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# *RF Appendix 1*

## *Compliance with Radiofrequency Radiation Guidelines*

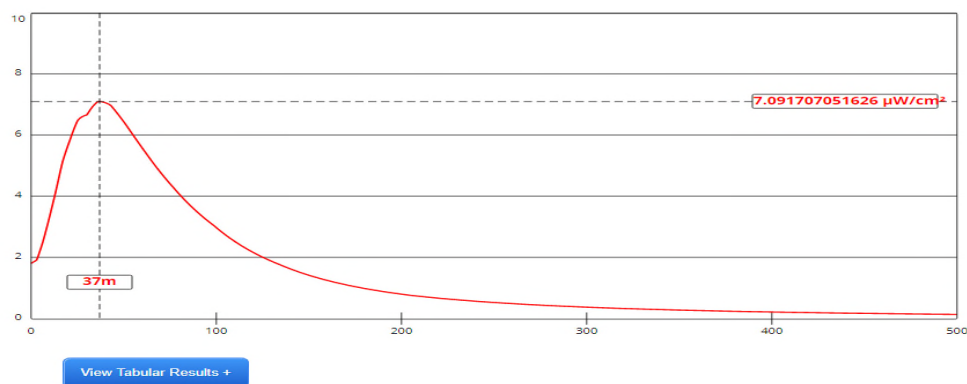
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The proposed facility complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments as set forth under §1.1307(b)(3) of the Commission's rules and the guidelines for RF radiation protection guidelines as set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01). The site is intended to house multiple transmitters, therefore 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.

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 these two protections.

The proposed K269DO.P - Scottsbluff, NE analog FM Translator (Facility ID: 25878) will operate on CH269D (101.7 MHz) with 0.250 kW ERP circular polarization (H&V). This facility will be diplexed with the existing K262CU.L - Scottsbluff, NE (Facility ID: 142007) analog FM Translator antenna which operates on CH262D (100.3 MHz) with 0.250 kW ERP circular polarization (H&V). The common antenna COR is mounted 38 meters above ground level (AGL). The common antenna is a one bay, Nicom BKG77 "Crossed V Dipole" antenna employing an EPA Type 2 element as defined by the Commission's own FM Model - Appendix B (issued March 31, 2016). This study has assumed the combined power of 0.500 kW (H&V). Neither facility will 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 269 (101.7 MHz)		
Antenna Type +	EPA Type 2: Opposed V Dipole		
Height (m)	38	Distance (m)	500
ERP-H (W)	500	ERP-V (W)	500
Num of Elements	1	Element Spacing ( $\lambda$ )	1
Num of Points	500	<b>Apply</b>	