

High-Level Radioactive Waste

Disposal & Transport Plans Threaten Communities



How Dangerous is High-Level Waste?

Although stockpiles of high-level radioactive waste (HLRW) make up only 1% of the total volume of all radioactive wastes in America, they contain about 95% of the radioactivity [IDBR]. HLRW is so deadly, human contact can deliver a fatal dose of radiation within seconds or minutes, depending on how long it has been removed from the reactor, and it must be handled by remote control behind heavy shielding. Radiation given off by HLRW is invisible, odorless, and tears at the very fabric of what makes us human—our cells and genetic material. In addition to cancer and birth defects, evidence exists that radiation is permanently mutating the gene pool and contributing to its gradual weakening, resulting in “developmental deficiencies in the fetus, hereditary disease, accelerated aging, and such non-specific effects as loss of immune competence.” [NS].

High-Level Problems at Proposed Nevada Waste Dump.

The federal government is planning to move over 70,000 tons of HLRW across our nation’s highways, railways, and waterways to a massive permanent burial site at Yucca Mountain, 90 miles northwest of Las Vegas, Nevada. The area is riddled with earthquake fault lines and underground hot water, with a history of volcanic activity. Over 600 earthquakes have occurred within a 50-mile radius of the site between 1976 and 1996 alone. [CNSSCC]. A 5.6 quake in 1992 did extensive damage to a Department of Energy (DOE) facility at the site. The fractures in the underground rock formation at Yucca Mountain provide fast flowing pathways for radioactive gases and contaminated water that would leak out of the storage facility and threaten people living downwind and downstream.

The U.S. Nuclear Waste Technical Review Board has warned that DOE’s Yucca Mt. repository design will lead to corrosion of the waste burial containers and relatively rapid radioactive releases. [NWTRB] Siting guidelines and environmental protection standards have been repeatedly weakened and even abandoned. Yet the U.S. Congress and George W. Bush have allowed DOE to move ahead with the proposed dump. Bush’s proposed Yucca Mt. Project budget for Fiscal Year 2005 is \$880 million—nearly \$2.5 million per day! [OCRWM] But the site has not yet been approved by the Nuclear Regulatory Commission, and faces fierce opposition (including in the courts) from the state of Nevada, the vast majority of its citizens, as well as environmental groups and concerned citizens across the country.

No Safe Disposal for High-Level Radioactive Waste.

HLRW is dangerously radioactive for hundreds of thousands to millions of years. [RW] For the last 60 years, experts around the world have been unable to design a safe, permanent disposal method for HLRW. Despite knowing this, the U.S. government continues to allow the nuclear industry to produce HLRW at 103 commercial U.S. nuclear power reactors—where there are now over 45,000 tons of HLRW in “interim” storage. If nuclear reactors continue to operate, 63,000 tons of HLRW will exist in the U.S. by 2011, enough to fill Yucca Mt. to its legal limit. Waste generated after that would be exceed Yucca Mt.’s capacity. By 2040, almost as much waste would have been generated at reactor sites across the U.S. as there is today. [DOE EIS] The nuclear power industry also proposes to build a “Private Fuel Storage” facility – similar to an open air parking lot – for 40,000 tons of HLRW on the Skull Valley Goshutes Indian Reservation in Utah.

**BE SAFE: Prevent High-Level Radioactive Waste From
Threatening Millions of People Across America**

BE SAFE's FOUR PRINCIPLES

1. HEED EARLY WARNING SIGNS

To get waste to the proposed Nevada and/or Utah facilities would require 24 to 38 years of transporting up to 100,000 casks of HLRW on highways, railways, and waterways through 45 states and the District of Columbia, risking catastrophic radiation releases from terrorist attacks and accidents. [DOE EIS & NRC EIS] Each of the 100,000 casks would carry the long-term radiological equivalent of some 40 to 200 Hiroshima bombs. [RWMA] Government studies show HLRW shipments would experience similar rates and types of accidents as other types of hazardous materials shipments; DOE estimates that 8 to 66 accidents would occur during HLRW transport to Yucca Mt. [DOE EIS] Therefore, the question is not if an accident will occur—but when and where. The steel shipping containers could release catastrophic amounts of radiation in a severe accident or terrorist attack, but the federal government has refused to perform adequate full-scale physical safety tests to see how they would hold up. Transporting HLRW poses grave public health risks as these potential “dirty bombs” or “mobile Chernobyls” travel through our communities.

Workers and people living near HLRW storage sites and targeted dump sites and shipping routes have an increased risk of cancer from routine exposure to radiation. Radiation exposure causes blood cancers (leukemia, lymphoma); lung cancer; and tumors of various organs; as well as birth defects such as Down's Syndrome, congenital malformations, spinal defects, kidney and liver damage.[SMHS, BMJv, SRIC] We must heed the early warning signs that no amount of radiation exposure is safe—and stop HLRW from being rushed onto our roads, rails and waterways or into dumps until containers and facilities can be designed to guarantee radiation leaks and accidents will not harm people and the environment.

2. PUT SAFETY FIRST

Through a combination of electricity conservation and efficiency, as well as use of renewable sources of electricity such as wind and solar power, nuclear power can and should be phased out as quickly as possible. Rushing HLRW onto our roads, rails and waterways to dump it on Native American or scientifically unsuitable lands is unacceptable and must be prevented. We must stop the production of forever deadly HLRW, rather than allow the size of this insoluble problem to double or triple.

3. EXERCISE DEMOCRACY

Native Americans, low-income and other minority communities have always borne the brunt of nuclear pollution. The Western Shoshone Indians have treaty rights to Yucca Mt., and their National Council is adamantly opposed to the dump. [1863 Treaty] The proposed HLRW parking lot targeted at Skull Valley, Utah has sharply divided the Goshute community there. [NIRS] As Native American activist Winona LaDuke points out, after decades of studies by the “best minds” in the nuclear establishment on what to do with HLRW, they have decided to haul it down a dirt road and dump it on Indian lands. [HTE]

The nuclear establishment in government and industry is willing to risk public health and safety and the environment in their rush to “solve” the nuclear waste crisis for public relations purposes in their drive to extend operations at old reactors, build new ones, and continue generating HLRW. U.S. nuclear waste management policies need to be reevaluated, putting safety, not industry profit, first.

4. CHOOSE THE SAFEST SOLUTIONS

■ For More Information.

Contact Nuclear Resource & Information Service by sending an e-mail to nirsnet@nirs.org or call 202-328-0002.

■ Support the national campaign to stop Yucca Mountain.

Find out how you can make a difference by contacting Citizen Alert at www.citizenalert.org or 702-796-5662.

■ BE SAFE.

Take precautionary action to protect our health from high-level radioactive waste. Sign on to the BE SAFE Platform on the next page. Be counted when we deliver this national Platform to the White House in 2005. Endorse the BE SAFE Platform today at www.besafenet.com.

■ Your Vote Counts.

The next election will set the country's course on high-level radioactive waste management and disposal policies. For information on state and federal environmental voting records, contact www.sierraclub.org and www.lcv.org. To register to vote, visit earthday.net

Public Pressure Can Stop The Rush to Unsafe Radioactive Waste Disposal

"There is no safe level of exposure and there is no dose of radiation so low that the risk of a malignancy is zero."

Dr. Karl Morgan, "the father" of Health Physics

Despite attempts by the federal government to freeze Nevada out of the nuclear waste dump siting process, the state has mounted an aggressive campaign to protect the rights and safety of its citizens. The Yucca Mountain dump is strongly opposed by the State of Nevada's Governor and Legislature, as well as by its U.S. congressional delegation. The Nevada Agency for Nuclear Projects is watch dogging federal waste activities.

Grassroots activism in the US put the brakes on repeated "Mobile Chernobyl" (rushed transport and immediate "interim" storage of HLRW at Yucca) bills in Congress from 1996 to 2000, culminating in a Presidential veto that was sustained in the Senate. In Germany, tens of thousands of protestors have blocked HLRW shipments in the streets for many years, slowing them to a trickle and helping lead to the planned phase-out of nuclear power there. In Italy and South Korea, mass citizen mobilizations have stopped unacceptable government dump plans dead in their tracks. With enough public pressure, we too can reverse this mad march into a future of widespread radioactive contamination across America.

References: U.S. Dept. of Energy, Office of Civilian Radioactive Waste Management, *Integrated Data Base Report*, Washington, D.C., 1994 [IDBR]; The New Scientist, October, 1997 [NS]; *Council of the National Seismic System Composite Catalogue, 1976 to Present*, Southern Great Basin Seismic Network, 1996 [CNSSCC]; *US NWTRB Report on Localized Corrosion*, Nov. 25, 2003 [NWTRB]; Dr. Margaret S.Y. Chu, Director, Office of Civilian Radioactive Waste Management, Feb. 2, 2004: *Fiscal Year 2005 Budget Rollout*, [OCRWM]; Ronnie D. Lipschutz, *Radioactive Waste: Politics, Technology, and Risk*, 1980, Table A-1, *Radionuclides in Spent Reactor Fuel*, p. 178-9 [RW]; U.S. Dept. of Energy, *Final Environmental Impact Statement (EIS) for Yucca Mountain*, Tables A-7 and A-8, Feb. 2002 [DOE EIS]; *Final EIS for Independent Spent Fuel Storage Installation on Reservation of Skull Valley Band of Goshute Indians*, NRC, Dec.2001, [NRC EIS]; Statement is in terms of radioactive cesium isotopes, according to Dr. Marvin Resnikoff, Radioactive Waste Management Associates, New York City [RMWA]; Yucca DOE EIS, p. J-63 [DOE EIS]; Morris, M. Knorr, R. The Southeastern Massachusetts Health Study 1978-1986, Report of the Mass. Dept. of Public Health, Oct. 1990 [SMHS]; Gardner et al. "Results of Case-control Study of Leukemia and Lymphoma Among Young People Near Sellafield Nuclear Plant in West Cumbria," *BMJv.* 300. Feb. 17, 1990 [BMJv]; Southwest Research and Information Center, "Uranium Legacy," *The Workbook*, v. 8, no. 6, Albuquerque, NM 1983 (SRIC). 1863 *Treaty of Ruby Valley between the Western Shoshone and U.S. government [Treaty]*; NIRS fact sheet "Environmental Racism, Tribal Sovereignty and Nuclear Waste" and Feb. 2004 newsletter article "PFS Nuke Dump Crawls Ahead Despite Tribal Meltdown" [NIRS]; and Honor the Earth concert, Salt Lake City, Sept. 2000 [HTE].

Primary Contributor: Michael Mariotte of Nuclear Information and Resource Service (NIRS)

BE SAFE Platform

In the 21st century, we envision a world in which our food, water and air are clean, and our children grow up healthy and thrive. Everyone needs a protected, safe community and workplace, and natural environment to enjoy. We can make this world vision a reality. The tools we bring to this work are prevention, safety, responsibility and democracy.

Our goal is to prevent pollution and environmental destruction before it happens. We support this precautionary approach because it is preventive medicine for our environment and health. It makes sense to:

- *Prevent pollution and make polluters, not taxpayers, pay and assume responsibility for the damage they cause;*
- *Protect our children from chemical and radioactive exposures to avoid illness and suffering;*
- *Promote use of safe, renewable, non-toxic technologies;*
- *Provide a natural environment we can all enjoy with clean air, swimmable, fishable water and stewardship for our national forests.*

*We choose a “better safe than sorry” approach motivated by caution and prevention.
We endorse the common-sense approach outlined in BE SAFE’s four principles listed below.*

Platform Principles

HEED EARLY WARNINGS

Government and industry have a duty to prevent harm, when there is credible evidence that harm is occurring or is likely to occur—even when the exact nature and full magnitude of harm is not yet proven.

PUT SAFETY FIRST

Industry and government have a responsibility to thoroughly study the potential for harm from a new chemical or technology before it is used—rather than assume it is harmless until proven otherwise. We need to ensure it is safe now, or we will be sorry later. Research on impacts to workers and the public needs to be confirmed by independent third parties.

EXERCISE DEMOCRACY

Precautionary decisions place the highest priority on protecting health and the environment, and help develop cleaner technologies and industries with effective safeguards and enforcement. Government and industry decisions should be based on meaningful citizen input and mutual respect (the golden rule), with the highest regard for those whose health may be affected and for our irreplaceable natural resources—not for those with financial interests. Uncompromised science should inform public policy.

CHOOSE THE SAFEST SOLUTION

Decision-making by government, industry and individuals must include an evaluation of alternatives, and the choice of the safest, technically feasible solutions. We support innovation and promotion of technologies and solutions that create a healthy environment and economy, and protect our natural resources.

Take precautionary action to protect our health and environment from dangerous high-level radioactive waste. Sign onto the BE SAFE Platform.

Be counted when we deliver this national platform to the White House in 2005. Endorse the platform today at www.besafenet.com

BE SAFE is coordinated by the Center for Health, Environment & Justice. To sign the platform or for more information, contact us at CHEJ, P.O. Box 6806, Falls Church, VA 22040, 703-237-2249, or 518-732-4538, or visit www.besafenet.com

