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Revised Draft
September 1986

INFORMAL REPORT

CONFORMANCE TO GENERIC LETTER 83-28
ITEM 2.1 (PART 1) EQUIPMENT CLASSIFICATION
HOPE CREEK, PEACH BOTTOM 2 AND 3, PERRY 1
AND 2, PILGRIM 1

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PRELIMINARY



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Revised Draft

CONFORMANCE TO GENERIC LETTER 83-28
ITEM 2.1 (PART 1) EQUIPMENT CLASSIFICATION (RTS COMPONENTS)
SELECTED GENERAL ELECTRIC BOILING WATER REACTOR PLANTS
HOPE CREEK
PEACH BOTTOM 2 AND 3
PERRY 1 AND 2
PILGRIM 1

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ABSTRACT

This EG&G Idaho, Inc. report provides a review of the submittals from selected operating and applicant Boiling Water REactor (BWR) plants for conformance to Generic Letter 83-28, Item 2.1 (Part 1). The following plants are included in this review.

| <u>Plant Name</u> | <u>Docket Number</u> | <u>TAC Number</u> |
|-------------------|----------------------|-------------------|
| Hope Creek | 50-354 | OL |
| Peach Bottom 2 | 50-277 | 52865 |
| Peach Bottom 3 | 50-278 | 52866 |
| Perry 1 | 50-440 | 61705 |
| Perry 2 | 50-441 | OL |
| Pilgrim 1 | 50-293 | 52867 |

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 Regulation, Division of PWR Licensing-A, by the EG&G Idaho, Inc.

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CONTENTS

| | |
|-------------------------------------|----|
| ABSTRACT | 11 |
| FOREWORD | 11 |
| 1. INTRODUCTION AND SUMMARY | 1 |
| 2. PLANT RESPONSE EVALUATIONS | 3 |
| 2.1 Hope Creek | 3 |
| 2.2 Conclusion | 3 |
| 2.3 Peach Bottom 2 and 3 | 5 |
| 2.4 Conclusion | 5 |
| 2.5 Perry 1 and 2 | 6 |
| 2.6 Conclusion | 6 |
| 2.7 Pilgrim 1 | 7 |
| 2.8 Conclusion | 7 |
| 3. GENERIC REFERENCES | 8 |

1. INTRODUCTION AND SUMMARY

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, an automatic trip signal was generated at Unit 1 of the Salem Nuclear Power Plant 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 staff to investigate and report on the generic implications of the 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 1 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, 1983²) all licensees of operating reactors, applicants for an operating license, and holders of construction permits to respond to generic issues raised by the analyses of these two ATWS events.

This report is an evaluation of the responses submitted from a selected group of Boiling Water Reactors (BWRs) for Item 2.1 (Part 1) of Generic Letter 83-28.

The results of the review of four individual plant responses are combined and reported on in this document to enhance review efficiency. The specific plants reviewed in this report were selected based on the

convenience of review. The actual documents which were reviewed for each evaluation are listed at the end of each plant evaluation. The generic documents referenced in this report are listed at the end of the report.

Part 1 of Item 2.1 of Generic Letter 83-28 requires the licensee or applicant to confirm that all reactor trip system components are identified, classified, and treated as safety-related, as indicated in the following statement:

Licenses and applicants shall confirm that all components whose functioning is required to trip the reactor are identified as safety-related on documents, procedures, and information handling systems used in the plant to control safety-related activities, including maintenance, work orders, and parts replacement.

2. PLANT RESPONSE EVALUATIONS

2.1 Hope Creek 50-354 (OL)

The applicant for Hope Creek (Public Service Electric and Gas Company) provided responses to the requirements of Item 2.1 (Part 1) of Generic Letter 83-28 in submittals dated March 30, 1984, December 17, 1984 and May 21, 1985. In the first submittal the applicant described their plan to develop a Master Equipment List (MEL) which would identify the components required to initiate reactor trip and designate these components as safety-related. The MEL imposes quality assurance requirements for the safety-related components and is the controlling document for safety-related activities. The applicant stated intentions to be in compliance with Item 2.1 (Part 1) prior to September 1984.

The second submittal reviewed progress to December 17, 1984 and outlined a revised program which would meet the requirements of Item 2.1 (Part 1) prior to March 1985. The applicant confirmed in their May 21, 1985 submittal that review of the reactor trip system had been completed and that reactor trip system components were verified to be classified safety-related on appropriate design documents, however, the MEL had not been completed for all components of the reactor trip system. The applicant stated that this effort would be completed by September 30, 1985.

2.2 Conclusion

Based on a review of the applicant's submittals, we find that the applicant's responses confirm that components required to trip the reactor have been designated safety-related and that the MEL is used to control all activities relating to safety-related components. We, therefore, find that the applicant's responses meet the requirements of Item 2.1 (Part 1) of Generic Letter 83-28, and are acceptable.

REFERENCES

1. Letter, R.L. Mittl, Public Service Electric and Gas Co., to A. Schwencer, NRC, March 30, 1984.
2. Letter, R.L. Mittl, Public Service Electric and Gas Co., to A. Schwencer, NRC, December 17, 1984.
3. Letter, R.L. Mittl, Public Service Electric and Gas Co., to W. Butler, NRC, May 21, 1985.

2.3 Peach Bottom 2 50-277 TAC NO. 52865
Peach Bottom 3 50-278 TAC NO. 52866

The licensee for Peach Bottom 2 and 3 (Philadelphia Electric Co.) provided responses to the requirements of Item 2.1 (Part 1) of Generic Letter 83-28 in submittals dated November 4, 1983, April 23, 1984 and May 29, 1985.

The responses state that all systems that contribute to the reactor trip function have been identified as safety-related in the current "Q" list and that all components of safety-related systems are safety-related unless specifically excluded by safety evaluation. The "Q" list is used to identify the applicable codes, standards and procedures to be used for activities relating to the safety-related components.

Each item or service to be procured is reviewed to determine if it is safety-related. The review is performed by a cognizant member of the plant staff or the Engineering and Research Department.

2.4 Conclusion

Item 2.1 (Part 1) requires licensees to confirm that all components whose functioning is required to trip the reactor are identified as safety-related on documents, procedures, and information handling systems used in the plant to control safety-related activities, including maintenance, work orders, and parts replacement.

Based on the licensee's submittal we find that the list of components required to trip the reactor is incomplete. We also find that the licensee's program does not identify safety-related components on relevant plant documents. The response, therefore, does not meet the requirements of Item 2.1 (Part 1) of Generic Letter 83-28 and is unacceptable.

REFERENCES

1. Letter, S.L. Daltroff, Philadelphia Electric Co., to D.G. Eisenhut, NRC, November 4, 1983.
2. Letter, S.L. Daltroff, Philadelphia Electric Co., to D.G. Eisenhut, NRC, April 23, 1984.
3. Letter, S.L. Daltroff, Philadelphia Electric Co., to J.F. Stolz, NRC May 29, 1985.

2.5 Perry 1 50-440 (OL) and Perry 2 50-441 (OL)

The applicant for Perry 1 and 2 (Cleveland Electric Illuminating Co.) provided responses to the requirements of Item 2.1 (Part 1) of Generic Letter 83-28 in submittals dated April 6, 1984 and August 28, 1985. The applicant reported in the first submittal that the "Q"-list for the plants was undergoing review to verify the correct classification of safety-related components. The "Q"-list is to be used to determine classification for maintenance, work orders and procurement activities.

The second submittal reported that the "Q"-list evaluation had been completed and that all numbered components from the 5 systems that contribute to the reactor trip function had been reviewed and classified as safety-related or nonsafety-related. The "Q"-list is the safety-related subset of the Perry Equipment Master Files System (PEMS) used to determine the classification for work orders, maintenance and parts procurement.

2.6 Conclusion

Based on the review of the applicant's submittals, we find that the applicant has verified that the components necessary to perform reactor trip are classified as safety-related and that this classification program imposes safety-related procedures on work orders, maintenance, and procurement activities. We, therefore, find that the applicant's response meet the requirements of Item 2.1 (Part 1) of Generic Letter 83-28 and are acceptable.

REFERENCES

1. Letter, M.R. Edelman, Cleveland Electric Illuminating Co. to D.G. Eisenhut, NRC, April 6, 1984.
2. Letter, M.R. Edelman, Cleveland Electric Illuminating Co., to B.J. Youngblood, August 28, 1985.

2.7 Pilgrim 1, 50-293, TAC No. 52867

The licensee for Pilgrim 1 (Boston Edison Co.) provided responses to the requirements of Item 2.1 (Part 1) of Generic Letter 83-28 in submittals dated November 7, 1983 and June 28, 1985. In the submittals the licensee confirmed that the components required to function for reactor trip are identified in the plant "Q"-list and are controlled at a quality level which reflects the safety-related functions. Documents (Purchase Orders, Maintenance Requests) used to control activities associated with the "Q"-listed equipment are identified as "Q" which designates the use of safety-related procedures.

2.8 Conclusion

Based on the review of the licensee's submittals, we find that the licensee has verified that the components necessary to perform reactor trip are classified as safety-related and that the classification program imposes safety-related procedures on maintenance and procurement activities relating to the components. We, therefore, find that the licensee's response meet the requirements of Items 2.1 (Part 1) of Generic Letter 83-28 and are acceptable.

REFERENCES

1. Letter, W.D. Harrington, Boston Edison Co., to D.B. Vassallo, NRC, November 7, 1983.
2. Letter, W.D. Harrington, Boston Edison Co., to D.B. Vassallo, NRC, June 28, 1985.

3. GENERIC REFERENCES

1. Generic Implications of ATWS Events at the Salem Nuclear Power Plant, NUREG-1000, Volume 1, April 1983; Volume 2, July 1983.
2. 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.

BIBLIOGRAPHIC DATA SHEET

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This EG&G Idaho, Inc. report provides a review of the submittals for Hope Creek, Peach Bottom 2 and 3, Perry 1 and 2, and Pilgrim 1 for conformance to Generic Letter 83-28 Items 2.1 (Part 1) Equipment Classification (RTS Components).

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