ENGINEERING EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
RADIO ONE LICENSES, LLC
FM BROADCAST STATION WFXC
DURHAM, NORTH CAROLINA
FACILITY IDENTIFICATION 36952
CH 296C3 7.5 KW 151M

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Engineering Statement

The engineering exhibit of which this Statement is part, was prepared on behalf of Radio One Licenses, LLC, licensee of FM broadcast station WFXC Durham, North Carolina, Facility Identification Number 36952. Station WFXC operates on channel 296A employing effective radiated power (ERP) of 2.6 kilowatts and antenna height about average terrain (HAAT) of 153 meters. By means of this application Radio One seeks a one-step upgrade for WFXC, to be processed employing the provisions of 47 CFR 73.215. As proposed, WFXC would continue operation on channel 296 but with ERP increased to 7.5 kilowatts and station classification from class A to Class C3. The HAAT is reduced from 153 meters to 151 meters so as to comport with tower registration information.

A slight change in geographic coordinates for the WFXC transmitting location is being made to conform to the tower registration information. The tower registration number is 1008249.

One Step Upgrade

Figure 1 is a map showing the location of the one-step upgrade reference location. From this location, and as listed on Figure 2, the WFXC proposal meets all separation requirements, except for the licensed operation of WKQB Southern Pines, NC, Facility Identification 46948, where a short spacing of 6.6 kilometers results. The licensee of station WKQB holds a construction permit to change the WKQB transmitter location, File No. BPH-20030829AZF. Licensing of the proposed WKQB facility will remove the short spacing with the proposed operation of WFXC. If an application for license for WKQB has not been filed when the FCC

considers the WFXC application, it is requested that the WFXC application remain on file in pending status.

From the reference geographic coordinates, the furthest city limits of Durham are to the southwest at a distance of approximately 18 kilometers. The 70 dBu contour for a maximum facility class C3 station (25 KW, 100 M) extends to a distance of 23 kilometers. All of Durham would be expected to receive a signal level greater than 70 dBu (3.16 mV/m) from a maximum class C3 facility operating at the reference coordinates.

Proposed WFXC Facility

Station WFXC proposes to continue operation from the existing location employing the same antenna height (with corrected antenna height above mean sea level); however, the ERP will be increased from 2.6 kilowatts to 7.5 kilowatts. From the existing location, the WFXC class C3 operation will be short spaced with the licensed operation of WKQB as discussed above, and also with the proposed WKQB facilities by 1 kilometer. Pertinent separations are shown on Figure 3. The WKQB construction permit specifies that the grant of the application is based on employing the provisions of 47 CFR 73.215; therefore the facilities authorized in the permit were employed to show the pertinent protected and interfering contours as depicted on the allocation map, Figure 4. As will be noted, there is no overlap of contour prohibited by 47 CFR 73.215.

The WFXC proposal also results in a short spacing with station WCLN-FM Clinton, NC, which operates on Channel 297C3. As listed in Figure 3, the short spacing is 2.4 kilometers. Station WCLN-FM does not operate under the provisions of 73.215 therefore protected and interference contours for WCLN-FM are based on the maximum permitted facilities for a Class C3 station. As will be seen from the allocation map, Figure 4, there is no overlap of contours prohibited by 47 CFR 73.215.

Predicted Coverage Contours

The proposed 70 dBu and 60 dBu contour for the proposed operation of WFXC are shown on Figure 5. All of Durham is located within the predicted 70 dBu contour.

Potential Radiofrequency Radiation Exposure

The proposed WFXC facilities were evaluated in terms of potential radiofrequency radiation exposure to humans at two meters above ground level in accordance with OST Bulletin No. 65, "*Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation*", August 1997.

The WFXC antenna center of radiation is 148 meters above ground level. The calculated power density two meters above ground level at the base of the tower was determined to be 0.0235 milliwatts per centimeter squared or 11.8 percent of the FCC guideline value for an uncontrolled environment. A very conservative relative field factor of unity was assumed for this calculation.

Access to the tower is restricted and appropriately marked with warning signs. If it becomes necessary for workers to ascend the tower, the power of the station will be reduced, or the station will be taken off the air, so as to prevent exposure in excess of the guideline value.

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