

**News from Beyond Nuclear  
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Contacts: Terry Lodge, environmental coalition attorney, (419) 255-7552  
Kevin Kamps, Beyond Nuclear, (240) 462-3216  
Michael Keegan, Don't Waste Michigan, (734) 770-1441

**Environmentalists Bolster Case  
against 20-Year Extension at Davis-Besse Atomic Reactor**

***NRC Documents Obtained through FOIA  
Reveal Severe Safety Significance of Cracking***

Oak Harbor, OH—An environmental coalition opposing the 20-year license extension at the problem-plagued Davis-Besse atomic reactor on Ohio's Lake Erie shore has cited scores of U.S. Nuclear Regulatory Commission (NRC) documents, obtained by Beyond Nuclear through the Freedom of Information Act (FOIA), to show how dangerous cracking of the concrete shield building containment actually is, despite FirstEnergy Nuclear Operating Company (FENOC) denial and downplaying.

[The filing is posted online](#), as are [the NRC documents revealed through FOIA](#).

In one document (FOIA Document B/9), NRC's Pete Hernandez states: "I think the greater concern is will the SB [Shield Building] stay standing, and not whether or not the decorative concrete will fall off. Because the licensee has not performed core bores to see if there is cracking in the credited concrete, do they have a basis to say that the structural concrete will maintain a Seismic II/I condition?"

In another document (B/26), NRC's Abdul Sheikh states: "Since we assume that outside reinforcement is to be treated ineffective in carrying additional stress beyond 12.4 ksi, under accident thermal loads that may cause stresses in excess of what the rebar can carry...the reinforcement is assumed to detach itself from the outer section of the shell." Sheikh concluded: "I am concerned that the concrete will fail in this region due to bending in this region even under small loads."

Alarming, Sheikh went on to state (B/44): "[The Davis-Besse] shield building has not been designed for containment accident pressure and temperature."

This means that, even when brand new and un-cracked, Davis-Besse's shield building was not capable of preventing catastrophic radioactivity releases during a reactor core meltdown. An inner steel containment vessel, a mere 1.5 inches thick when brand new, would thus be the last line of defense. However, the environmental Intervernors have unearthed NRC and FENOC documents showing that the steel containment vessel has suffered significant corrosion over the past several decades, due to infiltrating and standing, chemically "aggressive" groundwater in the "sand bed" region surrounding the

bottom of the containment vessel (which has also degraded the shield building's underground "moisture barrier"), as well as due to an acidic borated water leak from the refueling channel near the top of the containment vessel.

The Intervenor has pointed to a 1982 study, "Calculation of Reactor Accident Consequences" (CRAC-2), commissioned by NRC, to show how bad the casualties and property damage would be downwind and downstream of a catastrophic radioactivity release which escapes Davis-Besse's corroded inner steel containment vessel and cracked outer shield building. CRAC-2 lists the following consequences at Davis-Besse: 1,400 Peak Early Fatalities; 73,000 Peak Early Injuries; 10,000 Peak Cancer Deaths; \$84 billion in property damage. However, CRAC-2 was based on 1970 U.S. Census data. [As reported by Jeff Donn at the Associated Press in summer 2011](#), populations around U.S. nuclear power plants have "soared" in the past 42 years, meaning those casualty figures near Davis-Besse would likely now be much worse. And, when adjusted for inflation from 1982-dollar figures, property damage would today surmount \$187 billion in 2010-dollar figures.

The environmental coalition's attorney, Terry Lodge of Toledo, said: "What we have established from NRC's own documents is that there are two Nuclear Regulatory Commissions: some hard-working, intelligent people who set out to find out the truth of these very dangerous technical problems and their causes, and a political class in the agency that is dedicated to pulling the plug on any investigation that threatens utility profits, above all else. The search for truth about the shield building had to be cut off because it went too close to the cash cow."

Intervenor Michael Keegan of Don't Waste Michigan in Monroe stated: "These multiple crackings, complete with concrete degradation of the shield containment building, are but a metaphor for the entire dilapidated Davis-Besse atomic reactor. This reactor is running on borrowed time, propped up on stilts by a captured regulator that is now under investigation for doing so."

He referred to [a recent demand by U.S. Rep. Kucinich \(D-OH\) to the NRC Office of Inspector General \(OIG\) to investigate NRC's rushed approval for Davis-Besse's restart last December 2<sup>nd</sup>](#). Kucinich cited Beyond Nuclear's FOIA revelations in his investigation demand.

Kevin Kamps, of national watchdog Beyond Nuclear in Takoma Park, Maryland, another intervening group, stated: "NRC staff and management, both at its national headquarters in Rockville, Maryland, as well as its Region 3 office outside Chicago, worked long hours, during evenings, on weekends, and even through the Thanksgiving holiday, in order to rubberstamp reactor restart approval at Davis-Besse in a great big hurry, despite countless unanswered questions and unresolved concerns about the shield building cracking."

Beyond Nuclear has prepared a summary of the coalition's 2012 Davis-Besse cracking work, entitled "What Humpty Dumpty doesn't want you to know: Davis-Besse's Cracked

Containment Snow Job.” It documents: pre-operations construction flaws dating back to the 1970s; numerous different kinds of cracks (surface, dome, micro-, radial, shrinkage, sub-surface laminar), and other damaged (such as spalling), located across the shield building, some cracks (nearly 16 inches deep) extending a third to half way through the side wall; evidence of the true severity and large safety risks of the cracks; and indications that FENOC cherry-picked, and NRC blessed, the most convenient “root cause” explanation for the cracking, while ignoring other compelling theories, meaning needed corrective actions are very likely being neglected. [This summary is posted online.](#)

[A compilation, including the original cracking contention filed Jan. 10th, and four additional supplements since, is also posted online.](#)

The environmental coalition groups intervening against Davis-Besse’s 20-year license extension include: Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don’t Waste Michigan, and the Green Party of Ohio.