ENVIRONMENTAL AND HAZARDOUS MATERIALS PROGRAMS
Overview of BNSF’s Environmental Policy

BNSF’s environmental policy statement states that “It is the policy of the BNSF Railway Company to operate so as to protect and enhance the environment, to protect the health and safety of employees and the communities in which BNSF operates, to comply with environmental laws and regulations, and to continuously improve BNSF environmental performance by monitoring and measuring environmental indicators and goals.” BNSF will strive to minimize releases to air, land and water. We will minimize the volume and toxicity of waste. We will reduce risk and be prepared for incidents and emergencies. We will use responsible contractors. All BNSF employees will understand the need for prompt and accurate reporting of all environmental incidents and issues.

For a more comprehensive look at the BNSF Environmental/Hazardous Materials Team, go to www.BNSF.com/communities/responsible_care/pdf/Environmentreport.pdf

General Information

• More than 1.7 million carloads of hazardous materials are transported by rail each year in the U.S. – double the number handled in 1980 – and 99.998 percent of rail hazmat shipments reach their final destination without a release caused by an accident. Railroads have reduced overall hazmat accident rates by 90 percent since 1980 and 49 percent since 1990.1

• The safety record for hazmat shipments on rail is far better than the comparable record for trucks. Freight railroads have less than seven percent of the number of hazmat incidents that trucks do, despite having roughly equal hazmat tonnage.2

Environmental Programs

Reducing air emissions. BNSF is committed to reducing air emissions, with a program focusing specifically on locomotive emissions. Since 1995, BNSF has acquired more than 2,700 new locomotives and retired older, less efficient units. These newer locomotives emit fewer emissions than older models. Since 1992, BNSF has reduced total locomotive emissions by 25 percent. BNSF has also been a leader in reviewing alternative fuel technologies to further reduce air emissions. BNSF is leasing two locomotives that operate on liquid natural gas. These locomotives emit low amounts of nitrogen oxide, compared to other switch engines. These are the only two such locomotives operating in the United States. BNSF is also working with the Environmental Protection Agency and several state agencies in addressing regional air quality issues. In Houston, Chicago, Portland, Ore., Vancouver, Wash., and other locations, BNSF

---

1 Source: U.S. Department of Transportation data for 2001
2 Source: AAR analysis of data from FHWA, FRA, RSPA, and STB
has installed and is evaluating new idling reduction systems on yard switch engines and line haul locomotives that reduce fuel consumption and air emissions. These systems may contribute to helping the states achieve air quality standards at these locations.

**Wastewater treatment.** BNSF’s wastewater treatment plants achieve compliance for more than 99 percent of all opportunities. BNSF spent $8.1 million in 2003 upgrading our treatment plants to keep them at high levels of compliance.

**Recycling and material reclamation.** In 2005, BNSF recycled more than 3.3 million gallons of used lubricating oil and more than 867,000 pounds of batteries. In addition, BNSF is committed to reclamation of used crossties. Of the 2.6 million crossties replaced in 2005 across the rail network, less than 1 percent were disposed of in a landfill. More than 1 million crossties were offered for reuse in landscaping, more than 1.5 million were provided for energy cogeneration, and approximately 26,000 were cascaded for use on secondary lines and sidings.

**Fuel efficiency.** Railroads are one of the most fuel-efficient transportation modes available. The Department of Transportation has stated that trains are three times more fuel efficient than trucks, and a draft study for the Environmental Protection Agency states that “freight rail is four to seven times more fuel efficient than freight trucking.” BNSF has put tremendous emphasis on programs to further conserve fuel, including promoting fuel-efficient train handling practices, shutting down idling locomotives whenever possible, improving locomotive efficiency, and lubricating the wheel and rail interface to reduce friction. Since 1995, BNSF has improved fuel efficiency by nearly 10 percent, due in large part to acquiring more than 2,700 new locomotives and retiring older, less efficient units, as well as increasing use of fuel efficient operating practices.

**Endangered species.** BNSF has an active program to help protect endangered species. Drainage structures are designed to allow for fish passage. Projects are scheduled and planned to minimize impact to sensitive animal habitat and endangered wildlife and plants. The right of way is maintained to help ensure it does not become attractive to bears and eagles to help keep them out of danger.

**Hazardous Materials Initiatives**

**Transportation safety for hazardous materials.** Hazardous materials shipped on BNSF receive special identification and handling that includes waybill preparation, track and train list inventories, in-train placement checks, automatically updated train list entries and emergency response information. BNSF’s Transportation Support System (TSS), a comprehensive mainframe system that tracks all shipments and creates a “trip plan” for each car, supports all aspects of hazardous materials shipment transportation and documentation. Computer programs analyze the location of cars in a train to ensure BNSF complies with train placement regulations.
Hazardous materials awards. BNSF received the 2005 National TRANSCAER award from the National TRANSCAER Committee. This group is made up of members from within the American Chemistry Council, Association of American Railroads, National Tank Truck Carriers and the Chlorine Institute. BNSF has received this award for an unprecedented six times in the past eight years. The award is given to the TRANSCAER partner or company that does the most to help communities prepare for hazardous materials transportation emergencies. BNSF received the award largely because of its training and exercises with community emergency responders and developing new response tools. BNSF has also received transportation achievement awards from several shippers, recognizing BNSF as their “best” transportation carrier.

Incident Response Programs

BNSF hazardous material responders. BNSF has more than 160 trained and well-equipped emergency responders. These people come from many different backgrounds to ensure a complete and effective emergency response, including mechanical, damage prevention, environmental and safety teams. The large number of trained responders helps ensure that personnel are available to assist if an incident occurs, regardless of location. BNSF also hires contractors, as needed, to assist with specialized applications in medical, hazardous materials operations, and site cleanup. BNSF works closely with state and local officials to protect the public, mitigate the incident, and restore the scene to normal operations.

Geographic information system. BNSF has developed a geographic information system (GIS) that provides point-and-click emergency response information about locations across the BNSF rail network. GIS provides rapid access to information about the rail infrastructure, chemical spill handling procedures, environmental risks and community demographics, which enables BNSF to work quickly and effectively with local emergency response agencies.

Two databases are integrated: a database containing state and local emergency contacts, phone numbers and jurisdictions; as well as a chemical database with information on over 10,000 hazardous materials and appropriate spill response procedures. A street network database allows BNSF to locate problems reported by citizens and local agencies; data on other rail carrier routes provides a crosscheck for reported problems; and the locations of each school, nursing home, hospital and jail are included, so local emergency responders can proficiently protect the public. Other features include an indicator of pipeline locations and an air dispersion model that depicts the likely path of a released product.