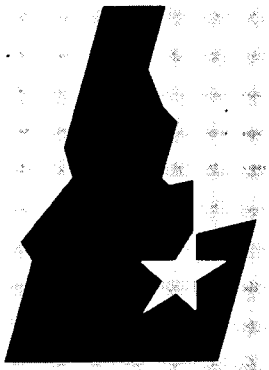

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INFORMAL REPORT

CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.1--EQUIPMENT CLASSIFICATION FOR ALL OTHER SAFETY-RELATED COMPONENTS: KEWAUNEE

Alan C. Udy

EG&G Idaho

Work performed under DOE Contract No. DE-AC07-76ID01570

Prepared for the

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DISCLAIMER

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TECHNICAL EVALUATION REPORT

CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.1-- EQUIPMENT CLASSIFICATION FOR ALL OTHER SAFETY-RELATED COMPONENTS: KEWAUNEE

Docket No. 50-305

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ABSTRACT

This EG&G Idaho, Inc., report provides a review of the submittal from the Kewaunee Nuclear Power Plant regarding conformance to Generic Letter 83-28, Item 2.2.1.

Docket No. 50-305
TAC No. 53682

FOREWORD

This report is supplied as part of the program for evaluating licensee/applicant conformance to Generic Letter 83-28 "Required Actions Based on Generic Implications of Salem ATWS Events." This work is being conducted for the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Division of PWR Licensing-A, by EG&G Idaho, Inc., NRR and I&E Support Branch

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CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.1-- EQUIPMENT CLASSIFICATION FOR ALL OTHER SAFETY-RELATED COMPONENTS: KEWAUNEE

1. INTRODUCTION

On February 25, 1983, both of the scram circuit breakers at Unit 1 of the Salem Nuclear Power Plant failed to open upon an automatic reactor trip signal from the reactor protection system. This incident was terminated manually by the operator about 30 seconds after the initiation of the automatic trip signal. The failure of the circuit breakers was determined to be related to the sticking of the undervoltage trip attachment. Prior to this incident, on February 22, 1983, at Unit 1 of the Salem Nuclear Power Plant, an automatic trip signal was generated based on steam generator low-low level during plant startup. In this case, the reactor was tripped manually by the operator almost coincidentally with the automatic trip.

Following these incidents, on February 28, 1983, the NRC Executive Director for Operations (EDO), directed the NRC staff to investigate and report on the generic implications of these occurrences at Unit 1 of the Salem Nuclear Power Plant. The results of the staff's inquiry into the generic implications of the Salem unit incidents are reported in NUREG-1000, "Generic Implications of the ATWS Events at the Salem Nuclear Power Plant." As a result of this investigation, the Commission (NRC) requested (by Generic Letter 83-28 dated July 8, 1983[1]) all licensees of operating reactors, applicants for an operating license, and holders of construction permits to respond to the generic issues raised by the analyses of these two ATWS events.

This report is an evaluation of the response submitted by the Wisconsin Public Service Corporation, the licensee for the Kewaunee Nuclear Power Plant, for Item 2.2.1 of Generic Letter 83-28. The document reviewed as a part of this evaluation is listed in the references at the end of this report.

2. REVIEW CONTENT AND FORMAT

Item 2.2.1 of Generic Letter 83-28 requests the licensee or applicant to submit, for the staff review, a description of their programs for safety-related equipment classification including supporting information, in considerable detail, as indicated in the guideline section for each sub-item within this report.

As previously indicated, each of the six sub-items of Item 2.2.1 is evaluated in a separate section in which the guideline is presented; an evaluation of the licensee's/applicant's response is made; and conclusions about the programs of the licensee or applicant for safety-related equipment classification are drawn.

3. ITEM 2.2.1 - PROGRAM

3.1 Guideline

Licensees and applicants should confirm that an equipment classification program exists which provides assurance that all safety-related components are designated as safety-related on all plant documents, drawings and procedures and in the information handling system that is used in accomplishing safety-related activities, such as work orders for repair, maintenance and surveillance testing and orders for replacement parts. Licensee and applicant responses which address the features of this program are evaluated in the remainder of this report.

3.2 Evaluation

The licensee for the Kewaunee Nuclear Power Station responded to these requirements with a submittal dated September 21, 1984.[2] This submittal includes information that describes their existing safety-related equipment classification program. In the review of the licensee's response to this item, it was assumed that the information and documentation supporting this program is available for audit upon request. The submittal states that a computerized data base is the control element that identifies safety-related structures, systems and components.

3.3 Conclusion

We have reviewed the licensee's information and, in general, find that the licensee's response is adequate.

4. ITEM 2.2.1.1 - IDENTIFICATION CRITERIA

4.1 Guideline

The applicant or licensee should confirm that their program used for equipment classification includes criteria used for identifying components as safety-related.

4.2 Evaluation

The licensee's response gives the criteria for identifying safety-related equipment and components (quality assurance type 1). A component is considered safety-related it is required to assure: (a) The integrity of the reactor coolant system pressure boundary, or (b) the capability to prevent or to mitigate the consequences of an accident that could result in potential offsite exposures.

4.3 Conclusion

We find that the licensee has confirmed that they have identified the criteria used in the identification of safety-related components, thus meeting the requirements of item 2.2.1.1.

5. ITEM 2.2.1.2 - INFORMATION HANDLING SYSTEM

5.1 Guideline

The licensee or applicant should confirm that the program for equipment classification includes an information handling system that is used to identify safety-related components. The response should confirm that this information handling system includes a list of safety-related equipment and that procedures exist which govern its development and validation.

5.2 Evaluation

The licensee states that the information handling system consists of listings that are being made using computer programs and techniques. The licensee states that the architect/engineer originated the data base. This original list was verified by the quality assurance (QA) typing committee. New safety-related items and changes to the listing are originated by the design engineer and verified by the QA typing committee. Administrative Control Directive (ACD)-9.4, Engineering Control Directive (ECD)-4.1, ACD-2.12, and Quality Control Directive (QAD)-4.3 control these processes.

The licensee states that hardcopy listings have been discontinued. Terminals that access the data base are used by those who need the information.

5.3 Conclusion

We find that the information contained in the licensee's submittals is sufficient for us to conclude that the licensee's information handling system for equipment classification meets the guideline requirements. Therefore, the information provided by the licensee for this item is acceptable.

6. ITEM 2.2.1.3 - USE OF EQUIPMENT CLASSIFICATION LISTING

6.1 Guideline

The licensee's or applicant's description should confirm that their program for equipment classification includes criteria and procedures which govern how station personnel use the equipment classification information handling system to determine that an activity is safety-related and what procedures for maintenance, surveillance, parts replacement and other activities defined in the introduction to 10 CFR 50, Appendix B, apply to safety-related components.

6.2 Evaluation

The licensee provided a list of ACDs and ECDs that address the concerns of this item. The licensee states that these controls direct station personnel to the information handling (retrieval) system if they are performing safety-related activities. Included in the licensee's description is a brief description of each directive and the interaction between the directive and the information handling system.

6.3 Conclusion

We find that the licensee's decription of plant administrative controls and procedures meets the requirements of this item and is, therefore, acceptable.

7. ITEM 2.2.1.4 - MANAGEMENT CONTROLS

7.1 Guideline

The applicant or licensee should confirm that the management controls used to verify that the procedures for preparation, validation and routine utilization of the information handling system have been followed.

7.2 Evaluation

The licensee's response to this item states that safety-related work is governed by Administrative Control Directives (ACDs) under either direct or indirect control of the plant manager. Procedures used in safety-related tasks are approved by the plant manager and the Plant Operating Review Committee. Quality Control checkpoints, inspections and signoffs are part of these procedures and maintenance work requests. Quality Control audits verify that these controls are operating for safety-related work.

The licensee's response describes the managerial controls that are applied to assure that the requirements of Item 2.2.1.4 are met. The licensee's response shows how management determines that the equipment classification information handling system was prepared according to approved procedures, that its contents have been properly validated; that it is being maintained current, and that it is being used to determine equipment classification as intended.

7.3 Conclusion

We find that the licensee's description meets the requirements of this item and is, therefore, acceptable.

8. ITEM 2.2.1.5 - DESIGN VERIFICATION AND PROCUREMENT

8.1 Guideline

The applicant's or licensee's submittal should document that past usage demonstrates that appropriate design verification and qualification testing is specified for the procurement of safety-related components and parts. The specifications should include qualification testing for expected safety service conditions and provide support for the applicant's/licensee's receipt of testing documentation to support the limits of life recommended by the supplier. If such documentation is not available, confirmation that the present program meets these requirements should be provided.

8.2 Evaluation

The licensee states that the design and review of modifications determines the quality level of replacement parts and modification components. A qualified supplier list is maintained to facilitate the specification and purchase of these parts and components. The licensee states that the appropriate equipment specification and testing requirements are involved in compliance with 10 CFR 50.49. A procurement requirement form becomes a part of the specification for all safety-related components and parts. It is on this form that the required verificaton of design capability and evidence of testing is specified.

8.3 Conclusion

The licensee's response for this item is considered complete. The information provided addresses the concerns of this item and is acceptable.

9. ITEM 2.2.1.6 - "IMPORTANT TO SAFETY" COMPONENTS

9.1 Guideline

Generic Letter 83-28 states that the licensee's equipment classification program should include (in addition to the safety-related components) a broader class of components designated as "Important to Safety." However, since the generic letter does not require the licensee to furnish this information as part of their response, review of this item will not be performed.

10. CONCLUSION

Based on our review of the licensee's response to the specific requirements of Item 2.2.1, we find that the information provided by the licensee to resolve the concerns of Items 2.2.1.1, 2.2.1.2, 2.2.1.3, 2.2.1.4 and 2.2.1.5 meet the requirements of Generic Letter 83-28 and is acceptable. Item 2.2.1.6 was not reviewed as noted in Section 9.1.

11. REFERENCES

1. NRC Letter, D. G. Eisenhut to all Licensees of Operating Reactors, Applicants for Operating License, and Holders of Construction Permits, "Required Actions Based on Generic Implications of Salem ATWS Events (Generic Letter 83-28)," July 8, 1983.

2. Wisconsin Public Service Corporation letter, D. C. Hintz to Director, Office of Nuclear REactor Regulation, NRC, "Generic Publications of Salem ATWS Event (Generic Letter 83-28), September 21, 1984, NRC-84-154.

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