

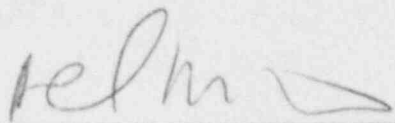
Docket No. 50-346
License No. NPF-3
Serial No. 1489
Enclosure

APPLICATION FOR AMENDMENT
TO
FACILITY OPERATING LICENSE NO. NPF-3
FOR
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NO. 1

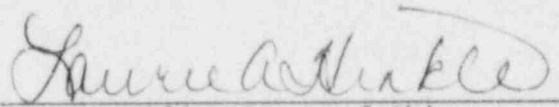
Attached are requested changes to the Davis-Besse Nuclear Power Station, Unit No. 1 Facility Operating License No. NPF-3. Also included are the Safety Evaluation and Significant Hazards Consideration.

The proposed changes (submitted under cover letter Serial No. 1489) concern:

License Condition 2.C.(3)(t), Startup Feedwater Pump System;
Technical Specification 3/4.7.1.2, Auxiliary Feedwater System; and
Basis 3/4.7.1.2, Auxiliary Feedwater System.

By 
D. C. Shelton, Vice President, Nuclear

Sworn and subscribed before me this 15th day of July, 1988.


Notary Public, State of Ohio

LAURIE A. HINKLE
Notary Public, State of Ohio
My Commission Expires May 15, 1991

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The following information is provided to support issuance of the requested changes to the Davis-Besse Nuclear Power Station, Unit No. 1 Operating License No. NPF-3, Appendix A, Technical Specifications.

- A. Time required to Implement: This change will be implemented within 45 days after issuance of the License Amendment.
- B. Reason for Change: (LAR No. 88-001): Replace the Startup Feedwater Pump License Condition 2.C.(3)(t) with Surveillance Requirement 4.7.1.2.a.4 and include a revision to the Basis Section, and clarify Specification 4.0.4 applicability to the AFW System Surveillance Requirements.
- C. Safety Evaluation: See attached Safety Evaluation (Attachment No. 1).
- D. Signification Hazards Consideration: See attached Significant Hazards Consideration (Attachment No. 2).

SAFETY EVALUATION

DESCRIPTION OF THE PROPOSED ACTIVITY

The purpose of this Safety Evaluation is to review proposed changes to the Davis-Besse Nuclear Power Station Unit No. 1 Operating License, Appendix A Technical Specifications. The proposed changes involve replacing the Startup Feedwater Pump (SUFF) License Condition 2.C.(3)(t) with a Surveillance Requirement and associated Basis change, and clarifying when the provisions of Specification 4.0.4 are not applicable for the Auxiliary Feedwater (AFW) Surveillance Requirements.

In January 1985, License Condition 2.C.(3)(t) was imposed on the SUFF after it was determined that non-seismic/high energy and moderate energy SUFF/Turbine Plant Cooling Water (TPCW) piping failures could potentially jeopardize operation of the Auxiliary Feedwater Pumps (AFP). License Condition 2.C.(3)(t) (Attachment I) imposed operational restrictions on the SUFF. These restrictions included: 1) stationing an operator in the SUFF/AFP area during SUFF operation; 2) isolating the SUFF and TPCW piping outside the SUFF/AFP area; and 3) installing a new SUFF prior to Cycle 6 operation.

In 1986, electrical power to the SUFF motor was removed and the SUFF was functionally replaced with a Motor Driven Feedwater Pump (MDFP). The MDFP was installed outside of the AFP rooms to be used during plant startups and shutdowns and as an additional source of feedwater in the event the Main Feedwater Pumps (MFP) and the steam turbine driven AFPs failed.

During the fifth refueling outage, the SUFF will be repowered to provide an additional means to remove decay heat via the steam generators. It will be locally operated and will not be used in Modes 1, 2 and 3, when the AFPs are required to be operable, unless other efforts have failed to re-establish feedwater using the MFPs, steam turbine driven AFPs and the MDFP. The SUFF/TPCW lines, which isolate the SUFF outside of the AFP rooms, will be valved closed in Modes 1, 2 and 3, thereby removing the potential hazard to the AFPs by SUFF operation. Plant procedures will provide operator instructions for placing the SUFF in service in the unlikely event that both MFPs, both AFPs and the MDFP fail. Since the SUFF will not be used (unless the above conditions are encountered) in Modes 1, 2, and 3 (when the AFPs are required to be operable), the concern for SUFF and TPCW pipe failures in the AFP rooms will be eliminated.

This request proposes deleting License Condition 2.C.(3)(t) and incorporating Item 2 of License Condition 2.C.(3)(t) as Technical Specification Surveillance Requirement 4.7.1.2.a.4. The AFW System Basis is also being revised to reflect this change. Additionally, Toledo Edison proposes clarifying when the provisions of Specification 4.0.4 are not applicable for the AFW Surveillance Requirements.

DOCUMENTS AFFECTED

ST 5071.14, Auxiliary Feedwater Train 1 Monthly Valve Verification
ST 5071.24, Auxiliary Feedwater Train 2 Monthly Valve Verification
SP 1106.27, Startup Feedwater Pump Operating Procedure
EP 1202.01, RPS, SFAS, SFRCS or SG Tube Rupture Emergency Procedure
AD 1838.00, Surveillance and Periodic Test Program

SYSTEMS AND COMPONENTS AFFECTED

Main Feedwater (MFW) System
Auxiliary Feedwater (AFW) System
Motor Driven Feedwater Pump (MDFP) System
Startup Feedwater Pump (SUFPP) System

SAFETY FUNCTIONS OF SYSTEMS AFFECTED

The MFW System supplies the normal source of feedwater to the steam generators. It provides the steam generators with enough water to replace the steam leaving the units.

The safety function of AFW System is to supply feedwater to the steam generators for the removal of reactor decay heat in the absence of MFW and/or to promote natural circulation of the Reactor Coolant System in the event all four reactor coolant pumps fail.

The function of the MDFFP System during routine plant operation is to provide feedwater to the steam generators during startups and shutdowns. The MDFFP also serves the function of providing a diverse means of supplying AFW to the steam generators as a backup to the steam turbine driven AFPs. The MDFFP may be aligned to the MFW System at or below 40% power and is aligned to the AFW System above 40% power.

The SUFP will serve no safety function. It was used as part of the original plant design, during startup and shutdown when insufficient steam was available to drive the MFPs. However, operation was limited by License Condition 2.C.(3)(t) after it was determined that piping failures could jeopardize the AFPs. In the new configuration, the SUFP will not be used in Modes 1, 2 or 3, when the AFPs are required to be operable, unless other efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFFP. Surveillance Requirement 4.7.1.2.a.4 will require isolation of the SUFP suction, discharge and cooling water lines, thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms when the AFPs are required to be operable. Since the AFPs are not required to be operable in Modes 4, 5 and 6, the SUFP may be used in Modes 4, 5 and 6.

EFFECTS ON SAFETY

License Condition 2.C.(3)(t) was added in January 1985 by License Amendment No. 83 (Log No. 1672). Since that time, Toledo Edison has installed the MDFFP to provide an additional, redundant source of feedwater. The MDFFP is located outside of the AFP rooms, thereby removing the hazards to the AFPs. The MDFFP

is used during normal plant operation for startup and shutdown. Toledo Edison is repowering the SUPP to provide an additional means to remove decay heat via the steam generators. The SUPP is not to be used in Modes 1, 2 or 3, unless other efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFFP. Since the proposed Surveillance Requirement will prevent SUPP operation in Modes 1, 2 or 3, the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms will be eliminated when the AFPs are required to be operable.

Each item of License Condition 2.C.(3)(t) is discussed below.

Item 1 of License Condition 2.C.(3)(t) requires Toledo Edison to station an operator in the SUPP/AFP area during operation of the SUPP to monitor the SUPP/TPCW piping in the AFP rooms. In the event of a SUPP/TPCW pipe leakage, the operator will trip the SUPP locally or notify the Control Room to trip the SUPP and isolate the SUPP/TPCW piping.

The SUPP will not be used in Modes 1, 2 or 3, when the AFPs are required to be operable, unless other efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFFP. Surveillance Requirement 4.7.1.2.a.4 will require isolation of the SUPP suction, discharge and cooling water lines, thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms when the AFPs are required to be operable. Thus, there is no longer a concern to have an operator stationed in the SUPP/AFP area to isolate the SUPP/TPCW piping to eliminate an AFP room flooding hazard. Since the AFPs are not required to be operable in Modes 4, 5 and 6, the SUPP may be used in Modes 4, 5 and 6. Also, because the SUPP will not be used when the AFPs are required to be operable, i.e., in Modes 1, 2 and 3, the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms will be eliminated. Toledo Edison therefore proposes deleting Item 1 of License Condition 2.C.(3)(t).

Item 2 of License Condition 2.C.(3)(t) requires Toledo Edison to isolate and maintain isolation outside the SUPP/AFP area of the SUPP suction, discharge and TPCW piping when the SUPP is not in operation (Modes 1, 2 and 3).

In conjunction with returning electrical power to the SUPP motor, Toledo Edison proposes to isolate and maintain isolation of the SUPP/AFP area. Isolation will be verified through an additional Technical Specification Surveillance Requirement. Surveillance Requirement 4.7.1.2.a.4 will be added to the AFW System Technical Specification and will require verifying, on a 31-day staggered test basis, for each AFW train, that the TPCW valves (CW196 and CW197), the SUPP suction valves (FW32 and FW91) and the SUPP discharge valve (FW106) are closed (see Attachment II). By maintaining these valves closed, the SUPP/TPCW lines located in the AFP rooms will be isolated, thereby negating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms when the AFPs are required to be operable. Toledo Edison also proposes to add to the Basis the explanation that by verifying these valves are closed, concerns associated with pipe failures in the AFP rooms are addressed. Toledo Edison therefore proposes deleting Item 2 of License Condition 2.C.(3)(t) and incorporating Technical Specification Surveillance Requirement 4.7.1.2.a.4 in the AFW System Technical Specification.

Item 3 of License Condition 2.C.(3)(t) requires that Toledo Edison install a SUFP, associated piping and valves to remove the hazards to the AFPs prior to commencing Cycle 6.

Consistent with the intent of Item 3 of License Condition 2.C.(3)(t), Toledo Edison has installed the MDFP. The MDFP is located outside of the AFP rooms, thereby removing the hazards to the AFPs. Toledo Edison is repowering the SUFP as an additional source of feedwater. However, since the SUFP will not be used in Modes 1, 2 or 3 when the AFPs are required to be operable, the hazards to the AFPs will be eliminated. Therefore, Toledo Edison proposes deleting Item 3 of License Condition 2.C.(3)(t).

Toledo Edison also proposes clarifying when the provisions of Specification 4.0.4 are not applicable for the AFW Surveillance Requirements (SR). The currently written exception is confusing.

An exception to Specification 4.0.4 is necessary for two of the AFW SRs. Because the AFW System Technical Specification is applicable in Modes 1, 2 and 3, the AFW SRs are required to be performed at the frequencies specified to verify system operability. The SRs are also done when coming up in power, prior to entering Mode 3 from Mode 4, if they have not been performed within the frequencies specified. Performance of two of the AFW SRs however requires the plant to be in Mode 3. SR 4.7.1.2.a.1 requires verifying that each steam turbine driven pump develops a differential pressure of greater than or equal to 1070 psid on recirculation flow when the secondary steam supply pressure is greater than 800 psia, i.e. the plant to be in Mode 3. Similarly, SR 4.7.1.2.b.2. requires verifying that each pump starts automatically upon receipt of an AFW actuation test signal which requires the plant to be in Mode 3 to produce a steam generator supply which is adequate to conduct the test, i.e., main steam pressure of greater than or equal to 800 psia. Therefore, these two SRs should be clarified to allow entry into Mode 3, to perform the surveillance, since they cannot be performed in Mode 4, i.e., prior to entering Mode 3, as the Applicability Statement dictates. This can be accomplished by providing an exception to Specification 4.0.4 for entry into Mode 3 for SR 4.7.1.2.a.1 and 4.7.1.2.b.2.

The currently written exception is confusing in that Mode 3 of the Applicability Statement and SR 4.7.1.2.b.2 refer to a footnote at the bottom of the page that says the provision of section 3.0.4 is not applicable for entry into Mode 3. Specification 3.0.4 states "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION statements unless otherwise excepted. This provision shall not prevent passage through OPERATIONAL MODES as required to comply with ACTION statements" and applies to Limiting Conditions for Operation. As discussed in Basis section 3.0.4, exceptions to Specification 3.0.4 are stated in the ACTION statements of the appropriate specifications. Specification 4.0.4 states: "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified" and applies to Surveillance Requirements (SR). An exemption to Specification 4.0.4 would permit completion of SRs 4.7.1.2.a.1 and 4.7.1.2.b.2 as it would

permit entry into Mode 3 from Mode 4 to perform the surveillance test. Because Specification 3.0.4 applies to Limiting Conditions for Operation and Specification 4.0.4 applies to SRs, Specification 4.0.4 is the appropriate reference for the AFW SRs.

Therefore, this application proposes clarifying that the provisions of Specification 4.0.4 are not applicable, for entry into Mode 3, for SRs 4.7.1.2.a.1 and 4.7.1.2.b.2, as the SRs require the plant to be in Mode 3 to produce a steam generator steam supply which is adequate to conduct the surveillances. The remaining AFW SRs can be performed prior to entering Mode 3, which is required by the Applicability Statement, therefore, no additional clarifications regarding Specification 4.0.4 are necessary.

DISCUSSION OF UNREVIEWED SAFETY QUESTION

The proposed changes involve deleting License Condition 2.C.(3)(t), incorporating Item 2 of License Condition 2.C.(3)(t) as Technical Specification Surveillance Requirement 4.7.1.2.a.4, revising the AFW System Basis to reflect this change, and clarifying when the provisions of 4.0.4 are not applicable for the AFW Surveillance Requirements.

Therefore, implementation of these changes would:

Not increase the probability of an accident previously evaluated in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFP. Surveillance requirement 4.7.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.59(a)(2)(i)).

Not increase the consequences of an accident previously evaluated in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFP. Surveillance Requirement 4.6.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.59(a)(2)(i)).

Not increase the probability of a malfunction of equipment important to safety previously evaluated in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFF. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.59(a)(2)(i)).

Not increase the consequences of a malfunction of equipment important to safety previously evaluated in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFF. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.59(a)(2)(i)).

Not create the possibility for an accident of a different type than any evaluated previously in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFF. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2 C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.59(a)(2)(ii)).

Not create the possibility for a malfunction of a different type than any evaluated previously in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFF. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are

required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.59(a)(2)(ii)).

Not reduce the margin of safety as defined in the basis for any Technical Specification because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUFP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFF. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUFP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.59(a)(2)(iii)).

CONCLUSION

Based on the above, it is concluded that the proposed Technical Specification and License Condition changes do not constitute an unreviewed safety question.

REFERENCE DOCUMENTS

Technical Specification 3/4.7.1.2, Auxiliary Feedwater System
Technical Specification Basis 3/4.7.1.2, Auxiliary Feedwater Systems
Updated Safety Analysis Report (USAR) Sections 3.6.2.7.2.12 and 7.4.1.2.5

Docket No. 50-346
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Attachment I

License Condition 2.C.(3)(t)

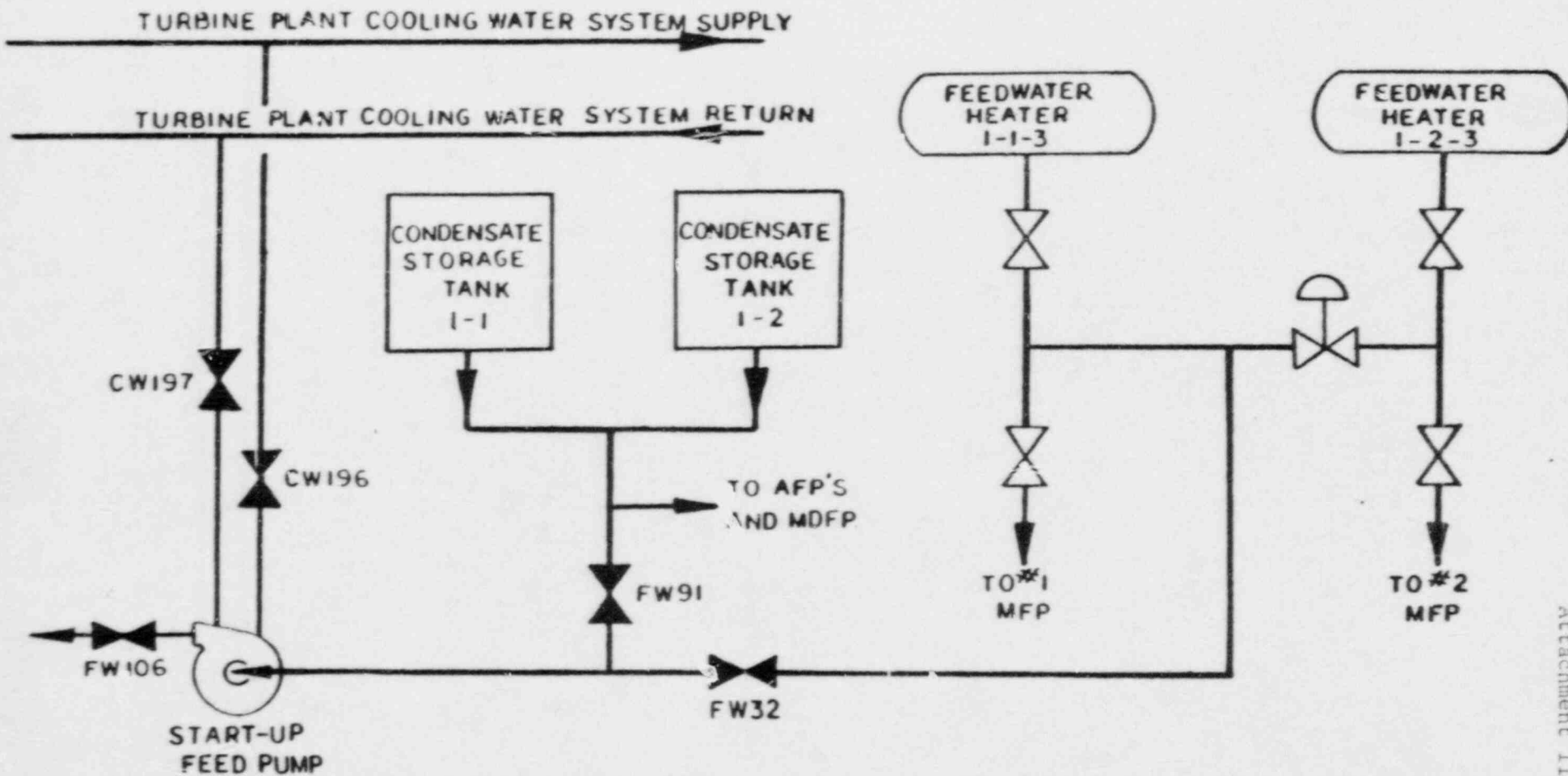
Accordingly, Facility Operating License No. NPF-3 is hereby amended by adding paragraph 2.C.(3)(t) to read as follows:

Toledo Edison shall operate the Startup Feedwater Pump (SUF) System with the following operational restrictions:

1. Toledo Edison will station an operator in the Startup Feedwater Pump/Auxiliary Feedwater Pump (SUF/AFW) area during operation of the SUF to monitor SUF/Turbine Plant Cooling Water (TPCW) piping status in the AFW Pump Rooms. In the event of SUF/TPCW pipe leakage, the operator will trip the SUF locally or notify the Control Room to trip the SUF, and isolate the SUF/TPCW piping.
2. Toledo Edison will isolate and maintain isolation outside the SUF/AFW area of the SUF suction, discharge, and turbine plant cooling water piping, when the SUF is not in operation (Modes 1, 2 and 3).
3. Toledo Edison will install a SUF, associated piping, and valves, to remove the hazards to the AFW pumps before commencing Cycle 6.

Date of Issuance: January 8, 1985

STARTUP FEEDWATER PUMP CONFIGURATION



SIGNIFICANT HAZARDS CONSIDERATION

DESCRIPTION OF THE PROPOSED ACTIVITY

The purpose of this License Amendment Request is to review proposed changes to the Davis-Besse Nuclear Power Station Unit No. 1 Operating License, Appendix A Technical Specifications. The proposed changes involve replacing the Startup Feedwater Pump (SUFF) License Condition 2.C.(3)(t) with a Surveillance Requirement and associated Basis change, and clarifying when the provisions of Specification 4.0.4 are not applicable for the Auxiliary Feedwater (AFW) Surveillance Requirements.

In January 1985, License Condition 2.C.(3)(t) was imposed on the SUFF after it was determined that non-seismic/high energy and moderate energy SUFF/Turbine Plant Cooling Water (TPCW) piping failures could potentially jeopardize operation of the Auxiliary Feedwater Pumps (AFP). License Condition 2.C.(3)(t) (Attachment I of the Safety Evaluation) imposed operational restrictions on the SUFF. These restrictions included: 1) stationing an operator in the SUFF/AFP area during SUFF operation; 2) isolating the SUFF and TPCW piping outside the SUFF/AFP area; and 3) installing a new SUFF prior to Cycle 6 operation.

In 1986, electrical power to the SUFF motor was removed and the SUFF was functionally replaced with a Motor Driven Feedwater Pump (MDFP). The MDFP was installed outside of the AFP rooms to be used during plant startups and shutdowns and as an additional source of feedwater in the event the Main Feedwater Pumps (MFP) and the steam turbine driven AFPs failed.

During the fifth refueling outage, the SUFF will be repowered to provide an additional means to remove decay heat via the steam generators. It will be locally operated and will not be used in Modes 1, 2 and 3, when the AFPs are required to be operable, unless other efforts have failed to re-establish feedwater using the MFPs, steam turbine driven AFPs and the MDFP. The SUFF/TPCW lines, which isolate the SUFF outside of the AFP rooms, will be valved closed in Modes 1, 2 and 3, thereby removing the potential hazard to the AFPs by SUFF operation. Plant procedures will provide operator instructions for placing the SUFF in service in the unlikely event that both MFPs, both AFPs and the MDFP fail. Since the SUFF will not be used (unless the above conditions are encountered) in Modes 1, 2, and 3 (when the AFPs are required to be operable), the concern for SUFF and TPCW pipe failures in the AFP rooms will be eliminated.

This request proposes deleting License Condition 2.C.(3)(t) and incorporating Item 2 of License Condition 2.C.(3)(t) as Technical Specification Surveillance Requirement 4.7.1.2.a.4. The AFW System Basis is also being revised to reflect this change. Additionally, Toledo Edison proposes clarifying when the provisions of Specification 4.0.4 are not applicable for the AFW Surveillance Requirements.

DOCUMENTS AFFECTED

ST 5071.14, Auxiliary Feedwater Train 1 Monthly Valve Verification
ST 5071.24, Auxiliary Feedwater Train 2 Monthly Valve Verification
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EP 1202.01, RPS, SPAS, SFRCS or SG Tube Rupture Emergency Procedure
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SYSTEMS AND COMPONENTS AFFECTED

Main Feedwater (MFW) System
Auxiliary Feedwater (AFW) System
Motor Driven Feedwater Pump (MDFP) System
Startup Feedwater Pump (SUPP) System

SAFETY FUNCTIONS OF SYSTEMS AFFECTED

The MFW System supplies the normal source of feedwater to the steam generators. It provides the steam generators with enough water to replace the steam leaving the units.

The safety function of AFW System is to supply feedwater to the steam generators for the removal of reactor decay heat in the absence of MFW and/or to promote natural circulation of the Reactor Coolant System in the event all four reactor coolant pumps fail.

The function of the MDFP System during routine plant operation is to provide feedwater to the steam generators during startups and shutdowns. The MDFP also serves the function of providing a diverse means of supplying AFW to the steam generators as a backup to the steam turbine driven AFPs. The MDFP may be aligned to the MFW System at or below 40% power and is aligned to the AFW System above 40% power.

The SUPP will serve no safety function. It was used as part of the original plant design, during startup and shutdown when insufficient steam was available to drive the MFPs. However, operation was limited by License Condition 2.C.(3)(t) after it was determined that piping failures could jeopardize the AFPs. In the new configuration, the SUPP will not be used in Modes 1, 2 or 3, when the AFPs are required to be operable, unless other efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFP. Surveillance Requirement 4.7.1.2.a.4 will require isolation of the SUPP suction, discharge and cooling water lines, thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms when the AFPs are required to be operable. Since the AFPs are not required to be operable in Modes 4, 5 and 6, the SUPP may be used in Modes 4, 5 and 6.

EFFECTS ON SAFETY

License Condition 2.C.(3)(t) was added in January 1985 by License Amendment No. 83 (Log No. 1672). Since that time, Toledo Edison has installed the MDFP to provide an additional, redundant source of feedwater. The MDFP is located outside of the AFP rooms, thereby removing the hazards to the AFPs. The MDFP

is used during normal plant operation for startup and shutdown. Toledo Edison is repowering the SUFP to provide an additional means to remove decay heat via the steam generators. The SUFP is not to be used in Modes 1, 2 or 3, unless other efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFFP. Since the proposed Surveillance Requirement will prevent SUFP operation in Modes 1, 2 or 3, the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms will be eliminated when the AFPs are required to be operable.

Each item of License Condition 2.C.(3)(t) is discussed below.

Item 1 of License Condition 2.C.(3)(t) requires Toledo Edison to station an operator in the SUFP/AFP area during operation of the SUFP to monitor the SUFP/TPCW piping in the AFP rooms. In the event of a SUFP/TPCW pipe leakage, the operator will trip the SUFP locally or notify the Control Room to trip the SUFP and isolate the SUFP/TPCW piping.

The SUFP will not be used in Modes 1, 2 or 3, when the AFPs are required to be operable, unless other efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFFP. Surveillance Requirement 4.7.1.2.a.4 will require isolation of the SUFP suction, discharge and cooling water lines, thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms when the AFPs are required to be operable. Thus, there is no longer a concern to have an operator stationed in the SUFP/AFP area to isolate the SUFP/TPCW piping to eliminate an AFP room flooding hazard. Since the AFPs are not required to be operable in Modes 4, 5 and 6, the SUFP may be used in Modes 4, 5 and 6. Also, because the SUFP will not be used when the AFPs are required to be operable, i.e., in Modes 1, 2 and 3, the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms will be eliminated. Toledo Edison therefore proposes deleting Item 1 of License Condition 2.C.(3)(t).

Item 2 of License Condition 2.C.(3)(t) requires Toledo Edison to isolate and maintain isolation outside the SUFP/AFP area of the SUFP suction, discharge and TPCW piping when the SUFP is not in operation (Modes 1, 2 and 3).

In conjunction with returning electrical power to the SUFP motor, Toledo Edison proposes to isolate and maintain isolation of the SUFP/AFP area. Isolation will be verified through an additional Technical Specification Surveillance Requirement. Surveillance Requirement 4.7.1.2.a.4 will be added to the AFW System Technical Specification and will require verifying, on a 31-day staggered test basis, for each AFW train, that the TPCW valves (CW196 and CW197), the SUFP suction valves (FW32 and FW91) and the SUFP discharge valve (FW106) are closed (see Attachment II of the Safety Evaluation). By maintaining these valves closed, the SUFP/TPCW lines located in the AFP rooms will be isolated, thereby negating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms when the AFPs are required to be operable. Toledo Edison also proposes to add to the Basis the explanation that by verifying these valves are closed, concerns associated with pipe failures in the AFP rooms are addressed. Toledo Edison therefore proposes deleting Item 2 of License Condition 2.C.(3)(t) and incorporating Technical Specification Surveillance Requirement 4.7.1.2.a.4 in the AFW System Technical Specification.

Item 3 of License Condition 2.C.(3)(t) requires that Toledo Edison install a SUFP, associated piping and valves to remove the hazards to the AFPs prior to commencing Cycle 6.

Consistent with the intent of Item 3 of License Condition 2.C.(3)(t), Toledo Edison has installed the MDFP. The MDFP is located outside of the AFP rooms, thereby removing the hazards to the AFPs. Toledo Edison is repowering the SUFP as an additional source of feedwater. However, since the SUFP will not be used in Modes 1, 2 or 3 when the AFPs are required to be operable, the hazards to the AFPs will be eliminated. Therefore, Toledo Edison proposes deleting Item 3 of License Condition 2.C.(3)(t).

Toledo Edison also proposes clarifying when the provisions of Specification 4.0.4 are not applicable for the AFW Surveillance Requirements (SR). The currently written exception is confusing.

An exception to Specification 4.0.4 is necessary for two of the AFW SRs. Because the AFW System Technical Specification is applicable in Modes 1, 2 and 3, the AFW SRs are required to be performed at the frequencies specified to verify system operability. The SRs are also performed when coming up in power, prior to entering Mode 3 from Mode 4, if they have not been performed within the frequencies specified. Performance of two of the AFW SRs however requires the plant to be in Mode 3. SR 4.7.1.2.a.1 requires verifying that each steam turbine driven pump develops a differential pressure of greater than or equal to 1070 psid on recirculation flow when the secondary steam supply pressure is greater than 800 psia, i.e. the plant to be in Mode 3. Similarly, SR 4.7.1.2.b.2. requires verifying that each pump starts automatically upon receipt of an AFW actuation test signal which requires the plant to be in Mode 3 to produce a steam generator supply which is adequate to conduct the test, i.e., main steam pressure of greater than or equal to 800 psia. Therefore, these two SRs should be clarified to allow entry into Mode 3, to perform the surveillance, since they cannot be performed in Mode 4, i.e., prior to entering Mode 3, as the Applicability Statement dictates. This can be accomplished by providing an exception to Specification 4.0.4 for entry into Mode 3 for SR 4.7.1.2.a.1 and 4.7.1.2.b.2.

The currently written exception is confusing in that Mode 3 of the Applicability Statement and SR 4.7.1.2.b.2 refer to a footnote at the bottom of the page that says the provision of section 3.0.4 is not applicable for entry into Mode 3. Specification 3.0.4 states "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION statements unless otherwise excepted. This provision shall not prevent passage through OPERATIONAL MODES as required to comply with ACTION statements" and applies to Limiting Conditions for Operation. As discussed in Basis section 3.0.4, exceptions to Specification 3.0.4 are stated in the ACTION statements of the appropriate specifications. Specification 4.0.4 states: "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified" and applies to Surveillance Requirements (SR). An exemption to Specification 4.0.4 would permit completion of SRs 4.7.1.2.a.1 and 4.7.1.2.b.2 as it would

permit entry into Mode 3 from Mode 4 to perform the surveillance test. Because Specification 3.0.4 applies to Limiting Conditions for Operation and Specification 4.0.4 applies to SRs, Specification 4.0.4 is the appropriate reference for the AFW SRs.

Therefore, this application proposes clarifying that the provisions of Specification 4.0.4 are not applicable, for entry into Mode 3, for SRs 4.7.1.2.a.1 and 4.7.1.2.b.2, as the SRs require the plant to be in Mode 3 to produce a steam generator steam supply which is adequate to conduct the surveillances. The remaining AFW SRs can be performed prior to entering Mode 3, which is required by the Applicability Statement, therefore, no additional clarifications regarding Specification 4.0.4 are necessary.

SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards in 10CFR50.92(c) for determining whether a significant hazard exists. A proposed amendment to an Operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in the margin of safety. The Company has reviewed the proposed changes and determined that a significant hazards consideration does not exist because operation of the Davis-Besse Nuclear Power Station, Unit No. 1, in accordance with these changes would:

Not involve a significant increase in the probability or consequences of an accident previously evaluated in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFF. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.92(c)(1)).

Not create the possibility of a new or different kind of accident from any accident previously in the USAR because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUPP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFF. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2 C.(3)(t), will require isolation of the SUPP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms.

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The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.92(c)(2)).

Not involve a significant reduction in a margin of safety because there will be no change in the present method of plant operation in Modes 1, 2 and 3. The SUFP will not be placed in service in Modes 1, 2 and 3, when the AFPs are required to be operable, unless efforts have failed to re-establish feedwater using the MFPs, the steam turbine driven AFPs and the MDFFP. Surveillance Requirement 4.7.1.2.a.4, instead of License Condition 2.C.(3)(t), will require isolation of the SUFP suction, discharge and cooling water lines while the AFPs are required to be operable (Modes 1, 2 and 3), thereby eliminating the concerns for non-seismic/high energy and moderate energy pipe failures in the AFP rooms. The proposed changes to the AFW System Technical Specification, regarding the applicability of Specification 4.0.4 to the AFW SRs, simply clarify what exists currently in the AFW System Technical Specification (10CFR50.92(c)(2)).

CONCLUSION

On the basis of the above, Toledo Edison has determined that the amendment request does not involve a significant hazards consideration.

REFERENCE DOCUMENTS

Technical Specification 3/4.7.1.2, Auxiliary Feedwater System
Technical Specification Basis 3/4.7.1.2, Auxiliary Feedwater Systems
Updated Safety Analysis Report (USAR) Sections 3.6.2.7.2.12 and 7.4.1.2.5