

COMPLIANCE WITH SECTION 73.1690(C)(1) AND RFR COMPLIANCE

Compliance with Section 73.1690(c)(1): Station WFNK's existing Shively 6814-6 (EPA Type 4, Two piece spiral), 1.0 wavelength spaced nondirectional (ND) antenna has been replaced with a Shively 6810-6R-EF (ERP Type 1, Ring and Stub), 1.0 wavelength spaced ND antenna. The authorized antenna height did not change (RCAGL 140 meters) and there is also no change in the authorized ERP (100 kW, H&V). Furthermore, as detailed below, the modified operation complies with the Commission's radio frequency radiation (RFR) guidelines.

RFR Compliance: The modified WFNK facilities were evaluated in terms of potential radio frequency (RF) energy exposure to workers and the general public based on the FCC's FM Model software. It is noted that WFNK's transmitter site is located atop Cat Mountain which is a remote location only accessible from a single road with a locked gate located approximately 1 mile from the transmitter site. In addition, the area in the vicinity of the transmitter site is enclosed within a fence with locked gate. Therefore, the transmitter site is considered to be a controlled exposure environment. The Shively 6810-6R-EF, 1.0 wavelength spaced ND antenna is side-mounted at the 140 meter level on the existing tower. The total ERP is 200 kW (horizontal plus vertical polarization). Figure 1 depicts the output of the FCC's FM Model program. As indicated, a maximum power density of 202.2  $\mu\text{W}/\text{cm}^2$  will occur at a point located 24 meters (79 feet) from the tower. This is only 20.2% of the FCC's recommended limit of 200  $\mu\text{W}/\text{cm}^2$  for FM frequencies for an controlled exposure environment. Therefore, the modified WFNK operation will continue to comply with the RF emission rules.

As noted above, public access to the transmitting site is restricted and is appropriately marked with RFR warning signs. Furthermore, a formal RFR protection protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to RFR exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.

Figure 1

Output of FCC's FM Model Program:



Channel Selection	Channel 298 (107.5 MHz) ▾		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▾		
Height (m)	<input type="text" value="140"/>	Distance (m)	<input type="text" value="500"/>
ERP-H (W)	<input type="text" value="100000"/>	ERP-V (W)	<input type="text" value="100000"/>
Num of Elements	<input type="text" value="6"/>	$\lambda$	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	