

JUN 24 1977

Docket No. 50-346

Toledo Edison Company
ATTN: Mr. Lowell E. Roe
Vice President, Facilities
Development
Edison Plaza
300 Madison Avenue
Toledo, Ohio 43652

Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE
NO. NPF-3 FOR DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 3 to the Facility Operating License No. NPF-3 which is effective as of the date of issuance. Amendment No. 3 revises license condition 2.C.(3)(j) to allow the performance of specific surveillance and preoperational test requirements related to the equipment and associated instrumentation as provided in the technical specification, and to require that an operator be stationed in the control room when only one decay heat removal train is available for operation to assure that the reactor heat removal pump(s) can be immediately secured should loss of flow occur due to the inadvertent closure of decay heat isolation valves DH 11 and DH 12.

Amendment 3 also revises the Technical Specification, Appendix A, to correct typographical errors presently existing in Table 3.3-12 and Table 3.6.2 of the technical specifications. Table 3.6.2 is also revised to allow surveillance testing of atmospheric vent valves ICS 11A and ICS 11B in operational mode 4. Technical Specification surveillance requirement 4.6.5.1.d.4 is revised to verify that the annulus space can be depressurized to a negative pressure of 0.25 inches water guage within 4 seconds from time that the redundant emergency ventilation systems fans attain a flow rate of 8000 cubic feet per minute. Technical specification 3.4.1 is revised to allow for surveillance and preoperational testing required in facility operational modes 3, 4, or 5. Also, Technical Specification 4.5.2 is revised to verify automatic isolation and interlock action of the decay heat removal system from the reactor control system with a simulated pressure signal.

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This license is amended by making the appropriate changes as listed above to the technical specifications on pages 3/4 3-28, 3/4 4-2, 3/4 5-4, 3/4 6-17, 3/4 6-20, 3/4 6-21, 3/4 6-22, and 3/4 6-30. This license is further amended by changing license condition 2.C.(3)(j) of facility operating license No. NPF-3.

We have determined that Amendment No. 3 does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves actions which are insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

A copy of the Federal Register Notice of Issuance of Amendment No. 3 and the related Safety Evaluation supporting Amendment No. 3 to License No. NPF-3 are also enclosed.

Sincerely,

Original signed by J. Angelo *for*

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Enclosures:

1. Amendment No. 3 to License No. NPF-3
2. Federal Register Notice
3. Safety Evaluation Supporting Amendment No. 3 to License No. NPF-3

cc w/enclosures:
See page 3

Rewritten per G. Fess, OELD, See Previous Yellow for Concurrence.

OFFICE >	LWR 1	LWR 1	OELD	LWR 1	
SURNAME >	Edgerton	LENGLE	Gfess	Stolz	
DATE >	6/24/77	6/24/77	6/24/77	6/24/77	

Toledo Edison Company

- 2 -

This license is amended by making the appropriate changes as listed above to the technical specifications on pages 3/4 3-28, 3/4 4-2, 3/4 5-4, 3/4 6-17, 3/4 6-20, 3/4 6-21, 3/4 6-22, and 3/4 6-30. This license is further amended by changing license condition 2.3.(3)(j) of facility operating license No. NPF-3.

We have determined that Amendment No. 3 does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

A copy of the Federal Register Notice of Issuance of Amendment No. 3 and the related Safety Evaluation supporting Amendment No. 3 to License No. NPF-3 are also enclosed.

Sincerely,

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Enclosures:

1. Amendment No. 3 to License No. NPF-3
2. Federal Register Notice
3. Safety Evaluation Supporting Amendment No. 3 to License No. NPF-3

cc w/enclosures:

See page 3

OFFICE	LWR #1	LWR #1	OELN	LWR #1		
SURNAME	EGH:klj	Lingle	OWR:036	JFStolz		
DATE	6/23/77	6/23/77	6/24/77	6/ /77		

cc: Gerald Charnoff, Esq.
Shaw, Pittman, Potts & Trowbridge
1800 M Street, N. W.
Washington, D. C. 20036

Leslie Henry, Esq.
Fuller, Seney, Henry and Hodge
300 Madison Avenue
Toledo, Ohio 43604

Mr. Donald H. Hauser, Esq.
The Cleveland Electric Illuminating Company
P. O. Box 5000
Cleveland, Ohio 44101

Mr. Harry R. Johnson
Ottawa County Courthouse
Port Clinton, Ohio 43452

Ohio Department of Health
ATTN: Director of Health
450 East Town Street
Columbus, Ohio 43216

Atomic Energy Control Board
P. O. Box 1046
Ottawa, Ontario, Canada

Harold Kahn, Staff Scientist
Power Siting Commission
361 East Broad Street
Columbus, Ohio 43216

Mr. Bruce Blanchard
Environmental Projects Review
Department of the Interior
Room 5321
18th and C Street, N. W.
Washington, D. C. 20240

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THE 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. 3
License No. NPF-3

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Toledo Edison Company (the licensee) dated June 1, 1977 and June 15, 1977, 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.(3)(j) of facility Operating License No. NPF-3 is hereby amended to read as follows:

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2.C(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 3, are hereby incorporated in the license. Toledo Edison Company shall operate the facility in accordance with the Technical Specifications.

2.C.(3)(j) Until such time as final resolution is obtained regarding the potential for and consequences of an inadvertent closure of a decay heat removal system valve during shutdown operations, Toledo Edison Company shall maintain power on decay heat removal isolation valves DH 11 and DH 12 and shall operate one decay heat removal train at a time.

This license condition shall not preclude performance of specific surveillance or preoperational test requirements related to this equipment and associated instrumentation as provided in the technical specification.

For those periods of time during which only one decay heat removal train is available for operation or during the time that the standby decay heat removal train is being brought on line, an operator shall be stationed in the control room and assigned to monitor flow rate in the decay heat removal trains, so as to immediately secure the reactor heat removal pump(s) should loss of flow occur due to the inadvertent closure of DH 11 or DH-12.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by J. Angelo

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Attachment:
Changes to the Technical
Specifications

Date of Issuance: **JUN 24 1977**

RETYPE PER G. FESS, SEE PREVIOUS YELLOW FOR CONCURRENCE

OFFICE →	LWR 1	LWR 1	LWR 1	LWR 1		
SURNAME →	Edgerton	LEngle	G. Fess	J. Angelo		
DATE →	6/24/77	6/24/77	6/24/77	6/24/77		

2.C(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 3, are hereby incorporated in the license. Toledo Edison Company shall operate the facility in accordance with the Technical Specifications.

2.C.(3)(j) Until such time as final resolution is obtained regarding the potential for and consequences of an inadvertent closure of a decay heat removal system valve during shutdown operations, Toledo Edison Company shall maintain power on decay heat removal isolation valves DH 11 and DH 12 and shall operate one decay heat removal train at a time.

This license condition shall not preclude performance of specific surveillance or preoperational test requirements related to this equipment and associated instrumentation as provided in the technical specification.

For those periods of time during which only one decay heat removal train is available for operation or during the time that the standby decay heat removal train is being brought on line, an operator shall be stationed in the control room so as to immediately secure the reactor heat removal pump(s) should loss of flow occur due to the inadvertant closure of DH 11 or DH-12.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Attachment:
Changes to the Technical
Specifications

Date of Issuance:

OFFICE >	LWR-#1	LWR-#1	LWR-#1		
SURNAME >	EH <i>Adh:k1j</i>	LEng <i>Eng</i>	JAngelo		
DATE >	6/2/77	6/22/77	6/23/77	6/ /77	

ATTACHMENT TO LICENSE AMENDMENT NO. 3

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed 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.

Pages

3/4 3-28

3/4 4-2

3/4 5-4

3/4 6-17

3/4 6-20

3/4 6-21

3/4 6-22

3/4 6-30

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-346

THE TOLEDO EDISON COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY

OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 3 to the Facility Operating License No. NPF-3, issued to the Toledo Edison Company and the Cleveland Electric Illuminating Company, which revised Technical Specifications for operation of the Davis-Besse Nuclear Power Station, Unit No. 1 (the facility) located in Ottawa County, Ohio. The amendment is effective as of its date of issuance.

This license is amended by making the appropriate changes to the technical specifications on pages 3/4 3-28, 3/4 4-2, 3/4 5-4, 3/4 6-17, 3/4 6-20, 3/4 6-21, 3/4 6-22, and 3/4 6-30. This license is further amended by changing license conditions 2.C.(3)(j) of facility operating license No. NPF-3.

The amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which

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are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) Amendment No. 3 to License No. NPF-3, (2) the Commission's related Safety Evaluation supporting Amendment No. 3 to License No. NPF-3. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Ida Rupp Public Library, 310 Madison Street, Port Clinton, Ohio 43452. A copy of items (1) and (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this 24 day of June 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by J. Angelo

John Angelo, Acting Branch Chief
Light Water Reactors Branch No. 1
Division of Project Management

RETYPE PER G. FESS, SEE PREVIOUS YELLOW FOR CONCURRENCE

OFFICE >	LWR 1	LWR 1	OEPA	LWR 1		
SURNAME >	E.H. Ston	L. Engle	G. Fess	J. Angelo		
DATE >	6/24/77	6/24/77	6/24/77	6/24/77		

are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) Amendment No. 3 to License No. NPF-3, (2) the Commission's related Safety Evaluation supporting Amendment No. 3 to License No. NPF-3. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Ida Rupp Public Library, 310 Madison Street, Port Clinton, Ohio 43452. A copy of items (1) and (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this day of 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

John Angelo, Acting Branch Chief
Light Water Reactors Branch No. 1
Division of Project Management

OFFICE >	LWR #1	LWR #1	LWR #1	LWR #1		
SURNAME >	EGC/...;klj	LEngle	JAngelo	JAngelo		
DATE >	6/22/77	6/22/77	6/22/77	6/22/77		

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 3 TO LICENSE NO. NPF-3

TOLEDO EDISON COMPANY

AND

CLEVELAND ELECTRIC ILLUMINATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1

DOCKET NO. 50-346

INTRODUCTION

By letter dated June 1, 1977 and June 15, 1977, the Toledo Edison Company requested changes in the Technical Specifications appended to Facility Operating License, NPF-3, for the Davis-Besse Nuclear Power Station, Unit 1. Also, we have noted an administrative error which requires a change to the Technical Specifications. These changes are identified below:

- (1) The Toledo Edison Company stated that an administrative error in Table 3.6.2 precluded proper operation of fifteen (15) containment isolation valves for surveillance testing and unit operation under administrative control when in Operational Modes 1, 2, 3, or 4.
- (2) We have noted that Table 3.3-12, page 3/4 3-28, is incorrect because of a typographical error which improperly identified the maximum value for the steam and feedwater rupture control system instrumentation trip setpoint for the steam generator feedwater differential pressure.
- (3) The Toledo Edison Company has requested a change to Table 3.6-2, page 3/4 6-22, to allow surveillance testing of atmospheric vent valves ICS 11A and ICS 11B in operational mode 4 instead of mode 5 as presently stipulated in the technical specifications.
- (4) The Toledo Edison Company has requested that Surveillance Requirement 4.6.5.1.d.4 page 3/4 6-30, be changed to verify that each emergency ventilation system will produce a negative pressure of greater than or equal to 0.25 inches water gauge in the annulus within less than or equal to 4 seconds after the emergency ventilation system fan attains a flow rate of 8000 cubic feet per minute plus or minus ten percent and that the test will be performed with the flow path established prior to starting the emergency ventilation system fan and the other dampers associated with the negative pressure boundary closed.

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- (5) The Toledo Edison Company has requested that the Technical Specification 3.4.3.2 be revised with the addition of a footnote on page 3/4 3-22, stating that in operational Mode 4 and 5, when Channel Calibration or Channel Function Test surveillance is performed, the interlock for one of the two decay heat isolation valves will be taken out of service.

DISCUSSION

- (1) The Toledo Edison Company has stated that in Table 3.6.2, on pages 3/4 6-20, 3/4 6-21, and 3/4 6-22 an asterisk (*) was omitted or added incorrectly to certain containment isolation valves by administrative error. The asterisk (*) in Table 3.6.2 defines those containment isolation valves which may be opened on an intermittent basis to allow for proper operation of specific containment isolation valves for surveillance testing and unit operation under administrative control when in Operational Modes 1, 2, 3, or 4.

The Toledo Edison Company has requested that an asterisk (*) be added to the following penetration number and its associated valve number in Table 3.6.2 as follows:

<u>Penetration No.</u>	<u>Valve No.</u>
29	DH 11
29	DH 23
39	MS 107
39	MS 107A
40	MS 106
40	MS 106A
57	MS 603
57	MS 603A
58	MS 611
58	MS 611A
74C	DH 2735
74C	DH 2736

The Toledo Edison Company has requested than an asterisk (*) be deleted from the following penetration number and its associated valve number in Table 3.6.2 as follows:

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Penetration No.

Valve No.

25
25
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SA 536
SA 532
SA 535

- (2) We have noted a typographical error in Table 3.3-12, page 3/4 3-28, of the technical specifications which defines the trip setpoint and allowable valves for the steam generator feedwater differential pressure as being greater than or equal to () the numbers assigned in line 3 of Table 3.3-12. The proper notation for line 3 should specify that the trip setpoint and allowable valves are less than or equal to () the numbers assigned in line 3 of Table 3.3-12.
- (3) The technical specifications require that all containment isolation valves be operable prior to entering Mode 4, which in turn requires that all applicable surveillance testing be performed in Mode 5. The Toledo Edison Company has indicated that atmospheric vent valves ICS 11A and ICS 11B could be damaged when tested in Mode 5 because there is no steam flow available in a cold standby condition.
- (4) Surveillance Requirement 4.6.5.1.d.4 requires that the Toledo Edison Company "Verify that each system produce a negative pressure of greater than or equal to 0.25 inches of water in the annulus within 12 seconds after a start signal". The purpose of this technical specification is to provide assurance that the emergency ventilation system boundary integrity will be maintained following a postulated loss-of-coolant accident.

The Toledo Edison Company in their request for a change in Surveillance Requirement 4.6.5.1.d.4 stated that the intent of the requirement was to test the draw down in the annulus after 8000 cubic feet per minute flow was established in the emergency ventilation system fans. Toledo Edison Company further stated that Surveillance Requirement 4.6.5.1.d.4 as presently written requires that the emergency ventilation system valve and damper operating times plus the fan start time occur in the 12 seconds response time.

Toledo Edison Company has requested that Surveillance Requirement 4.6.5.1.d.4 be changed as follows:

"Verify that each system produces a negative pressure of 0.25 inches W.G. in the annulus within four seconds after than fan attains a flow rate of 8000 cubic cfm 10%. This test is to be performed

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with the flow path established prior to starting the EVS fan, and the other dampers associated with the negative pressure boundary closed."

- (5) The Technical Specifications, Table 4.3-2 require that the Decay Heat Isolation Valve Interlock Channels be operational in Modes 1, 2, 3, 4 and 5.

In order to perform the Channel Functional Test and Channel Calibration, these interlock channels must either be made inoperable or result in the closure of the valves in the Modes 4 and 5 which results in the loss of the Reactor Coolant System overpressurization protection. This would be a violation of the requirements of 10 CFR 50, Appendix G.

The Toledo Edison Company has requested that the technical specifications on page 3/4 3-22 be revised to allow performance of a channel calibration or channel functional test on the decay heat isolation valve interlock channels. This will require that the interlock for one of the two decay heat isolation valves be taken out of service to prevent closure of the valve in Modes 4 and 5.

We have discussed the requested change as stated above with the Toledo Edison Company and we have determined that changes are required in licensing condition 2.C.(3)(j) and Technical Specification 4.5.2.d.1, page 3/4 5-4, and Technical Specification 3.4.1.d of Action Modes 3, 4, and 5, page 3/4 4-2, as amended, to allow the surveillance and preoperational testing which is required to assure that safety-related components, instrumentation, and systems will be operable.

These changes are delineated in the evaluation section of this report. Toledo Edison Company concurs in these changes.

EVALUATION

- (1) & (2) The changes to the Technical Specifications for items (1) and (2), as discussed above, serve to correct typographical and administrative errors, and do not involve any significant hazards considerations, and therefore, we find these changes to be acceptable.
- (3) The Toledo Edison Company has stated that steam flow through atmospheric vent valves ICS 11A and ICS 11B is desirable whenever these valves are opened in order to prevent particles which could be dislodged from components above the valves from falling onto the seat of the valve and

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thereby damaging the sealing surface when the valves are closed. Therefore, Toledo Edison Company has requested that these valves be surveillance tested in Mode 4 when steam flow will be available.

We have determined that atmospheric vent valves ICS 11A and ICS 11B would be closed at all times in Mode 4 except for the surveillance testing of these valves when in Mode 4 as requested by Toledo Edison Company.

The technical specifications define the maximum primary system temperature allowed in Mode 4 to be 280 degrees Fahrenheit, which corresponds to a steam generator secondary side saturation pressure of about 50 pounds per square inch absolute. The minimum design pressure for which these valves will open is about 900 pounds per square inch absolute which is well above the maximum steam generator secondary side pressure of 50 pounds per square inch absolute allowable in Mode 4.

By letter dated April 7, 1977, the Toledo Edison Company committed to operating the facility unit with the decay heat removal system when in operational Mode 4. An automatic setpoint of 320 pounds per square inch gauge on the decay heat removal relief valve assures that primary pressure will therefore not exceed 320 pounds per square inch gauge when the decay heat removal system is in operation.

Therefore, we have determined that in the event of a steam generator tube rupture accident in operational Mode 4, adequate assurance is provided that the maximum primary reactor coolant pressure that could be applied to valves ICS 11A and ICS 11B would be 320 pounds per square inch gauge which is below the minimum design pressure of 900 pounds per square inch gauge required to open these valves.

Also, we have determined that the radiological consequences of a failure in Mode 4 will be within the radiological consequences evaluated for this facility at full power and pressure which was evaluated in our Safety Evaluation Report.

Based on our review above, we have determined that adequate assurance is provided that containment isolation valves ICS 11A and ICS 11B will be closed in Mode 4 from either the maximum primary or secondary pressure which could be applied to these valves when in operational Mode 4. Also, the surveillance testing of these valves in Mode 4 will assure that their containment isolation function is operable in the event of a loss-of-coolant accident. In addition, the surveillance testing of these valves in Mode 4

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instead of Mode 5 will increase the operational reliability of these valves by decreasing the probability of damage to these valves. Therefore, we find Toledo Edison Company's request to perform the required surveillance testing of valves ICS 11A and ICS 11B in Mode 4 to be acceptable.

- (4) In the Final Safety Analysis Report for Davis-Besse Unit 1 the accident analysis assumes that the annulus space between the secondary containment (shield building) and the steel containment vessel can be at a negative pressure of 0.25 inches water gauge within 780 seconds following a postulated loss-of-coolant accident.

The purpose of surveillance requirement 4.6.5.1.d.4 is to verify by test conditions that the emergency ventilation system can draw down the annulus failure to a negative pressure of 0.25 inches water gauge within 780 seconds following the postulated loss-of-coolant accident.

Actual test conditions preclude the heat input to the annulus as would occur under loss-of-coolant conditions. Therefore, the Toledo Edison Company has determined that test conditions for simulating the loss-of-coolant conditions require that the emergency ventilation system fan will draw down the annulus space to a negative pressure of greater than or equal to 0.25 inches water gauge within the time interval of less than or equal to 4 seconds from the time the emergency ventilation system fan obtains 8000 cubic feet per minute flow plus or minus ten percent.

When calculating the depressurization time of the annulus volume following a loss-of-coolant accident, an initial estimate must be made of the leakage rate into the annulus. The depressurization time of the annulus becomes a direct function of the assumed leakage rate. When the Toledo Edison Company calculated the 780 second depressurization time for the annulus volume, a 2.4 square foot equivalent leakage area was assumed in the shield building. One of the primary purposes of Technical Specification 4.6.5.1.d.4 is to ensure that the 2.4 square foot assumed leakage area has not been exceeded.

For our confirmatory analysis, we did not allow credit to be taken for out leakage through the shield building, and the only leakage assumed was that due to inleakage. Inleakage can only occur when the annulus

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pressure is between atmospheric pressure and the negative pressure of 0.25 inches water gauge. By periodically drawing down the annulus pressure from atmospheric to a negative 0.25 inches water gauge, the Toledo Edison Company not only verifies the functional capability of the emergency ventilation system but also justifies the initial leakage area of 2.4 square feet.

Technical Specification 4.6.5.1.d.4 presently calls for a single emergency ventilation system fan to draw down the annulus volume from atmospheric pressure to a negative pressure of 0.25 inches water gauge in 12 seconds. The 12 seconds includes fan startup time and instrument delay times. Analysis by the Toledo Edison Company has shown that the emergency ventilation system fan requires 25 seconds (assuming loss of offsite power) after the postulated loss-of-coolant accident to startup and attain the maximum capacity of 8000 cubic feet per minute flow. The response times of emergency ventilation system valves and damper and the fan start time required to obtain maximum flow capacity are verified by Technical Specification Surveillance Requirements 4.3.2.1.3 for safety features actuation system response times.

Under actual loss-of-coolant conditions, the annulus pressure does not reach atmospheric conditions until nearly 780 seconds after the accident occurs. Therefore, the emergency ventilation system fans have ample time to reach the 8000 cubic feet per minute flow before the fans are required to draw down the annulus pressure below atmospheric conditions.

We have determined that the requested change will allow the emergency ventilation system to be tested under condition that would be more realistic following a loss-of-coolant accident. The four seconds required to draw the annulus volume from atmospheric pressure to a negative 0.25 inches water gauge is based on the original assumed leakage area of 2.4 square feet, and since the total depressurization time of 780 seconds has not been changed, we have determined that testing the emergency ventilation system for a depressurization time of four seconds with the fans at maximum capacity will more closely approximate loss-of-accident conditions, and therefore, we find the requested change acceptable.

In addition, we note, as stated in Supplement 1 to our Safety Evaluation Report that we have calculated the radiological accident doses using a conservative depressurization time of 802 seconds and our evaluation determined that the radiological accident doses are within the 10 CFR Part 100 guidelines.

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(5) Licensing condition 2.C.(3)(j) presently stipulates that:

"Until such time as final resolution is obtained regarding the potential for and consequences of an inadvertent closure of a decay heat removal system valve during shutdown operations, Toledo Edison Company shall maintain power on decay heat removal isolation valves DH 11 and DH 12 and shall operate one decay heat removal train at a time."

We have determined that licensing condition 2.C.(3)(j) should be revised as follows:

"Until such time as final resolution is obtained regarding the potential for and consequences of an inadvertent closure of a decay heat removal system valve during shutdown operations, Toledo Edison Company shall maintain power on decay heat removal isolation valves DH 11 and DH 12 and shall operate one decay heat removal train at a time."

This license condition shall not preclude performance of specific surveillance or preoperational test requirements related to this equipment and associated instrumentation as provided in the technical specifications.

For those periods of time during which only one decay heat removal train is available for operation or during the time that the standby decay heat removal train is being brought on line, an operator shall be stationed in the control room and assigned to monitor flow rates in the decay heat removal trains, so as to immediately secure the reactor heat removal pump(s) should loss of flow occur due to the inadvertent closure of DH 11 and DH 12."

Paragraph 2 of the revised licensing condition 2.C.(3)(j) will allow the Toledo Edison Company to perform the surveillance and preoperational testing required to assure that the safety related valves, instrumentation, and safety system will be operable.

Paragraph 3 of the revised licensing condition 2.C.(3)(j) states that should loss of flow occur to the decay heat removal trains due to the inadvertent closure of decay heat removal isolation valves DH 11 and DH 12, operator action can immediately secure the decay heat removal pump(s) and thereby provide additional assurance that the decay heat removal pump(s) will not be damaged.

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We have determined that Technical Specification 4.5.2.d.1 requires a change in order to verify that automatic isolation and interlock action of the decay heat removal system will occur when the reactor coolant system pressure is greater than or equal to 413 pounds per square inch gauge.

We have required the Toledo Edison Company to ensure that the decay heat removal relief valve will actuate prior to automatic closure of the decay heat removal system isolation valves in order to minimize the likelihood of exceeding the pressure limitations of Appendix G to 10 CFR Part 50 for the first fuel cycle. The automatic relief valve will actuate at 320 pounds per square inch gauge which is 93 pounds per square inch gauge below the auto closure setpoint of 413 pounds per square inch gauge for decay heat removal isolation valves DH 11 and DH 12.

The activation of the decay heat removal isolation valve at 320 pounds per square inch gauge presently precludes the verification of the automatic isolation and interlock action of the decay heat removal system with reactor coolant system flow greater than or equal to the 413 pounds per square inch gauge as presently stipulated in Technical Specification 4.5.2.d.1.

In order that assurance will be provided for meeting the pressure limitations of Appendix G for the first fuel cycle and also, that Technical Specification 4.5.2.d.1 can be verified by test, we have determined that Technical Specification 4.5.2.d.1 should be changed as follows:

"Verify automatic isolation and interlock action of the decay heat removal system from the reactor coolant system when a simulated reactor coolant system pressure of greater than or equal to 413 pounds per square inch gauge is applied."

This change will address both our concerns for meeting Appendix G limitations and for the functional testing required to verify that automatic isolation of the decay heat removal system from the reactor coolant system will occur.

We have determined that the technical specification 3.4.1, item (a) of action modes 3, 4, and 5 should be changed by revising the footnote of page 3.4 4-2 to read:

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*All reactor coolant pumps and decay heat removal train pumps may be deenergized for up to one (1) hour to accommodate decay heat removal pump switching operations, surveillance testing, and preoperational testing provided no operations are permitted which could cause dilution of reactor coolant system boron concentration.

This change will permit the Toledo Edison Company to allow the interlock on either decay heat isolation valve to be taken out of service in order to perform the Channel Calibration or Channel Functional Test Surveillance Requirements as required in Modes 4 and 5 to meet the surveillance requirements of Technical Specification 3.4.3.2.2 and Surveillance Requirement 4.3.2.1.3.

This change allows the required preoperational and surveillance testing of valves DH 11 and DH 12 to assure their operability and required safety functions. In addition, the requested change to technical specification 3.4.1 does not change our conclusion in our supporting safety evaluation to Amendment 1 to Facility Operating License, NPR-3, where we stated that the change in Technical Specification 3.4.1, item (a) of Action Modes 3, 4, and 5 does not include any increase in the probability or consequences of accidents previously considered in our Safety Evaluation Report, Supplement 1 to the Safety Evaluation Report, and the Final Safety Analysis Report.

ENVIRONMENTAL CONSIDERATION


We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered or a significant decrease in any safety margin, it does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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. Also, we reaffirm our conclusions as otherwise stated in our Safety Evaluation Report.

OFFICE	DATE: June 24, 1977				
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DISTRIBUTION FOR DAVIS-BESSE, UNIT NO. 1 AMENDMENT NO. 3 TO OPERATING
LICENSE NO. NPF-3 DATED JUN 24 1977

Docket File 

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