

September 19, 1988

Docket No. 50-346
Serial No. DB-88-049

Mr. Donald C. Shelton
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Dear Mr. Shelton:

SUBJECT: AMENDMENT NO.120 TO FACILITY OPERATING LICENSE NO. NPF-3:
APPENDIX J TYPE A SUPPLEMENTAL VERIFICATION TEST (TAC NO. 66419)

The Commission has issued the enclosed Amendment No. 120 to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1. This amendment consists of changes to the Appendix A Technical Specifications (TS's) in response to your application dated December 8, 1987 (No. 1436). Specifically, this amendment revises TS 4.6.1.2 c.3 to be consistent with the requirements of Appendix J to 10 CFR Part 50 and ANSI N45.4-1972 Appendix C.

A copy of the related Safety Evaluation is enclosed. Notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

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Albert W. De Agazio, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects - III, IV,
V & Special Projects

Enclosures:

1. Amendment No.120 to License No. NPF-3
2. Safety Evaluation

cc w/enclosures:
See next page

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Date: 9/15/88

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CPI

Mr. Donald C. Shelton
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Davis-Besse Nuclear Power Station
Unit No. 1

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

TOLEDO EDISON COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DOCKET NO. 50-346

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 120
License No. NPF-3

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Toledo Edison Company and The Cleveland Electric Illuminating Company (the licensees) dated December 8, 1987 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:

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(a) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 120, 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 November 3, 1988.

FOR THE NUCLEAR REGULATORY COMMISSION

Albert M. McGovern for

Kenneth E. Perkins, Director
Project Directorate III-3
Division of Reactor Projects - III, IV,
V, & Special Projects

Attachment: Changes to the Technical
Specifications

Date of Issuance: September 19, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 120

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

3/4 6-3

Insert

3/4 6-3

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. If any periodic Type A test fails to meet $0.75 L_a$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet $0.75 L_a$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet $0.75 L_a$ at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
 - 1. Confirms the accuracy of the Type A test by verifying that the difference between supplemental and Type A test data is within $0.25 L_a$.
 - 2. Has a duration sufficient to establish accurately the change in leakage between the Type A test and the supplemental test.
 - 3. Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between $0.75 L_a$ and $1.25 L_a$.
- d. Type B and C tests shall be conducted with gas at P_a , 38 psig, at intervals no greater than 24 months except for tests involving:
 - 1. Air locks,
 - 2. Penetrations using continuous leakage monitoring systems, and
 - 3. Valves pressurized with fluid from a seal system.
- e. The combined bypass leakage rate shall be determined to be $< 0.015 L_a$ by applicable Type B and C tests at least once every 24 months except for penetrations which are not individually testable; penetrations not individually testable shall be determined to have no detectable leakage when tested with soap bubbles while the containment is pressurized to P_a , 38 psig, during each Type A test.
- f. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- g. Leakage from isolation valves that are sealed with fluid from a seal system may be excluded, subject to the provisions of Appendix J, Section III.C.3, when determining the combined leakage rate provided the seal system and valves are pressurized to at least $1.10 P_a$, 41.8 psig, and the seal system capacity is adequate to maintain system pressure for at least 30 days.
- h. Type B tests for penetrations employing a continuous leakage monitoring system shall be conducted at P_a , 38 psig, at intervals no greater than once per 3 years.
- i. Each time the containment purge and exhaust isolation valves are opened, a special test shall be performed within 72 hours after valve closure or prior to entering mode 4 from mode 5, whichever is later. The special test is conducted by pressurizing the piping section including one valve inside and one valve outside the containment to a pressure greater or equal to 20 psig. The leakage rate per penetration shall not exceed $0.15 L_a$.
- j. The special test as defined in Surveillance Requirement 4.6.1.2.i shall be performed for the containment purge and isolation valves when the plant has been in any combination of modes 3, 4, 5 or 6 for more than 72 hours provided that the tests required by Surveillance Requirements 4.6.1.2.i or 4.6.1.2.d have not been performed in the previous 6 months.
- k. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurement system.
- l. The provisions of Specification 4.0.2. 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. 120 TO FACILITY OPERATING LICENSE NO. NPF-3
TOLEDO EDISON COMPANY
AND
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1
DOCKET NO. 50-346

1.0 INTRODUCTION

By letter dated December 8, 1987, Toledo Edison Company proposed a revision to the Davis-Besse Nuclear Power Station, Unit No. 1, Technical Specifications (TS's). The proposed change would make Surveillance Requirement 4.6.1.2 c.3 consistent with the wording of 10 CFR Part 50, Appendix J, and ANSI N45.4-1972.

Toledo Edison Company asserts that the surveillance requirement, as presently worded, is contrary to the provisions of ANSI N45.4-1972, Appendix C, and is not consistent with the NRC position relating to the rate of gas injection or bleed-off from containment during testing. Toledo Edison Company further asserts that with the present wording of the TS's, if the initial Type A test leakage were zero, a valid supplemental test could not be performed to the requirements of 10 CFR Part 50, Appendix J, and ANSI N45.4-1972.

2.0 DISCUSSION

Every license issued under 10 CFR Part 50 is deemed to have certain conditions as part of the license whether specifically stated in the license or not (cf. 10 CFR 50.54). One of these conditions imposes the requirements of Appendix J to 10 CFR Part 50 relating to primary containment leakage testing. Appendix J provides for pre-operational and periodic verification of leak-tight integrity of the primary reactor containment.

Appendix J defines three types of tests to be conducted. This proposed amendment relates to the Type A tests, which are defined as tests intended to measure the primary containment overall integrated leakage rate (1) after the containment has been completed and is ready for operation, and (2) at periodic intervals thereafter.

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Paragraph III.A.3.(b) of Appendix J specifies that the accuracy of type A tests shall be verified by a supplemental test, and an acceptable method for such tests is described in ANSI N45.4-1972, Appendix C. Supplemental test results are acceptable if the difference between the supplemental test data and Type A test data is within $0.25 L_a$ (or L_t). (L_a is the maximum allowable leakage rate at the calculated peak pressure for the Design Basis Accident (DBA), and L_t is the maximum allowable leakage rate at the reduced test pressure.)

The ANSI N45.4-1972 method involves the use of an adjustable orifice (microadjustable instrument flow control valve). The valve and suitable flow meter are installed at a convenient containment penetration. In use, the leak orifice is adjusted to provide a flow during the test approximating (at test pressure conditions) the leakage rate specified for the containment vessel. The leak orifice is to be selected to provide a flow of 75 to 125 percent of L_a .

Surveillance Requirement 4.6.1.2 c.3 of the TS presently specifies that the quantity of gas injected into or bled from the containment system during the supplemental test is to be equivalent to at least 25 percent of the total measured leakage rate at the calculated peak pressure for the DBA, P_a , (38 psig).

3.0 EVALUATION

Toledo Edison Company has proposed to revise this paragraph to specify that the rate at which gas is injected into or bled from containment during the supplemental test is to be between 0.75 and 1.25 of L_a . This change would then make the TS requirement consistent with the requirements of ANSI/ANS 56.8-1981, ANSI N45.4-1972, and Appendix J to 10 CFR Part 50. The change also would allow conducting a supplemental test even if the measured containment leakage were zero, whereas under the present TS requirement, a valid supplemental test cannot be performed since no gas would be injected into or bled from containment.

The staff has reviewed the proposed change to TS paragraph 4.6.1.2 c.3 and finds the change acceptable on the basis that it eliminates an inconsistency between the station TS's and the Commission's regulations; furthermore, the change eliminates the potential for not being able to perform a valid test if the measured leakage is zero.

The staff also notes that Inspection Report No. 50-346/84-29(DRS), issued by the NRC on February 8, 1988, identified the discrepancy between the station TS's and Appendix J to 10 CFR Part 50 as an open item. This change should resolve that open item.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and 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: Albert W. De Agazio

Dated: September 19, 1988