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Get the Facts on Nuclear Waste Transportation!





Will Radioactive Waste Travel Through My State?

The nuclear power industry has created thousands of tons of deadly nuclear waste, and it could soon be traveling through your community! Along with its allies in the federal government, the nuclear industry is pushing Congress to establish a nuclear waste dump at Yucca Mountain, Nevada. If they are successful, 100,000 shipments of high-level radioactive waste, now located at 77 sites across the country, will be transported through 43 states. Fifty million Americans will be put at risk over 25 years, as waste moves past homes, workplaces, recreational areas, schools, and hospitals. The map below shows the routes that would most likely be used to transport the waste.



Where is Yucca Mountain?

Yucca Mountain is located in Nevada, about an hour northwest of Las Vegas. Located in a desert landscape, it public lands include part of the Nevada Test Site and Nellis Air Force Base. However, the entire area is part of the Western Shoshone people's traditional homelands, as recognized by the U.S. government when it signed the Treaty of Ruby Valley in 1863. If a dump is built at Yucca Mountain, the Shoshone will lose access to a place they consider sacred.

What Can I Do?

- Write to your Members of Congress and tell them that you do not want high level nuclear waste to travel through your community. You can use the sample post card text below, or write one in your own words, telling your Representative and Senators your concerns. Send your note on a post card depicting a local scene if you can to drive home the point that you're a voter in their next election.
- Solution Not the Notice No
- Also, if you belong to a group yourself, put an article in the newsletter, make an announcement at a meeting, or arrange to have a speaker address your group on this issue.
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- S Contact us (see back of flyer) for more flyers or other materials, or to arrange a presentation to your group.



What is the Time Frame for the Decision about the Dump and the Transportation of Waste?

The Department of Energy (DOE) is now in a "site characterization" phase, which means that it is performing tests at the Yucca Mountain site to determineits suitability as a site for the disposal of radioactive waste. If the DOE determines that the site is acceptable, it will apply in 2001 for a license from the Nuclear Regulatory Commission (NRC). If the license is granted, construction will begin in 2006. If all goes according to the DOE's plan, waste will be accepted at Yucca Mountain beginning in 2010 and will continue to arrive at Yucca Mountain for 24 years, with the final "emplacement" activities ending in 2035.

Where can I get more information?

If you have access to the World Wide Web, check out these sites:

Public Citizen's Critical Mass Energy and Environment Program

http://www.citizen.org/cmep Nuclear Information Resource Service **Atomic** http://www.nirs.org Shundahai Network http://www.shundahai.org **Citizen Alert** http://www.igc.org/citizenalert/



Check out Public Citizen's Atomic Atlas! State of Nevada Nuclear Waste Project Office http://www.state.nv.us/nucwaste/index.htm Yucca Mountain Project Office (DOE) http://www.ymp.gov **Nuclear Regulatory Commission** http://www.nrc.gov **EPA Yucca Mountain Homepage** http://www.epa.gov/radiation/yucca/ NRC/Sandia Labs Modal Study Page http://ttd.sandia.gov/nrc/modal.htm

How much waste will go to Yucca Mountain?

Under current law, 70,000 metric tons of waste (one metric ton is about 1.1 tons or 2200 pounds) would be allowed to be stored at Yucca Mountain, with 63,000 tons of that being commercial waste and the rest being DOE waste. However, that still would not accommodate all the waste projected to be produced by the time the repository opens (an estimated 107,500 metric tons of both commercial and DOE waste). This means that legislators would either have to change the law to allow more waste to go to Yucca Mountain, or open a second repository in another state (because they are unwilling to look at other solutions to the nuclear waste problem).

What is High-Level Radioactive Waste?

High-level radioactive waste is produced at commercial nuclear power plants and nuclear weapons production facilities. Nuclear fuel is made of pellets of enriched uranium, sealed in fuel rods, which are bundled together into nuclear fuel assembly. The fuel assembly powers the nuclear reactor until it is no longer efficient in generating

electricity. The "spent" fuel is replaced about once a year. Spent fuel-which is highly radioactive-is the primary form of high-level nuclear waste.

Spent fuel is both thermally and radioactively hot, so irradiated fuel assemblies are placed in "spent fuel pools" to cool and allow some of the radioactivity to decay. Each reactor has only a certain amount of pool space, and when the pools are full, the reactors either must shut down or store some of the cooled spent fuel somewhere else.



A person standing one yard away from an unshielded, 10 year old fuel assembly, would receive a lethal dose of radiation (500 rem) in less than three minutes. A thirty-second exposure (100 rem) at the same distance, would significantly increase the risk of cancer or genetic damage.

What does a radioactive waste transportation cask look like?

The casks that would be used to transport high-level nuclear waste look like large concrete dumbbells. The nuclear waste would be housed in the middle

section, and the end sections are called "impact limiters." These casks have never been properly tested, and the consequences of an accident could be severe.

The DOE's own estimates suggest that at least 50 accidents could occur during shipment of radioactive waste. As part of the 1986 Environmental Assessment for the Yucca Mountain



repository site, the DOE conducted a study that found that a severe accident in a rural setting involving a high-speed impact, lengthy fire and fuel oxidation would contaminate a 42-



square-mile area, require 462 days to clean up and cost \$620 million. The health, economic and environmental impacts of such an accident could devastate a community. If

such an accident occurred in an urban area, the costs and other consequences would be much more severe.

Will the value of my property be affected by the Government's plan to transport nuclear waste to Yucca Mountain?

Experience has shown that property values decline significantly along nuclear waste routes. In 1992, the New Mexico Supreme Court upheld a jury decision to award John and Lemonia Komis \$337,815 in damages for perceived loss due to public perception of fear. The Komis property was located along aWaste Isolation Pilot Project (WIPP) nuclear waste transportation route, and the case proved that property values do indeed decline because people are afraid of the dangers associated with nuclear waste transportation.

Most states require that potential property buyers be informed if the property for sale is located on a potential nuclear waste transportation route. This means that even if nuclear waste isn't already traveling past your home, your property value may decrease, and your property may become difficult to sell. Residents should not be "stuck" with property that they cannot sell along a nuclear waste transportation route.

Are the casks safe?

Nuclear waste transportation casks have never been fully physically tested. The Nuclear Regulatory Commission sponsored a study in 1987 completed by the Lawrence Livermore National Laboratories. This study, commonly referred to as the "Modal Study," used computer modeling only to predict cask responses to accident conditions. The study was inadequate because it did not use real life, full-scale testing of the casks. Further, the test criteria were developed in the 1960's and have not changed since, despite changes in traffic volume, travel speeds,

and hazardous cargoes on our roads and rails.

Even the Nuclear Regulatory Commission realizes that these tests were inadequate, and has contracted with Sandia National Labs to conduct a new study, called "Modal II," or the "Package



All tests to date have been computer simulated

and have NOT been fully physical tests.

Performance Study." Although this study is very much needed, it will not be completed until 2003—long after the Department of Energy applies for a license to construct and operate a nuclear waste repository at Yucca Mountain.