

**Application for Conventional Experimental License  
BNSF Railway  
April 2021**

**NARRATIVE EXPLANATION OF OPERATION  
AND FREQUENCY COORDINATION**

This application seeks a grant of an experimental license for research, development, and testing of a radar system on a runway to be used for Unmanned Aerial Vehicle (UAV) evaluations. The applicant, BNSF Railway (“BNSF”) is a Class I freight rail carrier. For several years, BNSF, in conjunction with the FAA, has been evaluating UAVs for use in promoting safe and effective freight rail operations

BNSF proposes to operate, for a limited time period, terrestrial radar at three sites in Texas. BNSF will install Echodyne Echoguard radars to be used for airborne vehicle detection during UAV testing. The UAV testing will include evaluation of radar systems to support UAV flights.

The communications system being tested operates in the 24.45 GHz – 24.65 GHz band. The emission designator for these experimental operations will be 165MF3N. The radios will operate at a maximum transmitted power of 2.5 watts

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