

TECHNICAL EVALUATION REPORT

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

Docket Nos 50-315 and 50-316

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### ABSTRACT

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

Docket Nos. 50-315 and 50-316

TAC Nos. 53661 and 53662

## 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. 50-315 and 50-316  
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CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.1--

EQUIPMENT CLASSIFICATION FOR ALL OTHER SAFETY-RELATED COMPONENTS:

COOK-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, 1983<sup>1</sup>) 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 Indiana and Michigan Electric Company, the licensee for the Donald C. Cook Nuclear Power Plant, Unit Nos. 1 and 2 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

Licensee and applicants should confirm that an equipment classification program is in place which will provide assurance that all safety-related components are designated as safety-related on plant documentation such as procedures, system descriptions, test and maintenance instructions and in information handling systems so that personnel performing activities that affect such safety-related components are aware that they are working on safety-related components and are guided by safety-related procedures and constraints. 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 Donald C. Cook Nuclear Power Plant, Unit Nos. 1 and 2, responded to these requirements with submittals dated November 4, 1983,<sup>2</sup> March 30, 1984,<sup>3</sup> and December 19, 1986.<sup>4</sup> These submittals include 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.

#### 3.3 Conclusion

The staff concludes that all the basic requirements of the equipment classification program are in place and address the concerns of the items of Item 2.2.1 of Generic Letter 83-28.



#### **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 states that the criteria for determining safety-related structures, systems, and components are contained in the present corporate procedures. The criteria were included in the response and conform with the definition within Item 2.2.1 of Generic Letter 83-28.

##### **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.

## **5.1 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's response states that safety-related components (with known exceptions) are entered in a computerized list known as the N-List. Structural items and piping are entered as a single line item. Electrical items such as relays, switches, conduit, fittings, and trays also are covered by single line items.

The licensee has confirmed that a new classification program has been implemented. This new program consists of a new computerized component classification record which lists all plant components, their safety classification and their procurement and QA requirements. Cross-references to drawings and relevant plant and corporate procedures will ensure that the safety role of a component is kept in focus whenever a component is taken out of service, bought, maintained, replaced or returned to service. The job control classification will rely on the record.

### **5.3 Conclusion**

The licensee's response for this item is considered to be complete and 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 governing the use of 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's response indicates that responsible station personnel use the N-List and corporate procedures to designate the safety classification of the equipment and the procedures required to perform the work. The safety classification and procedures are indicated on the Job Order form used for all repair and modification work performed at the plant. If anyone within the plant is unsure of the classification of a component, he is required to check with the responsible American Electric Power Service Company (AEPSC) cognizant engineer.

### 6.3 Conclusion

The licensee's response for this item is considered to be complete and is 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 states that the Quality Assurance Department performs audits of activities covered by the plant instructions and procedures and notifies appropriate plant management of any deficiencies noted. Thus, the audit program provides additional verification of the routine utilization of the information handling system.

### **7.3 Conclusion**

The licensee's response to this item is considered to be complete and is 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's response states that the current specifications used to procure new or replacement components identify normal and accident service conditions or reference applicable codes. Qualification testing and performance evaluation is required for harsh environments and test reports of this qualification testing are required to meet the conditions of the specifications.

Prior to future use for procurement, each specification subject to the requirements of 10 CFR 50.49 will be revised to include the requirements that the vendor establish service life by test or performance evaluation and require the vendor to supply documentation in support of the service life qualification.

### 8.3 Conclusion

The licensee's response for this item is considered to be complete 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 or applicant'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 or applicant 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 Item 2.2.1 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. Indiana and Michigan Electric Company letter, M. P. Alexich to D. G. Eisenhut, NRC, November 4, 1983, AEP:NRC:0838A.
3. Indiana and Michigan Electric Company letter, M. P. Alexich to D. G. Eisenhut, NRC, March 30, 1984, AEP:NRC:0838B.
4. Indiana and Michigan Electric Company letter, M. P. Alexich to H. R. Denton, NRC, December 19, 1986, AEP:NRC:0838W.

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This EG&G Idaho, Inc., report provides a review of the submittal from the Indiana and Michigan Electric Company regarding conformance to Generic Letter 83-28, Item 2.2.1 for the Donald C. Cook, Unit Nos. 1 and 2.

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DOCKET NO(S). 50-315/316  
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1 Riverside Plaza  
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SUBJECT: DONALD C. COOK NUCLEAR PLANTS

The following documents concerning our review of the subject facility are transmitted for your information.

- ☐ Notice of Receipt of Application, dated \_\_\_\_\_.  
☐ Draft/Final Environmental Statement, dated \_\_\_\_\_.  
☐ Notice of Availability of Draft/Final Environmental Statement, dated \_\_\_\_\_.  
☐ Safety Evaluation Report, or Supplement No. \_\_\_\_\_ dated \_\_\_\_\_.  
☐ Environmental Assessment and Finding of No Significant Impact, dated \_\_\_\_\_.  
☐ Notice of Consideration of Issuance of Facility Operating License or Amendment to Facility Operating License, dated \_\_\_\_\_.  
☒ Bi-Weekly Notice; Applications and Amendments to Operating Licenses Involving No Significant Hazards Considerations, dated Jul. 29, 87 [see page(s)] \_\_\_\_\_.  
☐ Exemption, dated \_\_\_\_\_.  
☐ Construction Permit No. CPPR-\_\_\_\_\_, Amendment No. \_\_\_\_\_ dated \_\_\_\_\_.  
☐ Facility Operating License No. \_\_\_\_\_, Amendment No. \_\_\_\_\_ dated \_\_\_\_\_.  
☐ Order Extending Construction Completion Date, dated \_\_\_\_\_.  
☐ Monthly Operating Report for \_\_\_\_\_ transmitted by letter dated \_\_\_\_\_.  
☐ Annual/Semi-Annual Report- \_\_\_\_\_  
\_\_\_\_\_ transmitted by letter dated \_\_\_\_\_.

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- ☒ Bi-Weekly Notice; Applications and Amendments to Operating Licenses Involving No Significant Hazards Considerations, dated July 15, 87 [see page(s)] \_\_\_\_\_.
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\_\_\_\_\_ transmitted by letter dated \_\_\_\_\_.

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