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# *Richmond, IN - W233AN (STA)*

## *Compliance with Radiofrequency Radiation Guidelines*

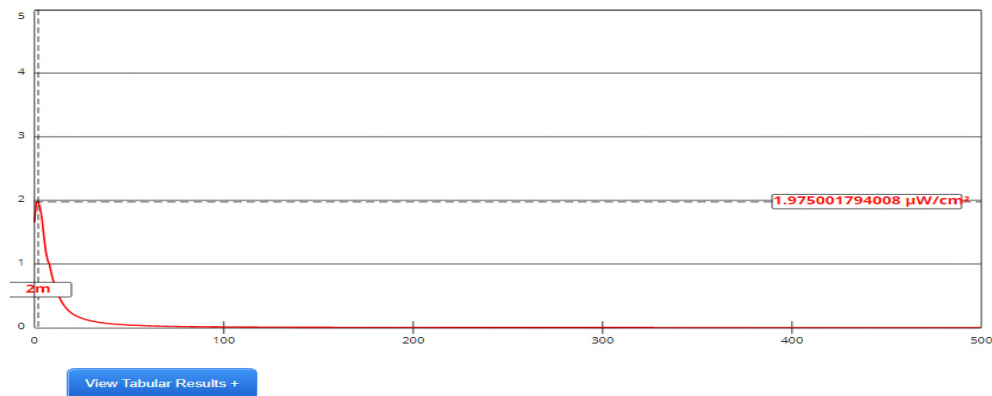
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The proposed facility complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments as set forth under §1.1307(b)(3) of the Commission's rules and the guidelines for RF radiation protection guidelines as set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01). The site could house multiple transmitters; therefore, out of an overabundance of caution, the potential for human exposure to non-ionizing radiofrequency radiation has been evaluated with regard to the §1.1307(b)(3) "five percent (5%) contribution rule" utilizing the Commission's own *FM Model* web-based software application. The use and implementation of this FCC sanctioned software is a matter of record before the Commission. **However, this facility is primarily exempt from compliance as §1.1307(b)(1) - Table 1 states Part 74-Subpart L facilities (FM Translators) operating with <100 watts ERP do not require Routine Environmental Evaluation.**

With regard to the "five percent (5%) contribution rule", §1.1307(b)(3), five percent (5%) of the maximum permissible 200  $\mu\text{W}/\text{cm}^2$  uncontrolled limit yields a threshold value of 10  $\mu\text{W}/\text{cm}^2$ . Five percent (5%) of the maximum permissible 1000  $\mu\text{W}/\text{cm}^2$  controlled limit yields a threshold value of 50  $\mu\text{W}/\text{cm}^2$ . Therefore, single contributions of  $\leq 10 \mu\text{W}/\text{cm}^2$  remain within the tolerances as allowed by §1.1307(b)(3) and its governing OET Bulletin No. 65 (Edition 97-01) for the more restrictive of either two protections.

The proposed W233AN.STA - Richmond, IN analog Translator STA operation (Facility ID: 140563) will operate on CH233D (94.5 MHz) with 0.0015 kW ERP circular polarization (H&V). The proposed operation will broadcast from a restricted access roof antenna COR mounted 7.5 meters above ground level (AGL). The STA facility will operate with a one bay, SWR Model FM1-1(NDA) "Ring and Stub" antenna employing an EPA Type 1 element as defined by the Commission's own FM Model - Appendix B (issued March 31, 2016). The element is spaced 1.0 wavelength ( $\lambda$ ) apart. This STA facility will not operate with HD/IBOC facilities at this time.

The results of the evaluation for the FM station have been shown at the end of this RF compliance discussion. To ensure complete protection, the maximum FM contribution has been assumed without regard to any restricted access fencing distance. In addition, the facility is, or will be, properly marked with signs. Entry is, or will be, restricted by means of fencing with locked doors or gates. Furthermore, coordination with other users of the site will be secured to reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.



Channel Selection	Channel 233 (94.5 MHz) ▾		
Antenna Type ▴	EPA Type 1: Ring-and-Stub or "Other" ▾		
Height (m)	<input type="text" value="7.5"/>	Distance (m)	<input type="text" value="500"/>
ERP-H (W)	<input type="text" value="1.5"/>	ERP-V (W)	<input type="text" value="1.5"/>
Num of Elements	<input type="text" value="1"/>	Element Spacing ( $\lambda$ )	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	