

2007 H🌐ME Yucca Mountain Fact Sheet

What is the Yucca Mountain Project? Yucca Mountain is the only site under consideration for disposal of the nation's high-level nuclear waste. Congressional politics singled out Yucca Mountain in the 1987 amendments to the Nuclear Waste Policy Act (NWPA). The DOE is responsible for implementing the program, the Environmental Protection Agency sets radiation exposure standards, and the Nuclear Regulatory Commission (NRC) is responsible for licensing the repository. The project would:

- Excavate a series of tunnels inside Yucca Mt. 1600 ft below the top, but still 1,200 feet above the Amargosa Valley floor. The water table is 1,000 feet below the tunnels, sloping toward the valley.
- Transport 70,000 metric tons of highly radioactive waste (11 billion curies compared to 80-100 million curies released by the Chernobyl disaster) from 72 commercial reactors and 5 DOE sites across the US. This volume will be created by 2010, before the repository even opens. Doubling waste capacity is now being discussed in a 10/07 Supplemental Environmental Impact Statement.
- Load waste into the repository, either directly in a dual purpose container or transferred into a disposal cask, to be backfilled later (possibly not for 300 years) with dirt and rock.
- Withdraw approximately 230 square miles from public access.

Where is it? Yucca Mountain is 90 miles northwest of Las Vegas, NV, the fastest growing city in the nation, and 12 miles from the farming community of Amargosa Valley, home to the largest dairy farm in Nevada, which provides milk to the entire southwest. Groundwater from Yucca Mountain eventually finds its way to numerous natural springs in the region. This includes Death Valley, CA, 20 miles away, home of Timbisha Shoshone and visited annually by up to a million thirsty tourists.

All tribal governments of the region oppose the Yucca Mountain Project. Of particular importance is the Treaty of Ruby Valley, still in force between the Western Shoshone Nation and the United States. The treaty outlines Western Shoshone land, "Newe Sogobia," which includes Yucca Mountain. Newe Sogobia has been declared "nuclear free" by the Western Shoshone National Council. Thus, the Yucca Mountain Project violates Shoshone sovereignty and law.

Is Yucca Mountain scientifically suitable? Over 25 years of analysis of Yucca Mountain has revealed significant problems with the site.

1. The region is seismically active, and the rock is highly fractured, which allows a "fast" pathway for water to escape. According to the DOE's own analysis, radioactive water could reach drinking wells in 200 to 400 years.
2. As a result, the DOE has moved away from a cornerstone of the original law- that the site alone provide primary geological waste isolation. In order for the project to move forward, regulations have been changed or eliminated to accommodate deficiencies of the site. Now, 99.9% of the waste containment system in the long term would be unverifiable metal canisters and drip shields.
3. The combination of readily available water inside the mountain and an oxidizing geochemical environment makes Yucca Mountain quite corrosive, leaving great uncertainty as to whether the waste could be contained for the hundreds of thousands of years that it will be toxic.

How will the waste get there? Planned nuclear waste shipments to Yucca Mountain for just one year would outnumber all such shipments made over the past three decades in the U.S. Anticipated problems:

1. Shipments would cause cumulative "routine" radiation exposures to the public, and reduction in property values near transportation routes.
2. Large expenditures would be required to upgrade highway and rail routes, build and test new shipping containers, and train emergency response personnel nationwide.
3. Approximately 50 million people in 44 states would live within the potential exposure zone.

4. By the DOE's own analysis, 150-400 accidents are expected over the 20-30 year period of shipping, (depending on the method of transportation and routing, -which has not yet been finalized). A 10/07 Supplemental Environmental Impact Statement discusses rail routes.
5. In the case of a serious accident from the projected 50,000 or more shipments, dozens of people could die immediately, others could be seriously injured, and cleanup alone would cost tens of billions of dollars and take months or years to complete. This does not include the millions to billions of dollars lost to the local economy from the stigma of being contaminated.

What should be done instead? Every active nuclear reactor will continue to be a waste site, since the waste needs to be cooled underwater for an average of 5 years before it can be moved. Thus, the Yucca Mountain Project does not fully address the significant environmental and public health risks that spent-fuel pools pose to surrounding reactor communities. The waste should be stored as near as possible to the sources of generation in Hardened On-Site Storage (HOSS). It can be then be managed for 100 – 200 years while some of the most radioactive elements such as strontium-90 decay away, allowing the waste to be less dangerous to handle in the long term.

What is the current status? Nevadans, the congressional delegation, the governor, and the legislature all continue to reject a nuclear dump at Yucca Mt. They and their allies nationwide are committed to strongly opposing the site in Congress, during the licensing process, and in the courts.

Congress "approved" Yucca Mountain in 2002 for the nations' highly radioactive waste, and the Dept. of Energy is planning to submit a license application for the site by June 30, 2008. The licensing of Yucca Mountain by the Nuclear Regulatory Commission (NRC) would be the last hurdle to the "official" beginning of construction. If completed, the DOE would expect its first shipments in 2017.

However, there is no radiation protection standard for Yucca Mountain yet, which is necessary for the project to move forward. Federal court ruled the initial standard inadequate. In September 2005, the Environmental Protection Agency (EPA) released its revised radiation protection standard, which is still inadequate and would seriously undermine environmental protection. The EPA is many months behind in releasing its "final" standard, which will likely be contested in court again.

Despite delays, budget shortfalls, changing management, and controversy regarding potentially falsified science, DOE continues to forge ahead. In 9/06, DOE introduced major changes in disposal packaging and Nevada transportation routes, followed by draft SEIS documents in October 2007.

Even NRC commissioner Edward McGaffigan, retiring after 10 years, has said, "It may be time to stop digging ..." [at Yucca], and that the project has been undermined by "bad law, bad regulatory policy, bad personnel policy...bad budget policy" and other problems "throughout its history."

Recommendations:

1. **Support legislation that offers Hardened On-Site Storage of nuclear waste as an alternative to Yucca Mountain.**
2. **Stop funding the Yucca Mountain Project. It is a waste of taxpayer money.**
3. **The Environmental Protection Agency's revised radiation protection standard must be thrown out once again and written to truly protect all future stakeholders equally and throughout the peak dose period; estimated at over 250,000 years.**
4. **The United States must honor the 1863 Treaty of Ruby Valley and follow the United Nations Committee to Eliminate Racial Discrimination (CERD) direction to "freeze, desist and stop" actions against the Western Shoshone Nation, including the Yucca Mountain project.**