

ROLLING STEWARDSHIP

FACTSHEET



At a glance

- A way to manage waste indefinitely, not to dispose of it.
- Keeps options open for the future.
- Assumes future technology will present a permanent disposal option.
- Requires continuous monitoring, inspection and renewal of waste packages and storage facilities for many years.
- Requires work and investment by future generations.
- Not recognized internationally as a method for the disposal of radioactive waste.

Rolling stewardship is an approach to managing radioactive materials for which there is no disposal solution in the near term. It means maintaining an effective storage regime now, while keeping options open about how to deal with the waste in future. It is not seen by any country as an acceptable strategy to rely on in the long term.

The concept of rolling stewardship was first introduced in 1995 by the U.S. National Research Council in studying the challenge of cleaning up a variety of waste created by the U.S. weapons program. Achieving 'complete' site cleanup in the near term would be desirable, but given that no solution was at hand, stewardship was clearly required. It was recommended that the U.S. Department of Energy adopt a framework of approximately 20 years for stewardship decisions. The study said this approach would provide the opportunity to defer decisions that could affect many generations and allow greater flexibility and adaptability to empower the next generation of decision-makers.

Under rolling stewardship, the radioactive waste is stored on the surface where human controls can safely contain, isolate, monitor and secure it for many generations indefinitely i.e., roll the radioactive waste forward from generation to generation (a succession of stewards). This concept is based on the assumption that technology will eventually resolve the problem for the long-term management of the waste, potentially by destroying or neutralizing it.

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Rolling stewardship for the long-term storage of low-level waste (LLW) would involve multi-generational intervention, continuous monitoring and inspection, improved processing facilities (e.g. super compaction and conditioning through cementation), re-handling and re-packaging of the radioactive waste and continuous construction and maintenance of improved storage facilities (e.g. climate controlled buildings designed for 100 years of service) that store the radioactive waste. Rolling stewardship for the long-term storage of intermediate level waste (ILW) would be similar to the needs of LLW, however this could extend over tens of thousands of years and special processing facilities, storage facilities and packaging would be required to shield workers from highly radioactive materials.

INTERNATIONAL EXPERIENCE

Rolling stewardship is not recognized internationally as a method for the disposal of radioactive waste. No country in the world has or is planning to use rolling stewardship as an approach to the long-term management of radioactive waste. It is not seen as a permanent solution, but a short-term management strategy.

The Netherlands has a small nuclear program with a small cumulative amount of radioactive waste generated to-date. The high groundwater table in the Netherlands disfavours the use of shallow land burial for short-lived radioactive waste, so ultimately all categories of radioactive waste will be placed in a deep geological repository (DGR). The country's current policy specifies that all radioactive waste shall be stored above ground in engineered packages and structures that allow retrieval at all times for a period of at least 100 years. Thereafter, society has the freedom of choice between a continuation of the storage for another 100 years or to proceed to final deep geological disposal.



Space in COVRA's climate-controlled L&ILW storage facility in the Netherlands is rented to museums as a depot to store priceless artwork for the next 100 years