



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

August 4, 2003

Mr. John A. Grobe, Chairman
Davis-Besse 0350 Panel
United States Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 60532-4351

SUBJECT: PRELIMINARY YELLOW FINDING FOR DAVIS-BESSE

Dear Mr. Grobe:

By letter dated July 30, 2003, you transmitted an inspection report containing a preliminary YELLOW finding to FirstEnergy for issues related to the containment sump at Davis-Besse. If I understand the basis for the YELLOW determination as articulated in the enclosure to your letter, although the chance of containment sump failure was high (90 percent), the chance of either a medium-size loss of coolant accident or a large-size loss of coolant accident occurring was sufficiently remote (2.28×10^{-9} and 5.13×10^{-10} respectively) to warrant a YELLOW rather than RED determination.¹

What is not clear from the inspection report is whether the initiating event probability used for the medium-size and large-size loss of coolant accidents properly accounted for the as-found conditions at Davis-Besse. At the bottom of page 17 of the enclosure, initiating event probabilities from NRC NUREG/CR-5750, "Rates of Initiating Events at U.S. Nuclear Power Plants," is cited. The numbers given on page 19 and quoted in the above paragraph appear to originate from this source.

On February 25, 2003, the NRC issued a RED finding to FirstEnergy for the damage to the reactor vessel head. The basis for that RED finding, as stated in the enclosure to that letter, was the increased likelihood of a loss of coolant accident. Specifically, page 3 of Attachment 2 to that letter cites a value of 2.91×10^{-3} for the medium-size loss of coolant accident, with the explanation that this number was provided by FirstEnergy. This value is a million times lower than the value apparently used to derive the preliminary YELLOW finding.

Did the recent preliminary YELLOW finding account for the heightened chances of a medium-size loss of coolant accident at Davis-Besse caused by the damaged reactor vessel head? If not, why not?

Sincerely,

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