



Background on Proposed Facility at Yucca Mountain

This fact sheet provides basic background information on the proposed Yucca Mountain facility and EPA's role in the process.

What is EPA's role at Yucca Mountain?

Congress has approved the Yucca Mountain site as a candidate for disposal of spent nuclear fuel and high-level radioactive waste in a centralized underground facility, and has established key roles for various Federal agencies to ensure safety of any radioactive waste disposal there.

EPA's role is to set standards that will protect public health and the environment from the risks of radioactive material proposed for disposal at Yucca Mountain for up to 1 million years after the facility closes. Yucca Mountain will not be allowed to open unless it meets EPA's requirements. For more information on EPA's proposed standards, see EPA Yucca Mountain Fact Sheet #2.

What is Yucca Mountain?

If built, the proposed facility at Yucca Mountain will become the final disposal site for all of the spent nuclear fuel and high-level radioactive waste produced in the U.S. Currently, spent nuclear fuel and high-level radioactive waste is stored above ground at 77 locations in 35 states, including 72 commercial nuclear power plants and 5 U.S. Department of Energy (DOE) facilities. The proposed facility is a geologic repository, meaning that it will store packaged waste deep below the Earth's surface in an underground tunnel.



Yucca Mountain is located within the Nevada Test Site, approximately 100 miles Northwest of Las Vegas, Nevada.

What are the radioactive wastes proposed for disposal at Yucca Mountain?

Ninety percent of the waste proposed for disposal at the Yucca Mountain facility consists of *spent nuclear fuel*. Spent nuclear fuel is produced as a waste product by nuclear reactors present in commercial nuclear power plants, government reactors, and naval propulsion plant reactors.

The remaining 10% of wastes proposed for disposal at Yucca Mountain consists of high-level radioactive waste, which is produced mainly from the reprocessing of spent nuclear fuel.

These materials contain radioactive elements such as cesium, strontium, technetium, and neptunium. While some of these will remain radioactive for only a few years, others will be radioactive for millions of years.

What must happen before Yucca Mountain can open?

Before the DOE could open a geologic repository at Yucca Mountain and begin waste emplacement, the following must happen:

- The EPA must issue its final Public Health and Environmental Radiation Protection Standards designed to protect the public and the environment for up to 1 million years into the future.
- The U.S. Nuclear Regulatory Commission (NRC) must issue licensing regulations for Yucca Mountain that implement EPA's rule, and include other technical requirements NRC will use in making a decision on whether Yucca Mountain is safe to open.
- The DOE must submit a license application to the NRC showing how the proposed repository meets all licensing requirements, including EPA's standards.
- The NRC must review and approve DOE's license application. This decision process includes a multi-year review and public hearings.
- Only if NRC determines that the facility will meet EPA's standards and other licensing requirements will the license be approved and construction of the facility begin.
- The earliest the proposed facility could open and begin accepting waste is 2017.

1970

Timeline of Key Yucca Mountain Actions

1978

DOE begins studying Yucca Mountain to determine if it is suitable for a permanent repository for the nation's high-level nuclear waste.

1980

1982

The Nuclear Waste Policy Act instructs the DOE to carry out further studies of locations for a geologic repository.

1987

The Nuclear Waste Policy Act Amendments direct DOE to continue studying only Yucca Mountain as a potential disposal site.

1990

1992

The Energy Policy Act directs EPA to develop standards for a high level nuclear waste repository at Yucca Mountain, based on scientific findings and recommendations of the National Academy of Sciences.

1995

The National Academy of Sciences releases "Technical Bases for Yucca Mountain Standards," which contains the recommendations on which EPA based their standards.

2000

2001

EPA issues a set of standards, designed to protect human health and the environment from risks of radioactive material if it is disposed at Yucca Mountain.

July 2002

President Bush signs House Joint Resolution 87, designating the Yucca Mountain Site for development of a high-level nuclear waste repository.

July 2004

The U.S. Court of Appeals for the District of Columbia Circuit rules that the timeframe of EPA's Yucca Mountain standards is inconsistent with technical advice from the National Academy of Sciences.

August 2005

EPA releases proposed changes to Yucca Mountain standards that extend protection to 1 million years.

December 2006

After reviewing and considering public comments, EPA issues the Final Yucca Mountain standards.

2017