

Docket No.: 50-346

NOV. 14 1975

Toledo Edison Company
ATTN: Mr. Lowell E. Roe
Vice President
Facilities Development
Edison Plaza
300 Madison Avenue
Toledo, Ohio 43652

Gentlemen:

The NRC staff recently completed a site visit to Davis-Besse, Unit 1 (DB-1) on October 15 and 16, 1975.

Based on observations of the ECCS sump during that visit, we request that you provide additional information as stated in the enclosure to this letter. We will require some means of testing to confirm the suction line pressure drop calculations. Most, but not all of the requested information concerns the area of adequate NPSH.

We will need your responses to the enclosure by December 5, 1975. If you cannot meet this response date, please inform us within seven (7) days after receipt of this letter so that we may revise our scheduling.

Please contact us if you have any questions regarding the enclosure provided.

Sincerely,

[Signature]

A. Schwencer, Chief
Light Water Reactors Branch 2-3
Division of Reactor Licensing

Enclosure:
Request for Additional
Information

ccs: See next page

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Toledo Edison Company

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ccs: Donald H. Hauser, Esq.
The Cleveland Electric Illuminating
Company
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ADDITIONAL INFORMATION REQUIRED

ON ECCS SUMP TESTING FOR

DAVIS-BESSE 1

1. The FSAR provides the following information (Page 6-79);

	<u>NPSH REQUIRED</u>	<u>NPSH AVAILABLE</u>
DH Pump @ 3000 gpm	8.5 ft.	9.26 ft.
BS Pump @ 1300 gpm	9.0 ft.	11.37 ft.

Provide all calculations of total elevation head available and total head required, including velocity heads, head losses, elevation heads, etc. Also, submit the values utilized in the NPSHa equation on page 6-79. Specify the flood level assumed inside the containment and provide the basis for this assumption in terms of equipment volumes displaced and the type of LOCA assumed. Confirm that the location of the assumed break resulted in the minimum flood level inside containment (i.e., most water left in the primary system).

2. Discuss the piping runs from the sump in terms of potential air bindage as the flood level rises after a LOCA.
3. Discuss tests by the manufacturer to confirm the required NPSH for each pump at Davis-Besse 1 (Decay Heat and Building Spray).
4. It is noted that less than .1 ft. margin exists between NPSH required and available for the DH pumps, and less than 3 ft. for the BS pumps. Discuss the potential that such margins could significantly diminish after a LOCA due to pump flows in excess of design.
5. What is the minimum test flow rate at which Toledo Edison Company would clearly be able to confirm previous head loss calculations (see question 1)? Discuss the basis for this conclusion.

6. Discuss the feasibility of expanding the capacity of the sump to allow design flow rate testing. As an alternative, discuss the possibility of installing temporary piping to permit a pressure drop test at design flow rates (or the flow proposed in response to question 5).
7. What is the maximum gravity drain rate capability to the sump from the BWST?
8. With regard to the potential for vortexing, submit your bases (including analyses and supporting test data) for concluding that this phenomenon would not occur.