Independent Institute Recommends Alternative Nuclear Waste Plan

For immediate release

PRESS RELEASE

Independent Institute Recommends Alternative Nuclear Waste Plan

Safer and more environmentally sound than the proposed Yucca Mountain repository

June 4, 2002; Takoma Park, Maryland — An independent technical institute has offered an alternative approach to the management of spent nuclear fuel in the United States. The plan is safer and more environmentally sound than the plan to bury the country's high level radioactive waste at Yucca Mountain, Nevada. The latter was endorsed by the Bush administration in February and voted on favorably by a majority of the U.S. House of Representatives last month.

The institute's plan is printed below in its entirety.

"Our plan, which is based on more than two decades of analysis and experience on radioactive waste management policy, includes the placement of spent fuel in hardened storage at or near the point of generation for a period of about 50 years. This would reduce the risk of large-scale catastrophe in case of a terrorist attack," explained Dr. Arjun Makhijani, author of the plan and president of the Institute for Energy and Environmental Research (IEER) in Takoma Park, Maryland.

"Meanwhile, ten years of scientific and engineering work would be undertaken, on questions like, 'What are the natural geologic conditions that retard the movement of radionuclides for long periods?'," Dr. Makhijani continued. "More basic research on various geologic settings is needed before sites can be scientifically screened. Site selection should not begin until this preliminary work has been done."

"The time to completion of disposal of spent fuel from existing reactors would be similar to that of the Yucca Mountain plan," said Dr. Makhijani.

"In my opinion, Yucca Mountain would not be a contender for a nuclear waste repository if the process were conducted on the technical merits," said Dr. Makhijani. "In my considered opinion, of all the sites studied, Yucca is in most ways the worst from an environmental point of view."

"In light of the deficiencies of the Yucca Mountain site and the risks of transporting spent fuel without proper design and testing of casks, IEER has put forth a plan for nuclear waste management, with due consideration to terrorism risks, that would greatly reduce on-site risks and increase the likelihood of a far better repository program," said Dr. Makhijani. "Our plan would have the benefit of greater public acceptance, especially if it were coupled with termination of the waste stream as nuclear power plant licenses expire."

IEER is a non-profit organization in Takoma Park, Maryland, that provides the public and policy-makers with clear, thoughtful studies on a variety of energy and environmental issues. IEER has analyzed radioactive waste management policy for more than 20 years and has published numerous reports, books, and articles on the topic. See the IEER web site: www.ieer.org.

– 30 –

(Attachment)

IEER Nuclear Waste Management Plan

June 4, 2002

IEER advocates the following program be carried out by an institution that does not have the conflict of interest that the U.S. Department of Energy does, and under more stringent public health and environmental protection standards than those currently in effect:

Interim Management

Interim Hardened On-Site Storage (HOSS) (different from spent fuel pools and dry casks now used) should be used for all spent fuel that can be moved out of pools. Pool storage should be minimized. No new above-ground dry storage of the present varieties should be licensed. Current dry storage should be converted to HOSS. The federal government should pay for HOSS at closed power plant sites since it has defaulted on its obligation to begin taking the waste on January 31, 1998, and has large amounts of ratepayer money dedicated to waste management that it has not spent.

Goals: Hardened On-Site Storage should be able to withstand most terrorist attacks without significant off-site releases. A second level goal is to prevent catastrophic off-site releases in case of even severe attacks. There could be defense in depth as part of the system.

The technology to accomplish HOSS is available.

Interim Hardened On-Site Storage (HOSS) should meet the following criteria:

1. It should not result in catastrophic releases and should be able to resist almost all types of attacks. The amount of releases projected in even severe attacks should be small enough that the storage system would be unattractive as a terrorist target.
2. It should be able to withstand a direct hit by a large commercial airliner full of fuel or anti-tank weapons without catastrophic offsite releases.
3. The individual canister locations should not be easily detectable from offsite.

On-site storage would be needed for about 50 to 60 years — not much different from what is projected to occur at present.

Long-term Management

The long-term repository plan should proceed as follows:

Ten years of the following scientific and engineering work:

1. Research on natural geologic conditions that retard the movement of radionuclides for long periods.
2. Development of materials that mimic these natural geologic conditions ("Natural analog" materials).
3. Research on geologic environment types that would match the characteristics of these natural analogs.
4. Intensified basic scientific research on the properties of the most important radionuclides under a variety of laboratory conditions.

After this initial work, the process of selecting two or three repository and natural analog types would be initiated for concentrated work (10 years). Then site selection (10 years).

If the process is sound, disposal could in principle happen in the twenty years to follow. The total time for complete disposal of fuel from existing power plants (40 year license) would be roughly 50 years, maybe sixty. If the power plants are closed down the overall timetable would not be longer than envisioned for Yucca Mountain now.

End attachment