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Progress towards the demonstration of deep borehole disposal

This paper provides an update to progress towards the end-to-end demonstration of deep borehole disposal for radioactive waste, following the research study presented at the IAEA International Conference on Radioactive Waste Management in November 2021.
In 2021/22, Deep Isolation and the University of Sheffield conducted a study of international stakeholder views from across the regulatory, policy and waste management communities on the benefits, opportunities and challenges of deep borehole disposal (DBD). Four out of five research participants said that they would welcome greater international collaboration on DBD, with the highest priority being a full-scale, non-radioactive demonstration of the technology.
Based on this feedback, Deep Isolation has helped to convene an initial group of government and industry partners to establish an independent, non-profit organization: the Deep Borehole Demonstration Center, established on 1 December 2022. This paper outlines the multi-year, phased program of work that this non-profit aims to deliver, with the primary objective to advance the maturity of the safety case for deep borehole disposal and the technical readiness levels of the disposal concept.
Work has already started on this program, with an initial canister lift test in February 2023 using standard oil and gas equipment. This paper sets out latest progress and plans by the growing number of government, regulatory and private-sector organizations that are joining as Members of the Deep Borehole Demonstration Center.

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