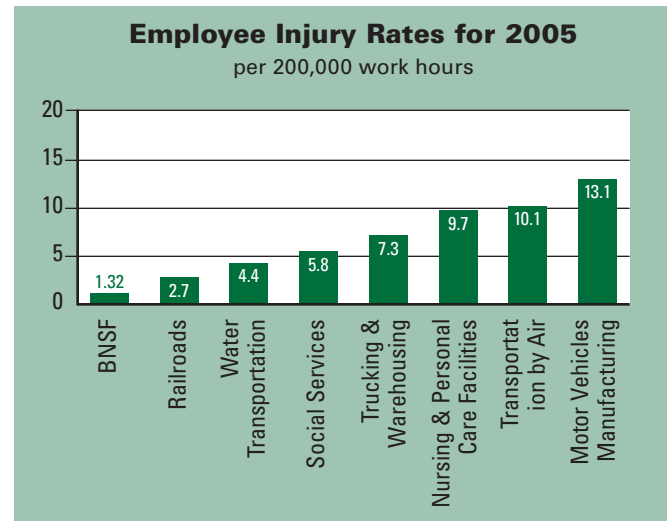


# EMPLOYEE SAFETY PROGRAMS



## Safety Overview

- The U.S. railroad industry has a lower employee injury rate than other modes of transportation and most other U.S. industry groups, including agriculture, construction and manufacturing.<sup>1</sup> The following 2005 statistics compare employee injury rates per 200,000 work hours: **Railroads**, 2.7; Water Transportation, 4.4; Social Services, 5.8; Trucking & Warehousing, 7.3; Nursing & Personal Care Facilities, 9.7; Transportation by Air, 10.1; Motor Vehicles Manufacturing, 13.1. BNSF's injury rate of 1.32 injuries per 200,000 work hours in 2005 was well below the rail industry average, based on Federal Railroad Administration (FRA) reportable injuries.
- From 1995 through 2005, BNSF decreased its employee injury rate by about 52 percent overall.
- For every year from 1995 through 2005, BNSF has received a Harriman Award from the Association of American Railroads, recognizing BNSF for being one of the top three Class I railroads in the nation for its employee safety record.
- BNSF's safety vision is to operate injury- and incident-free. To continue progress toward this vision, BNSF annually invests more than \$20 million on developing and managing employee safety programs. BNSF also invests extensively in equipment and facility improvements that enhance safety. For instance, in 2005, BNSF spent \$43.8 million on new signal equipment and trackside warning detectors, \$17.2 million on mechanical facility and shop machine improvements, \$2.0 million on yard office and building improvements, and \$2.1 million on additional safety items for field operations (such as yard lighting and fall protection). In 2005, BNSF also spent \$19.8 million on grade crossing replacements, surface improvements and closures, \$0.7 million on right-of-way fencing, and \$8.7 million on proactive environmental investments (such as wastewater treatment plants).



## Employee Safety Initiatives

**Safety personnel.** BNSF has a staff of more than 35 full-time safety managers, who develop and oversee system-wide safety processes and safety training, and more than 100 full-time craft employees in safety, including 29 conductor, engineer and yardmaster safety coordinators, 35 maintenance of way safety assistants, and 40 mechanical safety assistants. These craft employees are assigned through safety agreements with labor unions to oversee craft-specific safety processes.

<sup>1</sup> Source: Bureau of Labor Statistics, 2004 Survey of Occupational Injuries and Illnesses

**Safety action plans.** Every BNSF operating division and shop has a Safety Action Plan that provides a complete safety program, including risk identification procedures, employee participation and safety committees, safety communication, safety incident reporting procedures, emergency response plan, and other safety initiatives. Performance evaluations of BNSF division and shop management include a review of the effectiveness of their Safety Action Plan.

**Risk identification processes.** BNSF provides daily job safety briefings for all work teams. In addition, each BNSF field supervisor conducts an average of 1,000 operations tests annually, designed to measure employee adherence to key safety rules and procedures. In 2005, more than 978,473 000 operations tests were conducted across the BNSF network. BNSF has also implemented a system-wide “Closed Loop Safety Process,” a systematic process for identifying and eliminating at-risk work behaviors and environmental concerns at each BNSF location by using work practice observations and strategic interventions.

Engineering employees also helped develop and communicate more than 250 safety training and awareness programs. These programs are posted on BNSF’s Engineering Safety Wweb site.

**Job safety analyses.** BNSF has more than 1,300 job safety analyses (JSAs), which outline step-by-step work procedures for key work tasks. These JSAs are designed to encourage safer working behaviors.

**Safety and operating rules.** BNSF provides Safety Rules for All Employees, as well as craft-specific safety rule books, which describe safety precautions and considerations for most daily work tasks. BNSF train, yard and engine employees are also subject to the General Code of Operating Rules, which is a standard set of rail industry rules. Key rules are reviewed in new hire training, as well as in employee safety certification reviews, and all employees are required to demonstrate knowledge of the applicable safety rules. The rule books are posted on the BNSF Internet and Intranet Wweb sites, and BNSF requires that copies of the rules be available at all times at employee work sites for ready reference.

**Employee empowerment.** In the BNSF Safety Vision, which is included in the Safety Rules for All Employees, as well as in employee safety training and the Closed Loop Safety Process, BNSF emphasizes that employees are empowered to “take responsibility for personal safety, the safety of fellow employees, and the communities in which we serve.” As explained in training for the Closed Loop Safety Process, employees are empowered to “take the initiative to stop the work process when they feel their personal safety or the safety of the work team is compromised.”



**Employee involvement.** BNSF employees are represented in the system-wide Safety Assurance and Compliance Process (SACP) Task Force, a joint safety improvement process that includes BNSF management and, labor representatives. BNSF has also established SACP teams on each of its 12 divisions. A Safety Summit, including BNSF's Operations management team, officers of the Brotherhood of Locomotive Engineers (BLE) and United Transportation Union (UTU), and employee Safety Coordinators, meets quarterly to review safety issues and initiatives impacting Transportation employees. The Mechanical Safety and Health Team, made up of mechanical safety assistants, holds meetings twice a year. The Engineering safety assistant/facilitator teams meet on a regular basis. In addition, virtually every BNSF field location has a local site safety committee, which involves a large number of local employees in the safety improvement process.

**Safety communication.** BNSF issues safety communication, which includes videos, safety news, division newsletters, safety campaigns, and safety conference calls. Safety messages are consistently reinforced in BNSF communication tools, including BNSF Today, the daily electronic newsletter, Railway, the quarterly employee magazine, and BNSF Safety Briefings.

**Safety concern feedback processes.** BNSF has a system employee hotline, where employees can report safety concerns and questions. Most safety issues are resolved within a week after the call is received, and feedback is provided to all callers who leave contact information. In addition, many divisions offer a division safety hotline and a safety incident reporting process for employees on the division.

## Safety and Technical Training

**Safety and technical training.** BNSF's Technical Training Center (TTC) is located on the campus of Johnson County Community College (JCCC) in Overland Park, Kansas, a suburb of Kansas City. BNSF's TTC occupies more than 110,000 square feet of office, classroom and studio space. Here, 69 instructors teach approximately 11,500 BNSF employees each year in all crafts. The focus is hands-on, experiential training, with a ratio of four lab classes for every classroom course. The TTC has an array of simulation and lab equipment, including locomotive simulators; traffic control system simulators; power-operated switch layouts; grade crossing simulators; telecommunications and electronic labs and test equipment; simulated radio and transmission networks; freight car and locomotive air brake simulators. Additionally, 25 TTC instructors and 10 maintenance of way field trainers provide system-wide on-site training to approximately 33,000 employees annually.



**Industry training.** BNSF's TTC is so well-regarded that about 20 short lines, several Class I and foreign railroads, and the Federal Railroad Administration and other government agencies enroll their employees in TTC courses each year.

**New training technology.** In 2001, BNSF rolled out the rail industry's first-ever network of locomotive simulators, by installing 15 NetSimulators at field locations for "distance learning" opportunities. As of 2006, BNSF had 43 NetSimulators. BNSF has had locomotive simulators at its TTC since 1986, but NetSimulators bring hands-on locomotive training to field locations where employees live and work. The NetSimulators also allow employees and trainers to customize simulations to reflect different train types, weather conditions, terrain, track, and times of day, so training can focus on local conditions typically faced by employees. More than 2,100 locomotive engineers completed NetSimulator training in 2005.

**Computer-based training.** BNSF training specialists have developed more than 500 computer-based training (CBT) lessons, that is, interactive computer modules that use video, animated graphics, audio clips and self-assessments. CBT "learning centers" are installed at more than 200 locations across the BNSF network, with more than 700 CBT monitors. About 18,000 BNSF employees were trained in 2005 through CBT. That figure includes locomotive, freight car and transportation supervisors who completed their certification training as well as about 9,000 engineers and conductors who completed their rules review and testing on BNSF's NetSimulators and CBT system.

## **New Safety Technology**

**Hy-rail limits compliance system.** BNSF envisioned, developed and implemented the rail industry's first-ever Hy-rail Limits Compliance System (HLCS). This system provides a safety overlay for hy-rail vehicles (specially-designed maintenance and inspection vehicles that can operate on the highway and the rails). A joint effort by Network Control Systems, Technology Services, and Meteor Communication Corporation, HLCS has proven itself by adding a layer of safety to the operation of hy-rail vehicles on active main-line tracks. The system uses Global Positioning Satellites (GPS) to monitor the locations of hy-rail vehicles and compares their locations against the track authorization limits issued to the vehicle operator. Whenever the hy-rail is in danger of exceeding its authority limits or is approaching another HLCS-equipped vehicle, the HLCS provides a series of warnings to the operator. By the end of 2005, BNSF had installed HLCS on 2500 hy-rail vehicles.

