



Nuclear Energy Information Service

“Illinois’ Nuclear Power Watchdog for 25 years”

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PRESS RELEASE

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U.S. Representative Edward Markey and other members of Congress Join with Safe Energy Groups in Call for Hardened Storage of On-Site Reactor Waste

(Washington, DC) To mark the five-year commemoration of the September 11 attacks, members of Congress led by Massachusetts Democrat Congressman Edward Markey joined with the nationwide Nuclear Security Coalition to call for prompt actions to secure the U.S. commercial power reactors’ nuclear waste storage system. He proposed implementation of a storage technology known as “Hardened On-Site Storage” (HOSS) – by which over-filled atomic waste storage pools at reactor sites are off-loaded into dry storage casks that have been “hardened” against terrorist attack. A fourteen-minute compact disc presentation entitled “Nuclear Spent Fuel & Homeland Security: the Case for Hardened Storage” was hand delivered to every member of Congress in support of the joint call.

Rep. Edward Markey, a senior member of the House Homeland Security and Energy and Commerce Committees, said, “The NRC engages in faith-based nuclear security planning, choosing to ignore expert report after expert report, and instead relying on the voluntary half-measures of the profit-conscious nuclear industry.”

“The National Academy of Sciences has identified that the nation’s current nuclear reactor waste storage system is vulnerable to deliberate attack,” said Paul Gunter of Nuclear Information and Resource Service and spokesperson for the citizens’ coalition. “Robust on-site storage of nuclear waste – hardened against rocket propelled munitions or explosive laden aircraft – provides the public with the first responsible steps towards a protective strategy from a nuclear waste fire that could induce tens of thousands of cancer fatalities out hundreds of miles,” said Gunter.

To emphasize their concern, the Nuclear Security Coalition identified that 32 boiling water reactors around the country are particularly vulnerable, with their so-called “spent” fuel storage pools installed six to ten stories up on top of the reactor building outside the reactor containment. These pools typically contain in excess of 400 metric tons of thermally hot and highly radioactive used reactor fuel, which must be continuously cooled in water 40-feet deep in the elevated pools. None of the nation’s reactors’ fuel storage buildings are designed as containment structures to withstand attack by aircraft, rocket or a variety of improvised explosive devices.

No technical fix will ever erase the catastrophic risk that reactor operations pose because of the intensely radioactive waste that is inherent to their production of electricity. Reactor sites will continue to be attractive targets. However, offloading the radioactive waste from these overcapacity filled fuel pools and the hardening of on-site dry cask storage systems will dramatically reduce the risk and off-site consequences to public health and safety should the attack come on a more robust nuclear waste storage system.

The HOSS strategy is only an interim security measure and not a solution to the still insoluble and mounting long-term management problem of atomic wastes being generated by U.S. power reactors.

“Today, these reactor storage pools are very dangerous dumpsites, and Congress must act vigorously for the sake of the health, safety and security of the American public to change this ad hoc treatment of high-level waste,” said Deb Katz, Executive Director of Citizens Awareness Network. “Given that Yucca Mountain remains mired in scientific and legal controversy, Congress must simultaneously continue the search for truly feasible long-term methods for managing nuclear waste for the next tens of thousands of years to ensure that the nuclear fuel stored at reactor sites is hardened to protect reactor communities,” said Katz.

The compact disc presentation draws upon three scientific studies in making the case for hardened on-site storage.¹ Two key scientific studies have been published in scientific journals identifying the critical national security risk that “spent” fuel pools pose at over 100 US nuclear power plants and how the risk can be dramatically reduced by offloading pools into dry storage casks. One study in which Congress requested technical and scientific resolution to address this national security vulnerability called on the National Academy of Sciences in 2003. The public report, issued in April 2005, states, “The committee believes that knowledgeable terrorists might choose to attack spent fuel pools because:

- at U.S. commercial nuclear power plants, these pools are less well protected structurally than reactor cores; (p.36)
- they typically contain inventories of medium – and long-lived radionuclides that are several times greater than those in individual reactor cores; (p.36)
- a loss-of-coolant event resulting from damage or collapse of the pool could have severe consequences. (p.49)”

The third report authored by Dr. Gordon Thompson for coalition member Citizens Awareness Network outlined how a more robust storage system of dry casks is essential for the protection of the nuclear waste from attack. Such a system first involves reconfiguring pool storage of hot and highly radioactive used fuel assemblies from current high density storage racks to low density storage by moving irradiated fuel assemblies that have cooled from reactor temperatures at least 5 years to retrievable qualified dry casks hardened against attack in fortified onsite structures.

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Included in the Press Packet:

- 1) Copy of the Nuclear Security Coalition Letter to Congress
- 2) Copy of CD “Nuclear Spent Fuel & Homeland Security: the Case for Hardened Storage” that runs off of PowerPoint software and accompanying Background sheet.
- 3) Diagram of HOSS System

NOTE: A copy of the CD which containing the above reports and studies is available upon request from NEIS in Chicago.

¹ “Safety and Security of Commercial Spent Nuclear Fuel Storage, National Research Council, http://www7.nationalacademies.org/ocga/briefings/Safety_and_Security_Commercial_Spent_Nuclear_Fuel_Storage.asp , National Academy of Sciences, 2006
“Reducing the Hazards Stored Spent Power Reactor Fuel in the United States” (Taylor and Francis, Alveraz, et al), 2003
“Robust Storage of Spent Nuclear Fuel,” Citizens Awareness Network, Dr. Gordon Thompson , 2003
http://www.nukebusters.org/uploads/media/Thompson_Report.pdf#search=%22%E2%80%9CRobust%20Storage%20of%20Spent%20Nuclear%20Fuel%2C%E2%80%9D%20Citizens%20Awareness%20Network%22