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United States Nuclear Regulatory Commission
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Washington, D. C. 20555

Subject: Individual Plant Examination (IPE) for Severe Accident
Vulnerabilities for the Davis-Besse Nuclear Power Station,
Unit 1 (Response to NRC Generic Letter 88-20)

Gentlemen:

Nuclear Regulatory Commission Generic Letter (GL) 88-20, Individual Plant Examination for Severe Accident Vulnerabilities, dated November 23, 1988, and GL 88-20, Supplement 1, dated August 29, 1989, requested each utility to perform an Individual Plant Examination (IPE) to identify any severe accident vulnerabilities. In response to this request, by letter dated October 27, 1989 (Serial Number 1723), Toledo Edison (TE) committed to perform a Level 1 Probabilistic Risk Assessment (PRA) and a containment performance analysis for the Davis-Besse Nuclear Power Station (DBNPS). Toledo Edison has completed the IPE for the DBNPS. The purpose of this letter is to transmit the summary report for the DBNPS IPE.

The DBNPS IPE fulfills the NRC objectives for the IPE outlined in GL 88-20. The IPE was accomplished through the performance of a Level 2 PRA, using primarily TE personnel. This has resulted in TE obtaining the maximum benefit from the IPE, and development of in-house expertise for future use of the DBNPS IPE models. The models were developed and documented in a manner to accommodate possible future updating to reflect plant changes, emerging information on severe accident behavior, or to address safety and regulatory issues as they arise. In addition to extensive internal review by TE personnel, the DBNPS IPE process was reviewed by an independent consultant experienced in probabilistic risk assessment.

The results of the IPE provide a perspective on the types and frequencies of potential severe accident sequences that could be important for the DBNPS. Overall, the IPE identified no severe

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Operating Companies:
Cleveland Electric Illuminating
Toledo Edison

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accident vulnerabilities for the DBNPS. The IPE indicates that core damage frequency and containment performance for the DBNPS is comparable to that of other plants. Although no severe accident vulnerabilities or instances of unusually poor containment performance were identified, several potential enhancements based on the insights gained from the IPE are being considered for future implementation. These insights and potential enhancements are described in the summary report.

In addition to addressing Unresolved Safety Issue (USI) A-45, Shutdown Decay Heat Removal Requirements, as requested by GL 88-20, the IPE directly addresses other USI and Generic Safety Issues (GI) for the DBNPS. The USIs and GSIs addressed by the IPE include:

- USI A-17 Systems Interactions
- GI-23 Reactor Coolant Pump Seal Failures
- GI-105 Interfacing Systems Loss of Coolant Accidents in Pressurized Water Reactors
- GI-65 Probability of Core Melt due to Component Cooling Water System Failures
- GI-77 Flooding of Safety Equipment Compartments by Backflow Through Floor Drains
- GI-128 Electrical Power Reliability and Related Issues
- GI-143 Availability of Chilled Water Systems and Room Cooling
- GI-153 Loss of Essential Service Water in Light Water Reactors

Based on the results of the DBNPS IPE, TE considers these USIs and GSIs resolved.

If you have any questions regarding the information provided by this letter, please call Mr. R. W. Schrauder, Manager - Nuclear Licensing at (419) 249-2366.

Very truly yours,



PWS/dlc

Enclosures

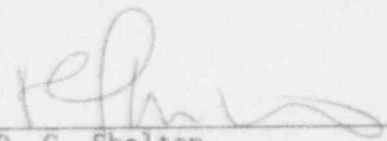
cc: A. B. Davis, Regional Administrator, NRC Region III
J. B. Hopkins, NRC/NRR DB-1 Senior Project Manager
S. Stasek, NRC Region III, DB-1 Senior Resident Inspector
Utility Radiological Safety Board

TRANSMITTAL OF SUMMARY REPORT
OF THE
INDIVIDUAL PLANT EXAMINATION
FOR SEVERE ACCIDENT VULNERABILITIES
FOR
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NUMBER 1


IN RESPONSE TO GENERIC LETTER NUMBER 88-20

Toledo Edison's summary report of the Individual Plant Examination for the Davis-Besse Nuclear Power Station in response to Generic Letter Number 88-20 Individual Plant Examination for Severe Accident Vulnerabilities, is hereby submitted under letter Serial Number 2119.

By:


D. C. Shelton,
Vice President Nuclear

Seen and subscribed before me this 26th day of February, 1993.


Notary Public, State of Ohio
EVELYN L. DRESS
NOTARY PUBLIC, STATE OF OHIO
My Commission Expires July 28, 1994