



DELAWARE VALLEY SOCIETY FOR RADIATION SAFETY

Chapter of the Health Physics Society

The Electromagnetic Energy Safety Program; Expansion of the Radiofrequency Safety Program to Include Concomitant EME Hazards

Presented by Donald L. Haes, Jr., CHP, CLSO

Wednesday, October 26th, 2022

12:00 pm – 1:00 pm

Live streamed

The goal of this talk is to introduce the concept of an EME Safety Plan through the soon-to-be-released IEEE C95.7 STANDARD, and help outline a strategy for compliance. Radiofrequency (RF) safety programs exist to help ensure worker and public safety when there is potential for exposure to RF energy that exceeds established limits. These limits typically include those mandated by a federal agency such as the Federal Communications Commission (FCC), or Health Canada. There are also consensus standards such as those published by the Institute of Electrical and Electronics Engineers, Inc. (IEEE), the American Conference of Governmental Agencies (ACGIH), and the International Commission on Non-Ionizing Radiation Protection (ICNIRP). The potential for hazardous interactions with certain equipment, systems and/or substances may occur at levels substantially lower than the adopted limits. Simple compliance with exposure limits might not prevent interference with medical and other devices that might exhibit susceptibility to electromagnetic interference (EMI). Concomitant Electromagnetic Energy (EME) hazards could exist at frequencies outside those covered by the RF Safety Program. Industrial facilities and office settings have the potential to have sources of fairly intense electric and/or magnetic fields at “power” frequency (50/60 Hz). Electric and magnetic fields at frequencies below 10 kHz are often not evaluated due to lack of measurement equipment and training. This presentation explains how an RF safety program is expanded to a full EME Safety Program by addressing such concomitant hazards as EMI and electromagnetic compatibility (EMC), including medical devices, electro-explosive devices (EED) and hazardous radiation to ordinance (HERO), explosive atmosphere considerations and hazardous radiation to fuel (HERF), electrical power phenomena, and static magnetic field interactions. Actual field data is presented in a discussion of an evaluation of the EME fields in a workplace. Limit values for sample implanted medical devices (IMD), HERO, and HERF are compared to various established EME exposure limits.

Cost: **Free** to Members

\$10 for Non-members (includes price of membership for FY23)

Registration:

To register, email dvsrschapterhps@gmail.com and provide name and method of payment (see below).

Registration Deadline: **Tuesday, October 25th**

DVSRS Payment Options:

1. Payments via PayPal - Go to the DVSRS Chapter Webpage: hpschapters.org/dvsrs/

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