

Non-Technical Summary



Management of radioactive waste from
decommissioning of nuclear sites:
Guidance on Requirements for Release from
Radioactive Substances Regulation
Version 1.0: July 2018

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Summary of the environment agencies' Guidance on Requirements for Release from Radioactive Substances Regulation

At nuclear sites, decommissioning means the dismantling of facilities and structures that have reached the end of their useful lives. Clean-up means treating or removing contamination from leaks or spills on or around the site.

The final stages of decommissioning and clean-up involve managing large amounts of radioactive waste, as well as other conventional waste. Operators are encouraged to take a joined up approach to managing both radioactive and conventional waste in order to comply with their environmental obligations.

Waste with higher levels of radioactivity needs to be moved into secure stores. It is kept there safely under supervision until dedicated disposal facilities are built. The majority of nuclear sites already have well established programmes for this.

Most of the waste from decommissioning and clean-up has only relatively low levels of radioactivity. Much of this waste will be made up of things like:

- demolition rubble
- scrap metal
- foundations
- drains and pipelines
- soil

All of this waste needs to be managed safely, and disposed of somewhere suitable. This might be on the site that produced the waste, or after transport to another site.

Protecting the public and the environment from radioactivity

The disposal of radioactive waste from nuclear sites is regulated by:

- The Environment Agency
- Natural Resources Wales
- Scottish Environment Protection Agency

We have a duty to protect members of the public and the environment from being harmed by radioactive substances. Our goal is to make sure that operators dispose of radioactive waste in ways which are safe for people and the environment.

Once we are satisfied that radioactive waste has been managed safely and the site has been left in a suitable condition, we can release a site from radioactive substances regulation.

We encourage operators to have early discussions with us about their proposals for decommissioning and clean-up, and before they make any formal applications. We also expect operators to engage early and widely with:

- local communities
- the general public
- other regulators - for example, for nuclear safety and security, or for land-use planning

Requirements for nuclear operators

The guidance is for operators of all nuclear sites. It describes what operators need to do when they are planning and carrying out their work to decommission and clean-up their sites.

The guidance applies to all sites, whether or not they have already begun decommissioning and clean-up. Operators also need to take the guidance into consideration when designing or building new sites.

The guidance requires operators to:

- produce a waste management plan
- produce a site-wide environmental safety case
- make sure the condition of their site meets standards for protection of people and the environment, now and into the future

Operators must keep the risks of radiation exposure to people as low as reasonably achievable, taking account of economic and social factors. This is called optimisation. It is a basic principle of the international system to protect people from radiation and it is central to the guidance.

Every operator must apply optimisation when they are developing and carrying out their waste management plan. This means the operator must produce a waste management plan that strikes the best overall (optimal) balance between:

- the safety of the public, workers and the environment
- other factors such as costs, potential future uses of the site, or the impacts of transport of waste and materials

The operator must assess all reasonable options for their site for managing every:

- batch of radioactive waste
- area of radioactive contamination

The full range of options that the operator chooses, and the way the operator carries them out, must keep risks to people as low as reasonably achievable.

Waste management plans must be optimised to each site's individual circumstances. This means that at different nuclear sites it might be optimal to use either one of the approaches below or a mix of both:

- remove all radioactive waste and contamination from that site and transport it for disposal at some other suitable site(s)
- dispose of all radioactive waste and leave all radioactive contamination on that site

We will only authorise disposal of radioactive waste on a site when we are satisfied the operator has developed an optimal waste management plan, and has satisfied us that the final condition of the site, and the work to be done to reach that condition, are safe for people and the environment.

We have set standards for public and environmental protection to be consistent with international and domestic law, guidelines and policies. These standards limit the:

- level (dose) of radiation people and the environment are exposed to whilst the site is being regulated
- risk of exposures to radioactive substances dispersed through the environment after the site is released from regulation
- level (dose) of radiation people are exposed to from local concentrations of radioactive substances after the site is released from regulation

We will only release a site from regulation when we are satisfied that the operator has:

- completed all work involving radioactive substances
- met all safety standards and can demonstrate this in their site-wide environmental safety case