October 21, 1991

Docket No. 50-346

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PDIII-3 r/f

Mr. Donald C. Shelton, Vice President
Nuclear - Davis-Besse
c/o Toledo Edison Company
300 Madison Avenue
Toledo, Ohio 43652

Dear Mr. Shelton:

SUBJECT: AMENDMENT NO. 164 TO FACILITY OPERATING LICENSE NO. NPF-3 (TAC NO. M79673)

The Commission has issued Amendment No. 164 to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The amendment revises the Technical Specifications in response to your application dated February 15, 1991.

This amendment revises TS 3/4.7.1.3 and Bases Section 3/4.7.1.3 which deletes the reference to the deaerator storage tanks as condensate storage facilities for the auxiliary feedwater system.

A copy of the Safety Evaluation is also enclosed. Notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original Signed By:
J. B. Hopkins

Jon B. Hopkins, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 164 to License No. NPF-3
2. Safety Evaluation

cc: See next page

LA/PD33/DRPW	PM/PD33/DRPW	PM/PD33/DRPW	BC/SPLB/DST	D/PD33/DRPW	OGC-WF1
PKreutzer	JLombardo:rc	JHopkins	CMcCracken	JHannon	
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9/20/91	9/25/91	9/25/91	10/1/91	9/25/91	10/08/91

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DOCUMENT NAME: 79673 AMD

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TOLEDO EDISON COMPANY

CENTERIOR SERVICE COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DOCKET NO. 50-346

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.164
License No. NPF-3

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Toledo Edison Company, Centerior Service Company, and the Cleveland Electric Illuminating Company (the licensees) dated February 15, 1991 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-3 is hereby amended to read as follows:

(a) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 164 , are hereby incorporated in the license. The Toledo Edison Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented not later than 45 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Jon B. Hopkins

Jon B. Hopkins, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of issuance: October 21, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 164

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove	Insert
INDEX VII	INDEX VII
3/4 7-6	3/4 7-6
B 3/4 7-2	B 3/4 7-2

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

PLANT SYSTEMS

CONDENSATE STORAGE TANKS

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tanks shall be OPERABLE with a minimum contained volume of 250,000 gallons of water.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the condensate storage tanks inoperable, within 4 hours either:

a. Restore the condensate storage tanks to OPERABLE status or be in HOT SHUTDOWN within the next 12 hours, or

b. Demonstrate the OPERABILITY of the service water system as a backup supply to the auxiliary feedwater system and restore the condensate storage tanks to OPERABLE status within 7 days or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The condensate storage tanks shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume to be within its limits when the tanks are the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The service water system shall be demonstrated OPERABLE at least once per 12 hours by verifying that at least one service water loop is operating and that the service water loop-auxiliary feedwater system isolation valves are either open or OPERABLE whenever the service water system is the supply source for the auxiliary feedwater pumps.

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEMS (Continued)

Following any modifications or repairs to the Auxiliary Feedwater System piping from the Condensate Storage Tank through auxiliary feed pumps to the steam generators that could affect the system's capability to deliver water to the steam generators, following extended cold shutdown, a flow path verification test shall be performed. This test may be conducted in MODES 4, 5 or 6 using auxiliary steam to drive the auxiliary feed pumps turbine to demonstrate that the flow path exists from the Condensate Storage Tank to the steam generators via auxiliary feed pumps.

Verification of the turbine plant cooling water valves (CW 196 and CW 197), the startup feedwater pump suction valves (FW 32 and FW 91), and the startup feedwater pump discharge valve (FW 106) in the closed position is required to address the concerns associated with potential pipe failures in the auxiliary feedwater pump rooms, that could occur during operation of the startup feedwater pump.

3/4.7.1.3 CONDENSATE STORAGE TANKS

The OPERABILITY of the Condensate Storage Tanks with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 13 hours with steam discharge to atmosphere and to cooldown the Reactor Coolant System to less than 280° under normal conditions (i.e., no loss of offsite power). The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

3/4.7.1.4 ACTIVITY

The limitations on secondary system specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose includes the effects of a coincident 1.0 GPM primary to secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to 1) minimize the

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 164 TO FACILITY OPERATING LICENSE NO. NPF-3

TOLEDO EDISON COMPANY

CENTERIOR SERVICE COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-346

1.0 INTRODUCTION

By letter dated February 15, 1991, the Toledo Edison Company (the licensee) requested changes to Technical Specification (TS) 3/4 7.1.3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The proposed changes would delete the reference to the deaerator storage tanks (DSTs) as condensate storage facilities for the Auxiliary Feedwater System in TS limiting condition for operation (LCO) 3.7.1.3 and would revise the nomenclature for "Condensate Storage Tanks" and "Condensate Storage Facilities" to "Condensate Storage Tanks" in TS LCO 3.7.1.3, TS Surveillance Requirement 4.7.1.3.1, and TS Bases Section 3/4.7.1.3.

2.0 EVALUATION

The original design of the Davis-Besse Auxiliary Feedwater System (AFWS) provided that the two auxiliary feedwater pumps (AFPs) and the start up feedwater pumps (SUFP) shared a common 10-inch supply header, which received condensate from either the DSTs or the condensate storage tanks (CSTs). During power operation, the SUFP was secured, and the CSTs aligned to be the source of water supply to the AFWS. At that time, the DSTs were considered the first backup to the CSTs and were included within the scope of TS 3.7.1.3.

The licensee has determined that the alignment of the DSTs to the AFPs should not be allowed because the high temperature water from the DSTs could damage the AFPs' bearings, and the AFP discharge would be considered a high energy line if suction were taken from the DST. The condensate from the CSTs is of lower energy, and ranges from 40°F to 80°F. To allow the AFPs to pump condensate received from the DSTs, the bearing cooling water source would have to be

switched over to the Service Water System (SWS). This requires a manual actuation of several bearing water supply line valves. Additionally, AFP suction from the DSTs would classify AFP discharge as a high energy line, which would create high energy line break concerns. The licensee has also determined that there were problems associated with high and moderate energy line breaks in the SUFP supply and discharge lines that run within the AFP rooms. These concerns were resolved by installing a motor driven feedwater pump (MDFP), which performs the functions of the SUFP. It is capable of providing feedwater to the steam generators in the event of the loss of the steam turbine driven AFPs. The header that brought condensate from the DSTs to the AFPs and SUFP was then diverted to the MDFP. Through this change and other modifications the licensee has reduced the possibility of supplying DST water to the AFPs and has improved the overall reliability of the AFWS.

The function of the Condensate Storage System (CSS) is to store condensate and deliver it as required to the AFWS. The licensee has stated that the CSTs contain adequate water supply to maintain the Reactor Coolant System (RCS) at hot standby conditions for 13 hours with steam discharge to atmosphere, and to cool down the RCS to less than 280°F under normal conditions. The two CSTs each provide a capacity of 250,000 gallons.

Section 9.2.6 of the Updated Safety Analysis Report (USAR) does not address the DSTs as a backup source of condensate for the AFWS. The primary supply is derived from the non-seismic CSTs, with a seismic Class I backup from the Service Water System (SWS). Therefore, the DSTs are not required and no credit has been taken in the USAR. The proposed change does not involve a significant reduction in a margin of safety, because the condensate volume requirements to meet the analysis assumptions remain the same. The licensee has stated that the DSTs have never been considered in meeting the TS volume requirements and that, based on the design and as-built configuration consideration, the DSTs should be removed from TS 3.7.1.3. The staff has reviewed the proposed change to TS 3.7.1.3 and finds it to be acceptable. Other changes to SR 4.7.1.3 and Bases Section 3/4.7.1.3 are editorial in nature and are found to be acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant

change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (56 FR 24219). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. J. Lombardo

Date: October 21, 1991