

Advanced Boiling Water Reactors— Incidents, Malfunctions and Mishaps

NRG plans to build two nuclear reactors known as Advanced Boiling Water Reactors, at the South Texas Nuclear Project site near Bay City in Matagorda County, Texas. No Advanced Boiling Water Reactor has been built yet in the United States, although the Nuclear Regulatory Agency has approved the design.

Similar reactors have had many problems in Japan.

Units 6 and 7 at the Kashiwazaki Kariwa (TEPCO) nuclear site in Japan are advanced boiling water reactors, similar to the two nuclear units NRG plans to build in Texas at the South Texas (Nuclear) Project site near Bay City in Matagorda County.

These incidents and problems are among those reported by AP and Reuters in Japan, between 1997 and 2002:

Apr.30, 1997	Small fire at TEPCO
Jul.19, 1997	Radioactive steam leak at Unit 7
Sep.30, 1998	Radioactive ash leak from incinerator after "a minor explosion"
Mar.30, 1999	Unit 7 shut for possible fuel leak in reactor
May 25,1999	Unit 6 shut down for safety activation
Jul.7, 1999	Three units shut down because of jellyfish
Jul.27, 1999	Unit 7 shut down because of pump malfunction
May 28, 2000	Unit 6 shut down for high radiation in cooling water
Mar.28, 2002	Unit 6 shut down, accusations of cover up of cracks

Recent earthquake resulted in radioactive waters, rising costs of electricity

A 6.8 magnitude earthquake struck the region of the Kashiwazaki Kariwa nuclear plant complex on July 16, 2007, rupturing steam and water pipes, and causing radioactive material to be released into the Sea of Japan. Barrels of nuclear waste split open.

An October 19, 2007 article in Nikkei Report stated "It has been three months since a powerful earthquake in Niigata Prefecture forced the closure of the Kashiwazaki-Kariwa nuclear power plant, the world's largest. Despite the risk of a massive blackout in the Tokyo metropolitan area due to a weakened power-supply capacity, Tokyo Electric Power Co, the facility's operator, appears to have successfully averted such a development no that the summer is over. However, with no prospect of the plant resuming operations anytime soon, Tepco has seen

its costs surge as it scrambles to fill the power-supply void caused by the plant closure, casting a long shadow over its bottom line.” ... “If such costs snowball, dragging the company into the red, Tepco might seek to increase the cost burden on its shareholders and consumers by reducing dividends and raising electricity fees.”



Exerpts from a story that ran in the World Nuclear News:

Control rod stuck in Kashiwazaki Kariwa unit

October 19, 2007

Tokyo Electric Power Company (Tepco) reported that a control rod cannot be removed from the reactor of unit 7 of its Kashiwazaki Kariwa nuclear power plant. The unit shut down automatically when an earthquake struck the plant on 16 July.

At the time of the earthquake, three of the seven reactors at Kashiwazaki Kariwa - units 3, 4 and 7 - were in operation. Those reactors shut down safely as tremors began. Unit 2 was in the process of starting operation, and shut down automatically as well. Units 1, 5 and 6 were not operating as periodic inspections were being carried out.

The earthquake resulted in water being shaken from cooling pools of all the units and some of this drained away to be discharged to sea. In addition, many barrels of solid low-level radioactive waste were knocked over and an external electrical transformer failed and caught fire.

The discovery of the jammed control rod is likely to further delay the resumption of plant operations. All seven reactors at the plant remain offline while damage from the earthquake is assessed.