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December 20, 1984

Docket No. 50-346

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Mr. Richard P. Crouse
Vice President, Nuclear
Toledo Edison Company
Edison Plaza - Stop 712
300 Madison Avenue
Toledo, Ohio 43652

Dear Mr. Crouse:

SUBJECT: AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-3; DEFINITION OF OPERABILITY FOR CYCLE 5 STARTUP

The Commission has issued the enclosed Amendment No. 82 to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. This amendment consists of a change to the Appendix A Technical Specifications (TSs) in response to your application dated December 3, 1984 (No. 1105).

This amendment modifies TS Section 1.6, which provides the definition of OPERABLE - OPERABILITY, so that from the effective date of this amendment to until Mode 1 is entered for Cycle 5 only, operability of the auxiliary feedwater system will be determined without consideration of the status of the startup feedwater system.

This amendment is being issued in accordance with the procedures described in 10 CFR 50.91 for exigent circumstances. Accordingly, since there was insufficient time for a Federal Register notice allowing 30 days for prior public comment and opportunity for hearing, public notices in local media were used to inform the public (cf§50.91(6)(i) and (ii)). These notices appeared in the Toledo Blade on December 8, 1984, the Port Clinton News Herald on December 12, 1984, and the Fremont News Messenger on December 13, 1984. A Notice of Issuance and Final Determination of No Significant Hazards Consideration and Opportunity for Hearing will be included in the Commission's next monthly Federal Register notice.

A copy of the Safety Evaluation supporting this amendment is enclosed.

Sincerely,

Original signed by

Albert W. De Agazio, Project Manager
Operating Reactors Branch #4
Division of Licensing

Enclosures:
1. Amendment No. 82
2. Safety Evaluation

cc w/enclosures:
See next page

ORB#4:DL	ORB#4:DL	ORB#4:DL	OELD	AD:ORB:DL	RSB:DSI
RIngram	ADe Agazio;cf	JStolz		GLainas	BSheron
12/19/84	12/19/84	12/19/84	12/20/84	12/19/84	12/19/84

Toledo Edison Company

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

TOLEDO EDISON 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. 82
License No. NPF-3

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

   A. The application for amendment by the Toledo Edison Company and The Cleveland Electric Illuminating Company (the licensees) dated December 3, 1984, 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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 82 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 20, 1984

ATTACHMENT TO LICENSE AMENDMENT NO.82

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains a vertical line indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

Page
1-1

1.0 DEFINITIONS

DEFINED TERMS

1.1 The DEFINED TERMS of this section appear in capitalized type and are applicable throughout these Technical Specifications.

THERMAL POWER

1.2 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

RATED THERMAL POWER

1.3 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 2772 MWt.

OPERATIONAL MODE

1.4 An OPERATIONAL MODE shall correspond to any one inclusive combination of core reactivity condition, power level and average reactor coolant temperature specified in Table 1.1.

ACTION

1.5 ACTION shall be those additional requirements specified as corollary statements to each principle specification and shall be part of the specifications.

OPERABLE - OPERABILITY

1.6 A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment, that are required for the system, subsystem, train, component or device to perform its function(s), are also capable of performing their related support function(s). Prior to entering MODE 1 for Cycle 5, auxiliary feedwater system OPERABILITY shall be determined without consideration of the status of the startup feedwater system.

REPORTABLE OCCURRENCE

1.7 A REPORTABLE OCCURRENCE shall be any of those conditions specified in Specifications 6.9.1.8 and 6.9.1.9.

CONTAINMENT INTEGRITY

1.8 CONTAINMENT INTEGRITY shall exist when:

a. All penetrations required to be closed during accident conditions are either:

1. Capable of being closed by the Safety Features Actuation System, or

2. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Table 3.6-2 of Specification 3.6.3.1.

b. All equipment hatches are closed and sealed,

c. Each airlock is OPERABLE pursuant to Specification 3.6.1.3,

d. The containment leakage rates are within the limits of Specification 3.6.1.2, and

e. The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is OPERABLE.

CHANNEL CALIBRATION

1.9 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds with necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. CHANNEL CALIBRATION may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated.

CHANNEL CHECK

1.10 A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and/or status with other indications and/or status derived from independent instrument channels measuring the same parameter.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-3

TOLEDO EDISON 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 December 3, 1984, Toledo Edison Company submitted an application to amend Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The proposed amendment would change Section 1.6 of the Appendix A Technical Specifications. This section provides the definition of OPERABLE.

The modification to the definition would be effective from the time of issuance of the amendment to until the facility leaves operational Mode 2 and enters operational Mode 1 for Cycle 5. The modification would remove from consideration the status of the startup feedwater system when determining the OPERABILITY of the auxiliary feedwater system. The modification would permit the use of the startup feedwater system in the plant startup sequence from the refueling outage for Cycle 5 and provides for its continued use to conduct zero power physics testing for the newly refueled core.

Toledo Edison Company has asked for expedited action on this amendment request and has provided justification for the consideration of exigent circumstances by the Commission.

2.0 DISCUSSION

On May 15, 1984, operating personnel at the Davis-Besse Nuclear Power Station identified one high and three moderate energy lines in auxiliary feedwater (AFW) pump rooms 237 and 238 whose failures have not been analyzed in accordance with the criteria given in Section 3.6 of the Final Safety Analysis Report (FSAR). The lines are the startup feedwater pump (SUFP) discharge line (high energy), SUFP suction line and turbine plant cooling water (TPCW) lines which supply coolant to the SUFP. The SUFP is located in AFW pump room 238. Unless the startup feedwater system and TPCW are isolated from outside the AFW pump rooms, a SUFP discharge line break within the room can jeopardize AFW pump 1-2 due to jet impingement or pipe whip; breaks in any of the other lines can jeopardize AFW pump 1-2 or AFW pump 1-1, located in room 237, by flooding or high temperature. Upon discovery of the situation, Toledo Edison Company closed valves located outside the AFW pump rooms to isolate the SUFP and TPCW piping.

Technical Specification 3.7.1.2 requires two independent AFW pumps and associated flow paths to be OPERABLE whenever the station is operating in Modes 1, 2 or 3. With the present arrangement of the SUFP system, the AFW system is considered not to meet the operability requirement unless the SUFP system is isolated.

The Davis-Besse station has been shutdown for refueling since September 11, 1984, and is presently in the startup sequence for Cycle 5. The station is expected to be ready for transition into Mode 3 about December 23, 1984, and for transition into Mode 2 about December 26, 1984. When the reactor is brought to criticality in Mode 2, zero power physics testing of the newly refueled core will commence. As long as 7 to 14 days may be required for this testing. Toledo Edison Company has proposed the temporary modification to the definition of OPERABILITY to permit use of the SUFP in Modes 2 and 3 to avoid a delay in plant startup. (In another licensing action related to this issue, the Commission is considering the issuance of an amendment that would permit the use of the SUFP when needed for the entire Cycle 5. This other proposed action has been the subject of a notice in the Federal Register and will not be issued prior to December 29, 1984.)

3.0 EVALUATION

Toledo Edison Company has determined that it is necessary to use the SUFP to conduct the zero power physics testing because of the need to control adequately the appropriate test conditions. It is not practical to use the main feedwater pump for such control because steam necessary to drive the main feedwater pump turbines would have to be supplied from the auxiliary boiler. This boiler is not reliable for this purpose. The poor reliability of the boiler to drive the main feedwater pump turbines could result in increased challenges to reactor safety systems and extend significantly the time required to accomplish zero power physics testing. Toledo Edison Company has evaluated the probability of a SUFP or TPCW piping failure and has determined that loss of the AFW pumps from such an event is not a significant contributor to total AFW system unavailability. However, as a compensatory measure, the licensee will locate an operator in the AFW/SUFP area whenever the SUFP lines are not isolated, are pressurized, and the facility is in operational Modes 2 or 3. Upon any indication of a pipe leak or failure in the SUFP piping, the operator will trip the SUFP locally or contact the control room to trip the SUFP. The operator will then close the SUFP and/or TPCW isolation valves which are outside the SUFP/AFW area.

In the unlikely event the SUFP or TPCW piping should fail and cause both trains of AFW to become inoperable, adequate cooling can be provided using feed and bleed until action can be taken to restore AFW or main feedwater.

The Davis-Besse reactor will have been shutdown for more than 100 days before the zero power physics tests are performed. Therefore, the decay heat level will be very low - less than 0.1% of full power. In an event in which all feedwater capability is lost, the Davis-Besse emergency procedures require

the operator to respond by 1) opening the pilot operated relief valve (PORV), 2) opening the reactor coolant system high point vents, 3) opening the pressurizer vent, and 4) starting the two makeup pumps. The procedure also requires the operator to ensure that the two high pressure injection pumps start when the coolant system pressure drops to 1650 psig.

The licensee has determined that adequate cooling could be provided by one high pressure injection or one makeup pump and either the PORV or one reactor system high point vent. Cooling in this mode would provide time to activate other means of feedwater addition. For example, a main feedwater pump, if available, could be activated.

The staff concludes that complete loss of feedwater resulting from operation of the SUFP during the 7 to 14 days of zero power physics testing is very unlikely and that the SUFP may be utilized for this purpose without endangering the public health and safety. However, in the unlikely event a complete loss of feedwater does occur, the very low level of decay heat can be removed using feed and bleed. Therefore, the requested Technical Specification change is acceptable.

4.0 EXIGENT CIRCUMSTANCES

The procedures to be followed on applications received after May 6, 1983, requesting an amendment to an operating license are stated in 10 CFR 50.91. These procedures require, among other actions, that the Commission will publish, in the Federal Register, a notice which 1) contains the staff's proposed determination with respect to significant hazards considerations of the proposed amendment, 2) provides a description of the amendment and facility involved, and 3) solicits public comments and offers a 30-day comment period and opportunity to request a hearing. Normally, an amendment will not be issued until this comment period expires.

These procedures allow for issuing an amendment before the expiration of the 30-day comment period if exigent circumstances exist. Where such circumstances exist and time does not permit the Commission to publish the 30-day notice in the Federal Register, the Commission may use local media to inform the public of the amendment request and of the Commission's proposed determination with respect to significant hazards considerations and to provide a reasonable opportunity for public comment. If the Commission determines that the amendment involves no significant hazards considerations, it may thereafter issue the amendment without further wait. The Commission will publish a notice in the Federal Register providing opportunity for hearing and public comment after the amendment is issued. A Public Notice in accordance with NRC regulations appeared with respect to this amendment on December 8, 1984, in the Toledo Blade, on December 13, 1984, in the Fremont (OH) News Messenger, and on December 12, 1984, in the Port Clinton (OH) News Herald.

With respect to this amendment, the Toledo Edison Company has explained the circumstances leading to this exigency. We have reviewed this explanation and find that an exigency does, indeed, exist.

The following describes the exigent circumstances:

a) On May 18, 1984, Toledo Edison Company discovered the circumstances regarding the SUFP system and established operational restrictions and other procedures regarding use of the SUFP system. These actions were taken to avoid interfering with continued operation of the unit and to operate the facility consistent with descriptions contained in the Final Safety Analysis Report. The licensee instituted actions to identify plant modifications to resolve the problem but later concluded that there was insufficient time to implement viable modifications during the Fall 1984 refueling outage.

b) On October 18, 1984, Toledo Edison Company submitted to the Commission a request for approval to use the SUFP for normal plant startup and shutdown. Toledo Edison Company submitted supporting technical analysis to demonstrate that operation of the SUFP presented no significant increased risk due to its operation. Upon review, the Commission determined that the Toledo Edison Company request involved an unreviewed safety question and would require, pursuant to 10 CFR 50.59(c), an amendment to the operating license.

c) Thereupon, on November 12, 1984, Toledo Edison Company submitted a request for license amendment to add a license condition requiring certain compensatory actions whenever the SUFP is in use during Modes 1, 2 or 3, requiring isolation of the system when not in use, and requiring a modification to the SUFP system before the end of the next refueling cycle to permanently remove the hazard to auxiliary feedwater pumps from SUFP operation. The staff, upon review of the application, found that because that application requested approval for the entire Cycle 5, a determination that the amendment involved no significant hazards considerations could not be made. The applicable Federal Register notice was published November 28, 1984, and the amendment will not be issued prior to December 29, 1984.

d) On December 3, 1984, Toledo Edison Company submitted application for this amendment with a request for prompt action because the SUFP would be needed on a one-time basis to perform the zero power physics tests in Mode 2 during plant startup. The current startup schedule will require that this amendment be issued no later than December 23, 1984, to avoid delaying restart of the unit. While the plant could be started up and operated at low power without this change, initial startup from a refueling outage without this change is undesirable because it could extend or prevent performance of required zero-power core physics testing and could result in unnecessary challenges to the plant safety systems.

In connection with requests for consideration of exigent circumstances, the Commission expects licensees to submit timely applications. We conclude that reasonable diligence was applied by the licensee, but that the exigency results from late recognition by the licensee of the need for SUFP operation to perform the zero power physics tests.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility in accordance with the amendment would not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) Involve a significant reduction in a margin of safety.

The application of these criteria to this license amendment for our final determination that no significant hazards consideration is involved is as follows:

1. No Significant Increase in the Probability or Consequences of an Accident Previously Analyzed

   The estimated probability of a rupture of the SUFP or TPCW piping which could result in the failure of the entire AFW system has been compared to the estimated probability of AFW system failure from all other causes. This comparison shows that the expected increase in AFW system failure is not significant. The consequences of AFW system failure would be less because of the very low level of decay heat after more than 100 days of shutdown and partial core replacement with fresh fuel.

2. No Creation of a New or Different Kind of Accident Than Previously Analyzed

   The licensee has committed to stationing an operator in the SUFP/AFW pump area to monitor the SUFP system for any leaks or piping failure. Prompt action to isolate the SUFP system will preclude the occurrence of conditions which could cause both AFW trains to fail because of the event. Therefore, no new or different kind of accident will be created.

3. No Significant Reduction in a Safety Margin

   The SUFP suction and discharge lines and TPCW lines are not designed to seismic class 1 requirements. This amendment does reduce the safety margin that would otherwise be provided against seismic events. However, this margin reduction is compensated for by the measures described in the previous paragraph and is not considered significant.

Accordingly, we conclude that this amendment to Facility Operating License NPF-3 to support startup operations of Davis-Besse, Unit 1, up to but not in Mode 1 for the upcoming Cycle 5, involves no significant hazards consideration.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, consultation was held with the State of Ohio by telephone. The State expressed no concern either from the standpoint of safety or of our no significant hazards determination.

7.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

8.0 CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: December 20, 1984

Principal Contributors: Walton Jensen, and Albert De Agazio.