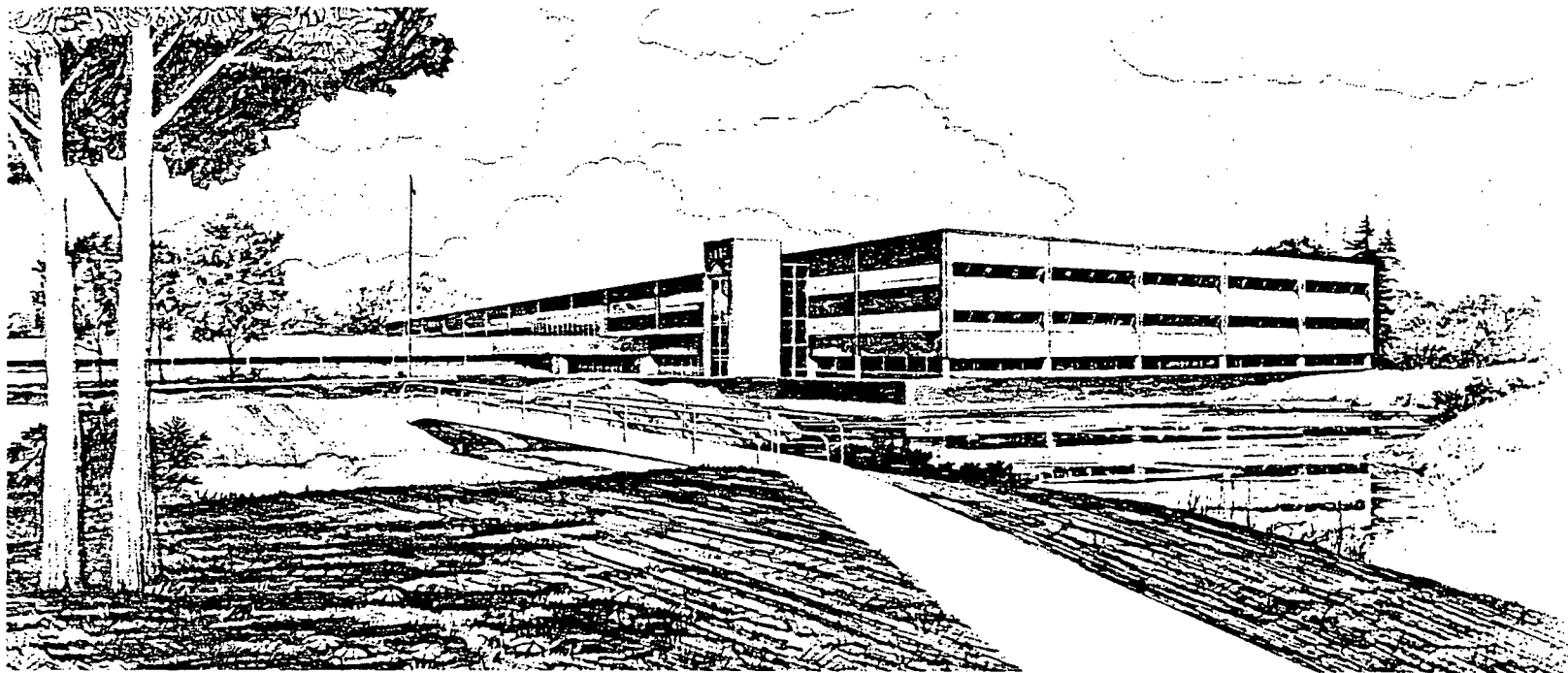


CONFORMANCE TO NRR GENERIC LETTER 82-16  
OCONEE NUCLEAR STATION UNITS 1, 2, AND 3

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Operated by the U.S. Department of Energy



This is an informal report intended for use as a preliminary or working document

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## ABSTRACT

This EG&G Idaho, Inc., report evaluates the submittal provided by Duke Power Company for Oconee Nuclear Station Unit Nos. 1, 2, and 3. The submittal is in response to Generic Letter No. 82-16, "NUREG-0737 Technical Specifications (TS)." Applicable sections of the plants' TS are evaluated to determine compliance to the guidelines established in the generic letter.

## FOREWORD

This report is supplied as part of the "Technical Assistance for Operating Reactors Licensing Actions," being conducted for the U.S. Nuclear Regulatory Commission, Region II, by EG&G Idaho, Inc., NRC Licensing Support Section.

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1. INTRODUCTION

On September 20, 1982, Generic Letter 82-16<sup>1</sup> was issued by D. G. Eisenhut, Director of Licensing, Office of Nuclear Reactor Regulation (NRR), to all pressurized power reactor licensees. This letter identified a number of items that were required by NUREG-0737<sup>2</sup> to be implemented into the licensee's Technical Specifications (TS) by December 3, 1981. Each licensee was requested to review his facility's TS, to address areas of compliance, and to identify deviations or absence of a specification for the items identified in the generic letter within 90 days of receipt of the letter.

Duke Power Company, the licensee for Oconee Nuclear Station Units 1, 2, and 3, provided a response to the generic letter on December 28, 1982.<sup>3</sup> This submittal states that several of the requirements included in Generic Letter 82-16 have already been incorporated into the TS, several other items are still under active review and appropriate TS will be provided upon completion of the review, and the remaining items have been reviewed and it has been determined that TS changes for those are unnecessary.

This report provides an evaluation of the licensee's TS and Nuclear Regulatory Commission (NRC) correspondence with the licensee pertaining to those items identified in the generic letter.

## 2. REVIEW REQUIREMENTS

The review consists of evaluating the licensee's response, currently approved TS, and other NRR approvals against the criteria set forth in Generic Letter 82-16. The NUREG-0737 items and the criteria established are as follows:

### 2.1 STA Training (I.A.1.1.3)

The licensee is to address within his TS that a shift technical advisor (STA) to the shift supervisor is provided. In addition, the qualifications, training, and on-duty requirements for the STA should be stated.

### 2.2 Shift Manning-Overtime Limits (I.A.1.3.1)

The licensee is to provide changes to his TS providing overtime administrative procedure and staffing requirements. The following guidelines were established for the licensee by the NRC.

- "a. An individual should not be permitted to work more than 16 hours straight (excluding shift turnover time).
- b. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any seven day period (all excluding shift turnover time).
- c. A break of at least eight hours should be allowed between work periods (including shift turnover time).
- d. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Recognizing that very unusual circumstances may arise requiring deviation from the above guidelines, such deviation shall be authorized by the plant manager or his deputy, or higher levels of management. The paramount consideration in such authorization shall be that significant reductions in the effectiveness of operating personnel would be highly unlikely.

In addition, procedures are encouraged that would allow licensed operators at the controls to be periodically relieved and assigned to other duties away from the control board during their tour of duty."<sup>4</sup>

### 2.3 Short Term Auxiliary Feedwater System (AFWS) Evaluation (II.E.1.1)

The objective of this item is to improve the reliability and performance of the auxiliary feedwater (AFW) system. TS depend on the results of the licensee's evaluation and the staff review, and are being developed separately for each plant. The limiting conditions of operation (LCO's) and surveillance requirements for the AFW system should be similar to other safety-related systems.<sup>1</sup>

### 2.4 Safety Grade AFW Initiation and Flow Indication (II.E.1.2)

The AFW system automatic initiation system was to have been control grade by June 1, 1980, and safety grade by July 1, 1981; the AFW system flow indication was to have been control grade by January 1, 1980, and safety grade by July 1, 1981.<sup>1</sup>

### 2.5 Dedicated Hydrogen Penetrations (II.E.4.1)

Plants that use external recombiners or purge systems for post-accident combustible gas control of the containment atmosphere should provide containment penetrations dedicated to that service. In satisfying this item, some plants may have to add some additional piping and valves. If so, these valves should be subjected to the requirements of Appendix J of 10CFR 50, and the TS should be modified accordingly.<sup>1</sup>

### 2.6 Containment Pressure Setpoint (II.E.4.2.5)

The containment pressure setpoint that initiates containment isolation must be reduced to the minimum compatible with normal operating conditions. Most plants provided justification for not changing their setpoint and the NRC has approved their justification by separate correspondence. The remaining plants must submit a change to the TS with



the lower containment pressure setpoint and provide justification if this setpoint is more than 1 psi above maximum expected containment pressure during normal operation.<sup>1</sup>

#### 2.7 Containment Purge Valves (II.E.4.2.6)

Model TS were sent separately to each plant as part of the overall containment purge review. These TS include the requirement that the containment purge valves be locked closed except for safety related activities, verified closed at least every 31 days, and be subjected to leakage rate limits.<sup>1</sup>

#### 2.8 Radiation Signal on Purge Valves (II.E.4.2.7)

The containment purge valves must close promptly to reduce the amount of radiation released outside containment following a release of radioactive materials to containment. TS should include the requirement that at least one radiation monitor that automatically closes the purge valves upon sensing high radiation in the containment atmosphere be operable at all times except cold shutdowns and refueling outages. If not operable, either the plant should begin proceeding to cold shutdown within 24 hours or the purge valves should be closed within 24 hours. Model TS were provided in Standard Technical Specifications format for those plants that are using safety-grade components to satisfy the requirement.<sup>1</sup>

#### 2.9 Upgrade Babcock and Wilcox (B&W) AFWS (II.K.2.8)

Additional long-term AFWS modifications were to be performed in conjunction with Generic Letter 82-16 Items 3 and 4 (2.3 and 2.4 above). The TS implemented for Items 3 and 4 will also address the upgrade of the B&W AFWS; therefore no separate TS changes would be required for this item for the B&W Plants.

#### 2.10 B&W Safety-Grade Anticipatory Reactor Trip (II.K.2.10)

Safety-grade turbine trip equipment initiating a reactor trip was to be implemented by the B&W designed plants as part of the TMI lessons learned. The licensee is to implement in the TS the trip setpoint, number of channels, trip conditions, minimal channels required for operation, applicable operating modes, actions to be taken, surveillance required and any other requirements for safety-grade equipment.

#### 2.11 B&W Thermal-Mechanical Report (II.K.2.13)

Licensees of B&W operating reactors were required to submit by January 1, 1981, an analysis of the thermal-mechanical conditions in the reactor vessel during recovery from small breaks with an extended loss of all feedwater. TS, if required, will be determined following NRC staff review.<sup>1</sup>

#### 2.12 Reporting Safety and Relief Valve Failures and Challenges (II.K.3.3)

NUREG-0660 stated that safety and relief valve failures be reported promptly and challenges be reported annually. The sections of the TS that discuss reporting requirements should be accordingly changed. The NRC has noted that an acceptable alternative would be to report challenges monthly.<sup>1</sup>

#### 2.13 Anticipatory Trip on Turbine Trip (II.K.3.12)

Licensees with Westinghouse-designed operating plants have confirmed that their plants have an anticipatory reactor trip upon turbine trip. Many of these plants already have this trip in the TS. For those that do not, the anticipatory trip should be added to the TS.<sup>1</sup>

B&W Thermal-Mechanical Report, item 2.11 above, is not being evaluated in this report. This item is being handled as an active Three Mile Island (TMI) action item under TAC numbers 45199, 45200, and 45201. Item 2.13 Anticipatory Trip on Turbine Trip is applicable to Westinghouse designs and therefore is not applicable for Oconee Units 1, 2, and 3 which are a Babcock and Wilcox design.

### 3.2 EVALUATION

The evaluations of Generic Letter 82-16 items are as follows:

#### 3.1 STA Training (I.A.1.1.3)

A review of the licensee TS administrative controls section shows that the STA position is established as shown in Table 6.1.1 and Figure 6.1.1 of the TS. The on-duty requirements for the STA are described in paragraph 6.1.1.7. Part of the requirements set forth in Generic Letter 82-16 are satisfied; however, until further guidance regarding training requirements is issued by the commission, no further licensing action is required.

#### 3.2 Shift Manning--Overtime Limits (I.A.1.3.1)

The licensee's response to this item references a Duke Power Co. letter<sup>5</sup> dated July 23, 1982, to the NRC, in which they object to including the proposed overtime limits in the TS and suggested the NRC support ANS 3.2 rather than take actions as proposed in the generic letter. The TS for the licensee does not contain any shift manning overtime limitation requirements.

The licensee response is currently being reviewed by the NRC under TAC Nos. 44109, 44110, and 44111 as a separate issue.

#### 3.3 Short Term Auxiliary Feedwater System (AFWS) Evaluation (II.E.1.1)

The licensee's response states that appropriate TS changes to address this item have been incorporated into the Oconee specifications. Our review of the Oconee Units 1, 2, and 3 TS sections 3.4 and 4.9 indicate that the limiting conditions for operation and the surveillance requirements are similar to the other related safety systems specified in the Oconee TS, thereby complying with the requirements of Generic Letter 82-16.

In a letter to Duke Power Company dated April 8, 1982,<sup>6</sup> the NRC provided an evaluation of the licensee response to the Emergency Feedwater System (EFWS) reliability requirements and found they meet the NUREG-0737 Item II.E.1.1 requirements.

No further licensing action is necessary for this item.

### 3.4 Safety Grade AFW System Initiation and Flow Indication (II.E.1.2)

The licensee's response states that appropriate TS changes which address this item have been incorporated into the Oconee specifications. Our review of the Oconee Units 1, 2, and 3 TS shows that the EFWS Initiation and Flow Indications items are addressed in Sections 3.4 and 4.9 and are acceptable.

By letter to Duke Power Co. dated April 8, 1982<sup>6</sup> the NRC found the licensee met the NUREG-0737 Item II.E.1.2 requirements. No further licensing action is required for this item.

### 3.5 Dedicated Hydrogen Penetrations (II.E.4.1)

The licensee's response states that existing Oconee TS and operating procedures effectively address this item. By letter to Duke Power Co. dated October 15, 1981,<sup>7</sup> the NRC found that the licensee's submittals on the design of the dedicated hydrogen penetrations were acceptable and satisfactorily resolved this NUREG-0737 item, provided the additional valves are included in the Appendix J and In-Service Testing (IST) procedures.

Review of the licensee TS indicates that the valves are subject to the testing requirements of Appendix J of 10 CFR 50 and it is concluded that this item is acceptable. No further licensing action is required for this item.

### 3.6 Containment Pressure Setpoint (II.E.4.2.5)

The licensee's response for this item states that "by letter dated July 15, 1981, the NRC found that the requirements of this item were met by Oconee." A review of the NRC correspondence to the utility shows that the NRC concluded from a Safety Evaluation Report, on the Oconee Units 1, 2, and 3 containment pressure setpoint, dated July 15, 1981,<sup>8</sup> that the requirements of the NUREG-0737 item II.E.4.2.5 have been met. The TS Table 2.3-1A shows the High Reactor Building Maximum pressure setpoint of 4 psig. No further licensing action is necessary for this item.

### 3.7 Containment Purge Valve (II.E.4.2.6)

The licensee's response states that this item is under separate review by both Duke Power Co. and the NRC.

The NRC, by letter dated October 28, 1982,<sup>9</sup> notified the licensee that the results of their review on this item concluded that the licensee met the NUREG-0737 Item II.E.4.2.6 requirements, that the containment purge valves are maintained closed except in cold shutdown mode, and that they are verified closed at least once every 31 days. The changes have been incorporated into TS Table 4.4-1 and are acceptable. No further licensing action is necessary for this item.

### 3.8 Radiation Signal on Purge Valves (II.E.4.2.7)

The licensee's response states that this item is under separate review by both Duke Power Co. and the NRC.

The present TS for Oconee Units 1, 2, and 3 do not address the issue of closing the containment purge valves upon receipt of a high containment radiation signal.

On February 9, 1983,<sup>10</sup> Duke Power Company submitted proposed TS changes to the NRC. Table 3.5.5-2 of the proposed changes addresses the fact that the containment purge release will be terminated automatically

and an alarm provided upon high noble gas activity. The surveillance requirements are also addressed for the Noble Gas Activity Monitor which activates the purge valves. The NRC staff has reviewed the proposed amendment changes and it is expected that amendment approval will be issued in the near future.

No further licensing action will be required for this item when the amendment has been approved and issued by the NRC.

### 3.9 Upgrade Babcock and Wilcox (B&W) AFWS (II.K.2.8)

The TS changes implemented for item 3.3 and 3.4 above will also address the upgrade of the B&W AFWS; therefore no separate TS change is required. Items 3.3 and 3.4 have been accepted; therefore, no further licensing action is required for this item.

### 3.10 B&W Safety-Grade Anticipatory Reactor Trip (II.K.2.10)

The licensee did not address this item in their response to the generic letter (82-16)<sup>3</sup> items. By a letter to Duke Power Co.<sup>11</sup> dated April 1, 1981, the NRC found that the licensee met the generic letter requirements for this item. The NRC letter contained amendments to the licensee's TS, in response to the licensee request, which have been incorporated into TS Tables 3.5.1-1 and 4.1-1. No further licensing action is necessary for this item.

### 3.11 B&W Thermal-Mechanical Report (II.K.2.13)

This item is being handled as an active Three Mile Island (TMI) action item under TAC Numbers 45199, 45200, and 45201. For the purpose of this report, there is no licensing action required by Generic Letter 82-16 for this item.

### 3.12 Reporting SV and RV Failures and Challenges (II.K.3.3)

The licensee's response to this item states that they do not consider it necessary or appropriate to be included in the TS. A basis for this position was also provided which includes seven items of discussion for their position on this issue.

Our review of the licensee TS shows this issue has not been specifically addressed. Accordingly we believe that this item does not meet the Generic Letter 82-16 criteria and should be evaluated as a separate issue.

### 3.13 Anticipatory Trip on Turbine Trip (II.K.3.12)

This item is applicable to Westinghouse designs and therefore is not applicable for Oconee Units 1, 2, and 3 which are a Babcock and Wilcox design.



#### 4. CONCLUSIONS

Based on our review, we find the licensee conforms to those items addressed in Generic Letter 82-16 on TS, except for those identified as follows.

1. Section 3.1 STA Training--Until further guidance is provided by the commission, no further licensing action can be taken.
2. Section 3.2 Shift Manning--Overtime Limits--The TS for Oconee Units 1, 2, and 3 do not contain shift-manning overtime limits. This item is presently being reviewed by the NRC under a separate issue.
3. Section 3.11 Thermal-Mechanical Report--The Thermal-Mechanical Reports for Oconee Nuclear Station Units 1, 2, and 3 are being handled as an active TMI action item under TSC numbers 45199, 45200, and 45201, respectively. Generic Letter 82-16 does not require any licensing action for this item.
4. Section 3.12 Reporting SV and RV Failures and Challenges--The TS for the Oconee Units 1, 2, and 3 do not comply with the requirements of Generic Letter 82-16 and should be handled as a separate issue.

## 5. REFERENCES

1. D. G. Eisenhut, NRC letter to all Pressurized Power Reactor Licensees, "NUREG-0737 Technical Specifications (Generic Letter 82-16)," September 20, 1982.
2. NUREG-0737, Clarification of TMI Action Plan Requirements, published by the Division of Licensing, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, November 1980.
3. Hal B. Tucker, Duke Power Company letter to Harold R. Denton, Office of Nuclear Reactor Regulation. (attn. John F. Stolz, Chief Operating Reactors Branch No. 4)," Oconee Nuclear Station Docket Nos. 50-269, -270, and -287, Response to Generic Letter 82-16, NUREG 0737 Items," December 28, 1982.
4. D. G. Eisenhut, NRC letter to All Licensees of Operating Plants, Applicants for an Operating License, and Holders of Construction Permits, "Nuclear Power Plant Staff Working Hours (Generic Letter No. 82-12)," June 15, 1982.
5. William O. Parker, Jr., Duke Power Company letter to Harold R. Denton, Office of Nuclear Reactor Regulation," Oconee Nuclear Station, McGuire Nuclear Station, Docket Nos. 50-269, -270, -287, -369, and -370, Staff Working Hours," July 23, 1982.
6. Philip C. Wagner, NRC letter to William O. Parker, Duke Power Co. which transmitted Amendments Nos. 110, 110, and 107 for Oconee Nuclear Station Units Nos. 1, 2, and 3, April 8, 1982.
7. Philip C. Wagner, NRC letter to William O. Parker, Duke Power Co. "Completed Portions of Reviews of Various NUREG-0737 items at the Oconee Nuclear Station Units Nos. 1, 2, and 3," October 15, 1981.
8. John F. Stolz, NRC letter to William O. Parker, Duke Power Co. "Completed Review of the Duke Power Co. January 2, 1981 response to NUREG-0737, Item II.E.4.2 Position 5," July 15, 1981.
9. John F. Stolz, Chief, Operating Reactors Br. No. 4, NRC letter to H. B. Tucker, Duke Power Co. "Completion of Review of NUREG-0737, Item II.E.4.2.6 and II.E.4.2.7 for Oconee Nuclear Station, Units 1, 2, and 3." October 28, 1982.
10. Hal B. Tucker, Duke Power Company letter to Harold R. Denton, Office of Nuclear Reactor Regulation. (attn. John F. Stolz, Chief Operating Reactors Branch No. 4)," Oconee Nuclear Station Docket Nos. 50-269, -270, and -287, Proposed Radiological Effluent TS (RETS) for the Oconee Nuclear Station," February 9, 1983.
11. John F. Stolz, NRC letter to William O. Parker, Duke Power Co. "Enclosed Amendments Nos. 96, 96, and 93 for Licenses Nos. DPR-38, DPR-47, and DPR-55 for Oconee Nuclear Station, Unit Nos. 1, 2, and 3," April 1, 1981.

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