



# NRWDI

NATIONAL RADIOACTIVE WASTE  
DISPOSAL INSTITUTE

Every human activity generates household waste, which can be disposed of in a municipal refuse site. However, radioactive waste is toxic and poisonous to humans, animals and the environment. Radioactive waste has a unique set of disposal criteria to isolate it from humans and the environment.

The National Radioactive Waste Disposal Institute (NRWDI) is a state owned entity responsible for the disposal and management of radioactive waste, nationally.

International best practice has established the selection criteria for the ideal radioactive waste disposal site. Vaalputs, in the Northern Cape comprises of 10 000 hectares of land, is the national radioactive waste management facility. It serves our needs for disposing of low level radioactive waste (LLW) generated by the nuclear, industrial, medical and agricultural sectors.

Radioactive waste is a multi sector by product:

- in the nuclear energy production at power plants
- in the diagnosis and treatment of illnesses
- in mining and minerals processing
- and in the manufacture of silicon blocks used for micro chips in computers and cellphones

Radioactive waste contains radioactivity which is harmful and must be completely isolated from humans and the environment. It is therefore, packed in metal (low level waste) and concrete drums (intermediate waste) at the point of departure and transported by road under stringent security measures to Vaalputs. Transport vehicles are constantly monitored via satellite tracking and adhere to strict transport schedules. Radioactive waste needs to be disposed of in specially prepared disposal systems or trenches called repositories. The metal and concrete drums are placed in these trenches, and when full they are covered by a thick layer of clay which is compacted to prevent the infiltration of rain water. On the surface, natural vegetation is planted returning the land to its original state.

At Vaalputs, the radioactive waste is carefully handled and managed to ensure utmost safety for the employees, the community and the environment. Every employee is thoroughly trained in all safety aspects and regularly monitored for exposure to radiation. The soil, water, plants and animals in the area are also regularly monitored for radioactive contamination. Radioactive waste loses its radioactivity over time and becomes less harmful.

**Our mandate is to apply an integrated and accountable radioactive waste management and disposal approach. Ensuring the safe management and disposal of radioactive waste in a manner that protects the environment for current and future generations.**

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Disposal Institute (NRWDI)

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