

YUCCA MOUNTAIN PROJECT

While the Trump administration's public stance on a proposal to turn Yucca Mountain into a nuclear waste dump has vacillated, the two candidates in Nevada's.

The Department of Energy DOE says all high-level radioactive waste destined for the Yucca Mountain repository would be in a solid, stable form before being transported, and cannot burn, explode, or leak. And the same cities would be affected by rail shipments as well. As a result, units of government below the federal level will have only limited input into routing rail shipments of spent fuel. Of note, if built the proposed Caliente rail line in Nevada would be the longest new track construction considered in the U. The goal would be to have a storage facility for waste from operating reactors or other "non-priority waste" available by , and an actual permanent repository by the end of . Reprocessing both reduces the volume of nuclear waste and provides uranium and plutonium that can be used to produce more energy. Defense waste is about 2, MTHM that was irradiated in a reactor, but had not been reprocessed when reprocessing was halted. Construction of such facilities would require the consent of the state, local, and tribal governments which may be affected. While the routes in Nevada would have been public, in the other states the planned routes, dates and times of transport would have been secret for security reasons. The amended law was subsequently labeled the "Screw Nevada Bill. The rail line would cover a distance of miles and is estimated by the DOE to take 4 years to build at a cost exceeding 1 billion. On a national level, the DOE says a repository at Yucca Mountain would protect public health and safety by removing nuclear waste from sites around the country and consolidating it into just one place. The Academy, however, said the radiation safety standard should be set when the waste would be at its peak radiation levels - at least , years from the time the waste is sent to Yucca. For a comparison, a chest X-ray exposes a person to 10 millirem. Hundreds of men and women worked on the study of Yucca Mountain for decades, including some of the best scientists in the world. How would nuclear waste be transported to Yucca Mountain? Yucca Mountain has a desert climate and receives about six to seven inches of rain and snow per year. But say for certain types of waste you don't want to have access to it anymoreâ€”that's good. Given funding limitations and other constraints, the DOE and the NRC subsequently and separately suspended their efforts to license the repository at Yucca Mountain; this action lead to law suits filed by several parties aimed at forcing the NRC to resume the licensing proceeding. Other options, such as shooting the waste out into space, are far too risky. The liquid waste is subsequently solidified. The concern is that, in an earthquake, the unanchored casks of nuclear waste material awaiting burial at Yucca Mountain could be sent into a "chaotic melee of bouncing and rolling juggernauts ". Of note, an update to the report was published in ; Download the report. Dry storage facilities permit easy human monitoring and maintenance. Highâ€”level waste will remain radioactive for hundreds of thousands of years but there is no way to guarantee that human-engineered waste packages can effectively contain the waste for that long. To be certified, each transportation cask design must be able to withstand all of the following tests, in the given sequence: A drop from 30 feet onto an unyielding surface, A drop from 40 inches onto a shaft 6 inches in diameter, A fully engulfing fire at F for 30 minutes, and Immersion in 3 feet of water The State of Nevada and other groups remain concerned, however, because these tests are conducted on computer models or on smaller-scale models of the casks. After detailed studies of these sites, President Ronald Reagan approved three sites for detailed site characterization. Those that do not reprocess plan to bury their spent fuel as is. If the radiation were to leak, it could contaminate underground water supplies. Rises in the water table caused by seismic activity would be, at most, a few tens of meters and would not reach the repository. When spent nuclear fuel is processed to extract plutonium for nuclear weapons development, liquid high-level radioactive waste is a byproduct.