

Regulation of Radioactive Material

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In the Beginning

The Atomic Energy Act requires that civilian uses of nuclear materials and facilities be licensed.

The Act also empowers the U.S. Nuclear Regulatory Commission (NRC) to establish by rule or order, and to enforce, such standards to govern these uses as "the Commission may deem necessary or desirable in order to protect health and safety and minimize danger to life or property."

In the Beginning

Under Section 274 of the Act, the NRC may enter into an agreement with a State for discontinuance of the NRC's regulatory authority over some materials licensees within the State. The State must first show that its regulatory program is compatible with the NRC's and adequate to protect public health and safety.

These States are known as "Agreement States."

What the NRC maintains authority for in Agreement States

Nuclear power reactors and research reactors



What the NRC maintains authority for in Agreement States

- Areas under exclusive Federal jurisdiction (military bases, VA hospitals).
- Special nuclear material in quantities greater than a critical mass.
- Export/import of radioactive material.
- Distribution of exempt quantities of radioactive material.

NRC-Agreement States Relationship

National Materials Program

"The vision of the National Materials Program (NMP) is to provide a coherent national system for the regulation of agreement material with the goal of protecting public health, safety, security and the environment through compatible regulatory programs. Through the NMP, the NRC and Agreement States function as regulatory partners."

Agreement States

Kentucky was the first Agreement State. Kentucky entered into an agreement in 1962 with the Atomic Energy Commission. The NRC was not formed until 1974.

Ohio became the 31st Agreement State on Aug. 31, 1999.

Agreement States



Agreement States

Total radioactive materials licenses in Agreement State jurisdiction:

15,879

Total radioactive materials licenses in NRC jurisdiction:

2,120

Total radioactive materials licenses in the United States:

17,999

Agreement States

Total radioactive materials licenses in Ohio:

686

Total locations where radioactive is used in Ohio:

1,001

Total NRC radioactive materials licenses in Ohio:

14

Agreement States

State programs also regulate:

- Radiation Generating Equipment
- Radon testers and mitigators
- Technologically Enhanced Naturally Occurring Radioactive Material (TENORM)

Radioactive Material Uses

Medical Uses

- Therapeutic uses (Brachytherapy, Gamma Knives, I-131)
- Diagnostic nuclear medicine
- Mobile nuclear medicine
- Nuclear pharmacies









Radioactive Material Uses

Industrial Uses

- Portable & fixed gauges
- Manufacturing & Distribution
- Research & Development
- Academic
- Industrial radiography
- Irradiators
- Well logging



















Waste Issues

Low-level Radioactive Waste

- This waste typically consists of contaminated protective shoe covers and clothing, wiping rags, mops, filters, reactor water treatment residues, equipment and tools, luminous dials, medical tubes, swabs, injection needles, syringes, and laboratory animal carcasses and tissues.
- Low-level waste is typically stored on site by licensees, either until it has decayed away and can be disposed of as ordinary trash, or until amounts are large enough for shipment to one of four low-level waste disposal sites.

Waste Issues



Waste Issues

Solid Waste Landfills

- Nuclear medicine diagnostic and therapeutic procedures. Primarily I-131 contaminated items.
- Wastewater treatment plant sludge. Primarily I-131 contamination.
- Kitty litter.
- TENORM. Primarily oil & gas industry generated waste.

Contact Information

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