

## EXHIBIT #16

### R.F. EMISSION COMPLIANCE STATEMENT

Vermont Public Radio  
BNPFT20030317HKR  
Channel 231 – 0.25 kW H & V  
Montpelier, Vermont  
July 2003

The proposed two-bay, circularly polarized antenna will be energized such that it produces 0.25 kW effective radiated power from a center of radiation of 22 meters above ground. The antenna will be located inside a cupola on the campus of Vermont College. Using the formulas expressed in the OET Bulletin, No. 65, August 1997, "Evaluating Compliance with F.C.C. Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", published by the Federal Communication Commission's Office of Science and Engineering, and then by applying a combination of the element and array pattern as defined in E.P.A. study PB85-245868 ("**Engineering Assessment of the Potential Impact of the Federal Radiation Protection Guidance on the AM, FM and TV Broadcast Services**") the predicted level of RF non-ionization emissions at a position of 2 meters above ground (head-height) at the base of the building for the proposed 2-bay Shively 6812 (Type #6) antenna is 0.209 microwatts per square centimeter, which is 0.0209 percent of the maximum for a controlled area and 0.1044 percent of maximum for an uncontrolled area.

There are two other RF sources located in the same cupola as the proposed transmitter. WPWL310 is a studio to transmitter link antenna operating with an EIRP of 147.6 watts (90 watts ERP) at 21.3 meters above ground. KYC873 is a public safety antenna operating with an EIRP of 41 watts (25 watts ERP) at a height of 18 meters above ground. According to OET #65, Section 2: Prediction Methods, RF power density (S) is calculated by the equation:  $S = \text{EIRP}/4\pi R^2$ , where EIRP = equivalent isotropically radiated power and R = antenna height above head (AG – 2 meters).

The following table outlines all transmitting antennas and their contributions to the RF hazard level at head-height.

CALL	Power (kW)	Head Height above ground (m)	Pwr Density $\mu\text{W}/\text{cm}^2$	% of maximum (Controlled)	% of maximum (Uncontrolled)
AP231	0.25	20	0.2090	0.02090	0.1044
WPWL310	0.09	19	0.0315	0.00315	0.01575
KYC873	0.025	16	0.0127	0.00127	0.00635
TOTAL			0.2532	0.02532	0.1265

The cupola is unmanned and access is restricted at all times. In the building, there are offices 7 meters below the antennas. The following table demonstrates the RF hazard levels at that height.

CALL	Power (kW)	Height above offices (m)	Pwr Density $\mu\text{W}/\text{cm}^2$	% of maximum (Controlled)	% of maximum (Uncontrolled)
AP231	0.25	7	143.662	14.3662	71.8311 <sup>1</sup>
WPWL310	0.09	7	0.2397	0.02397	0.11985
KYC873	0.025	7	0.0665	0.00665	0.03325
TOTAL			143.9682	14.39682	71.9842

The applicant will protect workers in the cupola by either reducing ERP or terminating transmission.

Consequently, it appears that the proposed FM station will be in full compliance with the Commission's human exposure to radiofrequency electromagnetic field rules and regulations.

<sup>1</sup> At a distance of 5 meters from the tower base, where the RF levels are the greatest.