

Scientists express concern over disposal of nuclear waste at New Mexico underground salt formation

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(Phys.org)—A trio of Earth and Environmental scientists with hazardous waste backgrounds, from Stanford University, has published a Comment piece in the journal *Nature*, outlining their concern over a recent proposed plan to add more nuclear waste to the Department of Energy's, Waste Isolation Pilot Plant (WIPP) located in a deep underground salt formation in New Mexico. The trio, Cameron Tracy, Megan Dustin and Rodney Ewing suggest more thought be put into the idea before the government gives the go-ahead for the project.

The cold war led to the stockpiling of a huge amount of nuclear arms in the U.S. and Russia, as most everyone knows. But it also led to an ever

increasing amount of hazardous materials associated with that stockpiling. Now that the arms race has cooled, and the U.S. and Russia have agreed to reduce their stockpiles, a means of dealing with many tons of [hazardous materials](#) must be found. To deal with such materials, the U.S. built the WIPP (which is essentially a platform built inside a cave that formed in a layer of salt), where such materials have been placed for storage over the past 15 years. But, now, a team of researchers hired by the government to address a whole new round of disposal requirements has recommended that 34 tons of [nuclear waste](#) be added to the WIPP, which the research trio suggests, may be pushing the limits of the facility. They also suggest that safety assessments have not taken into consideration all of the things that could go wrong with the storage facility—such as how material inside of drums will react with salt over thousands of years after they are crushed, or what might happen if over many years, the WIPP becomes unknown to future generations who at some point begin drilling in the area.

The researchers acknowledge the good safety record of the WIPP, just one major problem has occurred, where cat litter was used to sop up material which led to a reaction inside a drum, forcing the lid to pop off, allowing gas to escape. Such accidents are inevitable, the team notes—what they are worried about is the lack of planning regarding what should be done in the event other types of accidents occur—over a 10,000 year timeline. Once the site is sealed in 2033, monitoring will end—there will be no way to know what is going on inside the facility which means there will be no way to assess whether radioactive material has begun to leach into outside areas or whether carbon dioxide begins to build up due to decay, which can lead to pressure causing fractures to the surface. The group suggests the DOE take a harder look at the safety features that are in place now before adding tons more material to the site.

More information: Policy: Reassess New Mexico's nuclear-waste

repository, [nature.com/articles/doi:10.1038/529149a](https://doi.org/10.1038/529149a)

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