Radioactive Equipment DISPOSAL

EQUIPMENT WITH RADIOACTIVE MATERIAL REQUIRES EVALUATION BEFORE DISPOSAL

Contact the Division of Research Safety if you see the following equipment.

Aircraft Gauges, Timepieces, Switches, and Breakers

Devices from the 1910s though the '60s used radioactive paint for glow-in-the-dark applications.

Compound: Radium

Alnor Dew Pointer

Quickly determines dew points of gases. Some contain a label indicating radioactive material.

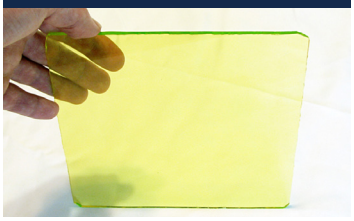
Compound: Radium-226

Ceramic Plates Inside Electrical Switches

These 600-pound switches have ceramic plates containing radioactive material.

Compound: Thorium

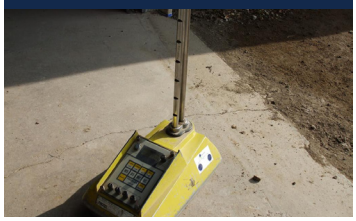
Corning Uranium-Glass Optical Filter



An optical filter to transmit or absorb light in the ultraviolet, visible, and infrared spectrum.

Compound: Uranium

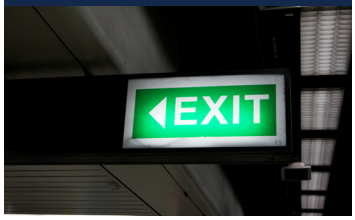
Densitometers or Soil Density Gauges



A tool that measures the density and inner structure of the test material.

Compounds: Americium/beryllium and cesium-137

Emergency Signs



Glow-in-the-dark devices, like exit signs, may contain radioactive material.

Compound: Tritium (H-3)

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Gas Chromatographs

Chromatographs that use an electron capture device contain a sealed radioactive source.

Compounds: Iron-55 or nickel-63

Geiger Counters

Civil defense Cold War Geiger counters often included chips of uranium.

Compound: Uranium

Ionization Smoke Detectors

Some smoke detectors, especially older models, contain radioactive sources.

Compounds: Am-241 or nickel-63

Liquid Scintillation Counters

These devices contain a sealed radioactive source and often contain a warning label on the back.

Compounds: Barium-133 or cesium-137

Photographic Lenses

Some photographic lenses contain radioactive material to improve performance.

Compound: Thoria (ThO_2)

Radioactive Power Resistors

Uranium is not in the black glaze but distributed throughout the volume of the resistor material.

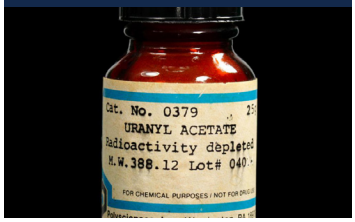
Compounds: Uranium

Static Elimination Devices

These devices eliminate the static charge that causes dust to adhere to surfaces.

Compound: Polonium-210

Uranyl Acetate and Nitrate Reagents



This material is commonly used as an electron miscroscopy stain.

Compound: Uranium

X-Ray Fluorescence (XRF) Devices

This tool uses a non-destructive technique to determine the composition of elemental materials.

Compound: Nickel-63

Electronic Tubes

Many types of electronic tubes contain radioactive material to ionize residual gas, improve timing characteristics, or help strike a discharge. The electronic tubes in the photo illustrate the tubes found in the table.

1. Signalite TG-167 spark gap	Cs-137	About 0.4 microcuries
2. Chatham 1B46 regulator	Ra-226	
3. Western Electric 724B TR cells	Ra-226	
4. Western Electric 423A regulators	Ra-226	External radium foil source on some versions, ~1.2 microcuries
5. KP-96 kryton	Ra-226	About 0.7 microcuries
6. Various small gas discharge tubes	Ra-226	External radium paint sources
7. 900V Corotron from Anton CDV-700	H-3(?)	
8. Western Electric 1B22 spark gap	Ra-226	2-4 microcuries
9. Western Electric 423B regulators	Ra-226	Internal radium as opposed to 423A; printed with radiation trefoil
10. Westinghouse 1B24 TR cell	Ra-226	Internal radium as opposed to 423A; printed with radiation trefoil
11. Westinghouse 1B26 TR cell	Ra-226	
12. Hytron 0A2 regulators	Ra-226	
13. Bendix 8152 noise generator tunes	Ra-226	
14. Western Electric 6141 regulator	Kr-85	
15. Northern Electric 313C gas triode	Kr-85	Box indicates 4.0 microcuries
16. Phillips PL-S-series fluorescent lamp	Kr-85	Box indicates <5 microcuries
17. Raytheon CK 427 TR cell	Th-232	Tag indicates 300 microcuries of Th-232[!] but no activity detected
18. Eimac 35-TG power triode	Uranium	Uranium glass seals