

November 30, 1982

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Docket No. 50-346

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

Dear Mr. Crouse:

SUBJECT: AMENDMENT NO. 50 TO FACILITY OPERATING LICENSE NO. NPF-3

The Commission has issued the enclosed Amendment No. 50 to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 17, 1982 (No. 781) and Item 2 of your application dated September 25, 1981 (No. 738). The remaining items of your September 25, 1981 application will be the subject of future licensing actions.

This amendment changes TS Surveillance Requirement 4.6.1.5 to require arithmetic averaging of inlet temperatures to the operating containment air coolers only thereby permitting more accurate determination of the average primary containment air temperature when one or more containment air coolers are not being operated. As a consequence of our review and subsequent discussions with your staff, we have made certain modifications to these TSs as proposed. Your staff concurs with these modifications.

This amendment also modifies TS Bases 3/4.3.3.7 to correct the description of the automatic control room isolation in response to high chlorine concentration and manual startup of the emergency ventilation system.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

ORIGINAL SIGNED BY

JOHN F. STOLZ

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

Enclosures:

1. Amendment No. 50
2. Safety Evaluation
3. Notice

OFFICE	ORB#4:DL	ORB#4:DL	C-ORB#4:DL	AD:OR:DL	OELD
8212100414 821130	RIngram:cf.	ADe Agazio	JStolz	GIngram	M. Rottschalk
PDR ADCK 05000346	11/17/82	11/17/82	11/17/82	11/17/82	11/23/82
P					

Concur in license
amendment &
Fed. Reg. notice
M. Rottschalk



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555
November 30, 1982

DISTRIBUTION:
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Docket No. 50-346

Docketing and Service Section
Office of the Secretary of the Commission

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies (12) of the Notice are enclosed for your use.

- ☐ Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- ☐ Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- ☐ Notice of Availability of Applicant's Environmental Report.
- ☐ Notice of Proposed Issuance of Amendment to Facility Operating License.
- ☐ Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- ☐ Notice of Availability of NRC Draft/Final Environmental Statement.
- ☐ Notice of Limited Work Authorization.
- ☐ Notice of Availability of Safety Evaluation Report.
- ☐ Notice of Issuance of Construction Permit(s).
- ☒ Notice of Issuance of Facility Operating License(s) or Amendment(s).
- ☒ Other: Amendment No. 50.

Referenced documents have been provided PDR.

Division of Licensing, ORB#4
Office of Nuclear Reactor Regulation

Enclosure:
As Stated

OFFICE →	ORB#4: DL					
SURNAME →	RIngram;cf					
DATE →	12/1/82					

Toledo Edison Company

cc w/enclosure(s):

Mr. Donald H. Hauser, Esq.
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Illuminating Company
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Program Director
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Commissioners of Ottawa County
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Mr. Ted Myers
Manager, Nuclear Licensing
Toledo Edison Company
Edison Plaza
300 Madison Avenue
Toledo, Ohio 43652



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

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. 50
License No. NPF-3

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment by The Toledo Edison Company and The Cleveland Electric Illuminating Company (the licensees) dated September 25, 1981, and February 17, 1982, comply 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 applications, 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, Facility Operating License No. NPF-3 is hereby amended as indicated below and by changes to the Technical Specifications as indicated in the attachment to this license amendment:

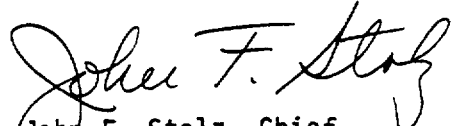
Revise paragraph 2.C.(2) to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 50, 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 the date of its 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: November 30, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 50

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages as indicated. 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 6-8

B 3/4 3-3

CONTAINMENT SYSTEMS

INTERNAL PRESSURE

LIMITING CONDITION FOR OPERATION

3.6.1.4 Primary containment internal pressure shall be maintained between +25" and -14" W.G. from the shield building.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the containment internal pressure outside of the limits above, restore the internal pressure to within the limits within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.4 The primary containment internal pressure shall be determined to within the limits at least once per 12 hours.

CONTAINMENT SYSTEMS

AIR TEMPERATURE

LIMITING CONDITION FOR OPERATION

3.6.1.5 Primary containment average air temperature shall not exceed 120°F.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the containment average air temperature > 120°F, reduce the average air temperature to within the limit within 8 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.5 The primary containment average air temperature shall be the arithmetical average of the inlet temperature(s) to the operating containment air cooler(s) (1-1, 1-2, and 1-3) and shall be determined at least once per 24 hours.

CONTAINMENT SYSTEMS

AIR TEMPERATURE

LIMITING CONDITION FOR OPERATION

3.6.1.5 Primary containment average air temperature shall not exceed 120°F.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the containment average air temperature > 120°F, reduce the average air temperature to within the limit within 8 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.5 The primary containment average air temperature shall be the arithmetical average of the inlet temperature(s) to the operating containment air cooler(s) (1-1, 1-2, and 1-3) and shall be determined at least once per 24 hours.

3/4.3 INSTRUMENTATION

BASES

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.

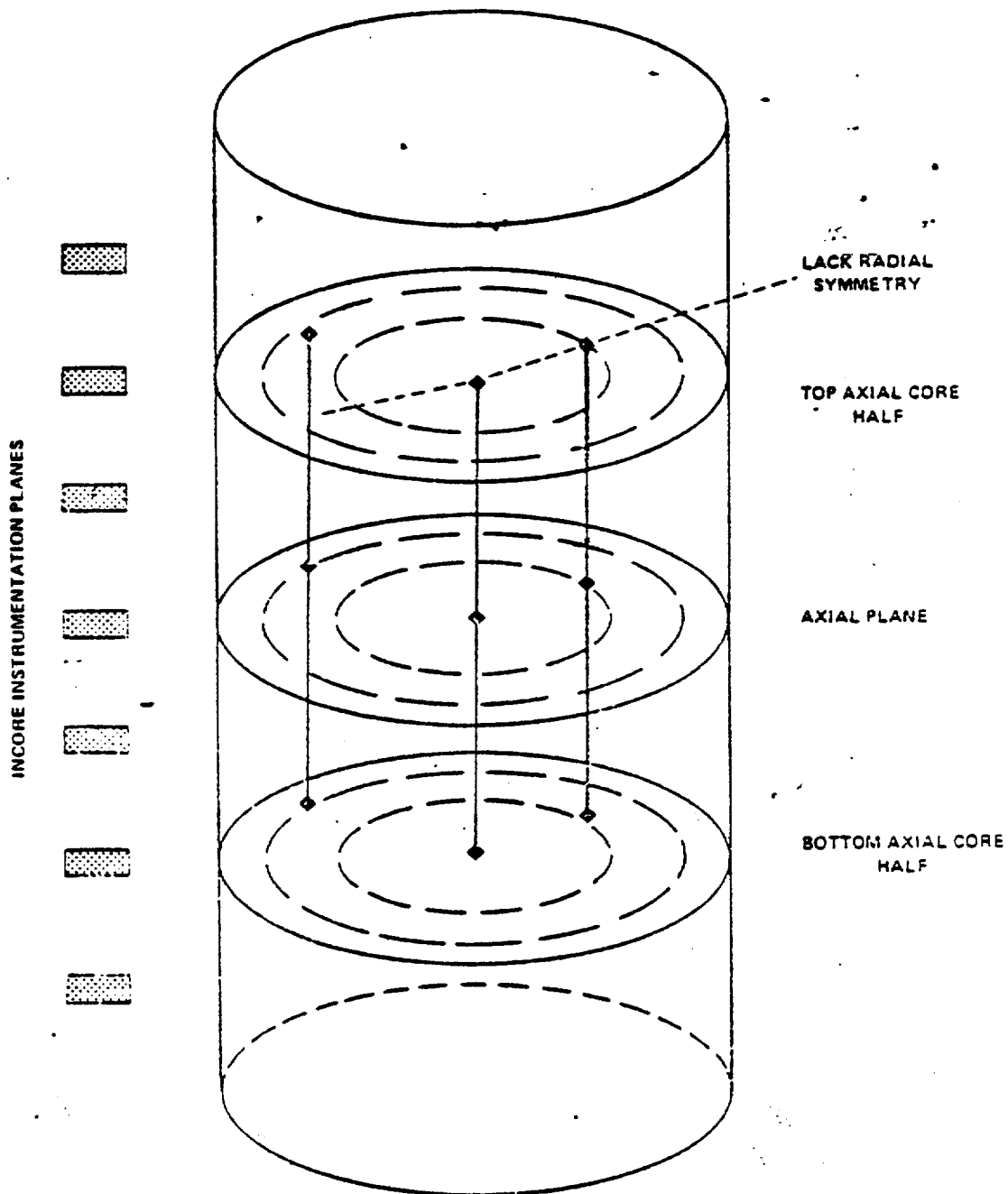
3/4.3.3.7 CHLORINE DETECTION SYSTEMS

The OPERABILITY of the chlorine detection systems ensures that an accidental chlorine release will be detected promptly and the control room will be isolated automatically. The control room emergency ventilation system will be started manually in the recirculation mode to provide the required protection. The chlorine detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operations Against an Accidental Chlorine Release," February 1975.

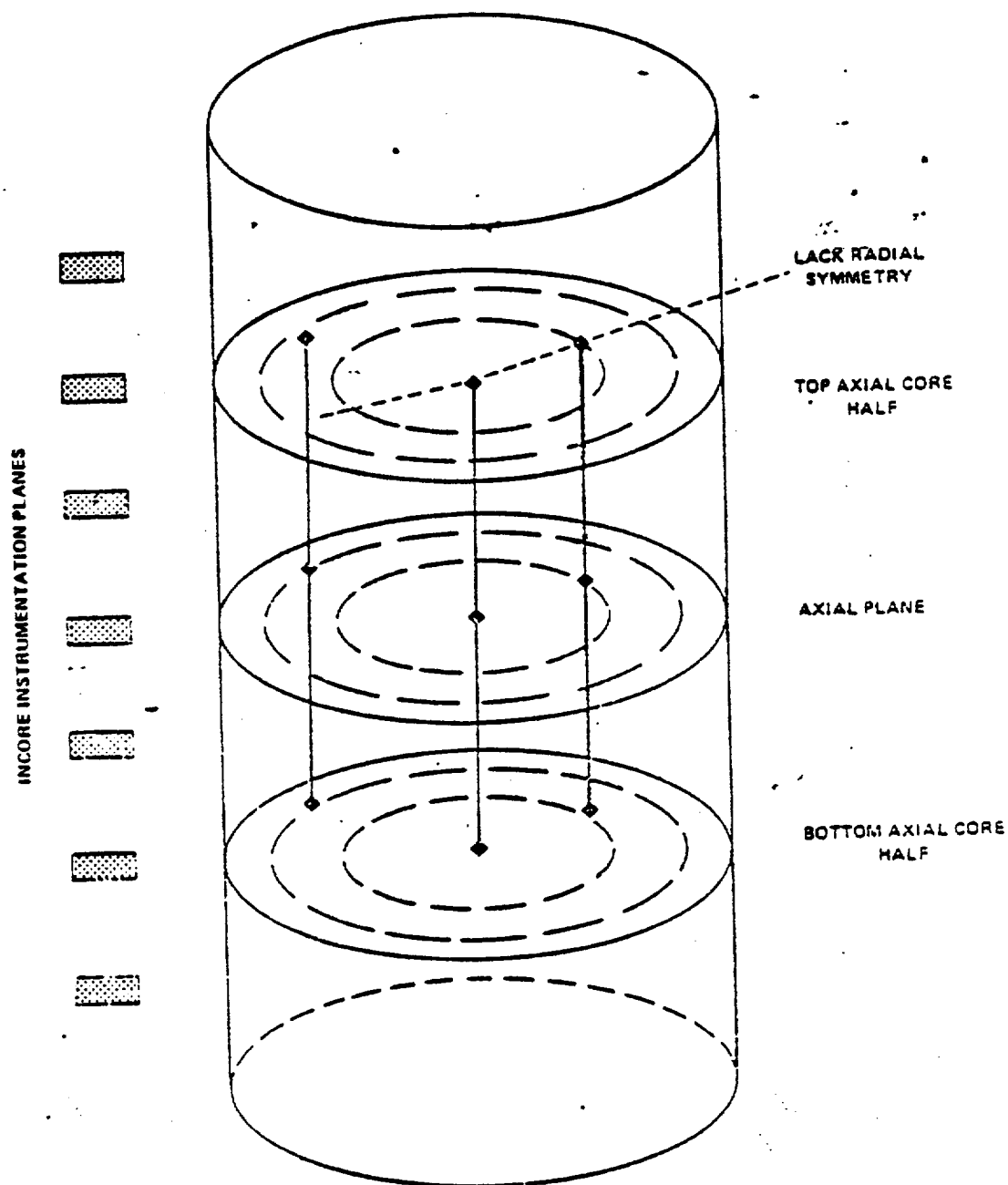
3/4.3.3.8 FIRE DETECTION INSTRUMENTATION

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.



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



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

DAVIS-BESSE, UNIT 1

B 3/4 3-4



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 50 TO FACILITY OPERATING 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 letters dated February 17, 1982 (No. 781), and September 25, 1981 (No. 738), Toledo Edison Company submitted applications for amendment to the Appendix A Technical Specifications (TSs) of Facility Operating License No. NPF-3. The licensee's February 17, 1982, application proposed to amend Section 4.6.1.5, Surveillance Requirements, to specify at least two of the primary containment air cooler inlet temperatures be used to determine the primary containment average air temperature. The licensee's request of September 25, 1981, involves Section B3/4.3.3.7 of the TS Bases. The licensee proposed to amend Section B3/4.3.3.7, Chlorine Detection Systems, to rectify an error in the Bases statement which states incorrectly that the control room emergency ventilation system will automatically isolate the control room and initiate its operation in the recirculation mode to provide the required protection.

Proposed Change to Section 4.6.1.5

Discussion

To ensure that the average primary containment air temperature does not exceed the initial temperature assumed in the accident analysis for the Loss of Coolant Accident (LOCA), the containment cooling system, in addition to its accident mitigating function, is used to cool and circulate air inside the primary containment building during normal operation. The containment air cooling system consists of three fan-cooler units located inside the primary containment building. Each unit is composed of a finned tube cooling coil using service water and a direct drive fan. The units distribute air through a common plenum and ducting around heat producing or releasing equipment to maintain the primary containment average air temperature at or below 120°F specified in TS 3.6.1.5.

In the event of a LOCA, any two of the three cooling units or one unit in combination with the containment spray system are capable of cooling the containment building atmosphere to reduce the containment pressure. During normal station operation, any two of the cooling units satisfy the operability requirements of TS-3.6.2.2. The action statement of TS 3.6.2.2 also permits reduction of operable containment air coolers to one for a period of 72 hours in a degraded mode of operation. This allows a reasonable time to make a second containment air cooler operable in the event of a malfunction.

Specification 4.6.1.5, the surveillance requirement for the 120°F of Specification 3.6.1.5, requires that the primary containment average air temperature shall be the arithmetical average of the temperatures at the three containment air cooler inlets. The licensee states that during normal station operation only two of the three cooler units are normally operated to maintain containment air at or below 120°F and to meet the operability requirements of Specification 3.6.2.2. Since only two containment air cooler units are normally operating, the cooler inlet temperature element of the inoperative unit measures static air temperature and may not be representative of containment building air temperature. In their February 17, 1982 letter, the licensee proposed that the surveillance requirements of Specification 4.6.1.5 be changed, to improve the accuracy of the determination, to state that the arithmetical average of the cooler inlet air temperatures of the operating units be used as the average air temperature in the primary containment.

Evaluation

All three of the containment air cooler inlets are located on the 585 foot elevation of the primary containment building. The units are situated in one area of the building drawing air from a common location. The temperature sensing elements used to measure the inlet air temperature are located on the inlet surface of each unit. While these temperature sensing elements are exposed to the containment air, we agree with the licensee that the accuracy of the air temperature measurement is improved when there is air flow around the element created by the operating fan in the cooler unit.

Although the licensee stated that two of the three containment air coolers are operating during normal station operation, we find there is a probability that this number of operating air cooler units could be reduced to one unit under the provisions of TS 3.6.2.2 or because only one unit is required to control the temperature. The licensee acknowledged, during oral discussions on August 20, 1982, that it is possible that only one containment air cooler could be operating provided the average containment air temperature does not exceed 120°F. The licensee also acknowledged that if only one containment air cooler is operating that the temperature sensing element for that operating unit should be used rather than two proposed in their letter of February 17, 1982.

We find that the licensee's proposal to change the surveillance requirements of TS 4.6.1.5 to state that the primary containment average air temperature shall be determined by an arithmetic average of the inlet temperature(s) to the operating containment air cooler(s) (1-1, 1-2, and 1-3) is acceptable. We agree that this change improves the accuracy of measuring the containment air temperature by ensuring the air temperature measurement of the operating units is used rather than including the static temperature measurement(s) of the nonoperating unit(s).

Proposed Change to Section B3/4.3.3.7

Evaluation

The Updated Safety Analysis Report (USAR) in Section 9.4.1.3 describes the chlorine detection system function as follows:

"Two chlorine detectors with independent essential power supplies are located in the control room fresh air intake vent and two detectors with independent essential power supplies are located at the chlorine tank car. These detectors indicate the presence of chlorine in concentrations greater than 0.5 parts per million. Signals from the chlorine detector stop the normal operating fans, and cause the normal ventilation system intake, exhaust, and control room isolation dampers to close. The control room emergency ventilation system is started manually by operator action."

The licensee proposes to correct the Bases statement, Section B3/4.3.3.7, so that it will agree with the USAR description. The Bases incorrectly state that the control room emergency ventilation system automatically isolates the control room, whereas the following automatic sequence occurs when a high chlorine concentration (0.5 ppm) is detected at any of the four chlorine detectors:

1. The control room supply and exhaust fans are stopped.
2. The inlet and outlet dampers are closed.
3. The control room isolation damper is closed.

Following the automatic isolation of the control room, the emergency ventilation system can be started manually by leaving the supply and exhaust dampers closed, opening the isolation dampers, and starting the air-conditioning system in the recirculation mode.

We agree that this change should be made to Section B3/4.3.3.7 to correctly describe the control room automatic isolation actuation, and since there is no change in this safety system and the system is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operations Against an Accidental Chlorine Release," we find the proposed change to Bases Section B3/4.3.3.7 acceptable.

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 an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment 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.

Dated: November 30, 1982

The following NRC Region III personnel have contributed to this Safety Evaluation: K. R. Ridgway, T. N. Tambling.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-346THE TOLEDO EDISON COMPANYANDTHE CLEVELAND ELECTRIC ILLUMINATING COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 50 to Facility Operating License No. NPF-3, issued to The Toledo Edison Company and The Cleveland Electric Illuminating Company (the licensees), which revised Technical Specifications (TSs) 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 amendment changes Surveillance Requirement 4.6.1.5 to require arithmetic averaging of inlet temperatures to the operating containment air coolers only thereby permitting more accurate determination of the average primary containment air temperature when one or more containment air coolers are not being operated.

This amendment also modifies TS Bases 3/4.3.3.7 to correct the description of the automatic control room isolation in response to high chlorine concentration and manual startup of the emergency ventilation system.

The applications for the amendment comply 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

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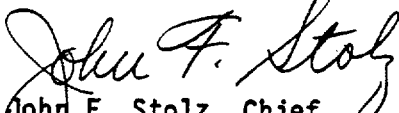
appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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 or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

For further details with respect to this action, see (1) the applications for amendment dated September 25, 1981, and February 17, 1982, (2) Amendment No. 50 to License No. NPF-3, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW, Washington, D.C., and at the University of Toledo Library, Documents Department, 2801 West Bancroft Avenue, Toledo, Ohio 43606. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 30th day of November 1982.

FOR THE NUCLEAR REGULATORY COMMISSION


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