



# Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

## Davis-Besse: Forget and Forgive?

Nuclear power is a very unforgiving technology. For example, workers in 1961 at a nuclear power reactor in Idaho made a mistake. The mistake caused a steam explosion that killed every worker at the facility. In 1986, workers at a nuclear power reactor in the Ukraine made a mistake while testing a safety system. Their mistake triggered two massive steam explosions that killed dozens of workers and created a nuclear wasteland. In 1999, workers at a Japanese factory making fuel for a nuclear reactor took some unauthorized shortcuts. Their mistake caused an uncontrolled nuclear chain reaction that claimed their lives and quarantined nearly 300,000 people living nearby.

So nuclear power is unforgiving, yet the Nuclear Regulatory Commission (NRC) is on the brink of forgiving FirstEnergy for very serious transgressions at their Davis-Besse nuclear plant. As has been widely reported, FirstEnergy allowed acid to eat a large hole in the metal reactor vessel head. It was luck more than skill that prevented the reactor cooling water from escaping through this hole. Had an accident happened at Davis-Besse, key backup safety systems intended to protect the public were broken. The high pressure injection system pumps had a variety of problems that FirstEnergy is still fixing. The containment sump portion of the low pressure recirculation and containment spray systems was also broken and has now been fixed. So, had the hole opened up, the accident would likely have been worse than Three Mile Island but not as bad as Chernobyl. And the cleanup from this accident would have taken longer and cost more than the cleanup from the 09/11 tragedies.

So why would the NRC forgive FirstEnergy and allow Davis-Besse to restart? For the same stupid reasons that NRC had in forgiving General Public Utilities (GPU) and allowing Three Mile Island Unit 1 to restart. In 1979, GPU's Three Mile Island Unit 2 had the worst accident in US history. GPU misled state and federal officials about conditions at the plant during the course of the accident. Later, they lied to the NRC about the condition of equipment on Unit 1 and several of their control room operators cheated on their NRC license examinations. The NRC knew about all of these sins when they allowed GPU to restart Unit 1.

And the NRC has forgiven other plant owners for their sins:

- The NRC issued an operating license for the Grand Gulf nuclear plant in Mississippi even though the license application submitted by the owner contained hundreds of errors. When the errors were later discovered, the NRC shrugged and essentially said, "close enough."
- The NRC issued an operating license for the Diablo Canyon nuclear plant in California after learning the plant was built within miles of an active earthquake fault and the restraints to protect piping and equipment during an earthquake had been installed backwards.
- The NRC has already forgiven FirstEnergy (or its earlier incarnation, Toledo Edison) for safety problems at Davis-Besse. Davis-Besse was shutdown for over a year from June 1985 to December 1986 fixing safety problems. The NRC allowed Davis-Besse to restart then and will likely allow Davis-Besse to restart now.

Actually, the NRC itself needs to be forgiven for its Davis-Besse sins. In the mid-1990s, the NRC sent a special team to Davis-Besse to look at only two safety systems – the high pressure injection system and the low pressure recirculation system. The NRC team found nothing wrong in systems that FirstEnergy spent the past 18 months fixing.

In 2001, the NRC drafted an order to shut down Davis-Besse. The NRC shelved that order for reasons it knew at the time were wrong. In the seven years I've been with UCS, I've examined literally hundreds of NRC decisions. Some I agreed with. Some I disagreed with. But this Davis-Besse decision stands as the only one I know about there the NRC knowingly and deliberately did the wrong thing.

The NRC put together a task force to look at how it handled Davis-Besse. The task force identified 49 things the NRC needs to fix to prevent another Davis-Besse debacle. Virtually none of the 49 fixes have yet been made. I cannot forgive the NRC for its sins until the NRC cashes in these 49 IOUs. Promises don't protect people. Promises don't ensure safety.

I don't have unrealistic expectations. Look at the Columbia disaster. NASA will not launch another space shuttle until it fixes the foam and tile problems that doomed Columbia and the safety culture problems that allowed foam and tile warnings signs to go unheeded until disaster struck.

The NRC is preparing to re-launch Davis-Besse without first fixing its own known safety problems that allowed warning signs to go unheeded. It would be "reckless endangerment" for the NRC to allow Davis-Besse to restart unless ALL 49 of its known oversight problems are fixed. Davis-Besse has had two very serious near-misses in the past. The third time is not likely to be a charm.

Presentation by David Lochbaum, Nuclear Safety Engineer at the Rock Against Radiation Rally on September 20, 2003, in Crane Creek State Park, Oak Harbor, Ohio. This event was sponsored by Coalition to Rebuke the Nuke, Green Party of Northwest Ohio, Food Not Bombs – Toledo, Western Lake Erie Group Sierra Club, Socialist Party of Ohio, Nuclear Information and Resource Service, Northwest Ohio Peace Coalition, Northeastern Ohio Sierra Club and the Green Party of Ohio.