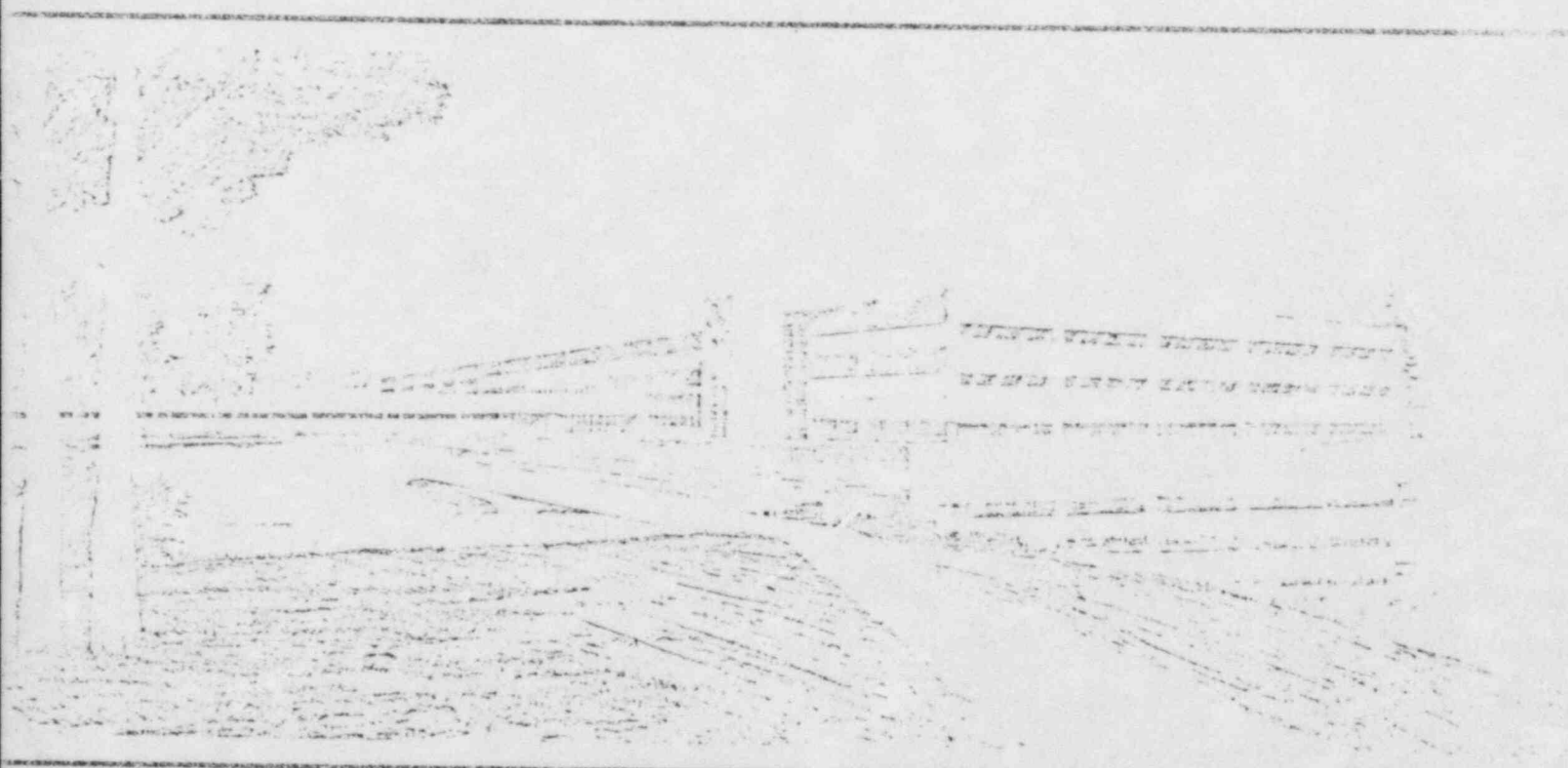


Final Report
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CONFORMANCE TO NRR GENERIC LETTER 82-16
JOSEPH M. FARLEY NUCLEAR PLANT UNITS 1 AND 2

D. M. Beahm

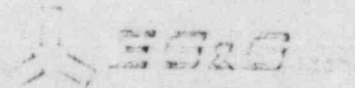
Idaho National Engineering Laboratory
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This is an informal report intended for use as a preliminary or working document

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CONFORMANCE TO NRR GENERIC LETTER 82-16
JOSEPH M. FARLEY NUCLEAR PLANT UNITS 1 AND 2

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ABSTRACT

This EG&G Idaho, Inc., report evaluates the submittal provided by Alabama Power Company (APCo) for Farley Nuclear Plants Unit Nos. 1 and 2. The submittal is in response to Generic Letter No. 82-16, NUREG-0737 Technical Specifications. Applicable sections of the plants' technical specifications 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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Docket Nos. 50-348 and 50-364
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CONFORMANCE TO NRR GENERIC LETTER 82-16
JOSEPH M. FARLEY NUCLEAR PLANT UNITS 1 AND 2

1. INTRODUCTION

On September 20, 1982, Generic Letter 82-16¹ 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 required by NUREG-0737² to be implemented in the licensee's Technical Specifications (TS) by December 3, 1981. Each licensee was requested to review their 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.

The Alabama Power Company (APCo), the licensee for Farley Nuclear Plant Units 1 and 2, provided a response to the generic letter on November 19, 1982.³ This submittal states that Farley Nuclear Plant Units 1 and 2 meet the requirements of Generic Letter 82-16 and no technical specification changes are required.

This interim report provides an evaluation of the licensees TS^{4,5} and the Nuclear Regulatory Commission's (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 their 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 their 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."⁴

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.¹

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, 1981.¹

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.¹

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.¹

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.¹

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.^{1*}

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 (items 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 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.¹

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.¹

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.¹

For the Farley Nuclear Plants Units Nos. 1 and 2, the above Items 2.9, 2.10, and 2.11 are not being evaluated. Being a Westinghouse design Items 2.9, and 2.10 are not applicable for Farley Nuclear Plants Unit Nos. 1 and 2. For item 2.11, the thermal-mechanical report is being evaluated by the NRC staff as an active Three Mile Island (TMI) action item under TAC number 46886 and 46887.

3. EVALUATION

The evaluations of Generic Letter 82-16 Items 1, 2, 3, 4, 5, 6, 7, 8, 12 and 13 are as follows:

3.1 STA Training (I.A.1.1.3)

The licensee's response stated that this item is addressed in the original Unit 2 TS and Amendment No. 25 to the Unit 1 TS. Section 6.2.4 of the TS^{5,6} establishes the STA position and advisory capacity; however, no detailed information is provided on STA training within the TS. Section 6.4 of the TS provides that a retraining and replacement training program for the facility staff be maintained under the direction of the Training Superintendent which meets or exceeds the requirements and recommendations of Section 5.5 of ANSI N18.1-1971, Appendix A of 10 CFR Part 55 and the supplemental requirements specified in the March 28, 1980, NRC letter to all licensees.

Consistent with the guidance provided in the Generic Letter 82-16, no licensing action is required until further guidance is issued by the Commission.

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

The existing Farley TS^{5,6} do not address this item. The licensee has submitted an application, dated June 6, 1983⁷, to amend the Unit 1 and 2 TS. The amendment will add page 6-1a to the existing TS concerning administrative procedures to limit the working hours of unit staff who perform safety-related functions. The amendment follows the guidelines recommended in Generic Letter 82-16. The acceptance and incorporation of the amendment will satisfy the NUREG-0737 requirements. This item is also being handled by the NRC staff under an active TMI action item, TAC number 44088 and 44089.

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

In a review of Amendment No. 26 to Farley Unit 1⁸ TS, the NRC provided a safety evaluation statement of the Auxiliary Feedwater System (AFWS) for Units 1 and 2. As indicated in the safety evaluation, AFW issues have been resolved and are acceptable. TS Section 3.7.1.2 and 4.7.1.2 are applicable for Farley Units 1 and 2 and meet the requirements of Generic Letter 82-16. No further licensing action is necessary.

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

The licensee's response stated that the requirements were addressed in the original Unit 2 TS and Amendment No. 25 to the Unit 1 TS. As stated in Section 3.3 above, the AFW issues have been resolved and are acceptable. A review of the licensee TS for Units 1 and 2 shows that the AFW Initiation and Flow Indications items are addressed in Tables 3.3-11, 4.3-7, 3.3-3, 3.3-4, 3.3-5 and 4.3-2. This meets the criteria set forth in Generic Letter 82-16. No further licensing action is necessary.

3.5 Dedicated Hydrogen Penetrations (II.E.4.1)

The hydrogen recombiners at the Farley Nuclear Plant are internal to the containment building, thus the requirements of NUREG-0737 Item II.E.4.1 are not applicable. No licensing action is necessary.

3.6 Containment Pressure Setpoint (II.E.4.2.5)

The licensee's response stated that the requirements were addressed in the original Unit 2 TS and Amendment No. 25 to the Unit 1 TS. A review of the licensee's TS verified the containment pressure setpoint of 4 psig has been incorporated into Table 3.3-4. This item has been found acceptable by the NRC as indicated in a letter to Alabama Power Co., dated August 5, 1981.⁹ No further licensing action is necessary for this item.

3.7 Containment Purge Valve (II.E.4.2.6)

The licensee's response stated that the requirements were addressed in the original Unit 2 TS and Amendment No. 26 to the Unit 1 TS. A review of the licensee TS shows this item is addressed in Sections 3/4.3.2, 3/4.6.1.1, 3/4.6.4.1.7, and 3/4.9.9. This item has been found acceptable to the Generic Letter 82-16 requirements for both units, as indicated by NRC safety evaluation of Amendment No. 26 to Farley Unit 1,⁸ dated March 1, 1982.

No further licensing action is necessary.

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

The licensee stated that this item is addressed in the original Unit 1 and Unit 2 TS. Our review of the current TS indicates this item is in Sections 3/4.3.2, 3/4.3.3 and 3/4.9.9 and verifies purge and exhaust isolation valves are actuated by containment radiation monitoring instrumentation. No further licensing action is necessary.

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

Farley Units 1 and 2 are a Westinghouse design and, therefore, the requirements of this item are not applicable. No licensing action is required.

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

Farley Units 1 and 2 are a Westinghouse design and, therefore, the requirements of this item are not applicable. The anticipatory trip is evaluated under NUREG-0737 Item II.K.3.3 for the Westinghouse design. No licensing action is required.

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

Farley Units 1 and 2 are a Westinghouse design and, therefore, the requirements of this item are not applicable. It has been noted that there is an active TMI action item Thermal-Mechanical Report for Units 1 and -2 under TAC Numbers 46886 and 46887. No licensing action is required by Generic Letter 82-16 for this item.

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

The licensee stated that the requirements were addressed in Amendment No. 26 to the Unit 1 TS and in the original Unit 2 TS. Our review of the TS indicates the Generic Letter 82-16 requirements are met by Sections 6.9.10 and 6.9.1.12. The NRC has found this item acceptable as indicated in a letter,¹⁰ dated March 26, 1982, to the utility. No further licensing action is necessary.

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

The licensee's response stated that this item is addressed in the original Unit 1 and Unit 2 TS. Our review of the TS verifies the anticipatory reactor trip, upon turbine trip, is addressed in TS Sections 2.2 and 3/4.3.1. The NRC has found this item acceptable as indicated by a letter,¹¹ dated January 6, 1982, to the utility. No further licensing action is necessary.

4. CONCLUSIONS

Based on our review, we find the licensee conforms to those issues addressed in Generic Letter 82-16 on TS with the exception of those identified in Section 3.1, STA Training (I.A.1.1.3), which requires further NRC guidance, and Section 3.2, Shift Manning-Overtime Limits (I.A.1.3.1), which requires acceptance and incorporation of a proposed TS amendment requested by the licensee.

5. REFERENCES

1. D. G. Eisenhut, NRC letter to all Pressurized 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. F. L. Clayton, Alabama Power Company letter to S. A. Varga, Nuclear Reactor Regulation, "Joseph M. Farley Nuclear Plant Units 1 and 2 NUREG-0737 Technical Specifications (Generic Letter 82-16)," November 19, 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. Farley Nuclear Plant Unit 1 Technical Specifications, Appendix A to License No. NPF-2, Amendment No. 26, March 1, 1982.
6. Farley Nuclear Plant Unit 2 Technical Specifications, Appendix A to License No. NPF-8, Amendment No. 13.
7. F. L. Clayton, Alabama Power Company letter to S. A. Varga, Nuclear Reactor Regulation, "Joseph M. Farley Nuclear Plant Units 1 and 2 Facility Staff Technical Specification Change Request NUREG-0737, Item I.A.1.3 Generic Letter Nos. 82-02 and 82-12," June 6, 1983.
8. Edward A. Reeves, NRC letter to F. L. Clayton, Alabama Power Company, "Transmittal of Amendment No. 26 to Farley Unit No. 1 with Safety Evaluation and Environmental Protection Plan related to Amendment 26," March 1, 1982.
9. S. A. Varga, NRC letter to F. L. Clayton, Alabama Power Company, "Completion of Generic Item B-24 and TMI Action Item II.E.4.2.5," August 5, 1981.
10. S. A. Varga, NRC letter to F. L. Clayton, Alabama Power Company, "TMI Action Plan Item II.K.3.3, Reporting Relief Valve and Safety Valve Failures and Challenges," March 26, 1982.
11. S. A. Varga, NRC letter to F. L. Clayton, Alabama Power Company, "Completion of NUREG 0737 Items II.K.3.9, II.K.3.10 and II.K.3.12," January 6, 1982.

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