



RICHARD P. CROUSE
Vice President
Nuclear
(419) 249-5221

Docket No. 50-346
License No. NPF-3
Serial No. 1155
May 29, 1985

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz
Operating Reactor Branch No. 4
Division of Licensing
United States Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Stolz:

Under separate cover, we are transmitting three (3) original and forty (40) conformed copies of an application for Amendment to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station Unit No. 1.

This application requests that the Davis-Besse Nuclear Power Station Unit 1 Technical Specifications, Appendix A, be revised to reflect the changes attached. The proposed changes involve Table 4.3-1.

The attachment identifies the proposed change and its safety evaluation and a significant hazard consideration. The proposed change provides for testing to independently confirm the operability of the shunt and under-voltage trip devices of the control rod drive trip breakers.

Toledo Edison requests that this amendment request be granted by January, 1986.

Enclosed is a check for \$150 as required by 10CFR170.12(C) for license application.

Very truly yours,

RP Crouse

RPC:LCS:GAB

Attachment

cc: DB-1 NRC Resident Inspector
State of Ohio

8506040126 850529
PDR ADOCK 05000346
PDR

THE TOLEDO EDISON COMPANY EDISON PLAZA 300 MADISON AVENUE TOLEDO, OHIO 43652

*Acc'd w/ check \$150⁰⁰
429976*

APPLICATION FOR AMENDMENT
TO
FACILITY OPERATING LICENSE NO. NPF-3
FOR
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NO. 1

Enclosed are forty-three (43) copies of the requested changes to the Davis-Besse Nuclear Power Station Unit No. 1 Facility Operating License No. NPF-3, together with the Safety Evaluation for the requested change.

The proposed changes include Table 4.3-1.

By /s/ Terry D. Murray
Terry D. Murray
Assistant Vice President,
Nuclear Operations

For R. P. Crouse
Vice President, Nuclear

Sworn and subscribed before me this 29th day of May, 1985.

/s/ Laurie A. Hinkle, nee (Brudzinski)
Notary Public -- State of Ohio
My Commission Expires May 16, 1986

S E A L

Docket No. 50-346
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Attachment

I. Changes to Davis-Besse Nuclear Power Station Unit 1, Appendix A
Technical Specifications Table 4.3-1

- A. Time required to Implement. This change is to be effective upon NRC approval.
- B. Reason for Change (Facility Change Request 85-0064, Rev. A).

This request is in response to the requirement in the Supplemental Safety Evaluation Report for Davis-Besse Unit 1 Generic Letter 83-28, Item 4.3, Reactor Breaker Automatic Shunt Trip. The attached change for Table 4.3-1 for testing to confirm the OPERABILITY of the shunt and undervoltage trip devices.

- C. Safety Evaluation
(See Attached)
- D. Significant Hazard Consideration
(See Attached)

SAFETY EVALUATION

INTRODUCTION:

This FCR is a result of a directive from the NRC in their safety evaluation report on our addition of the shunt trip device in each of four Reactor Trip Breakers (FCR 84-0026, Rev. A).

REFERENCE:

- NRC Supplement Safety Evaluation Report Log No. 1683.
- B&W report on "Review of On-Line Test Intervals for the Reactor Trip System."
- FCR 84-0026 (Rev. A) Addition of the shunt trip devices to each Reactor Trip Breaker.

DISCUSSION:

The directive states, "We require that technical specification explicitly note that testing independently confirms the operability of the shunt and undervoltage trip attachments (devices)." The term attachment applies to a Westinghouse breaker, whereas the term devices applies to our GE breakers.

The safety function of the technical specification is to provide a surveillance schedule for testing the reactor trip breakers, to assure the operability requirements of the reactor trip system are met.

The safety function of the reactor trip breakers is to remove the power from the Control Rod Drive Mechanisms (CRDMS) allowing the safety & regulating rods to drop into the core, bringing the reactor to a sub-critical condition whenever it receives an automatic trip command signal (undervoltage conditions) from the Reactor Protection System (RPS), Anticipatory Reactor Trip Systems (ARTS), or a manual trip command signal from the operator. (Reference: FSAR para. 7.4.1.1). The function of the shunt trip device is to provide additional assurance that the reactor trip breakers will open when required. There is no safety function associated with the shunt trip devices.

The addition to the Davis-Besse Unit 1 technical specification should not result in additional testing as procedures have previously been modified to incorporate the requirement to independently confirm the shunt and undervoltage trip device. This was accomplished following the addition of the shunt trip devices. We had made the interpretation that this was necessary to meet the existing technical specification operability requirements.

The only function of this FCR is to meet the directive to incorporate the required verbiage in the technical specification.

The frequency of testing as a result of the independent verification was addressed by the B&W Owners Group in their report entitled "Review of On-Line Test Intervals for the Reactor Trip Systems."

This report concluded:

"The wearout evaluation indicated that the RTS components are not susceptible to wearout caused by testing. The breakers are the major components affected by test cycling and the GE AK-2 breaker has a design cycle objective of 12,500 cycles. Aging of the trip shaft bearing lubricant is virtually eliminated as a concern when the Mobil 28 lubricant is installed." (This is completed at Davis-Besse.) "Therefore, for the breakers, common mode failure due to wearout is not a significant source of RTS unavailability. Other components do not exhibit histories that indicate that wearout is a concern.

Reduced redundancy caused by testing does not significantly contribute to RTS unavailability. Reduced redundancy is primarily due to bypass testing of the RPS and ARTS sensor strings, which has the effect of reducing the trip logic from 2/4 to 2/3 for the duration of the tests. Other on-line tests (breakers, electronic trip, trip modules) are performed with the channel tripped and, therefore, in a "fail-safe" condition that does not affect (RTS) unavailability."

CONCLUSION:

Additional testing should not result from this technical specification change as Station procedures already include the requirement to independently confirm the operability of the shunt and undervoltage trip devices. Surveillance testing now require 3 trips per month or 36 per year. The design number of cycles 12,500 over the 40 year plant life allows for an average of 312 per year. This margin is more than sufficient to allow for reactor trips and bench testing (the 12 month schedule for maintenance of the breakers.)

Based on this, the technical specification change will not result in an unreviewed safety question.

Significant Hazard Consideration

This amendment request to add surveillance requirements for testing to confirm the OPERABILITY of the SHUNT and UNDERVOLTAGE trip devices does not involve a Significant Hazard.

Resulting from the Salem ATWS event and Generic Letter 83-28, Licensees were requested, as part of their response, to review their Technical Specifications and submit any needed changes. The attached amendment request provides Toledo Edisons changes to their Technical Specifications. These changes provide that testing independently confirms the operability of the shunt and undervoltage trip attachments (devices). These devices are checked as part of the monthly channel functional test and before start up if the surveillance has not been performed in the past seven days.

These changes are an additional testing requirement, not presently included in the Technical Specifications, to be performed to ensure the safety function of the reactor trip breakers.

The Commission has provided guidance concerning the application of the standards in 10 CFR 50.92 by providing certain examples (48 FR 14870). One of the examples of actions involving no significant hazards considerations relates to a change that constitutes an additional limitation, restriction, or control not presently included in the technical specifications: for example, a more stringent surveillance requirement. The testing of the reactor trip breaker is an additional testing limitation not presently included in our Technical Specifications.

Therefore, based on the above, this amendment request is not a Significant Hazard.