



**ENGINEERING STATEMENT**  
**OF**  
**JOHN F.X. BROWNE, PE**  
**IN SUPPORT OF**  
**MINOR MODIFICATION OF CONSTRUCTION PERMIT**  
**WXXI-DT**  
**Rochester, NY**

**Background**

WXXI Public Broadcasting Council (WXXI) is the licensee of WXXI-TV, CH21, serving Rochester, NY and also holds a construction permit for WXXI-DT, CH16, (BPEDT-19990114KF, Facility ID. # 57274). WXXI is now applying for a minor modification of the construction permit for WXXI-DT. The constructed facility is different from the construction permit in that it uses a directional antenna with a slightly different radiation pattern and has an HAAT that is one meter higher and the ERP has been reduced from 200 kW to 180 kW.

**Antenna**

The antenna that was specified in the construction permit is a Dielectric TFU-18GTH-R C170. This antenna was replaced during construction with a Dielectric TFU-16DSB-M because of installation issues. This replacement antenna has a cardioid pattern which generally mimics the authorized pattern but is slightly different in several azimuths. Since the relative field pattern exceeds the original pattern slightly and the HAAT is one meter higher, the ERP has been reduced from 200 kW to 180 kW so that the authorized 41dBu F(50,90) contour is not exceeded in any direction and the ERP does not exceed the authorized values in any direction.



The new antenna patterns and a relative field/dBk table are included as Exhibit 1a-d and Table #1. The antenna is side mounted thus there is no change in the overall height of the supporting structure. A map comparing the authorized contour and the as-constructed 41 dBu F(50,90) contour is included as Exhibit 2. As can be seen from this map, the as-constructed contour does not exceed that authorized in the construction permit in any direction.

### **RFR/Environmental**

The changes would not involve any elements which would trigger the requirement for preparation of an Environmental Assessment.

The ground level radiation from the proposed analog facility is calculated to be  $0.011228 \text{ mW/cm}^2$ , which is less than 5% of the MPE for public exposure at this frequency.

Workers on the tower in the proximity of the proposed DTV antenna could be exposed to fields which exceed the MPE for occupational exposure. To ensure a compliant environment, WXXI will reduce power or cease operation on WXXI-DT , as necessary, when workers are in the vicinity of the antenna. Workers on the tower will be encouraged to wear personal RFR monitors while working on the tower. Signage is posted warning of the potential RFR hazard on the tower. The tower is enclosed by a locked security fence to limit access to authorized persons only.

### **Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

**B**

A handwritten signature in black ink, appearing to read "John F.X. Browne". The signature is written in a cursive style with a long, sweeping underline that extends to the left.

John F.X. Browne, P.E.

11-01-2004