



2002

Canada's radioactive waste management program

Low-level radioactive waste

Low-level wastes are stored at the Radioactive Waste Operations Site (RWOS) at the Bruce reactor in Ontario. Storage from small users, such as laboratories, will be placed in the near future in an underground, near-surface facility at Chalk River Laboratories in Ontario. Wastes from uranium refining operations may be disposed of at a potential site located in southern Ontario called Deep River.

Spent nuclear fuel and high-level radioactive waste

Spent nuclear fuel is stored in reactor pools at nuclear power plants for about six years, then put into on-site dry storage in concrete structures.

Reprocessing spent nuclear fuel

Spent nuclear fuel is not currently reprocessed nor are there plans for reprocessing in the future.

Transporting radioactive waste

There has been limited spent nuclear fuel transport in Canada. Transportation casks have been designed for truck and rail transport. Canada's regulatory body granted approval for truck casks, which may be used for barge shipments as well.

Deep geologic disposal plans

In March 1998, the Canadian Environmental Assessment Agency (CEAA) Panel reported to the Canadian government that the safety of a geologic disposal concept had been adequately

demonstrated. It concluded that the deep geologic disposal of high-level radioactive waste (spent nuclear fuel or solidified nuclear waste) 500 to 1000 meters (1,640 to 3,280 feet) deep within the stable plutonic rock of the Canadian shield constituted a safe and compliant passive long-term storage option.

The CEAA Panel also recommended the creation of an independent waste management organization (WMO). The WMO, yet to be created, will implement the study of long-term spent nuclear fuel/high-level radioactive waste management options. In addition to deep geological disposal, the WMO will examine two other long-term options for radioactive waste management: on-site storage at reactors and above or below ground centralized storage. Following the conclusion of its study, the WMO will recommend to the Canadian government its preferred approach for long-term nuclear waste management.

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U.S. Department of Energy
Office of Civilian Radioactive Waste Management

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