

Briefing note

Radioactive Substances Regulation

Radioactive waste disposal – our role

We regulate how nuclear sites and other users of radioactive materials such as hospitals and universities dispose of radioactive waste. We are working with the Government, the Nuclear Decommissioning Authority and other regulators to provide long-term, safe and sustainable options for disposing of radioactive waste to protect people and the environment.

Categories of waste

Radioactive waste is classified as high, intermediate or low-level according to its level of radioactivity.

Low-level

Low-level waste from operating facilities is generally paper, plastics and scrap metal. When facilities are dismantled and decommissioned there may also be building rubble, soil and steel items such as pipework.

A sub-category of low-level waste is very low-level waste. This can be low volume, mainly from hospitals and universities, that can be safely disposed of with municipal, commercial or industrial waste, and high volume, from nuclear sites, that can be disposed of to specified landfill facilities.

Intermediate-level

This is mainly metal items such as nuclear fuel cladding and nuclear reactor components, graphite from reactor cores, and sludges from the treatment of radioactive liquid. Intermediate-level waste is stored in tanks, vaults and drums.

High-level

Initially high-level waste comprises nitric acid



solutions containing the waste products of reprocessing spent nuclear fuels. This waste is intensely radioactive and is stored as liquid in water-cooled, stainless steel tanks or as glass blocks. It needs thick concrete walls to shield operators from the high radiation.

How is radioactive waste managed?

All radioactive waste needs to be properly managed and dealt with to protect people and the environment, both now and in the future. Many types of waste are treated in some way to reduce the amount that has to be disposed of, or to make it easier to manage.

Disposal options include both near-surface and deep geological disposal facilities, with near-surface generally used for waste containing low levels of radioactivity.

Almost all low-level waste from the nuclear power industry, hospitals, research establishments and defence programmes is disposed of at the Low Level Waste Repository near Drigg in Cumbria. However, this site does not have the capacity to meet future needs in the long term.



In March 2007 Government introduced new policy on managing low-level waste. The policy includes revised regulation around the disposal of low-level waste to landfill. This means the nuclear industry can now dispose of very low-level waste and some low-level waste to landfill. It is expected that the majority of waste that could go to landfill would consist of rubble and soil from decommissioning activities. This would contain only small amounts of radioactivity and we will limit the quantities authorised for disposal.

The Government has also committed to a programme for developing a deep geological disposal facility for radioactive waste that is not suitable for near-surface disposal.

Our role

We regulate the disposal of all radioactive waste, including solid waste to land and discharges to water and air under the Radioactive Substances Act 1993. We do this by granting site-based permits. We also make sure companies minimise the amount of radioactive waste they produce, and the amount that needs disposing of, including discharges to the environment, and we check that they do not exceed their authorised discharge limits.

Low-level waste to landfill

Any landfill operator that wishes to take high volume very low-level radioactive waste will need an authorisation from us. We will limit the quantities authorised for disposal and audit the site to make sure the operator complies with the authorisation.

Any nuclear site wishing to send low-level or very low-level waste to a landfill site will also need our authorisation before transferring it.

Working with others

Together with other UK regulators, we have developed new guidance for regulating radioactive waste disposal facilities; for near surface and deep geological facilities, as well as disposing of radioactive waste to landfill. You can view this guidance by visiting our website (www.environment-agency.gov.uk/nuclear).

For more information

This briefing is part of a series we have produced to highlight our work in the area of regulating radioactive substances. To view other briefings in the series, please go to (<http://intranet.ea.gov.policies/environment/compliance/36030.aspx>)