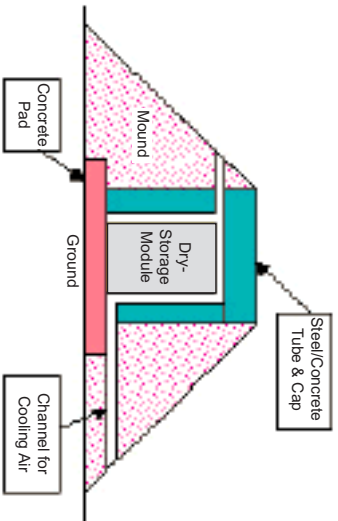


What Would HOSS Look Like?

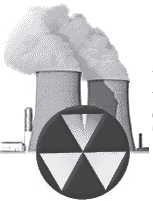
Rather than storing dozens of vulnerable dry-casks next to each other in the open air, HOSS would involve:

- Reinforcing the concrete and steel structures around each waste canister;
- Protecting these structures with mounds of concrete, steel, and gravel;
- Spreading HOSS modules across a larger land area. Currently, dry casks are stored about six feet apart from each other. With HOSS, waste modules would be 60-70 feet apart.



Such a design for HOSS would accomplish two things:

- The HOSS modules would be designed to withstand a range of weapons, explosives, and attacks - including anti-tank missiles, airliner impacts, and car bombs.
- Increased spacing between modules would mean that no more than a few casks could be damaged at once, even in the scenario of a nuclear attack.



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How Can We Protect Our Communities from

Nuclear Terrorism?



Hardened On-Site Storage at Nuclear Reactor Sites

Reactor sites contain more than 1,000 times the radiation released in one Hiroshima sized atomic bomb. The US Nuclear Regulatory Commission has estimated that an attack on a nuclear reactor could result in 100,000 deaths in the first year after a radiation release, an additional 600,000 immediate injuries, and 40,000 long term cancers.

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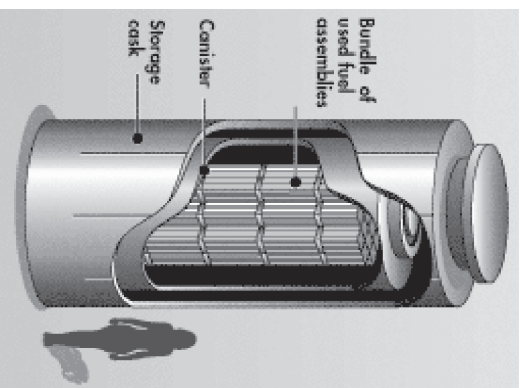
Are Nuclear Plants Terrorist Targets?

Our nation's nuclear reactors and their waste are our greatest vulnerability. By attacking ill-prepared nuclear facilities, terrorists could exploit their inherent weaknesses and symbolic value to cause widespread chaos, devastation, and suffering.

US intelligence agencies acknowledge continuing threats to the American infrastructure, yet the Bush Administration and its War on Terrorism ignore the risks to reactor communities and their surrounding regions. Power plants and industrial facilities must be protected as never before.

What Risks Do Reactors Pose?

- There are 65 reactor sites with spent fuel pools across the nation.
- These sites are located in 31 states.
- Reactor sites contain more than 1,000 times the radiation released in one Hiroshima sized atomic bomb in their spent fuel storage pools.
- Most spent fuel storage pools are not structurally protected.
- In the event of a fuel pool fire, land and property would remain useless for decades. Significantly, neither homeowner's nor business insurance policies cover nuclear disasters, leading to potential economic devastation.



How Does the Industry Respond?

- The nuclear industry responds to the prospect of a terrorist attack as a public relations problem. It attempts to conceal the grim reality of increased vulnerability that reactor communities live with.
- The industry wants to solve the problem by transporting waste to proposed dumps in the western US. This increases risk by creating thousands of "dirty bombs" rolling on highways and railroads, through towns, cities, and farms.
- Further, even if a dump was sited, waste would remain at reactors for decades.

Can Nuclear Sites Be Protected?

The priority is protection of nuclear reactors and waste sites.

The awful truth is that nuclear waste will always be vulnerable to terrorism. The US must adopt a new focus on reducing this threat and establishing a comprehensive plan, including federalizing security. A first priority is hardening and protection of nuclear reactors and waste sites.

Creating *Hardened On-Site Storage* (HOSS) of high-level nuclear waste must be at the top of the list.

Hardened On-Site Storage (HOSS)

- HOSS would reduce the risk and consequences of an attack.
- HOSS is necessary at both operating and closed reactors because irradiated (spent) fuel is stored at both.
- Presently, most nuclear fuel is stored in pools of water that could not withstand a terrorist attack. These pools are not designed to limit radioactive releases.
- Because the US does not have a viable long-term solution to the waste problem, the industry has stored ever-greater quantities of waste in overpacked pools.

The first step is to reduce the density of nuclear fuel in storage pools. If attackers drained water from a fuel pool, the fuel could spontaneously ignite and burn uncontrollably. A fuel pool fire could release many times more radioactivity than a reactor meltdown, contaminating thousands of square miles. The now over-packed pools must be unloaded into protected dry cask storage.

In the short term, HOSS would utilize existing cask designs to expedite the process, but would ensure that the casks are sufficiently protected to limit the consequences of an attack. Existing dry cask storage is vulnerable since the casks, which were never designed to withstand attack, are stored close together in the open air, sitting on concrete slabs. HOSS would spread the casks apart and offer added protection from attacks.

Except on the smallest sites, waste would not be stored below ground, to protect reactor communities from becoming permanent waste dumps.