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VIA ECFS

May 28, 2021

Marlene H. Dortch, Secretary  
Federal Communications Commission  
45 L Street NE  
Washington, DC 20554

Re: ET Docket No. 19-226 Human Exposure to Radiofrequency Electromagnetic Fields and Reassessment of  
FCC Radiofrequency Exposure Limits and Policies  
Notice of *Ex Parte* Discussion

Dear Ms. Dortch:

On May 26, 2021, members of the RF Safety Committee (RFSC) of ARRL, The National Association for Amateur Radio, and the Radio Society of Great Britain (RSGB) met by teleconference with several members of the FCC's Office of Engineering and Technology (OET). The RFSC members included Chairperson Gregory Lapin, Richard Tell, Matthew Butcher and Kazimierz Siwiak plus RSGB member Peter Zollman. The OET staff that participated included Kevin Graf, Martin Doczkat and Chrysanthos Chrysanthou.

The purpose of this meeting was to continue the discussion of exposure rule changes that took place on May 3, 2021 and to examine ways that the ARRL could help with the update of the documents, OET Bulletin 65 (OET65) and its Supplement B (OET65B).

The ARRL RF Safety Committee has volunteered to help the FCC OET with the update OET65B. We noted that the previous version of this document had several areas of duplication between OET65 and OET65B and discussed removing much of the repeated text. Sections that discuss general RF exposure concepts would be reserved for OET65, while OET65B would contain text that helps radio amateurs perform accurate exposure assessments.

The discussion proceeded to consideration of RF exposure calculators that are currently found on various Internet websites. Such calculators rarely cover exposure from all antenna configurations and could be used incorrectly. While far field exposure levels are generally accurate with the commonly found exposure calculators, the near field behavior can vary markedly depending on the type of antenna, the type of ground and the antenna's height above it, and the relationship between the transmitted wavelength and the physical antenna length. The addition of a section in OET65B that provides guidance for proper use of various RF exposure calculating tools was proposed.

Discussion of other antenna types ensued, particularly those that use the feedline to radiate energy. Such antenna architectures can lead to difficulty in determining correct exposure and the suggestion was made that all such antennas be built with chokes on the feedline to decrease the exposure of the operator. This led to the suggestion that OET65B contain a "Best Practices" section that includes techniques to decrease RF exposure, methods to validate the various exposure calculating tools, and descriptions of how exposure measuring tools can be accurately calibrated. A suggestion was made to also provide a reference to the newly released version of the standard, *IEEE C95.3-2021 - IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and*

*Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz to 300 GHz.*

To avoid duplication between OET65 and OET65B we asked for an outline of what will be contained in OET65, which is currently under revision by the OET staff. We agreed to a goal for completion of OET65B by the end of this calendar year. We agreed to start by preparing an outline of what we would like to have included in OET65B and will continue the discussion of this document at another teleconference meeting in two weeks.

Conclusion

We thank the Commission and OET staff for setting aside the time to meet with us to help make sure that radio amateurs are able to comply with the exposure rules that have been codified. We look forward to future collaborations in which we can further improve the processes of modeling and testing for compliance of exposure regulations.

This notice is being filed electronically pursuant to Section 1.1206 of the Commission's rules. Please contact me if you have any questions.

Respectfully submitted,

Gregory D. Lapin  
Chairman, RF Safety Committee  
ARRL, The National Association for Amateur Radio

cc: Kevin Graf  
Martin Doczkat  
Chrysanthos Chrysanthou  
Richard Tell  
Matthew Butcher  
Kazimierz Siwiak  
Peter Zollman  
David Siddall