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Subject: Request for Relief from ASME Code Section XI Requirements for VT-2  
Visual Examination of Class 2 Piping Associated with Containment  
Penetration Numbers 30, 31, 33 and 34 (TAC Number 77588)

Gentlemen:

The purpose of this letter is to request relief pursuant to 10 CFR 50.55a(g)(5)(iv) from certain requirements of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code regarding visual examination of portions of Class 2 piping associated with containment penetration numbers 30, 31, 33, and 34 at the Davis-Besse Nuclear Power Station (DBNPS). Containment penetration numbers 30 and 31 are associated with emergency sump recirculation and valves DH9B and DH9A, respectively. These valves and piping are enclosed by guard pipes which prohibit performance of a VT-2 visual examination. Similarly, guardpipes, rubber foam barriers and rubber boots prevent visual access necessary to perform VT-2 visual examination of the containment purge piping associated with containment penetration numbers 33 and 34.

Toledo Edison personnel discussed the adequacy of the proposed alternative examinations identified in the attachment with the chairman of the Special Working Group on Pressure Testing at the ASME Section XI meetings, during the week of August 27, 1990. Based on insights gained from this discussion, Toledo Edison has decided to seek an interpretation from the ASME Section XI Committee that the examinations performed satisfy Code requirements. In the interim, pending a favorable interpretation from ASME, pursuant to 10 CFR 50.55a(g)(5)(iv) relief is requested for the first ten-year interval and subsequent intervals.

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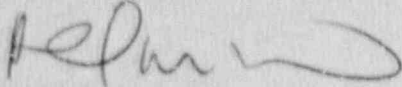
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If you have any questions concerning this matter, please contact Mr. R. W. Schrauder,  
Manager - Nuclear Licensing, at (419) 249-2366.

Very truly yours,



PWS/mmb

Attachment

cc: P. M. Byron, DB-1 NRC Senior Resident Inspector  
A. B. Davis, Regional Administrator, NRC Region III  
M. D. Lynch, DB-1 NRC Senior Project Manager  
State of Ohio  
Utility Radiological Safety Board

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Attachment 1

## Relief Request

### Component Description

Containment Penetration 31 - Emergency Sump Recirculation Line and Valve DH9A enclosed by guardpipe (Decay Heat Train 1)

Containment Penetration 30 - Emergency Sump Recirculation Line and Valve DH9B enclosed by guardpipe (Decay Heat Train 2)

### ASME Code Class

ASME Section XI, Class 2 Piping

### ASME Examination Requirements

Subsection IWC, Table IWC-2500-1 Examination Category C-H, Item No. C7.21, ASME Section XI, 1977 Edition with Addenda through Summer 1978, requires a hydrostatic test per IWC-5222 of the piping identified above.

### Basis for Relief

Due to the guardpipe enclosure, it is not practical to visually examine (VT-2) the valves and pipe enclosed. However, the guardpipes contain a drain that is opened and observed for leakage (Note attached drawing, M-283, CTMT Emergency Sump Recirc Valve Enclosure). Per Toledo Edison's procedure DB-PF-00204, ASME Section XI Pressure Testing, the examination shall consist of examining the enclosure drains for evidence of leakage; and that the presence of dampness (not active leakage) shall be acceptable based on successful completion of a pressure test of the guardpipe (e.g., Local Leak Rate Test).

The 10 CFR 50 Appendix J local leak rate test pressurizes the guardpipe to 38 psig. The local leak rate tests are mass replacement tests, where test pressure is maintained over a period of time and the flow necessary to maintain pressure is measured. The local leak rate test is performed at least every two years. Four tests have been performed since 1985, all resulting in zero leakage.

### Alternative Examination

The piping of discussion will be pressurized to hydrotest pressure. The examination shall consist of examining the enclosure drains for evidence of leakage. No active leakage and a successful completion of the 10 CFR 50, Appendix J, local leak rate test will result in an acceptable test.



## Relief Request

### Component Description

- 1) Containment Penetration 33 - Containment Purge from Valve CV5005 to Valve CV5006 (Line HBB-17).
- 2) Containment Penetration 34 - Containment Purge from Valve CV5007 to Valve CV5008 (Line HBB-18).

### ASME Code Class

ASME Section XI, Class 2 Piping

### ASME Examination Requirements

Subsection IWC, Table IWC-2500-1 Examination Category C-H, Item No. C7.21, ASME Section XI, 1977 Edition with Addenda through Summer 1978, requires a hydrostatic test per IWC-5222 of the penetrations identified above. A pneumatic test is performed as allowed by IWC-5210 (b).

### Basis for Relief

Relief is requested from a complete visual VT-2 examination using the soap bubble technique on Containment Penetrations 33 and 34.

Due to the configuration of the pipe, surrounding guardpipes, and five penetration rubber foam barriers and rubber boots, it is not practical to completely use a soap bubble technique with the VT-2 visual examination along the entire length of the pipe. Even the removal of the fire penetration barriers and rubber boots would not allow for a complete soap bubble technique VT-2 visual examination due to the length of the pipe and lack of clearance between the pipe and guardpipes.

During the pneumatic test, the accessible welds are examined by the soap bubble technique. The inaccessible welds are longitudinal welds. The inaccessible weld portions are considered acceptable based on successful completion of the associated local leak rate tests. Section XI does not provide any guidance for pneumatic testing. Thus, the soap bubble technique has been used for good practice.

The 10 CFR 50, Appendix J local leak rate tests pressurizes the system to 38 psig (Design Basis Accident Pressure).

### Alternative Examination

A pneumatic test will be performed and visually VT-2 examined by the soap bubble technique for all accessible welds. The inaccessible weld portions shall be acceptable based on successful completion of 10 CFR 50, Appendix J local leak rate tests.

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