



National Radioactive Waste Management Facility

Transport

Radioactive waste is stored in various locations all over Australia and it is principally transported by road or rail.

Before any radioactive material is allowed to be transported it must be packed, shielded, labelled and marked as set out in ARPANSA's *Code for the Safe Transport of Radioactive Material*. This code is based on the International Atomic Energy Agency's *Regulations for the Safe Transport of Radioactive Material*.

What does this mean?

Before transportation, the form and content of radioactive waste must be known, and external radiation levels must be measured, known and controlled.

How does this happen?

The Transport Regulations are designed on the basis that any radioactive material being transported must be packaged to cope with routine transport conditions and anticipated accident conditions. For example, lifting, loading, movement, acceleration, vibration etc.

Emergency response arrangements are required in case of an accident or incident.

The radioactive waste must be encased in multiple layered containers to provide an appropriate level of radiation shielding, safety and security.

What testing are radioactive waste containers subjected to?

Radioactive waste packages go through a strict testing method before they can be used. The majority of these are tested to show they are able to withstand:

- a 1.2 metre drop test onto hard surface
- a stacking test with a weight five times that of the package pressed upon it
- a water spray test (to simulate exposure to rainfall)
- a penetration test (6 kilogram bar dropped from 1 metre).

Other packages will be subject to more severe tests including:

- a 9 metre drop test onto a hard surface
- a thermal test where the package is subjected to 800 °C for 30 minutes
- an immersion test (15 metres for 8 hours)
- an enhanced immersion test for packages containing high activity (200 metres for 1 hour).

Who knows what is being transported and when?

ARPANSA oversee and approve the design of packages, and transportation of all Commonwealth radioactive waste.

The state and territory regulators oversee and approve the transportation of their waste, adhering to the same ARPANSA code as Commonwealth do.