



Q: *What are some of the public policy issues associated with a repository the Secretary is considering?*

A: The relevant public policy issues all converge on safety and security. If Yucca Mountain is chosen as the repository site, it will enhance the safety and security of the high-level radioactive waste and spent nuclear fuel through disposal.

Protecting Public Health and Safety and Preserving the Quality of the Environment

At present, spent nuclear fuel and high-level radioactive waste are temporarily stored in surface facilities at 131 locations in 39 states. It is clearly preferable to store wastes 1,000 feet underground, if it can be done safely. Most of the existing storage sites are near population centers, and because nuclear reactors require abundant water, most of these sites are also located near rivers, lakes, and seacoasts. Analyses indicate that these stored materials, if left where they are indefinitely, could become a serious hazard to nearby populations and the environment. If not perpetually maintained and safeguarded, this material could travel through groundwater and surface water runoff to rivers and streams that people use for domestic and agricultural purposes. Should this occur, 20 major waterways and all seacoasts could be adversely impacted. Currently, more than 30 million people are served by municipal water systems with intakes along the potentially affected portions of these waterways. Over the 10,000-year regulatory compliance period, without a geologic repository, trillions of dollars could be required to maintain facilities and thousands of lives would be impacted.

Local residents' safety and health and the environment are also protected. The Environmental Protection Agency and Nuclear Regulatory Commission regulations address the performance of a repository by setting radiation protection standards that protect the

The most compelling issue is the protection of the health and safety of millions of Americans in almost every state. In addition, a repository would also protect national security and support a balanced energy supply.

public, workers, and the environment. The DOE has evaluated the ability of the natural and engineered barrier systems to isolate radioactive materials from the environment. These studies and analyses indicate that the health and safety of all those individuals living in the vicinity of the repository would be protected.

Environmental cleanup of Cold War weapons facilities: The production of nuclear weapons during World War II and the Cold War resulted in a legacy of high-level radioactive waste and spent nuclear fuel that is currently stored in

require permanent disposal of all these materials.

Protecting the Nation

Protecting the nation from acts of terrorism:

Fundamentally, deep geologic disposal of radioactive waste is safe from acts of sabotage or terrorism. No reasonably conceivable attack at the surface of a repository could have a significant impact on the high-level waste contained in very long-lasting metal containers some 1,000 feet underground in solid rock. In addition, the Yucca Mountain site is remotely located on

federal land, with restricted access

because of its proximity to the Nevada Test Site, where the United States has conducted over 800 nuclear weapons tests. Yucca Mountain is also surrounded on three sides

by the Nellis Air Force Range, which has restricted airspace, and the site already has a highly trained and effective rapid-response security force.

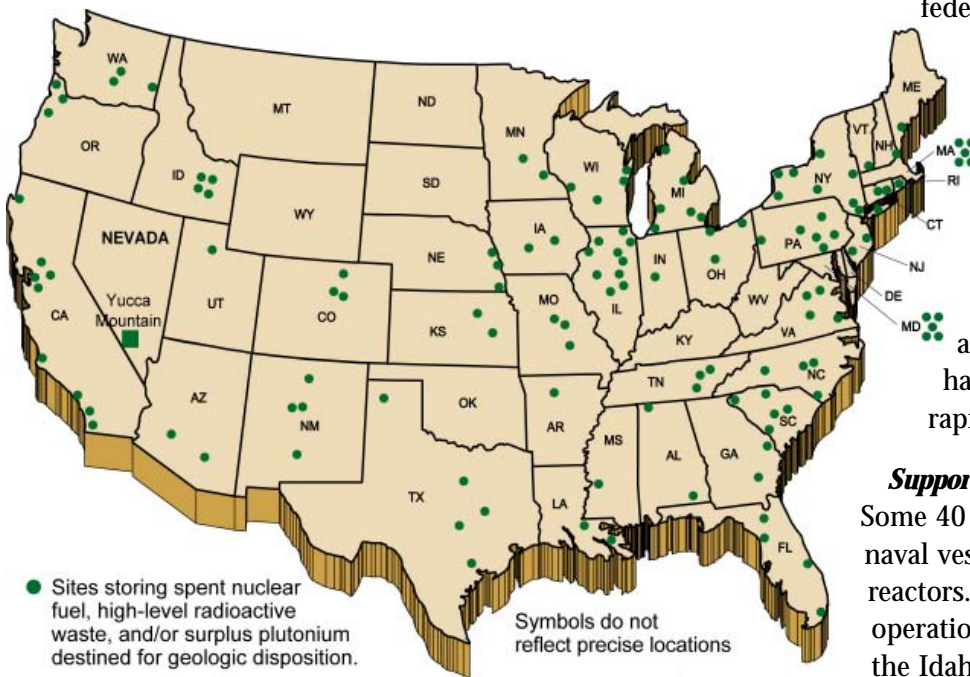
Supporting the U.S. Navy nuclear fleet:

Some 40 percent of the nation's large naval vessels are powered by nuclear reactors. Spent nuclear fuel from naval operations is currently being stored at the Idaho National Environmental and

Engineering Laboratory, in temporary storage facilities, and is awaiting final

disposal. This waste must be disposed of in order to maintain our naval capability, now and in the future.

Dismantling nuclear weapons: The end of the Cold War has brought the welcome challenge to our country of disposing of surplus weapons-grade plutonium. This could be used as mixed oxide fuel, which would then generate spent fuel, or immobilized material. The spent fuel or immobilized material would be secure in the geologic repository, where unauthorized removal would be very hard even if institutional controls were lost.



Spent nuclear fuel and high-level radioactive wastes are currently stored in temporary facilities in 39 states

Washington, South Carolina, Colorado, and Idaho. Large volumes of high-level radioactive waste were created in the past when spent nuclear fuel was reprocessed to extract plutonium for weapons use. The high-level waste left over from that process exists in liquid and solid forms. Federal sites where this liquid waste has been stored, and in some instances has leaked from holding tanks, require varying degrees of remediation. The cleanup and decommissioning of the former weapons-production sites will

By permanently disposing of surplus nuclear weapons materials, the United States would encourage other nations to do the same.

Fuel from research reactors: The DOE has provided fuel for use in research reactors in both U.S. and foreign universities and laboratories. To support nuclear nonproliferation objectives, these research facilities are required to return the DOE-owned spent nuclear fuel. These spent fuels are being stored at the Savannah River Site, in South Carolina, and at the Idaho National Engineering and Environmental Laboratory, while awaiting disposal in a repository.

Providing support for America's balanced energy security

Roughly 20% of our country's electricity is generated from nuclear power. This means that, on average, each home, farm, factory, and busi-



The U.S. Navy's aircraft carriers and submarines are powered by nuclear reactors, which produce waste that must be disposed of in a repository.

ness in America runs on nuclear fuel nearly five hours a day. If we continue to avoid resolving the nuclear waste question, sooner or later we will have to decide which five hours of electricity we are willing to do without.

Some existing facilities are limited in the amount of spent nuclear fuel they can store onsite. When the limits are reached, either new or additional storage space will have to be negotiated, or in some cases, these reactors may have no choice but to close down prematurely. Moreover, the costs for additional onsite dry spent fuel storage and security have been rising rapidly.



Nuclear arms reductions result in excess plutonium, which must be disposed of in a repository. Geologic disposal of defense waste protects the health and safety of the public, while keeping such material out of the reach of terrorists and rogue nations.