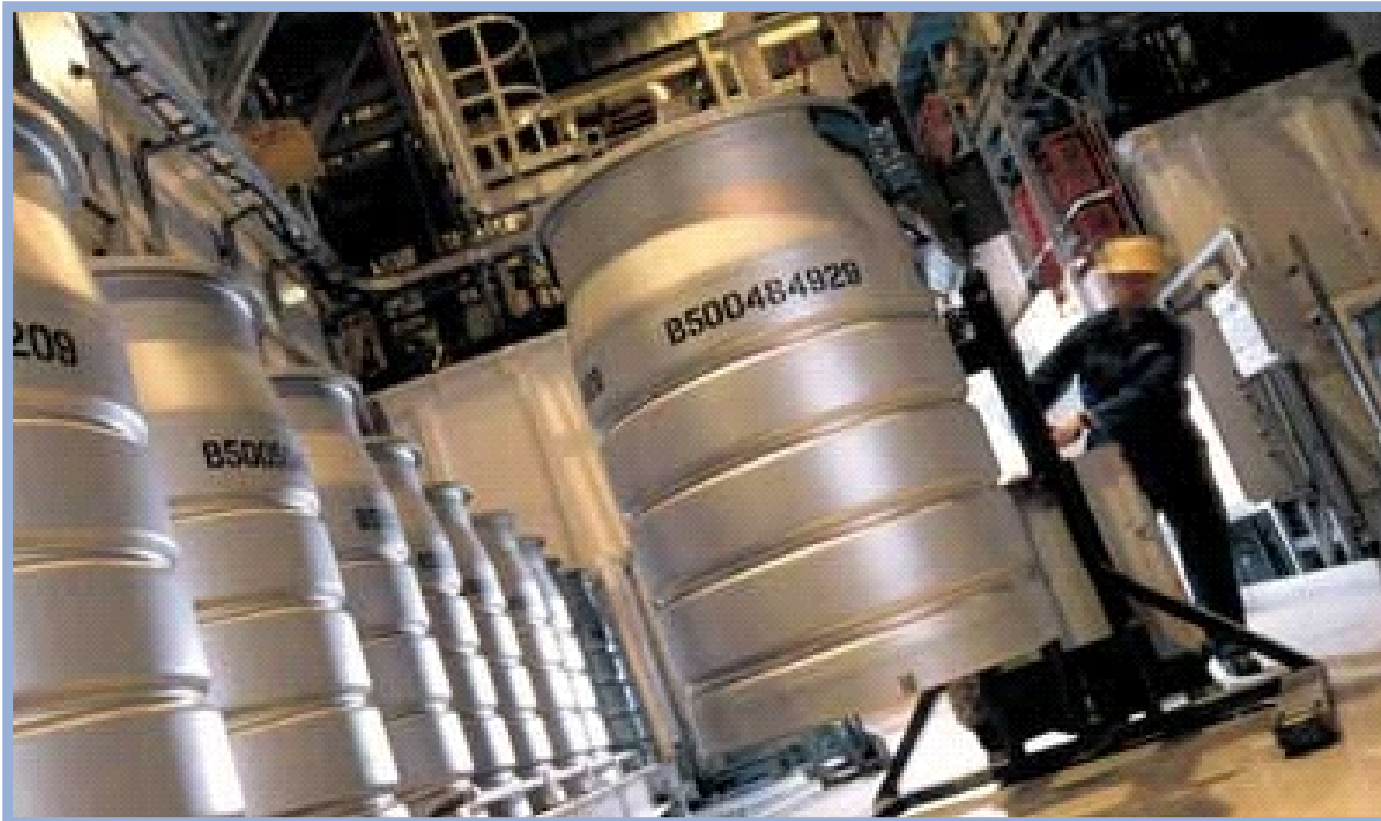


What is nuclear waste?

Only 1% of nuclear waste is high-level nuclear waste. This is the most radioactive type of waste and is created in nuclear power stations during the fission process (the splitting of uranium atoms). Once the fuel has been used it is removed from the reactor and sent to Sellafield where the high level waste is separated from the rest of the used fuel. The waste is then converted into granules and mixed with molten glass inside a steel container where it sets into a solid form for safe storage.



Inside the Waste Packaging and Encapsulation Plant

Nineteen percent of nuclear waste is intermediate-level waste which is far less radioactive than high-level waste. Intermediate-level waste is made up of such things as fuel cladding material and sludges that come from the treatment processes. At Sellafield, there are two encapsulation plants where this sort of waste is put into stainless steel drums, which are then filled with cement. These drums are then lidded, washed and monitored before being placed into a special above-ground storage facility at Sellafield. The decision as to where this waste will be stored long term will be made by the government.

Low-level waste, which forms 80% of all nuclear waste, is only slightly radioactive and includes things like protective clothing, laboratory equipment, paper towels and gloves etc, items that have been used in the controlled areas of a nuclear site, or in hospitals and nuclear research centres.

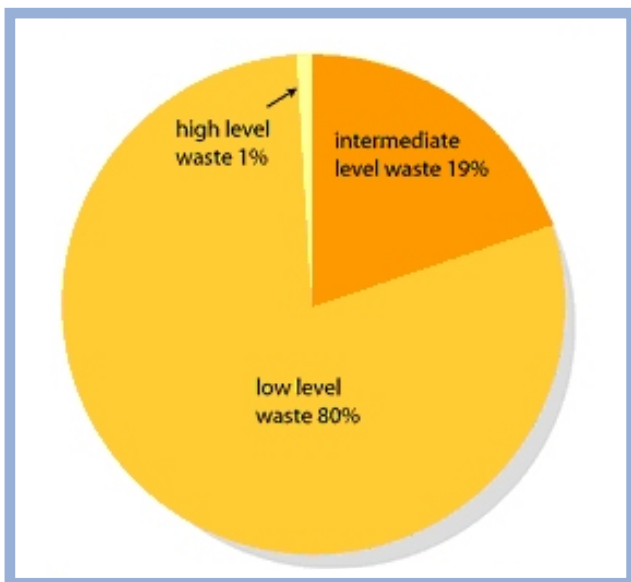
The waste is treated at Sellafield at the Waste Monitoring and Compaction Plant - WAMAC. At WAMAC the waste is placed inside drums which are monitored and then compacted down to a quarter of their original size using a high force compactor.

These drums are then placed inside a freight container and transported mainly by rail to the low-level waste repository in West Cumbria. At the repository, the freight containers are infilled with cement before being placed into a purpose-built concrete lined vault. When a vault is full it is capped with a waterproof membrane and landscaped.



The Waste Packaging and Encapsulation Plant

The UK's national repository for solid low-level waste is four miles from Sellafield. Only 50% of the solid low-level radioactive waste disposed of at this facility is from Sellafield. The rest comes from hospitals, universities, research establishments and industries, including the nuclear industry, around the UK.



Levels of nuclear waste

80%

Low-level waste, which forms 80% of all nuclear waste, is only slightly radioactive and includes things like protective clothing, laboratory equipment, paper towels and gloves etc, items that have been used in the controlled areas of a nuclear site, or in hospitals and nuclear research centres.



Sellafield Site

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