

FCC 302 application for replacement of Aux antenna  
WRCH (FM) fac. Id. 1910  
July 21, 2015

## ENGINEERING STATEMENT

### **ENVIRONMENTAL**

An Environmental Assessment is not required as grant of this application would not be considered a major environmental action.

The transmitting antenna is mounted on a tower that has been registered with the Commission (ASR 1041624). The antenna, an ERI, model SHPXA-4BC-HW-SP "AXIOM" 4 bay with 1/2 wavelength spaced elements, is installed with the center of radiation 122 meters above ground (the same center of radiation as the antenna that was replaced). The WRCH auxiliary antenna ERP remains at 18.5 kW (H+V).

The transmitting facilities comply with the FCC guidelines limiting human exposure to radio frequency energy. The vertical pattern is typical of a standard ERI SHPX rototiller type antenna. A worst case field factor of .22 at an elevation angle of -44° was considered, based on the manufacturer's theoretical specifications. The maximum power density level at any location at ground level, calculated in accordance with OET Bulletin No. 65 (August 1997), is determined to be less than 5% of the most restrictive applicable limit (Un-controlled General Population). If work is done on the tower in an area where over exposure could occur, the Licensee in coordination with the other users will take necessary action to prevent the overexposure of workers on the tower including reducing the transmitting power or ceasing operation completely.