



**ENGINEERING STATEMENT**  
**IN SUPPORT OF**  
**MINOR MODIFICATION OF CONSTRUCTION PERMIT**  
**WCFE-DT**  
**PLATTSBURGH, NY**

**Background**

Mountain Lake Public Telecommunications Council (MLPTC) is the licensee of noncommercial WCFE-TV, CH57, Plattsburgh, NY (BLET-19881102KE, Facility ID # 46755) and it also holds a construction permit for WCFE-DT, CH38, Plattsburgh, NY (BPEDT-20000427ACT). MLPTC currently holds a Special Temporary Authorization (STA) for a reduced power digital television operation of WCFE-DT (BDSTA-20030224ACW). MLPTC plans to commence operation pursuant to that STA in the first calendar quarter of 2004 in order to meet its digital television build out requirements. MLPTC plans to later convert that STA operation into an auxiliary stand-by facility for WCFE-DT. The modifications proposed by this application will provide for the permanent WCFE-DT main facility. In order to implement its DTV allotment on CH38, MLPTC now proposes to replace its authorized directional antenna with a different directional antenna so that a common antenna can be used for both analog and digital stations. This antenna will have a slightly different pattern than the pattern authorized in the construction permit. This is necessitated by the fact that the existing mountain-top tower used by MLPTC for its analog station is neither capable of accommodating another antenna and transmission line for the DTV station nor is it capable of being modified to do so. Replacement of the tower would be both technically and economically problematic. Because the proposed antenna pattern is slightly different and - in some directions - exceeds the authorized power the proposed ERP has been reduced so the authorized power is not exceeded in any direction so as to maintain the station's interference contour toward Canada at previously authorized levels.



### **Tower/Antenna System**

The radiation center height (1237.6 AMSL) with the proposed antenna would be 15 meters above the authorized height and HAAT. However, due to the combined analog/digital operation with the proposed antenna, the overall height of the structure would be reduced by 6.6 meters. The FAA will be notified of the decrease in height simultaneously with the filing of this application; modification of the Antenna Structure Registration (ASR# 1003308) will be made upon receiving an FAA "Determination of No Hazard".

### **Power/Interference**

A relative field/dBk table and the proposed antenna's azimuth and elevation patterns and tables are attached.

The maximum ERP with the proposed antenna will be reduced from 100 kW to 60 kW . as previously noted, this reduction is predicated on maintaining the interfering contour of the proposed operation completely within that of the authorized antenna in order to maintain the protection to Canadian stations. A map showing the authorized 19.5 dBu F(10,10) contour and the proposed 19.5 dBu F(10,10) contour is attached. These interference contours show that the interference from the operation of the proposed facility (at 60 kW) would be slightly less than the interference from the authorized facility (at 100 kW). Since the proposal actually reduces the interference towards Canada there should be no issues relative to approval by the Canadian Administration. Likewise, there are no domestic interference issues because of the reduced ERP.

### **Coverage**

The 48 dBu F(50,90) contour using the proposed antenna and ERP would completely encompass the principal city of Plattsburg, NY.

**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 0.00128 mW/cm<sup>2</sup>, which is less than 5% of the MPE for public exposure at this frequency. The sum of the ratios of the calculated radiation to the allowable radiation from both analog and digital stations is calculated to be 0.017 or 1.7% of the MPE for public exposure.

Workers on the tower in the proximity of the proposed combination DTV/Analog antenna could be exposed to fields which exceed the MPE for occupational exposure. To ensure a compliant environment, MLPTC will reduce power or cease operation on WCFE-DT and/or WCFE-TV, 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.

February 19, 2004

# WCFE-DT Authorized and Proposed 19.5 dBu F(10,10) Contour Comparison

