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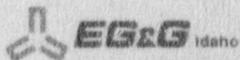
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INFORMAL REPORT

CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.1--
EQUIPMENT CLASSIFICATION FOR ALL OTHER SAFETY-
RELATED COMPONENTS: CALVERT CLIFFS-1 AND -2

Alan C. Udy



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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:
CALVERT CLIFFS-1 AND -2

Docket Nos. 50-317/50-318

Alan C. Udy

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Idaho National Engineering Laboratory
EG&G Idaho, Inc.
Idaho Falls, Idaho 83415

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ABSTRACT

This EG&G Idaho, Inc., report provides a review of the submittals from the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, regarding conformance to Generic Letter 83-28, Item 2.2.1.

Docket Nos. 50-317/50-318
TAC Nos. 53659/53660

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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Docket Nos. 50-317/50-318
TAC Nos. 53659/53660

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CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.1--
EQUIPMENT CLASSIFICATION FOR ALL OTHER SAFETY-RELATED COMPONENTS:
CALVERT CLIFFS-1 AND -2

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, 1983¹) 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 responses submitted by the Baltimore Gas and Electric Company, the licensee for Unit Nos. 1 and 2 of the Calvert Cliffs Nuclear Power Plant, for Item 2.2.1 of Generic Letter 83-28. The documents reviewed as a part of this evaluation are 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

Licenses 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 Calvert Cliffs Nuclear Power Plant responded to these requirements with submittals dated November 5, 1983,² February 29, 1984³ and April 6, 1987.⁴ These submittals include information that describes their safety-related equipment classification program (Q-list). We have reviewed this information and note that the licensee states that all safety-related components are designated as such on the Q-list, and identified as such on plant documents, drawings, and procedures. The licensee states that the Q-list includes red-lined piping and instrumentation diagrams and a computerized list of safety-related systems, equipment and components.

3.3 Conclusion

We have reviewed the licensee's submittals 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 used for identifying safety-related equipment and components. Instruments and equipment are considered safety-related if required to assure: (a) the integrity of the reactor coolant system pressure boundary, (b) the capability to achieve and maintain a safe shutdown of the reactor, (c) the capability to prevent or to mitigate the consequences of an accident which could result in potential offsite exposures or (d) items that the Nuclear Engineering Services Department specifies to receive the same level of quality assurance as necessary for items (a), (b), and (c) above. Guidelines that expand on these criteria were included with the licensee's submittal.

4.3 Conclusion

We find that the criteria used in the identification of safety-related components meets the requirements of Item 2.2.1.1 and are acceptable.

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 Q-list and its attachments are the component listing referred to. Quality Assurance Procedure (QAP)-18 is the governing procedure for the Q-list committee's development, verification and validation of and changes to the Q-list. QAP-28 is implemented by the Electric Engineering Department's Procedure (EEDP)-4, which covers the preparation, approval, issue, revision and interpretation of the Q-list.

5.3 Conclusion

We find that the information contained in the licensee's submittal 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 describes QAP-14 and 15 and Calvert Cliffs Instructions (CCI)-126, 200, 201 and 211 which are administrative procedures that require personnel to consult the Q-list to determine when a component or activity is safety-related. The licensee states that QAPs are followed for maintenance work, surveillance testing, parts replacement and other maintenance and testing activities.

6.3 Conclusion

The information provided by the licensee addresses the concerns of this item. We find that the licensee's description of plant administrative controls and procedures is adequate for this item.

7. ITEM 2.2.1.4 - MANAGEMENT CONTROLS

7.1 Guideline

Managerial controls that will be used by the licensee to verify that the information handling system for equipment classification has been prepared according to the approved procedures, that its contents have been validated, that it is being maintained current, and that it is being used to determine equipment classification as intended shall be described. The description of these controls shall be in sufficient detail for the staff to determine that they are in place and are workable.

7.2 Evaluation

The licensee has described the management controls over the preparation, validation, maintenance and routine use of the Q-list in sufficient detail.

7.3 Conclusion

We find that the management controls used by the licensee assure that the information handling system is maintained, is current and is used as intended. Therefore, the licensee's response for this item is acceptable.

8. ITEM 2.2.1.5 - DESIGN VERIFICATION AND PROCUREMENT

8.1 Guideline

The licensee's submittals shall show that the specifications for procurement of replacement safety-related components and parts require that verification of design capability and evidence of testing that qualifies the components and parts for service under the expected conditions for the service life specified by the supplier is included.

8.2 Evaluation

The licensee's submittal indicates that QAP-2 "Procurement and Storage" and the licensee's "Procurement and Storage Manual" specify the verification and testing for replacement safety-related components and parts. The licensee included a description of what is included in a specification package, how the package is developed and how the specified requirements are implemented into a specification package.

8.3 Conclusion

The licensee's response for this item is considered to be 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. Letter, Baltimore Gas and Electric Company (A. E. Lundvall, Jr.) to NRC (D. G. Eisenhut), "Generic Letter 83-28; Required Actions Based on Generic Implications of Salem ATWS Events," November 5, 1983.
3. Letter, Baltimore Gas and Electric Company (A. E. Lundvall, Jr.) to NRC (D. G. Eisenhut), "Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events," February 29, 1984.
4. Letter, Baltimore Gas and Electric Company (J. A. Tiernan) to NRC, "Request for Additional Information Concerning BG&E Responses to Generic Letter 83-28," April 6, 1987.

BIBLIOGRAPHIC DATA SHEET

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Alan C. Udy

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EG&G Idaho, Inc.
P. O. Box 1625
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This EG&G Idaho, Inc., report provides a review of the submittals from the Baltimore Gas and Electric Company regarding conformance to Generic Letter 83-28, Item 2.2.1 for Calvert Cliffs-1 and -2.

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