



NUCLEAR INFORMATION AND RESOURCE SERVICE

6930 Carroll Avenue, Suite 340, Takoma Park, MD 20912
 301-270-NIRS (301-270-6477); Fax: 301-270-4291
nirsnet@nirs.org; www.nirs.org

General Electric Mark I Reactors in the United States

The Fukushima Daiichi Unit 1 reactor that exploded on Saturday, March 12, 2011, was a General Electric Mark I reactor. This design has been criticized by nuclear experts and even Nuclear Regulatory Commission staff for decades as being susceptible to explosion and containment failure.

As early as 1972, Dr. Stephen Hanauer, an Atomic Energy Commission safety official, recommended that the pressure suppression system be discontinued and any further designs not be accepted for construction permits. Shortly thereafter, three General Electric nuclear engineers publicly resigned their prestigious positions citing dangerous shortcomings in the GE design.

An NRC analysis of the potential failure of the Mark I under accident conditions concluded in a 1985 report that Mark I failure within the first few hours following core melt would appear rather likely. In 1986, Harold Denton, then the NRC's top safety official, told an industry trade group that the "Mark I containment, especially being smaller with lower design pressure, in spite of the suppression pool, if you look at the WASH 1400 safety study, you'll find something like a 90% probability of that containment failing."

For more information, see: <http://www.nirs.org/factsheets/bwrfact.htm>

Reactor	Location	Size	Year operation began
Browns Ferry 1*	Decatur, AL	1065 MW	1974
Browns Ferry 2*	Decatur, AL	1118 MW	1974
Browns Ferry 3*	Decatur, AL	1114 MW	1976
Brunswick 1*	Southport, NC	938 MW	1976
Brunswick 2*	Southport, NC	900 MW	1974
Cooper*	Nebraska City, NE	760 MW	1974
Dresden 2*	Morris, IL	867 MW	1971
Dresden 3*	Morris, IL	867 MW	1971
Duane Arnold*	Cedar Rapids, IA	581 MW	1974
Hatch 1*	Baxley, GA	876 MW	1974
Hatch 2*	Baxley, GA	883 MW	1978
Fermi 2	Monroe, MI	1122 MW	1985
Hope Creek**	Hancocks Bridge, NJ	1061 MW	1986
Fitzpatrick*	Oswego, NY	852 MW	1974
Monticello*	Monticello, MN	572 MW	1971
Nine Mile Point 1*	Oswego, NY	621 MW	1974
Oyster Creek*	Toms River, NJ	619 MW	1971
Peach Bottom 2*	Lancaster, PA	1112 MW	1973
Peach Bottom 3*	Lancaster, PA	1112 MW	1974
Pilgrim**	Plymouth, MA	685 MW	1972
Quad Cities 1*	Cordova, IL	867 MW	1972
Quad Cities 2*	Cordova, IL	867 MW	1972
Vermont Yankee*	Vernon, VT	620 MW	1973

*has received 20-year license extension from the Nuclear Regulatory Commission

**20-year license renewal extension is under review by Nuclear Regulatory Commission