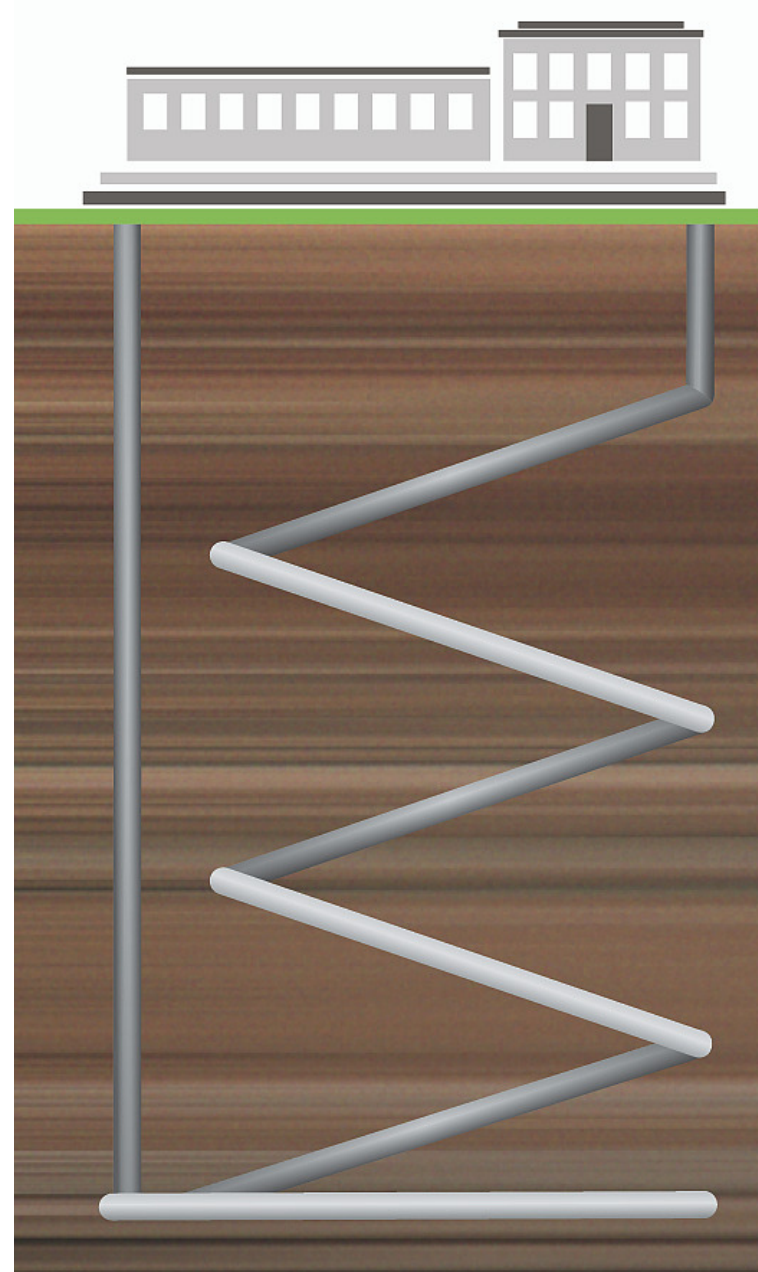
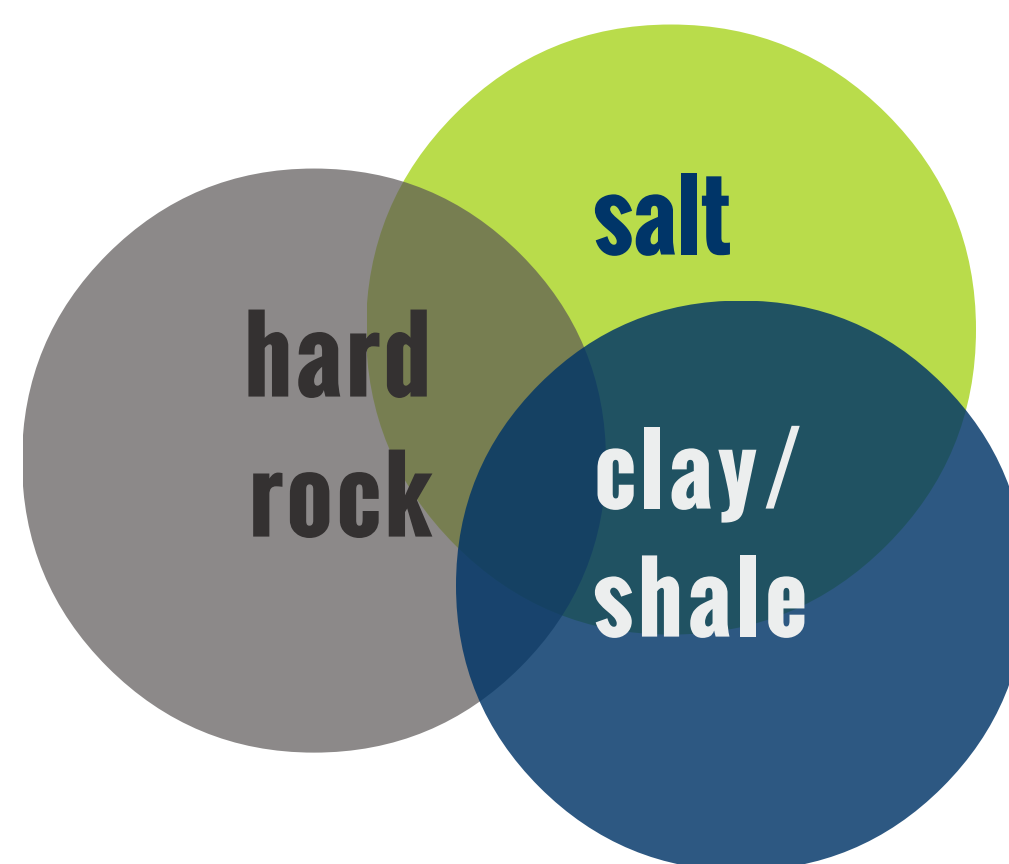


DISPOSAL

A key advantage of a geologic repository is that it will not require perpetual human care and will not rely on the stability of societies or civilizations for thousands of years into the future. It will rely instead on geologic formations that have remained relatively stable for millions of years and on long-lived, engineered barriers.

PERMANENT GEOLOGIC DISPOSAL

Permanent geologic disposal is an essential element of a sustainable, integrated waste management system. Geologic disposal involves placing carefully prepared and packaged radioactive waste in excavated tunnels in formations such as:



A series of barriers, natural and engineered, would be designed to safely contain the waste for thousands of years.

Geologic disposal is the best known method for permanently disposing of spent nuclear fuel and high-level radioactive waste without placing a burden of continued care on future generations. Therefore, the Department is currently performing research and development to study the long-term performance of disposal systems in various rock types, as well as evaluating the deep borehole disposal method.

BOREHOLE DISPOSAL

Boreholes offer a potential alternative to mined geologic repositories, particularly for smaller waste forms. Boreholes would be drilled to a depth of approximately three miles, with at least two miles of depth penetrating hard rock. Waste packages would be emplaced in the bottom mile or so of a borehole, and the hole would then be filled and sealed. The Department currently plans to conduct field tests to evaluate the technical feasibility of the borehole method.

