

March 8, 1993

Docket No. 50-346

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

DISTRIBUTION

Docket File	GHill(2)
NRC & Local PDRs	Wanda Jones
PD3-3 Reading	CGrimes
JRoe	ACRS(10)
JZwolinski	OPA
JHannon	OC/LFMB
PKreutzer	Region RIII,DRP
JHopkins	PD3-3 Gray
OGC-WF	
DHagan	

Dear Mr. Shelton:

SUBJECT: AMENDMENT NO.178 TO FACILITY OPERATING LICENSE NO. NPF-3  
(TAC NO. M83393)

The Commission has issued Amendment No.178 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 April 30, 1992.

This amendment revises the Technical Specification sections for reactivity control systems related to group heights for safety and regulating rod groups and for position indicator channels, thereby allowing more operational flexibility.

A copy of the Safety Evaluation and of the notice of issuance are also enclosed. The notice of issuance has been forwarded to the Office of the Federal Register for publication.

Sincerely,

**ORIGINAL SIGNED BY:**

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.178 to License No. NPF-3
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:

See next page

LA/PD3-3/DRPW

PKreutzer

2/10/93

JBH  
PM/PD3-3/DRPW

JHopkins/jbh/bj

2/10/93

JBH 3-8-93

Y  
D/PD3-3/DRPW

JHannon

2/10/93

AGB  
OGC-WF1

Reichmann

2/17/93

DOCUMENT NAME:

G:\DAVISBES\DB83393.AMD

9303150235 930308  
PDR ADDCK 05000346  
P PDR

NRC FILE CENTER COPY

CP-1

DF01



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

March 8, 1993

Docket No. 50-346

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

Dear Mr. Shelton:

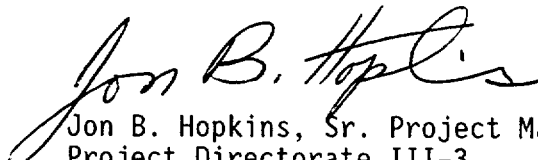
SUBJECT: AMENDMENT NO.178 TO FACILITY OPERATING LICENSE NO. NPF-3  
(TAC NO. M83393)

The Commission has issued Amendment No.178 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 April 30, 1992

This amendment revises the Technical Specification sections for reactivity control systems related to group heights for safety and regulating rod groups and for position indicator channels, thereby allowing more operational flexibility.

A copy of the Safety Evaluation and of the notice of issuance are also enclosed. The notice of issuance has been forwarded to the Office of the Federal Register for publication.

Sincerely,

  
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. 178 to License No. NPF-3
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:  
See next page

Mr. Donald C. Shelton  
Toledo Edison Company

Davis-Besse Nuclear Power Station  
Unit No. 1

cc:

Mary E. O'Reilly  
Centerior Energy Corporation  
300 Madison Avenue  
Toledo, Ohio 43652

Radiological Health Program  
Ohio Department of Health  
Post Office Box 118  
Columbus, Ohio 43266-0149

Mr. Robert W. Schrauder  
Manager, Nuclear Licensing  
Toledo Edison Company  
300 Madison Avenue  
Toledo, Ohio 43652

Attorney General  
Department of Attorney  
General  
30 East Broad Street  
Columbus, Ohio 43215

Gerald Charnoff, Esq.  
Shaw, Pittman, Potts  
and Trowbridge  
2300 N Street, N.W.  
Washington, D.C. 20037

Mr. James W. Harris, Director  
Division of Power Generation  
Ohio Department of Industrial Regulations  
P. O. Box 825  
Columbus, Ohio 43216

Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Ohio Environmental Protection Agency  
DERR--Compliance Unit  
ATTN: Zack A. Clayton  
P. O. Box 1049  
Columbus, Ohio 43266-0149

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
1700 Rockville Pike, Suite 525  
Rockville, MD 20852

President, Board of Ottawa  
County Commissioners  
Port Clinton, Ohio 43452

Resident Inspector  
U. S. Nuclear Regulatory Commission  
5503 N. State Route 2  
Oak Harbor, Ohio 43449

State of Ohio  
Public Utilities Commission  
180 East Broad Street  
Columbus, Ohio 43266-0573

Mr. Murray R. Edelman  
Executive Vice President -  
Power Generation  
Centerior Service Company  
6200 Oak Tree Boulevard  
Independence, Ohio 44101

Mr. James R. Williams  
State Liaison to the NRC  
Adjutant General's Department  
Office of Emergency Management Agency  
2825 West Granville Road  
Columbus, Ohio 43235-2712



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.178  
License No. NPF-3

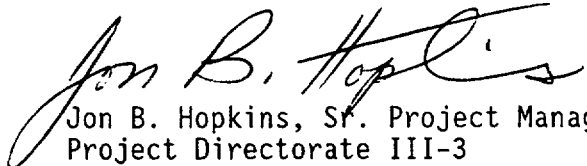
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by the Toledo Edison Company, Centerior Service Company, and the Cleveland Electric Illuminating Company (the licensees) dated April 30, 1992, complies with the standards and requirements of the 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. 178, 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 90 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
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: March 8, 1993

ATTACHMENT TO LICENSE AMENDMENT NO.178

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

3/4 1-19

3/4 1-19

3/4 1-20

3/4 1-20

3/4 1-22

3/4 1-22

## REACTIVITY CONTROL SYSTEMS

### 3/4.1.3 MOVABLE CONTROL ASSEMBLIES

#### GROUP HEIGHT - SAFETY AND REGULATING ROD GROUPS

#### LIMITING CONDITION FOR OPERATIONS

---

3.1.3.1 All control (safety and regulating) rods shall be OPERABLE and positioned within  $\pm 6.5\%$  (indicated position) of their group average height.

APPLICABILITY: MODES 1\* and 2\*.

ACTION:

- a. With one or more control rods inoperable due to being immovable as a result of excessive friction or mechanical interference or known to be untrippable, determine that the SHUTDOWN MARGIN requirement of Specification 3.1.1.1 is satisfied within one hour and be in at least HOT STANDBY within 6 hours.
- b. With more than one control rod inoperable or misaligned from its group average height by more than  $+ 6.5\%$  (indicated position), be in at least HOT STANDBY within 6 hours.
- c. With one control rod inoperable due to causes other than addressed by ACTION a, above, or misaligned from its group average height by more than  $+ 6.5\%$  (indicated position), POWER OPERATION may continue provided that within one hour either:
  1. The control rod is restored to OPERABLE status within the above alignment requirements, or
  2. The control rod is declared inoperable and the SHUTDOWN MARGIN requirement of Specification 3.1.1.1 is satisfied. POWER OPERATION may then continue provided that:
    - a) An analysis of the potential ejected rod worth is performed within 72 hours and the rod worth is determined to be  $< 1.0\% \Delta k$  at zero power and  $< 0.65\% \Delta k$  at RATED THERMAL POWER for the remainder of the fuel cycle, and
    - b) The SHUTDOWN MARGIN requirement of Specification 3.1.1.1 is determined at least once per 12 hours, and

\*See Special Test Exceptions 3.10.1 and 3.10.2.

## REACTIVITY CONTROL SYSTEMS

### GROUP HEIGHT - SAFETY AND REGULATING ROD GROUPS

#### LIMITING CONDITION FOR OPERATIONS

---

##### ACTION: (Continued)

- c) A power distribution map is obtained from the incore detectors and  $F_0$  and  $F_{\Delta H}^N$  are verified to be within their limits within 72 hours; and
- d) Either the THERMAL POWER level is reduced to  $\leq 60\%$  of the THERMAL POWER allowable for the reactor coolant pump combination within one hour and within the next 4 hours the High Flux Trip Setpoint is reduced to  $\leq 70\%$  of the THERMAL POWER allowable for the reactor coolant pump combination, or
- e) The remainder of the rods in the group with the inoperable rod are aligned to within  $\pm 6.5\%$  of the inoperable rod within one hour while maintaining the position of the rods within the limits provided in the CORE OPERATING LIMITS REPORT; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation.

#### SURVEILLANCE REQUIREMENTS

---

4.1.3.1.1 The position of each control rod shall be determined to be within the group average height limit by verifying the individual rod positions at least once per 12 hours except during time intervals when the asymmetric rod monitor is inoperable, then verify the individual rod position(s) of the rod(s), with the inoperable asymmetric rod monitor at least once per 4 hours.

4.1.3.1.2 Each control rod not fully inserted shall be determined to be OPERABLE by movement of at least 2% in any one direction at least once every 31 days.



LIMITING CONDITION FOR OPERATION

---

3.1.3.2 All axial power shaping rods (APSR) shall be OPERABLE, unless fully withdrawn, and shall be positioned within  $\pm 6.5\%$  (indicated position) of their group average height.

APPLICABILITY: MODES 1\* and 2\*.

ACTION:

With a maximum of one APSR inoperable or misaligned from its group average height by more than  $\pm 6.5\%$  (indicated position), operation may continue provided that within 2 hours:

- a. The APSR group is positioned such that the misaligned rod is restored to within limits for the group average height, or
- b. It is determined that the imbalance limits of Specification 3.2.1 are satisfied and movement of the APSR group is prevented while the rod remains inoperable or misaligned.

SURVEILLANCE REQUIREMENTS

---

4.1.3.2.1 The position of each APSR rod shall be determined to be within the group average height limit by verifying the individual rod positions at least once per 12 hours except during time intervals when the asymmetric rod monitor is inoperable, then verify the individual rod position(s) of the rod(s), with the inoperable asymmetric rod monitor at least once per 4 hours.

4.1.3.2.2 Unless all APSR are fully withdrawn, the APSR shall be determined to be OPERABLE by moving the APSR rods at least 2% at least once every 31 days.

\*See Special Test Exceptions 3.10.1 and 3.10.2.

## REACTIVITY CONTROL SYSTEMS

### POSITION INDICATOR CHANNELS

#### LIMITING CONDITION FOR OPERATION

3.1.3.3 All safety, regulating and axial power shaping control rod absolute position indicator channels and relative position indicator channels shall be OPERABLE and capable of determining the control rod group average positions within  $\pm 1.5\%$ .

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With a maximum of one absolute position indicator channel per control rod group or one relative position indicator channel per control rod group inoperable either:
  1. Reduce THERMAL POWER to  $< 60\%$  of the THERMAL POWER allowable for the reactor coolant pump combination and reduce the High Flux Trip Setpoint to  $< 70\%$  of the THERMAL POWER allowable for the reactor coolant pump combination within 8 hours, or
  2. STARTUP and POWER OPERATION may continue provided:
    - a) The position of the control rod with the inoperable position indicator is verified within 8 hours by actuating its 0%, 25%, 50%, 75% or, 100% position reference indicator, and
    - b) The control rod group(s) containing the inoperable position indicator channel is subsequently maintained at the 0%, 25%, 50%, 75% or, 100% withdrawn position and verified at this position at least once per 12 hours thereafter, and
    - c) Operation is within the limits of Specification 3.1.3.5, 3.1.3.6, or 3.1.3.9, as applicable.
- b. With more than one relative position indicator channel per control rod group inoperable, STARTUP and POWER OPERATION may continue provided that the requirements of either Action a.1 or a.2 above have been complied with and the absolute position indicator channels are OPERABLE for the affected control rod assemblies.
- c. The provisions of Specification 3.0.4 are not applicable.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 178 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 April 30, 1992, the Toledo Edison Company requested changes to the Technical Specifications (TS) for Davis-Besse, Unit 1. The proposed changes would revise the TS related to reactivity control systems. The proposed changes, in addition to clarifying the present TS, would also delete the restriction for plant mode changes with one or more relative position indicator (RPI) channels inoperable.

2.0 EVALUATION

The licensee has proposed to make the following changes to the TS:

- a. Section 3.1.3.1 would be revised to add word "and" to the end of the Action statement 3.1.3.1.c.2.a, 3.1.3.1.c.2.b and 3.1.3.1.c.2.c to clarify that Actions 3.1.3.1.c.2.a, b and c must be performed with either Actions 3.1.3.1.c.2.d or 3.1.3.1.c.2.e.
- b. Revise Action Statement 3.1.3.3.a.2 by stating that Startup and Power Operation may continue.
- c. Revise Action Statement 3.1.3.3.a.2.c by adding references to TS section 3.1.3.5 and 3.1.3.9.
- d. Revise Action 3.1.3.3.b to clarify that the action applies for the situation of more than one RPI channel per control rod group inoperable and to clarify that the requirements of either section 3.1.3.3.a.1 or 3.1.3.3.a.2 must be met and allow startup or power operation to continue if the absolute position indication (API) channels for the affected control rods are operable.

- e. Add a new action 3.1.3.3.c to state that the provisions of section 3.0.4 are not applicable.

The primary means of control rod position indication is provided by API while RPI provides the secondary means of position indication. Another means of rod position indication is provided by the position reference indicators which provide position indication corresponding to 0, 25, 50, 75 and 100 percent withdrawn from the core.

TS Section 3.0.4 states, in part, "Entry into an operational mode or other specified applicability condition shall not be made unless the conditions of the Limiting Condition for Operation (LCO) are met without reliance on provisions contained in the ACTION statements unless otherwise excepted." However, NRC Generic Letter 87-09 states: "For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operational mode or other specified condition of operation should be permitted in accordance with those Action Requirements." TS 3.0.4 unduly restricts plant operation while existing TS Action 3.1.3.3.a permits continued plant operation. Therefore, exception to TS 3.0.4 is acceptable based on the conformance to criterion described in GL 87-09.

The TS Action 3.1.3.3.b currently allows operation in modes 1 and 2 to continue up to 24 hours. The proposed change in this action statement will allow continuous operation provided the API channels are operable for the associated control rod assemblies. The API is a more reliable means of position indication than the RPI since during normal operation RPI is reset to match the API. Therefore, the requirement to shut down is overly restrictive when the API is operable. Also, TS Actions 3.1.3.3.a.2.a and 3.1.3.3.a.2.b provide another means of position indication in addition to API. In the event that both API and RPI, for the same control rod assembly, become inoperable, TS 3.0.3 would require the plant shutdown to be initiated within 1 hour. Therefore, the staff finds the proposed changes to the TS acceptable.

Based on its evaluation of the licensee's submittal, the NRC staff has concluded that the proposed changes to the TS are acceptable. The proposed changes are in accordance with the GL 87-09 and will remove unnecessary startup delays following plant outages and reduce unnecessary plant shutdowns.

### 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

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact has been prepared and published in the Federal Register on February 11, 1993 (58 FR 8068 ). Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

#### 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: H. Garg

Date: March 8, 1993

U. S. NUCLEAR REGULATORY COMMISSIONTOLEDO EDISON COMPANY, ET AL.DOCKET NO. 50-346NOTICE OF ISSUANCE OF AMENDMENT TOFACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No.178 to Facility Operating License No. NPF-3, issued to The Toledo Edison Company, Centerior Service Company, and The Cleveland Electric Illuminating Company (the licensee), which revised the Technical Specifications for operation of the Davis-Besse Nuclear Power Station, Unit No. 1 (the facility) located in Ottawa County, Ohio. The amendment was effective as of the date of its issuance.

The amendment revised the Technical Specification sections for reactivity control systems related to group heights for safety and regulating rod groups and for position indicator channels, thereby allowing more operational flexibility.

The application for 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 are set forth in the license amendment.

NRC FILE 50-346-178

CP-1

9303160171 930308  
CF ADOCK 05000346  
CF

DFX 2  
110

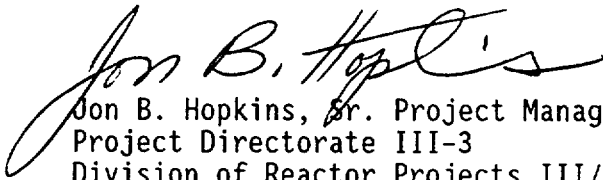
Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on August 5, 1992 (57 FR 34598). No request for hearing or petition for leave to intervene was filed following this notice.

For further details with respect to this action see (1) the application for amendment dated April 30, 1992 (2) Amendment No. 178 to License No. NPF-3, (3) the Commission's related Safety Evaluation dated March 8, 1993 and (4) the Environmental Assessment dated February 3, 1993 (58 FR 8068 ). All of these items are available for public inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C., and at the University of Toledo Library, Documents Department, 2801 Bancroft Avenue, Toledo, Ohio 43606.

A copy of items (2), (3) and (4) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Reactor Projects III/IV/V.

Dated at Rockville, Maryland this 8th day of March 1993.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on August 5, 1992 (57 FR 34598). No request for hearing or petition for leave to intervene was filed following this notice.

For further details with respect to this action see (1) the application for amendment dated April 30, 1992 (2) Amendment No.178 to License No. NPF-3, (3) the Commission's related Safety Evaluation dated March 8, 1993 and (4) the Environmental Assessment dated February 3, 1993 (58 FR 8068 ). All of these items are available for public inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C., and at the University of Toledo Library, Documents Department, 2801 Bancroft Avenue, Toledo, Ohio 43606.

A copy of items (2), (3) and (4) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Reactor Projects III/IV/V.

Dated at Rockville, Maryland this 8th day of March 1993.

FOR THE NUCLEAR REGULATORY COMMISSION

**ORIGINAL SIGNED BY:**

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

DISTRIBUTION

~~Docket File~~

PD3-3 Reading

JHannon

PKreutzer

JHopkins

OGC

PD3-3:LA

PKreutzer

2/10/93

JBH

PD3-3:PM

JHopkins/bj

2/10/93

JBH 3-8-93

PD3-3:PD

JHannon

2/10/93

DOCUMENT NAME: G:\DAVISBES\CFR83393.BWI