



A Centenor Energy Company

Docket Number 50-346

License Number NPF-3

Serial Number 1838

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Vice President - Nuclear  
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United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Subject: Second Ten-Year Interval Pump and Valve Testing Program for  
Davis-Besse Nuclear Power Station Unit 1 (TAC Number M76025)

Gentlemen:

By letter dated March 22, 1990, (Serial Number 1776) Toledo Edison (TE) submitted the subject Pump and Valve Testing Program for Davis-Besse Nuclear Power Station Unit 1 (DBNPS) to the Nuclear Regulatory Commission. The program was updated in accordance with 10 CFR 50.55(g)(5)(i) to be applicable for the second ten-year in-service inspection and testing interval. The Pump and Valve Testing Program incorporates the 1986 Edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, which is the most recent edition incorporated by reference in 10 CFR 50.55(a)(b). The second ten-year interval will begin on September 21, 1990.

The scope of the pump and valve inservice testing program includes safety-related pumps and valves required to: (1) shutdown the reactor to the safe shutdown condition; (2) maintain the reactor in the safe shutdown condition; or, (3) mitigate the consequences of an accident. The safe shutdown condition for the DBNPS, as licensed, is the hot standby condition defined by the Operating License Appendix A Technical Specifications. Toledo Edison considers that this scope encompasses those pumps and valves whose function is required for safety, consistent with 10 CFR 50.55a(g)(4)(ii). Toledo Edison recognizes that Section XI, Article IWV-1100 of the 1986 edition of the ASME Code, would include valves which are required to perform a specific function in shutting down the reactor to the cold shutdown condition. A general relief request from Article IWV-1100 is included in the program for the purpose of identifying this difference in scope between the 1986 edition of ASME Code and the DBNPS licensing basis.

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Since the program was submitted on March 22, 1990, subsequent review has identified the need for changes to the program as originally submitted. Table 1 identifies the location and nature of the program changes. The most substantial change is an expansion of program scope to include additional makeup system components which are credited by the Updated Safety Analysis Report in mitigating the consequences of a tornado.

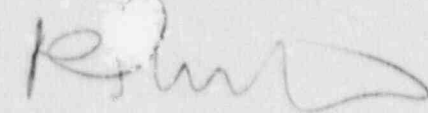
The program includes requests for relief from certain ASME Section XI pump and valve testing requirements. The program includes both new relief requests and relief requests which were approved for the first ten-year interval. As a result of program expansion, previously approved relief requests have been applied to components which have been added to the program. In some cases, previously approved relief requests have been modified to reflect experience gained during the first ten-year interval.

Because the program is organized by system, requests for relief from the same ASME Code Section XI requirements are repeated in each section of the program where applicable. Deferment of check valve testing from quarterly to each refueling, for example, represents the most widely applied relief request. Table 2 summarizes the relief requests for pumps by specific ASME Code requirement. Table 3 summarizes relief requests for valves by specific ASME Code requirement. These tables identify specific Code requirements, applicable components, P&ID references, and the program location where system specific relief justification can be found. These tables are intended to facilitate NRC review of relief requests required for implementation of the program.

As discussed in a telephone conference with the NRC Staff on July 26, 1990, Toledo Edison understands that the NRC Staff intends to perform an initial review of the relief requests with a goal of granting interim approval where justification appears to be adequate by September 21, 1990, the program implementation date, pending completion of a detailed review. Toledo Edison also understands that the NRC Staff prefers that the updated program be implemented on September 21, 1990, even if the requested relief has not been granted. Updated programs are generally considered to be more comprehensive and an improvement over previous programs.

Should you have any questions regarding this updated in-service testing program, please call Mr. R. W. Schrauder, Manager - Nuclear Licensing, at (419) 249-2366.

Very truly yours,



PWS/mmb

Attachments

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  
Utility Radiological Safety Board of Ohio

TABLE 1

Summary of Changes to the Second Ten-year Interval  
Inservice Test Program  
Submitted on March 22, 1990

<u>Page</u>	<u>Change</u>
II-3	Added Boric Acid Transfer and Makeup Pumps
II-2-1	Added Boric Acid Transfer and Makeup Pumps
III-4	Added information on alternate check valve testing.
III-6	Added exception to IWV-3427(b)
III-22	Added "T-Per ANSI/ASME OM-1 1981"
III-1-1-2	Removed PI-Y since these valve have no remote indication.
III-1-4-16	Removed leak test for Alternate Testing.
III-1-8-2	Added the Forward Flow test as a Relief Valve test. This was added based upon USAR requirements.
III-1-12-1	Removed PI-Y since this valve has no remote indication.
III-1-13-3	Change exercise, time and fail to just
III-1-13-4	exercise and time.
III-1-19-ALL	Added Makeup System valves to ensure a boric acid flow path. See cold shutdown justification and relief requests. Revised cold shutdown justifications CS-1 and CS-3. Added cold shutdown justifications CS-6, CS-7, CS-8 and CS-9. Added relief requests RV-2, RV-3, RV-4, and RV-5.
III-1-21-1	Added SC-R since this valve must open for the PORV function and close to maintain subcooled conditions. RC2A fails closed upon loss of power.
III-1-23-2	Remove closure time test for SW1382 and SW1383 since there is no safety function for the valves requiring them to be timed closed.



TABLE 2

Summary of Pump Testing Relief Requests

Code Requirement and Relief Requested	Components for which relief is requested	P&ID	IST Program Reference	New or Modified Relief	Remarks
IWP-3000 Relief from annual bearing temperature ( $T_B$ ) measurement requirements	Auxiliary Feedwater Pumps P14-1, P14-2	M-006D, G-9 M-006D, J-6	RP-1, pg. II-1-3	Modified	Relief was granted to defer quarterly $T_B$ to annual. NRC/ Toledo Edison letter dated 5/18/84.
IWP-3000 Relief from annual bearing temperature ( $T_B$ ) measurement requirements	Makeup Pumps P37-1, P37-2	M-031C, E-8 M-031C, H-9	RP-1, pg. II-1-3	New	Makeup pumps added to IST program.
IWP-3000 Relief from annual bearing temperature ( $T_B$ ) measurement requirements	Boric Acid Transfer Pumps P38-1, P38-2	M-045, J-45 M-045, J-45	RP-1, pg. II-1-3	New	Boric Acid Transfer Pumps added to program.
IWP-3000 Relief from annual bearing temperature ( $T_B$ ) measurement requirements	Decay Heat Removal Pumps P42-1, P42-2	M-033B, G-9 M-033C, F-8	RP-1, pg. II-1-3	Modified	See above remark for Auxiliary Feedwater Pumps.
IWP-3000 Relief from annual bearing temperature ( $T_B$ ) measurement requirements	Component Cooling Water Pump P43-1, P43-2, P43-3	M-036A, D-4 M-036A, J-4 M-036A, G-4	RP-1, pg. II-1-3	Modified	See above remark for Auxiliary Feedwater Pumps.
IWP-3000 Relief from annual bearing temperature ( $T_B$ ) measurement requirements	Containment Spray Pumps P56-1, P56-2	M-034, D-10 M-034, B-10	RP-1, pg. II-1-3	Modified	See above remark for Auxiliary Feedwater Pumps.

TABLE 2 (Continued)  
Summary of Pump Testing Relief Requests

Code Requirement and Relief Requested	Components for which relief is requested	P&ID	IST Program Reference	New or Modified Relief	Remarks
IWP-3000 Relief from annual bearing temperature ( $T_B$ ) measurement requirements	High Pressure Injection P58-1, P58-2	M-033A, d-7 M-033A, E-7	RP-1, pg. II-1-3	Modified	See above remark for Auxiliary Feedwater Pumps.
IWP-3100-2, Expanded alert and required action ranges for pump flow, $Q_r$	Service Water Pumps P3-1, P3-2, P3-3	M-041C, G-2 M-041C, G-5 M-041C, G-9	RP-2, pg. II-1-4	New	
IWP-4500, Relief from vibration monitoring at pump housing	Service Water Pumps P3-1, P3-2, P3-3	M-041C, G-2 M-041C, G-5 M-041C, G-9	RP-3, pg. II-1-5	New	
IWP-3100-2 Substitution of pump curve for reference values	Service Water Pumps P3-1, P3-2, P3-3	M-041C, G-2 M-041C, G-5 M-041C, G-9	RP-4, pg. II-1-6	New	
IWP-3100/IWP-3500, Relief from pressure and flow rate measurements and test duration	DG Fuel Oil Transfer Pumps P195-1, P195-2	M-017A, C-4 M-017A, C-7	RP-5, pg. II-1-7	New	DG Fuel Oil Transfer pumps added to program.
IWP-3100, Relief from vibration monitoring	DG Fuel Oil Transfer Pumps P195-1, P195-2	M-017A, C-4 M-017A, C-7	RP-6, pg. II-1-8	New	DG Fuel Oil Transfer pumps added to program.

TABLE 3  
 Summary of Valve Testing Relief Requests

Code Requirement and Relief Requested	Components for which relief is requested	P&ID	IST Program Reference	New or Modified Relief	Remarks
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Auxiliary steam to AFW pump turbine check valve AS274	M-003C, E-4	RV-1, pg. III-1-2-2	New	Valve added to program.
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Component cooling water inlet to RCS thermal barrier heat exchanger line check valves CC183, CC283, CC383 CC483	M-040D, J-4	RV-1, pg. III-1-4-16	New	Valves added to program.
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	CCW pump discharge check valves CC17, CC18, CC19	M-036A, D-5 M-036A, G-5 M-036A, J-5	RV-2, pg. III-1-4-17	New	Reverse flow test was previously performed at cold shutdown. Program specified reverse flow testing quarterly for operating pumps and at system re-alignment for stand-by pump.

TABLE 3 (Continued)

Summary of Valve Testing Relief Requests

Code Requirement and Relief Requested	Components for which relief is requested	P&ID	IST Program Reference	New or Modified Relief	Remarks
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	High pressure injection pump discharge check valves HP10, HP11, HP22, HP23	M-033A, H-9 M-033A, E-11 M-033A, H-6 M-033A, E-6	RV-2, pg. III-1-15-5	New	Full forward flow cannot be developed in 3" recirculation line. Partial flow quarterly. Full flow at refueling is proposed.
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Normal Makeup to RCS line check valve MU169	M-031C, H-2	RV-2, pg. III-1-19-15	New	Valve added to the program.
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Makeup to RCS feed and bleed line check valve MU800	M-031C, E-2	RV-3, pg. III-1-19-16	New	Valve added to the program.



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TABLE 3 (Continued)

Summary of Valve Testing Relief Requests

Code Requirement and Relief Requested	Components for which relief is requested	P&ID	IST Program Reference	New or Modified Relief	Remarks
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Makeup pump discharge check valves MU196, MU197	M-031C, H-6 H-031C, E-6	RV-5, pg. III-1-19-18	New	Valves added to the program.
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Makeup pump minimum flow line check valves MU204, MU207	M-031C, G-7 M-031C, F-7	RV-4, pg. III-1-19-17	New	Valves added to the program.
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Service Water Pump Discharge check valves SW17, SW18, SW19	M-041A, G-3 M-041A, G-10 M-041A, G-7	RV-3, pg. III-1-23-6	New	Reverse flow testing of idle service water pump check valve. Discharge check valves on operating pumps will be made during pump realignment.



TABLE 3 (Continued)

Summary of Valve Testing Relief Requests

Code Requirement and Relief Requested	Components for which relief is requested	P&ID	IST Program Reference	New or Modified Relief	Remarks
IWV-3521, Refueling interval for full forward flow and or reverse flow closure for check valves which cannot be tested quarterly or at cold shutdown	Containment vacuum relief check valves CV5080 through CV5089	M-029B	RV-1, pg. III-1-8-4	New	Takes credit for Appendix J leak test to satisfy reverse flow test requirement.
IWV-3413(b) Stroke time measurement	AFW pump discharge to steam generator flow control valves AF6451 and AF6452	M-006D, J-12 M-006D, G-12	RV-1, pg. III-1-1-4	New	Valves are actuated and positions measured from two different locations. It is not possible to accurately measure stroke time.
IWV-3413(b) Stroke time measurement	Diesel Generator Air Start Solenoid Valves DA1147A, DA1147B, DA1148A, DA1148B	M-017B, D-10 M-017B, E-10 M-017B, H-10 M-017B, J-10	RV-1, pg. III-1-12-2	New	Valves added to program. Valves are solenoid valves. There are no position indication and position cannot be observed.

TABLE 3 (Continued)

Summary of Valve Testing Relief Requests

Code Requirement and Relief Requested	Components for which relief is requested	P&ID	IST Program Reference	New or Modified Relief	Remarks
IWV-3413(b) Stroke time measurement	RCS Vents RC4608A, RC4608B, RC4610A, RC4610B	M-030A, D-11 M-030A, D-11 M-030A, E-2 M-030A, G-2	RV-3, pg. III-1-21-10	New	Valves tested in accordance with Technical Specifications.
IWV-3412	PORV RC2A	M-030A, A-3	RV-1, pg. III-1-21-7	Modified	Changes frequency from cold shutdown to refueling. Revises test method.