REPUBLIC OF KENYA

NuPEA NUCLEAR POWER & ENERGY AGENCY

Radioactive waste: what it is and how it is managed

What is radioactive waste?

Radioactive waste is material that contains radioactive substances and has no further use. Because it gives off radiation, it must be controlled until it is no longer a hazard.

It is produced wherever radiation is used: in hospitals, industry, research and teaching, and in nuclear power plants.



Types of waste, by where it comes from



HOSPITALS

Used syringes, swabs and gloves; old sources from treatment machines.



INDUSTRY

Old sealed sources from testing and measuring instruments.



RESEARCH AND AGRICULTURE

Laboratory liquids and contaminated items.



EDUCATION

Old teaching sources.

Categories of waste

VERY LOW AND LOW LEVEL

About 95% of the world's waste by volume.

Examples: used gloves, tools and clothing.

Needs simple packaging. Disposed of near the surface.

INTERMEDIATE LEVEL

About 4% by volume.

Example: some reactor parts.

Needs shielding. Disposed of deeper underground.

HIGH LEVEL

Less than 1% by volume, but most of the radioactivity.

Example: used reactor fuel.

Needs cooling, shielding and deep disposal. None in Kenya today.

IN KENYA TODAY: most radioactive waste is old radiation sources from hospitals, industry, research and teaching. Kenya has no nuclear power plant and no reactor waste.