May 6, 1991

Docket No. 50-346

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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. 156 TO FACILITY OPERATING LICENSE NO. NPF-3 (TAC NO. M67393 AND M71849)

The Commission has issued Amendment No. 156 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 July 21, 1988.

This amendment revises Technical Specification 3/4.3.3.3 to (1) reflect the actual and appropriate configuration of the seismic trigger, its associated station site strong motion triaxial accelerometer and the shield building peak recording accelerometer, and (2) revise the measurement (frequency) range of the station site strong motion triaxial accelerometer seismic trigger.

By letter dated July 27, 1988, Toledo Edison requested a change to Bases Section 3/4.3.3.8 of the Davis-Besse Technical Specifications, Fire Detection Instrumentation. The proposed Bases change clarifies that, in the event of inoperable fire detection instrumentation, frequent inspections of the local fire detection panels, with operable fire detectors, local fire detection panel, alarms and connecting circuitry, will satisfy the fire detection requirements set forth in Technical Specification 3/4.3.3.8. Based on the provisions of 10 CFR 50.36(a), the Bases are not a part of the Technical Specifications and therefore, the revised Bases page does not constitute a change to the Technical Specification. The revised Bases page is being issued with this amendment as an administrative convenience.

CP-1
DF01

41

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:

James R. Hall, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 156 to License No. NPF-3
2. Safety Evaluation

cc: See next page

See previous

LA/PDIII-3	PM/PDIII-3	PM/PDIII-3	OGC-WF1	D/PDIII-3
PKreutzer	AHsia/bj*	JRHall		JHannon
3/21/91 4/18	12/3/90	4/10/91	4/20/91	4/22/91

NRR:ESGB
~~GGiese-Koch~~ GBAGCHI
4/24/91

NAME OF DOCUMENT: 67393/71849 AMD

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3/21/91 4/4	12/3/91	4/10/91	4/20/91	4/22/91

NRR:ESGB
~~GGiese-Koch~~ GBAGCHI
4/24/91

NAME OF DOCUMENT: 67393/71849 AMD

cc:
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DERR--Compliance Unit
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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. 156
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 July 21, 1988 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. 156, 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

James R. Hall

James R. Hall, 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: May 6, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 156

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 3-38	3/4 3-38
3/4 3-39	3/4 3-39
B 3/4 3-3	B 3/4 3-3

INSTRUMENTATION

SEISMIC INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-4.

4.3.3.3.2 Each of the above seismic monitoring instruments actuated during a seismic event shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

INSTRUMENTS AND SENSOR LOCATIONS	MEASUREMENT RANGE	MINIMUM INSTRUMENT OPERABLE
1. Strong Motion Triaxial Accelerometers		
a. Containment Concrete Foundation, Elev. 565	± 1g	1
b. Containment Interior Secondary Shield Wall, Elev. 653	± 1g	1
c. Auxiliary Building Basement Floor, Elev. 545	± 1g	1
d. Station site - Minimum of 300 ft from containment vessel within the site boundary	± 1g	1
2. Peak Recording Accelerometers		
a. Shield Building Top, Minimum Elev. 812	± 1g	1
b. Auxiliary Building Roof, Elev. 660	± 1g	1
c. Control Room, Elev. 623	± 1g	1
3. Seismic Trigger		
a. Station site - Minimum of 300 ft from containment vessel within the site boundary	1 - 10 Hz* 0.005g - 0.02g***	1**

*Minimum Frequency Response Range
**With cabinet room indication
***Actuation Range

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENTS AND SENSOR LOCATIONS	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. Strong Motion Triaxial Accelerometers			
a. Containment Concrete Foundation, Elev. 565	M*	R	SA
b. Containment Interior Secondary Shield Wall, Elev. 653	M*	R	SA
c. Auxiliary Building Basement Floor, Elev. 545	M*	R	SA
d. Station Site - Minimum of 300 ft from containment vessel within the site boundary	M*	R	SA
2. Peak Recording Accelerometers			
a. Shield Building Top, Minimum Elev. 812	NA	R	NA
b. Auxiliary Building Roof, Elev. 660	NA	R	NA
c. Control Room, Elev. 623	NA	R	NA
3. Seismic Trigger			
a. Station Site - Minimum of 300 ft from containment vessel within the site boundary	M**	R	SA

*Except seismic trigger
**With cabinet room indication

INSTRUMENTATION

METEOROLOGICAL INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.4 The meteorological monitoring instrumentation channels shown in Table 3.3-8 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more required meteorological monitoring channels inoperable for more than 7 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.4 Each of the above meteorological monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-5.

REMOTE SHUTDOWN INSTRUMENTATION (Continued)

HOT STANDBY of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost.

3/4.3.3.6 POST-ACCIDENT INSTRUMENTATION

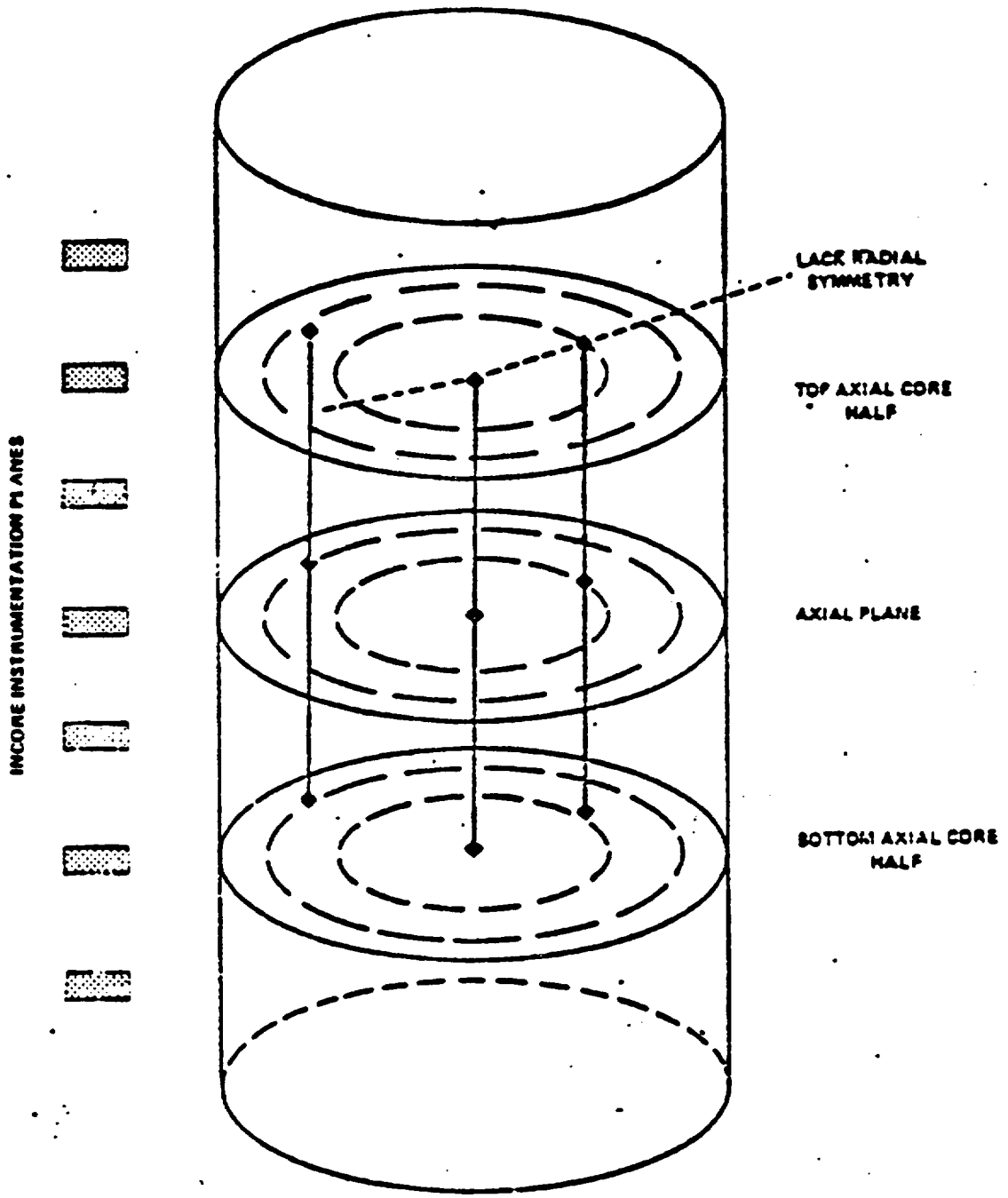
The OPERABILITY of the post-accident instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident.

3/4.3.3.7 CHLORINE DETECTION SYSTEMS - Deleted

3/4.3.3.8 FIRE DETECTION INSTRUMENTATION

Operability of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY. With the fire detector(s), local panel alarms, and connecting circuitry OPERABLE, the establishment of frequent fire patrols to inspect local fire panel(s) will provide the required fire detection capability.



Bases Figure 3-1 Incore Instrumentation Specification
Acceptable Minimum AXIAL POWER IMBALANCE Arrangement

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 156 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 July 21, 1988 (Serial No. 1539), the Toledo Edison Company (TE) proposed an amendment to Technical Specification 3/4.3.3.3, Seismic Instrumentation. The proposed changes would revise Table 3.3-7, "Seismic Monitoring Instrumentation," and Table 4.3-4, "Seismic Monitoring Instrumentation Surveillance Requirements," to (1) reflect the actual and appropriate configuration of the seismic trigger, its associated station site strong motion triaxial accelerometer and the shield building peak recording accelerometer, and (2) revise the measurement (frequency) range of the station site strong motion triaxial accelerometer seismic trigger.

2.0 DISCUSSION

The seismic monitoring system at Davis-Besse includes an external free-field seismic trigger, four associated strong motion triaxial accelerometers, and three peak recording accelerometers.

The free-field seismic trigger and a triaxial accelerometer are located away from structures to avoid reflective waves from station foundations. In the case of an earthquake or other seismic event, the seismic trigger will generate a signal to start the four triaxial accelerometers which will monitor and record the seismic motion in the three mutually orthogonal directions via the time history accelerograph. The locations of the triaxial accelerometers are indicated in Tables 3.3-7 and 4.3-4 of the Technical Specifications 3/4.3.3.3.

The peak recording accelerometers require no power sources and are used to permanently record peak accelerations. These recordings are then used to verify the dynamic analyses of seismic Class I structures, systems, and components by comparison with the recorded acceleration time history after a seismic event. The locations of the three peak recording accelerometers are indicated in Tables 3.3-7 and 4.3-4 of the Technical Specifications.

3.0 EVALUATION

The proposed change to the location of the free-field seismic trigger and its associated free-field triaxial accelerometer to a minimum of 300 feet from containment vessel within the site boundary is to allow sufficient distance from station structures to preclude influence from these structures' reflective waves and yet still be flexible within the site boundary for possible future relocations. The staff finds this change acceptable.

The revised elevation of the peak recording accelerometer at the top of the shield building reflects the actual installed elevation of this accelerometer which corresponds to the highest mass point originally used in the Updated Safety Analysis Report (USAR) shield building structural analysis. The staff finds this acceptable.

The original frequency range of the seismic trigger specified by Table 3.3-7 of the Technical Specifications is 0.053-20 Hz. This is overly restrictive for equipment replacement considerations. To remove this restriction, the licensee proposed, based on Revision 2 to Regulatory Guide 1.12, referencing ANSI/ANS-2.2-1978, "Earthquake Instrumentation Criteria for Nuclear Power Plants," a revised minimum frequency response range of 1 to 10 Hz and inclusion of a seismic trigger actuation acceleration range of 0.005g to 0.02g. Since frequencies smaller than 0.5 Hz are insignificant in the design of structures and equipment and the frequency range and the actuation acceleration cited by ANSI/ANS-2.2-1978 provide sufficient margin to the actuating and recording design values of these seismic monitoring instruments, the revised ranges will ensure proper monitoring of the probable seismic events. The structures and equipment at Davis-Besse are designed to withstand seismic events well above those near the triggering setpoint. Therefore, the staff finds the proposed minimum frequency response range of 1 to 10 Hz and the addition of an actuation acceleration range of 0.005g to 0.02g for the seismic trigger to be acceptable.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change to 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 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.

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, 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.

Principal Contributor: A. H. Hsia

Dated: May 6, 1991