

## Amateur Extra – The Right Answers

### Chapter Eleven – Safety

E0A07. How may dangerous levels of carbon monoxide from an emergency generator be detected?

**Only with a carbon monoxide detector**

E0A09. Which insulating material commonly used as a thermal conductor for some types of electronic devices is extremely toxic if broken or crushed and the particles are accidentally inhaled?

**Beryllium oxide**

E0A10. What toxic material may be present in some electronic components such as high voltage capacitors and transformers?

**Polychlorinated biphenyls**

E0A02. When evaluating RF exposure levels from your station at a neighbor's home, what must you do?

**Make sure signals from your station are less than the uncontrolled MPE limits**

E0A03. Which of the following would be a practical way to estimate whether the RF fields produced by an amateur radio station are within permissible MPE limits?

**Use an antenna modeling program to calculate field strength at accessible locations**

E0A04. When evaluating a site with multiple transmitters operating at the same time, the operators and licensees of which transmitters are responsible for mitigating over-exposure situations?

**Each transmitter that produces 5 percent or more of its MPE limit at accessible locations**

E0A05. What is one of the potential hazards of using microwaves in the amateur radio bands?

**The high gain antennas commonly used can result in high exposure levels**

E0A06. Why are there separate electric (E) and magnetic (H) field MPE limits?

**The body reacts to electromagnetic radiation from both the E and H fields  
Ground reflections and scattering make the field impedance vary with location  
E field and H field radiation intensity peaks can occur at different locations**

E0A08. What does SAR measure?

**The rate at which RF energy is absorbed by the body**

E0A11. Which of the following injuries can result from using high-power UHF or microwave transmitters?

**Localized heating of the body from RF exposure in excess of the MPE limits**

E0A01. What is the primary function of an external earth connection or ground rod?

**Lightning protection**