

**Standard Operating Procedure**  
**How to Identify Radioactive Smoke Detectors**



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Smoke Detectors  
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### **Purpose**

Many smoke detectors in use at the University of Texas contain a small amount of radioactive material (RAM). Most of them contain 1.0 microcurie ( $\mu\text{Ci}$ ) or less of Americium-241 (Am-241). Due to the small amount of radioactivity contained in these detectors, disposal is not regulated. However, a small percentage of smoke detectors may contain a larger amount of Am-241, or other radioisotopes such as Radium-226 (Ra-226) or Nickel-63 (Ni-63). Disposal of these smoke detectors is regulated, so they require special handling and must be surrendered to the Radiation Safety Office for disposal.


### **Scope**

This procedure applies primarily to personnel in Facilities Services and Environmental Health & Safety (EHS), but also applies to any University employee or contractor who may be involved in the removal, handling, or storage of smoke detectors, for instance during the renovation or demolition of a University building.

### **Procedures**

Prior to discarding any smoke detector, a University employee must follow the steps below to determine if it contains regulated radioactive material.

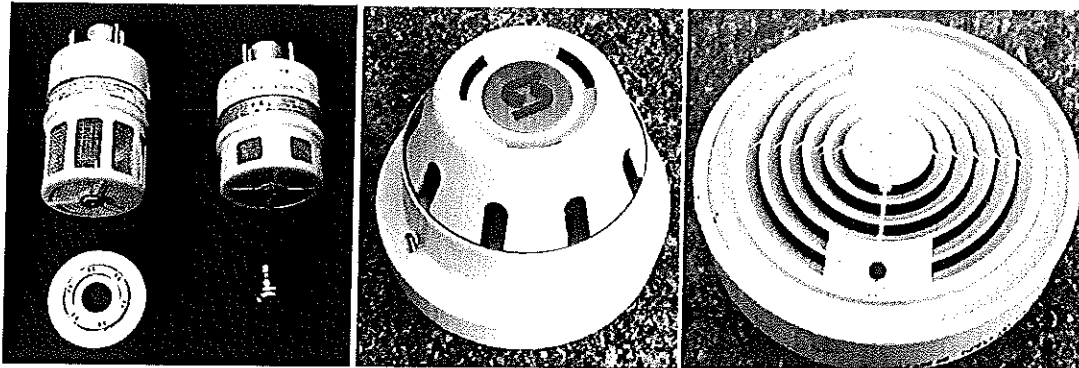
1. **Identification:** Smoke detectors that contain radioactive material are always labeled, although the exact wording and location of the label may vary depending on the manufacturer. If a smoke detector is labeled with any of the following words or symbols, it contains radioactive material:

The international radiation symbol:   
Any of these words: "Radioactive", "Ionization", "Americium", "microcurie"  
Any of these abbreviations: "Am-241", " $\mu\text{Ci}$ ", "kBq", "NRC"

The identifying label is typically visible on the back or side of the detector, but may also be located underneath a mounting plate or detector housing.

2. **Do Not Disassemble:** Never attempt to disassemble a smoke detector, even to identify it. If there is any question as to what it contains, contact the Radiation Safety Office for assistance.

3. Disposal of non-radioactive detectors: If a smoke detector does not contain radioactive material, it may be discarded in the regular trash.
  
4. Send radioactive detectors to EHS: Any smoke detector that contains radioactive material must be relinquished to the EHS Radiation Safety Office. EHS is located on the second floor of the Service Building (SER), and may be reached by phone at 512.471.3511. Three examples of regulated smoke detectors are shown below:



**Pyrotronics F3/5A**  
Contains 80 uCi Am-241

**Simplex 2098-9508**  
Contains 4.5 uCi Am-241

**Gamewell 29968**  
Contains 1 uCi Ra-226

Director, Environmental Health and Safety

6/4/12  
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