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ENCLOSURE 1

SAFETY EVALUATION

RANCHO SECO NUCLEAR GENERATING STATION, UNIT 1

DOCKET NO. 312

GENERIC LETTER 83-28, ITEM 2.2.1

EQUIPMENT CLASSIFICATION

PROGRAMS FOR ALL SAFETY-RELATED COMPONENTS

1.0 INTRODUCTION

Generic Letter 83-28 was issued by the NRC on July 8, 1983 to indicate actions to be taken by licensees and applicants based on the generic implications of the Salem ATWS events. Item 2.2.1 of that letter states that licensees and applicants shall describe in considerable detail their program for classifying all safety-related components other than RTS components as safety-related on plant documents and in information handling systems that are used to control plant activities that may affect these components. Specifically, the licensee/applicant's submittal was required to contain information describing (1) the criteria used to identify these components as safety-related; (2) the information handling system which identifies the components as safety-related; (3) the manner in which station personnel use this information handling system to control activities affecting these components; (4) management controls that are used to verify that the information handling system is prepared, maintained, validated, and used in accordance with approved procedures; and (5) design verification and qualification testing requirements that are part of the specifications for procurement of safety-related components.

The licensee for the Rancho Seco Nuclear Generating Station, Unit 1 submitted responses to Generic Letter 83-28, Item 2.2.1 in submittals dated November 4, 1983, May 23, 1985 and December 3, 1986. We have evaluated these responses and find that they are acceptable.

2.0 EVALUATIONS AND CONCLUSIONS

In these sections the licensee's responses to the program and each of five sub-items are individually evaluated against guidelines developed by the staff and conclusions are drawn regarding their individual and collective acceptability.

1. Identification Criteria

Guideline: The licensee's response should describe the criteria used to identify safety-related equipment and components. (Item 2.2.1.1)

Evaluation:

The licensee's submittal provides the classification criteria used to determine whether equipment is safety-related. The licensee has a procedure that is used to initiate the identification of equipment as safety-related or nonsafety-related if no previous classification exists.

Conclusion:

The licensee's submittal for this item, meets staff requirements and is acceptable.

2. Information Handling System

Guideline: The licensee's response should confirm that the equipment classification program includes an information handling system that is used to identify safety-related equipment and components. Approved procedures which govern its development, maintenance, and validation should exist. (Item 2.2.1.2)

Evaluation:

The licensee's submittal describes a computerized system for identifying, listing, tracking and retrieving maintenance information on safety-related equipment. The licensee also describes their administrative procedure which defines the method for making changes to the Maintenance Information Management System.

Conclusion:

We conclude that the licensee's submittal meets the staff requirements for this item and is acceptable.

3. Use of Information Handling System:

Guidelines: The licensee response should confirm that their equipment classification program includes criteria and procedures which govern the use of the information handling system to determine that an activity is safety-related and that safety-related procedures for maintenance, surveillance, parts replacement and other activities defined in the introduction to 10 CFR 50, Appendix B, are applied to safety related components. (Item 2.2.1.3)

Evaluation:

The licensee's submittal states that the Master Equipment List is to be used to determine equipment classification prior to working on any plant equipment. Administrative procedures require this use of the Master Equipment List.

Conclusion:

We conclude that the licensee's submittal meets the staff requirements and is acceptable.

4. Management Controls

Guideline: The licensee/applicant should confirm that management controls used to verify that the procedures for preparation, validation, and routine utilization of the information handling system have been and are being followed. (Item 2.2.1.4)

Evaluation:

The licensee's submittal states that there is a Management Safety Review Committee which audits their QA program. The results of QA audits and corrective actions are reported to management.

Conclusion:

We conclude that the licensee's submittal meets the staff requirements for this item and is acceptable.

5. Design Verification and Procurement

Guideline: The licensee/applicant's response should document that past usage demonstrates that appropriate design verification and qualification testing are 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 licensee's receipt of testing documentation which supports 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. (Item 2.2.1.5)

Evaluation:

The licensee's submittal stated that they had a Quality Control Instruction which defines the method whereby quality class equipment requirements are evaluated and documented.

Conclusion:

We conclude that the licensee's submittal meets the staff requirements and is acceptable.

6. "Important To Safety" Comments

Guideline: Generic Letter 83-28 states that licensee/applicant equipment classification programs 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/applicant to furnish this information as part of their response, staff review of this sub-item will not be performed. (Item 2.2.1.6)

7. Program

Guideline: Licensees/applicants should confirm that an equipment classification program exists which provides assurance that all safety-related components are designated as safety-related on plant documents such as drawings, procedures, system descriptions, test and maintenance instructions, operating procedures, and information handling systems so that personnel who perform 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. (Item 2.2.1)

Evaluation:

The licensee's responses to these requirements were contained in the submittals dated November 4, 1983, May 23, 1985 and December 3, 1986. These submittals describe the licensee's program for identifying and classifying safety-related equipment and components which meets the staff requirements as indicated in the preceding sub-item evaluations.

Conclusion:

We conclude that the licensee's program addresses the staff concerns regarding equipment and component classification and is acceptable.

3.0 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. Sacramento Municipal Utility District letter, R. J. Rodriguez to D. C. Eisenhut, NRC, November 4, 1983
3. Sacramento Municipal Utility District letter, R. J. Rodriguez to H. L. Thompson, Jr., NRC, May 23, 1985
4. Sacramento Municipal Utility District letter, J. A. Ward to F. J. Miraglia, Jr., NRC, December 3, 1986

Principal Contributor : R. Lasky

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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:
RANCHO SECO-1

Docket No. 50-312

R. VanderBeek

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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 for the Rancho Seco Nuclear Generating Station, Unit No. 1 for conformance to Generic Letter 83-28, Item 2.2.1.

Docket No. 50-312

TAC No. 53709

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.

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

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 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 generic issues raised by the analyses of these two ATWS events.

This report is an evaluation of the responses submitted by the Sacramento Municipal Utility District for Rancho Seco Nuclear Generating Station, Unit No. 1 for Item 2.2.1 of Generic Letter 83-28. The actual 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/applicant to submit, for staff review, a description of their programs for classification of their safety-related equipment includes supporting information, in considerable detail, as indicated in the guidelines preceding the evaluation of each sub-item.

As previously stated, 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 its acceptability 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 Rancho Seco Nuclear Generating Station Unit No. 1 provided a response to Generic Letter 83-28 on November 4, 1983², May 23, 1985³ and December 3, 1986.⁴ These submittals included information that describes their 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 criteria for identifying components as safety-related should be presented. This should include a description of means for handling sub-components or parts as well as procedures for initiating the identification of components as safety-related or non-safety related if no previous classification existed.

4.2 Evaluation

The licensee's submittal provides the classification criteria used to determine whether a structure, system or component is safety related. This is consistent with the definition given in Item 2.2.1. The licensee identified the procedure used to initiate the identification of components as safety-related or nonsafety-related if no previous classification existed.

4.3 Conclusion

The licensee's response to this item is complete and is 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 describes the information handling system used for identifying safety-related components as a computerized method of listing, tracking, and retrieving maintenance information on plant equipment. This system is known as the Maintenance Information Management System (MIMS). The MIMS consists of the Master Equipment List (MEL), the Drawing Index, the Spare Parts System, the Work Request System, the Auxiliary Tables System, and the Vendor List System. Administrative procedure AP.42 defines the MIMS content, the responsibility and authority for adding, changing, or deleting information and the method of making changes.

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 description should show how station personnel use the equipment classification information handling system to determine:
(a) when an activity is safety-related, and (b) what procedures are to be used for maintenance work, routine surveillance testing, accomplishment of design changes, and performance of special tests or studies. We should be able to gain confidence from our review that there will be no confusion about when activity is safety-related.

6.2 Evaluation

The licensee's response states that section 2.1 of Quality Assurance Procedure QAP3, "Quality Assurance Classification", establishes a procedure for classifying systems, structures, subassemblies, components and design characteristics so as to establish the degree of quality assurance activity related to their manufacture, erection, installation, maintenance, or in-service inspection. It also establishes that Nuclear Engineering determines the classification of systems and components. The MEL is used for this. In addition administrative procedure AP.3 requires 1) that a work request be submitted for documentation of maintenance, modifications, and other work items, and 2) the QA class of the item be recorded on the work request. The cognizant engineer determines what procedures are required for the work based on the QA class specified on the work request. The licensee states that all procedures are reviewed by the Plant Review Committee (PRC).

6.3 Conclusion

The licensee's response to this item is complete and is acceptable.

7. ITEM 2.2.1.4 - MANAGEMENT CONTROLS

7.1 Guidelines

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's response states that the Rancho Seco Technical Specifications, Item 6.5.2.B.d require that the Management Safety Review Committee audit the QA program. Quality Control Instruction QCI.2 describes the QA audit program. The purpose of this program is to provide for systematic, planned audits of nuclear safety-related aspects of operation, maintenance, inspection, testing, modification, administration and the nuclear operations, testing, modification, administration and the nuclear operations quality assurance program to verify that they are in accordance with their respective license requirements. The result of audits and corrective action are reported to management. The Nuclear Executive Director determines the effectiveness of the QA program based on this information.

7.3 Conclusion

We find the licensee's response to this item complete and is acceptable.

B. ITEM 2.2.1.5 DESIGN VERIFICATION AND PROCUREMENT

B.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.

B.2 Evaluation

The licensee included within his response Quality Control Instruction QCI-4 which defines the method whereby quality class requirements are evaluated and documented. The procedure applies to QA Class 1 parts and materials.

B.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 of this report.

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 Implication of Salem ATWS Events (Generic Letter 83-28)," July 9, 1983.
2. Sacramento Municipal Utility District letter, R. J. Rodriguez to D. G. Eisenhut, NRC, November 4, 1983, RJR 83-725.
3. Sacramento Municipal Utility District letter, R. J. Rodriguez to H. L. Thompson, Jr., NRC, May 23, 1985, RJR 85-269.
4. Sacramento Municipal Utility District letter, J. A. Ward to F. J. Miraglia, Jr., NRC, December 3, 1986, JEW 86-901.