

NUCLEAR WASTE DISPOSAL SOLUTIONS

Deep Isolation offers unique deep geologic solutions for nuclear waste storage or disposal. We combine scientific and nuclear expertise with specialized stakeholder engagement skills to work alongside communities to design and deliver equitable and environmentally protective solutions.

WHY DEEP ISOLATION?

ENVIRONMENTALLY PROTECTIVE

Nuclear waste is isolated deep underground where it is emplaced in boreholes and monitored for safety.

COMMUNITY COLLABORATION

Our framework for engaging communities is predicated upon listening, learning, and working collaboratively to earn trust and confidence.

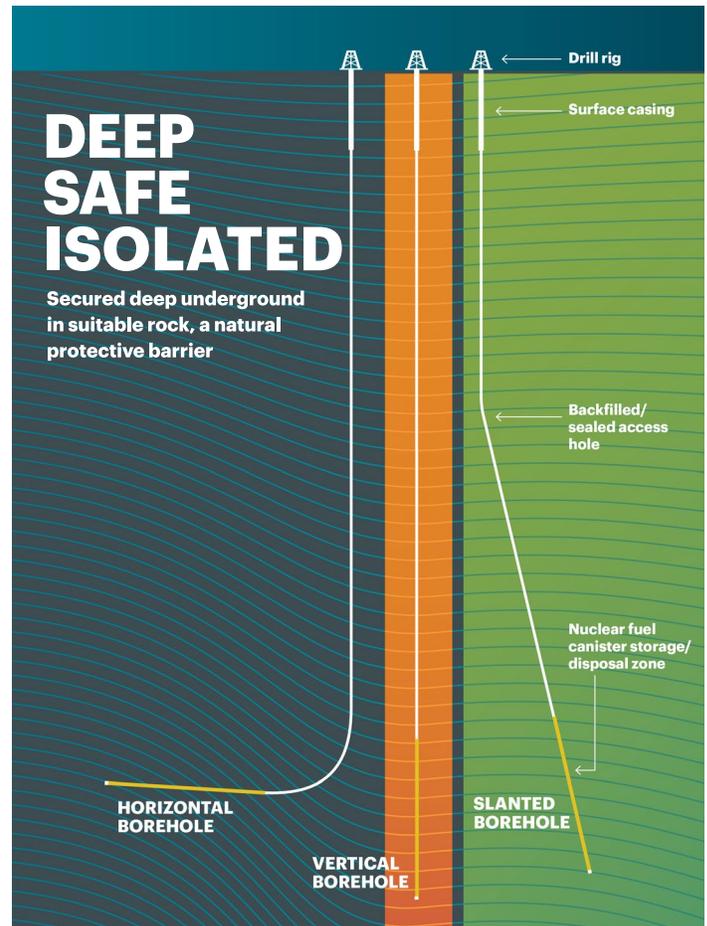
TRUSTED EXPERIENCE

An acclaimed team of engineers, geologists, subject-matter experts, and advisors:

- MacArthur Genius and Bloomberg Innovative Thinker
- Nobel Laureates
- Former U.S. Secretary of Energy
- Former Head of International Relations for the U.K.'s Nuclear Decommissioning Authority (NDA)

INNOVATION AND TECHNOLOGY

- Demonstrated engineered barrier system and retrieval design
- Patented radioisotope dating methods for site characterization
- Waste canisters made of a highly corrosion-resistant alloy designed to last thousands of years

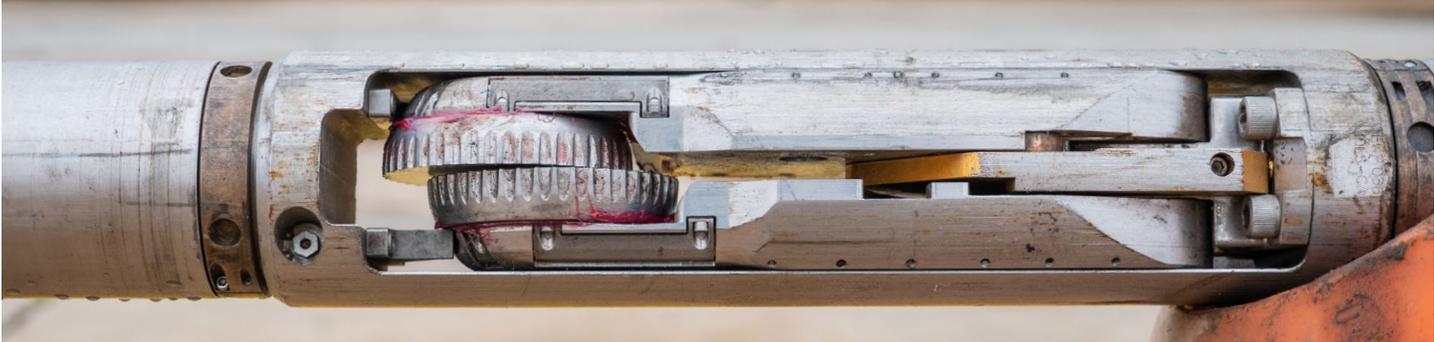


- Canister placement and engineered seal block pathways to the surface
- Peer-reviewed calculations quantify the safety case over a one-million-year timescale

FLEXIBLE PARTNERING

We provide global delivery capability through partnerships with industry leaders as well as flexible IP licensing partnerships when local providers are preferred.





DIRECTIONAL BOREHOLE DISPOSAL

Deep Isolation's solution leverages directional drilling technology to place waste thousands of meters underground within highly stable geologic formations. Borehole repositories can provide substantial deep isolation for many types of waste in a wider range of locations. Because it can be implemented modularly, it is well suited for smaller waste inventories or as a complement to an existing repository.

There are multiple borehole configurations or geometries that can be drilled to dispose of nuclear waste, including horizontal, vertical, or slanted. The optimal depth and configuration will depend on the available geology, type of waste, and other local factors.

Although Deep Isolation's borehole repository design capitalizes on the inherent safety of an extensive subsurface natural barrier, durable engineered barriers are also put in place. Corrosion-resistant canisters to contain the spent fuel assemblies are specially designed to be lowered and retrieved using standard drilling technology. Boreholes are cased with cement and steel to provide a smooth conduit for placement, and when the repository is ready to be permanently closed, the access hole is backfilled and sealed for additional safety and security.

REPOSITORY FEATURES

- At such depth, the thick rock strata provides a robust, natural geologic barrier that effectively isolates waste from humans and the environment.
- The drilling, placement, and retrieval techniques are standard, cost-effective and reliable.
- Directional borehole design allows for waste storage or disposal in decentralized repositories located at or near reactor sites, thus eliminating the need for long-haul transportation.
- Borehole repositories are lower in cost and improve worker safety compared to mined repositories.



COMMUNITY AND STAKEHOLDER ENGAGEMENT

Deep Isolation is committed to engagement and collaboration with local communities and governments to determine if deep geologic disposal is not only right for that location but supportive of their community vision. Through a fully immersive two-way dialogue with local communities and decision-makers, we facilitate informed consent on behalf of the community to ensure an equitable partnership for all stakeholders.

SOLUTION BENEFITS



World leading science and innovation with mature technologies



Early and inclusive stakeholder engagement



Roadmap process for optimal design and operations



Demonstration planning and delivery



IP licensing and full-service provider options