
RF Appendix 1

Compliance with Radiofrequency Radiation Guidelines

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Explanation of Study. The proposed facility complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments as set forth under §1.1310 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 is intended to house multiple transmitters.

Concerning FM contributions, the potential for human exposure to non-ionizing radiofrequency radiation has been evaluated with regard to §1.1310 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. To ensure complete protection, each maximum FM contribution has been assumed without regard to any restricted access fencing distance. The maximum permissible uncontrolled limit for FM stations is $200 \mu\text{W}/\text{cm}^2$. The maximum permissible controlled limit is $1000 \mu\text{W}/\text{cm}^2$. Therefore, single contributions of $\leq 200 \mu\text{W}/\text{cm}^2$ remain within the tolerances as allowed by §1.1310 and its governing OET Bulletin No. 65 (Edition 97-01) for the more restrictive of these two protections.

Summary of Stations. The proposed W262CL.P - Brattleboro, VT analog FM Translator (Facility ID: 140890) will operate on CH262D (100.3 MHz) with 0.250 kW ERP circular polarization (H&V). The proposed operation will broadcast from an antenna COR mounted 17 meters above ground level (AGL). The facility will operate with a one bay Scala CL-FM(Slant45) log periodic antenna employing an EPA Type 1 element as defined by the Commission's own FM Model - Appendix B (issued March 31, 2016). This facility will not operate with HD/IBOC facilities at this time.

The licensed WRSY(FM).L - Marlboro, VT analog FM Station (Facility ID: 17797) operates on CH268A (101.5 MHz) with 0.120 kW ERP circular polarization (H&V). The facility broadcasts from an antenna COR mounted 21 meters above ground level (AGL). For purpose of this RF Compliance Study, a worst case EPA Type 1 element as defined by the Commission's own FM Model - Appendix B (issued March 31, 2016) has been assumed. WRSY(FM).L operates with HD/IBOC facilities as outlined under BDNH-20111114AAR, or identified as -10 dBc power (0.012 kW ERP) circular polarization (H&V) (or $\text{Log}[0.1] \times 10 = -10 \text{ dBc}$) from the main antenna mounted 21 meters AGL. Therefore, a combined power of 0.132 kW (H&V) has been assumed for this contribution.

The results of the evaluation for each 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.

Results of Study. The sum of each individual contribution as a percentage of its each maximum permissible uncontrolled limit has been provided below. As the resulting contribution(s) as a whole is less than 100% of the combined exposure has been calculated to be within the guidelines of OET Bulletin No. 65 (Edition 97-01) for the more restrictive uncontrolled environment as defined by locations accessible by the general public.

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Contributing Station	Maximum Contribution	Individual Uncontrolled Limit	Percent of Individual Uncontrolled Limit
W262CL.P (analog)	44.6771 $\mu\text{W}/\text{cm}^2$	200 $\mu\text{W}/\text{cm}^2$	22.34%
WRSY(FM).L (analog & HD)	14.6975 $\mu\text{W}/\text{cm}^2$	200 $\mu\text{W}/\text{cm}^2$	7.35%
		Total of uncontrolled Limit:	29.69%

As the sum exposure is less than 100% for the uncontrolled environment, the operation of the combined transmitting plants is in compliance with the provisions of OET Bulletin No. 65 (Edition 97-01). As stated before, protection of the uncontrolled environment implies protection of the controlled environment. There are no other broadcast sources of radiofrequency non-ionizing radiation present at this site.

The results of the evaluation for each station have been shown at the end of this RF compliance discussion. 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.

