

**Application for Special Temporary Authority**  
**BNSF Railway**  
**August 2021**

**NARRATIVE EXPLANATION OF OPERATION**

This application seeks a grant of Special Temporary Authority for research, development, and testing of next generation 220 MHz Positive Train Control (“PTC”) technology. The applicant, BNSF Railway (“BNSF”), is one of North America’s leading freight transportation companies, with a rail network of 32,500 route miles in 28 states and three Canadian provinces. BNSF is one of the top transporters of the products and materials that help feed, clothe, supply and power communities throughout America and the world.

PTC is a communications-based traffic control system mandated by the U.S. Congress for all of the largest U.S. railroads, including BNSF, pursuant to the Rail Safety Improvement Act of 2008, 49 U.S.C. § 20157, and implementing regulations of the Federal Railroad Administration (FRA), 49 C.F.R. § 236.1001 et seq. PTC is designed to prevent train-to-train collisions, overspeed derailments, incursions into established work zones, and unintended movements of trains through switches. Such events jeopardize the safety of not only railroad personnel, but also passengers and the public. PTC is required on lines over which intercity or commuter rail passenger transportation is regularly provided and on lines over which hazardous materials, including such everyday chemicals as chlorine used for drinking water, may be transported. Effectively, PTC technology must be implemented throughout much of each railroad’s network. BNSF is requesting this license to test its next generation PTC technology.

BNSF proposes to operate, for a limited time period for test operations, two fixed units in Texas and three fixed units in Illinois. The communications system being tested is at 217 to 222 MHz. The emission designators for these experimental operations will be 8K90DXW and 17K80DXW. The trackside base station radios will operate at a maximum transmitted power of 40 dBm and at an EIRP of up to 45 dBm EIRP.

“Stop Buzzer” contacts for the eleven terrestrial trackside sites are as follows:

Mr. Jim Barrett at +1-682-429-6934

Mr. Miles Francis at +1-817-368-3447