

Docket No. 50-346

License No. NPF-3

Serial No. 648

September 8, 1980



RICHARD P. CROUSE  
Vice President  
Nuclear  
(419) 259-5221

Director of Nuclear Reactor Regulation  
Attention: Mr. Robert W. Reid, Chief  
Operating Reactors Branch No. 4  
Division of Operating Reactors  
United States Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Reid:

In Toledo Edison's letters of October 23, and November 21, 1979 (Serial Nos. 546 and 559) we committed to investigate the design of new instrumentation that could be used to provide unambiguous indication of inadequate core cooling conditions in the reactor coolant system of the Davis-Besse Nuclear Power Station, Unit No. 1 (DB-1). This related to recommendation 2.1.3.b of NUREG 0578 "TMI-2 Lessons Learned Task Force Status Report and Short Term Recommendations". Babcock and Wilcox (B&W) undertook this investigation at the request of the B&W Owners Group.

On January 31, 1980 (Serial No. 587) a preliminary evaluation of a reactor coolant hot leg level instrument identified this potential device as ambiguous and confusing to a point of leading the operators to incorrect interpretations of core conditions during a severe incident. This submittal also identified a continuing review of other conceptual approaches. This review is now completed and five copies of the "Evaluation of Instrumentation to Detect Inadequate Core Cooling Prepared for 177 Owners Group" dated August 15, 1980 are enclosed.

The conclusions of this evaluation identify subcooling monitors and incore thermocouples as appropriate instrumentation for detection of inadequate core cooling at our facility. These instruments exist at Davis-Besse Unit 1 and operator guidelines are in place for their use. Toledo Edison considers this to meet the recommendation of section 2.1.3.b of NUREG 0578 of "unambiguous, easy-to-interpret indication of inadequate core cooling."

Very truly yours,

A handwritten signature in cursive script, appearing to read 'R. Crouse'.

RPC:TJM:SCJ:slc

cc: NRC D-B Resident Inspector

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POWER ENG.

EVALUATION OF INSTRUMENTATION  
TO DETECT  
INADEQUATE CORE COOLING  
PREPARED FOR  
177 OWNERS GROUP

Issued: August 15, 1980  
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Prepared By D. J. Firth  
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Babco  
Nuclear Power  
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DUPLICATE DOCUMENT

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