

**To:** All System Sensor customers  
**From:** Systems Application Engineers  
**Subject:** Radioactive material – effects and disposal

In regard to questions concerning the use of radioactive material in our detectors and the health and safety of those in contact with same, System Sensor ionization smoke detectors contain no more than .5 to 1 microcurie of Americium 241. The following information acquired from the Ionization Smoke Detector Information Bureau, which is an active member of NEMA (National Electrical Manufacturers Association), says:

In actuality, ionization smoke detectors use a minute amount of a radioactive material known as Americium 241 (AM-241) which is a material derived from processing at US. Government laboratories. According to all scientific evidence, the amount of radioactivity inherent in the use of the ionization smoke detector is virtually undetectable with standard radiation measuring devices. It is considered “negligible” and is less than 1/1000th of the exposure received from natural background radiation sources, such as the cosmic rays from the sun.

What most people are not aware of is that radiation is a naturally occurring condition. Substances similar in activity to AM-241, a group of elements known as actinides, are widely distributed in all rocks and soil and are even found in limited amounts in people. The amount of radioactivity in a typical home ionization smoke detector is equivalent to the amounts of actinides in the volume of soil removed in planting a large bush.

Consumers Union made extensive tests for radiation from ionization smoke detectors and concluded, “we believe ionization detectors offer virtually no hazard from radiation – but valuable protection from fire.”

The Nuclear Regulatory Commission has released an extensive report on what effect, if any, there may be in the production, distribution, use and disposal of said detectors over an extended period.

The Nuclear Regulatory Commission’s regulations regarding ionization smoke detectors states, “The purchaser is exempt from any regulatory requirements.” The US Nuclear Regulatory Commission (NRC) and the Organization for Economic Cooperation and Development (OECD) recommend that home type detectors with less than 5 $\mu$ Ci (microcuries) of Am-241 may be disposed of without restriction.

If you have any questions concerning System Sensor products or their application, please contact Technical Services at 1-800-SENSOR2 (736-7672), extension 2.