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May 2011

UNSAFE CONTAINMENT SYSTEMS AT PILGRIM NUCLEAR POWER STATION
MARK 1 GE BOILING WATER REACTOR

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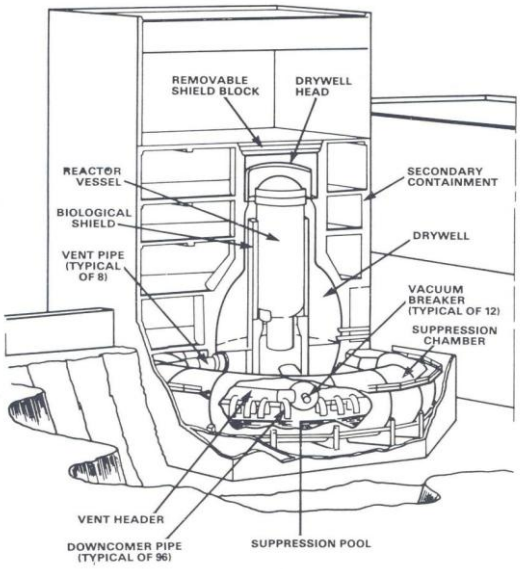

The Pilgrim nuclear power station in Plymouth, Massachussetts received its operating license on June 8, 1972 and began commercial operation on December 1, 1972 utilizing the General Electric Mark I Boiling Water Reactor pressure-suppression containment system to guard against a nuclear accident.

On September 20, 1972, a chief safety official at the United States Atomic Energy Commission (AEC), Dr. Stephen Hanauer, sent a memo that read:

"I recommend that the AEC adopt a policy of further discouraging the use of pressure-suppression containments, and that such designs not be accepted for construction permits filed after a date to be decided."

While Pilgrim was one of the last GE Mark 1 reactors to be constructed and issued an operating license in the United States, Dr. Hanauer's safety concerns were largely ignored by the atomic industry and federal regulators. However, the unresolved Mark I safety issues regarding the inadequacy of an undersized containment design vulnerable

to failure during an accident were again confirmed in June 1986 by the Nuclear Regulatory Commission's (NRC) top safety officer, Harold Denton, when he said: "The Mark I containments, being especially smaller with lower design pressure---and in spite of the supression pool---if you look at the WASH 1400 reg safety study, you'll find something like a 90% probability of that containment failing."

As a result, in 1989, the NRC pre-approved a plan to retrofit the Mark I design giving control room operators the option to deliberately vent and temporarily defeat the unreliable containment system during a severe accident in order to prevent its permanent rupture. Pilgrim nuclear power station was the first US Mark I to install the experimental and unproven "hardened vent system."

On March 11, 2011, the Great Eastern Japan Earthquake and Tsunami knocked out electrical grid power to the six unit Fukushima Dia-Ichi nuclear power station and destroyed the onsite emergency backup power for reactor safety systems including core cooling to the three units that were operating at the time. The Fukushima reactor Units 1, 2, 3, 4 and 5 are all Mark I Boiling Water Reactors with the backfitted hardened vent systems. Within a matter of hours the reactor cores at the three operational units(Units 1, 2 and 3) began to overheat generating explosive hydrogen gas inside containment and the reactor building. Simulataneously, power was lost to cool high-level radioactive waste in the form of irradiated fuel assemblies underwater in spent fuel storage pools located ontop of the reactor building above and outside of the reactors' primary containment systems. As a result a series of hydrogen gas explosions with significantly high radiation releases occurred according to a NRC internal document, with significant reactor core damage in Units 1, 2 and 3 as well as significant damage to containment systems and irradiated spent fuel pools at Units 1, 2, 3 and 4. The Mark I containment system and hardened vent system are now demonstrated to have failed during a severe nuclear accident as previously warned with massive radiation releases into the atmosphere and the ocean.

On April 13, 2011, Beyond Nuclear filed an Emergency Enforcement Petition to NRC requesting that the federal safety agency suspend the operating license of the General Electric Mark I Boiling Water Reactors pending:

1) Completion of the NRC near-term and long-term safety review of US reactors in the aftermath of the Fukushima nuclear disaster that includes NRC convened public meetings in each of the Mark I Emergency Planning Zones to take public comment and independent expert testimony;

2) Revocation of prior NRC approval for US Mark I operators to install an experimental "hardened vent system" that is now demonstrated to have failed at the Fukushima Dai-Ichi nuclear power station to safely mitigated dangerous design inadequacies for a the substandard containment design. NRC should further require all Mark I operators to instead submit to the license amendment request process with the opportunity for an independent public intervention in the safety hearing process;

3) The installation of emergency backup power generators and battery backup power the high density storage of thermally hot and intensely radioactive waste in "spent fuel pools" can be provided with for reliable spent fuel cooling systems in the event of electric grid failure.