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Private Company Successfully Demonstrates Deep Geologic Disposal of Prototype Nuclear Waste Canister

Private Company Successfully Demonstrates Deep Geologic Disposal of Prototype Nuclear Waste Canister

01/22/2019 | Press Release

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Berkeley, CA – On Wednesday 16 January, Deep Isolation, a California-based private company, demonstrated publicly that prototype canisters built for nuclear waste can be successfully placed and retrieved thousands of feet underground. With over 40 observers from multiple countries, attendees included representatives from the U.S. Department of Energy, nuclear and oil & gas industry professionals, investors, environmentalists, and local citizens. This first-of-its kind demonstration represents a significant milestone for the nuclear waste industry.

Deep Isolation's patented technology leverages standard drilling technology that has been perfected over the past two decades in the oil & gas industry. The approach was previously considered impossible by many nuclear experts, in part because of the challenge of retrieval. Deep Isolation had been testing their technology in private, and this was the first time that members of the public were invited to see the demonstration. No radioactive material was used in the test, and the location was not one where actual waste would be disposed.

Participants saw first-hand the Deep Isolation prototype canister designed to hold highly radioactive nuclear waste, and were able to tour the test rig and site while the test was being conducted. Professor Scott Tinker, Director of the Bureau of Economic Geology and the State Geologist of Texas, has been following Deep Isolation's progress. "Managing nuclear waste is an important, unmet commitment to the American people. I was intrigued by this innovative approach to nuclear waste disposal", said Dr. Tinker. "The technology is adapted from the oilfield and is straightforward and time tested. The team was able to answer questions around public perception and environmental risk."

This is the first time that such a test has ever been carried out, and demonstrates the advantages of a private-public-partnership approach. Deep Isolation's objective is to safely and securely dispose of nuclear waste faster than other options, while building consensus through genuine stakeholder engagement. Elizabeth Muller, Deep Isolation's CEO emphasized that "Stakeholder engagement is where our solution began. Meaningful consultation cannot happen once a technology has been confirmed. To prepare for this public demon-

stration, we met with national environmental groups, as well as local leaders, to listen to concerns, incorporate suggestions, and build our solution around their needs and our customers'."

The canister held no waste, but a steel rod simulated the weight of true waste. The canister was lowered over 2000 feet deep in an existing drillhole using a wireline cable, and then pushed using an underground "tractor" into a long horizontal storage section. The canister was released and the tractor and cable withdrawn. Several hours later, the tractor was placed back in the hole, where it latched and retrieved the canister, bringing it back to the surface.

Our team has worked tirelessly to reach this moment," says Rod Baltzer, Deep Isolation's Chief Operations Officer. "We have been working on canister design, drilling technology, stakeholder engagement and other aspects, and today, we were able to show people our disposal concept using a prototype canister. It was incredibly special to share this accomplishment with many of the key people who have made it possible, and with our guests who can see how this solution could benefit them, their organizations and communities."

Dr. Richard Muller, Deep Isolation Chief Technology Officer, notes that "We have not invented new drilling technology; the oil and gas industry has already perfected directional drilling. What we are doing is using this technology for an unexpected and extremely important new application. Right now, the U.S. is holding 80,000 tons of highly radioactive nuclear waste. Something must be done with this, and every major scientific group that has studied the challenge concluded that putting it deep underground is the safest solution for the present and future generations." He further explains that the method has significant advantages over the widely considered alternative of putting the waste in mined tunnels. "A drilled repository allows you to go deeper, while disturbing less rock. It is both safer and less expensive than a mined repository", says Professor Muller.

In 2019, Deep Isolation is focused on both the U.S. and the international market for nuclear waste disposal. According to the International Atomic Energy Agency, there are about 400 thousand tons of highly radioactive spent nuclear fuel waste temporarily stored in pools and dry casks at hundreds of sites around the world. No country has an operational geological repository for spent fuel disposal.

About Deep Isolation

Berkeley based Deep Isolation is a leading innovator in nuclear waste disposal solutions. Founded through a passion for environmental stewardship, scientific ingenuity, and American entrepreneurship, Deep Isolation's world-class team of experts has developed a patented solution using directional drilling to safely secure waste deep underground. For more information, contact info@deepisolation.com (<mailto:info@deepisolation.com>).

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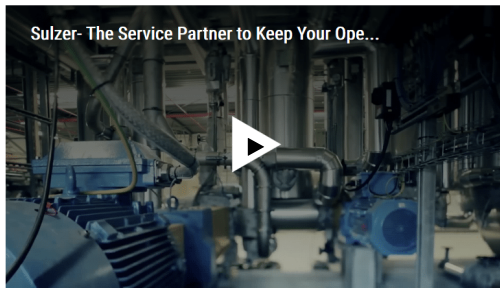


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