NORTHEAST UTILITIES

THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 665-5000

October 16, 1985

Docket No. 50-245
B11806

Director of Nuclear Reactor Regulation
Attn: Mr. Christopher I. Grimes, Chief
Systematic Evaluation Program Branch
U. S. Nuclear Regulatory Commission
Wasington, D. C. 20555

References: (1) J. F. Opeka letter to C. I. Grimes, dated May 17, 1985.

(2) H. L. Thompson letter to J. F. Opeka, dated July 31, 1985.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 1
Integrated Safety Assessment Program

In Reference (1), Northeast Nuclear Energy Company (NNECO) provided a proposed scope for the Integrated Safety Assessment Program (ISAP) review of Millstone Unit No. 1. In Reference (2), the Staff formally issued the results of the ISAP screening review process, establishing the scope of ISAP for Millstone Unit No. 1 and initiating issue-specific evaluations. Reference (1) also indicated that for each issue or topic included in ISAP, NNECO would provide a discussion of the safety objective and an evaluation of the plant design with respect to the issue being addressed to identify specific items to be considered in the integrated assessment. In accordance with this commitment, reviews for the following ISAP topics are attached.

- ISAP Topic 1.07 - "Control Room Design Review"
- ISAP Topic 1.08 - "Safety Parameter Display System"

If you have any questions concerning the attached reviews, please contact us.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

J. F. Opeka

J. F. Opeka
Senior Vice President

C. F. Sears

By: C. F. Sears
Vice President

cc: J. A. Zwolinski

A001
1/1

Docket No. 50-245

ISAP TOPIC NO. 1.07

CONTROL ROOM DESIGN REVIEW

October, 1985

ISAP Topic No. 1.07
Control Room Design Review

I. Introduction

Following the accident at Three Mile Island Unit No. 2 (TMI-2) on March 28, 1979, the Nuclear Regulatory Commission (NRC) Staff developed a number of proposed requirements to be implemented on operating reactors and on plants under construction. These requirements include Operational Safety, Siting and Design, and Emergency Preparedness and are intended to provide substantial additional protection in the operation of nuclear facilities and significant upgrading of emergency response capability based on the experience from the accident at TMI-2 and the official studies and investigations of the accident. The requirements are set forth in NUREG-0737, "Clarification of TMI Action Plan Requirements," and in Supplement 1 to NUREG-0737, "Requirements for Emergency Response Capability." One of the requirements is for all licensees and applicants for operating licenses to conduct a detailed Control Room Design Review (CRDR) to identify and correct deficiencies. The objective of the issue is clearly defined in NUREG-0737, Supplement 1:

"The objective of the control room design review is to improve the ability of nuclear power plant control room operators to prevent accidents or cope with accidents if they occur by improving the information provided to them (from NUREG-0660, Item I.D.1). As a complement to improvements of plant operating staff capabilities in response to transients and other abnormal conditions that will result from implementation of the SPDS and from upgraded emergency operating procedures, this design review will identify any modifications of control room configurations that would contribute to a significant reduction of risk and enhancement in the safety of operation. Decisions to modify the control room would include consideration of long-term risk reduction and any potential temporary decline in safety after modifications resulting from the need to relearn maintenance and operating procedures."

II. Review Criteria

1) NUREG-0737
2) NUREG-0737, Supplement 1
3) NUREG-0700
4) NUREG-0801

III. Related Topics/Interfaces

ISAP Topic No. 1.08 - Safety Parameter Display System
ISAP Topic No. 1.09 - Regulatory Guide 1.97 Instrumentation
ISAP Topic No. 1.10 - ERF Instrumentation

IV. Evaluation

On December 17, 1982, a letter (Generic Letter 82-33) was sent to all licensees of operating reactors, applicants for operating licenses and holders of construction permits enclosing Supplement 1 to NUREG-0737.

In this letter operating reactor licensees and holders of construction permits were requested to furnish the following information, pursuant to 10CFR50.54(f), no later than April 15, 1983:

(1) A proposed schedule for completing each of the basic requirements for the items identified in Supplement 1 to NUREG-0737, and

(2) A description of plans for phased implementation and integration of emergency response activities including training.

Northeast Nuclear Energy Company responded to Generic Letter 82-33 by letter dated April 15, 1983. By letters dated August 11, November 28, December 20, 1983, and April 9, 1984, NNECO modified several dates as a result of negotiation with the NRC Staff. In these submittals, NNECO made commitments for completion of the basic requirements. NNECO's commitments included (1) dates for providing required submittals to the NRC, (2) dates for implementing certain requirements and (3) a schedule for providing implementation dates for other requirements. The NRC Staff found that the modified dates were reasonable and achievable dates for meeting the Commission requirements. The NRC Staff concluded that the schedule proposed by NNECO would provide timely upgrading of our emergency response capability.

In a letter dated June 12, 1984, the NRC issued an order confirming NNECO's commitments on emergency response capability. The schedule agreed upon for a control room design review for Millstone Unit No. 1 called for a program plan and a summary report, including a proposed schedule for implementation, to be submitted to the NRC by March 2, 1987.

V. Conclusions

NNECO plans to provide a program plan and schedule for implementing a control room design review to respond to Reference 1. The optimal plan for conducting the review, including consideration of its associated resource burden and expected safety impact, should be considered in the integrated assessment.

VI. References

1. D. M. Crutchfield letter to W. G. Counsil, "Orders Confirming Licensee Commitments on Emergency Response Capability (Generic Letter 82-33, NUREG-0737), dated June 12, 1984.

2. W. G. Counsil letter to J. R. Miller/D. M. Crutchfield, "Supplement 1 to NUREG-0737, Revision 2 to Regulatory Guide 1.97," dated April 9, 1984.

3. W. G. Counsil letter to J. R. Miller/D. M. Crutchfield, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL 82-33)," dated December 20, 1983.

4. W. G. Counsil letter to D. G. Eisenhut, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL-82-33), dated November 28, 1983.

5. W. G. Counsil letter to R. A. Clark/D. M. Crutchfield, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL 82-33), dated August 11, 1983.

6. W. G. Counsil letter to D. G. Eisenhut, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL 82-33), dated April 15, 1983.

7. D. G. Eisenhut letter to Licensees of Operating Reactors, Applicants for Operating Licenses and Holders of Construction Permits, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL-82-33)," dated December 17, 1982.

Docket No. 50-245

ISAP TOPIC NO. 1.08

SAFETY PARAMETER DISPLAY SYSTEM

October, 1985

ISAP Topic No. 1.08
Safety Parameter Display System

I. Introduction

Following the accident at Three Mile Island Unit No. 2 (TMI-2) on March 28, 1979, the Nuclear Regulatory Commission (NRC) Staff developed a number of proposed requirements to be implemented on operating reactors and on plants under construction. These requirements include Operational Safety, Siting and Design and Emergency Preparedness and are intended to provide substantial additional protection in the operation of nuclear facilities and significant upgrading of emergency response capability based on the experience from the accident at TMI-2 and the official studies and investigations of the accident. The requirements are set forth in NUREG-0737, "Clarification of TMI Action Plan Requirements," and in Supplement 1 to NUREG-0737, "Requirements for Emergency Response Capability." One of the requirements is for all licensees to provide a plant safety parameter display console that will display to operators a minimum set of parameters defining the safety status of the plant, capable of displaying a full range of important plant parameters and data trends on demand, and capable of indicating when process limits are being approached or exceeded.

II. Review Criteria

1. NUREG-0737
2. NUREG-0737, Supplement 1
3. NUREG-0660
4. NUREG-0696
5. NUREG-0835
6. Regulatory Guide 1.97, Revision 3

III. Related Topics/Interfaces

1. ISAP Topic No. 1.07 - Control Room Design Review
2. ISAP Topic No. 1.09 - Regulatory Guide 1.97 Instrumentation
3. ISAP Topic No. 1.10 - ERF Instrumentation
4. ISAP Topic No. 2.03 - Process Computer Replacement

IV. Evaluation

On December 17, 1982, a letter (Generic Letter (GL) 82-33) was sent to all licensees of operating reactors, applicants for operating licensees and holders of construction permits enclosing Supplement 1 to NUREG-0737. One of the requirements of NUREG-0737, Supplement 1 requires licensees and applicants to prepare a written safety analysis describing the basis on which the selected plant variables for SPDS are sufficient to assess the safety status of each identified function for a wide range of events, including symptoms of severe accidents. Licensees and applicants are also to prepare an implementation plan for the SPDS which contains schedules for design, development, installation, and full operation of the SPDS as well as a design verification and validation (V&V) plan. The safety analysis and the implementation plan are to be submitted to the NRC Staff for review.

Northeast Nuclear Energy Company (NNECO) responded to GL 82-33 by letter dated April 15, 1983. By letters dated August 11, November 28, December 20, 1983, and April 9, 1984, NNECO modified several dates as a result of negotiation with the NRC Staff. In these submittals, NNECO made commitments for completion of the basic requirements. NNECO's commitments included: (1) dates for providing required submittals to the NRC, (2) dates for implementing certain requirements and (3) a schedule for providing implementation dates for other requirements. The NRC Staff found that the modified dates were reasonable and achievable dates for meeting the Commission requirements. The NRC Staff concluded that the schedule proposed by NNECO would provide timely upgrading of our emergency response capability.

In a letter dated June 12, 1984, the NRC issued an order confirming NNECO's commitments on emergency response capability. The schedule agreed upon for meeting the SPDS requirements of NUREG-0737 called for submittal of a safety analysis and a plan and schedule for operator training and implementation of a fully operational SPDS no later than April 9, 1987.

V. Conclusion

NNECO plans to provide a program plan and schedule for implementing an SPDS to respond to Reference 1. However, the expected safety impact, the need to implement an SPDS and a priority for implementation should be determined in the integrated assessment.

VI. References

1. D. M. Crutchfield letter to W. G. Counsil, "Orders Confirming Licensee Commitments on Emergency Response Capability (GL 82-33, NUREG-0737), dated June 12, 1984.

2. W. G. Counsil letter to J. R. Miller/D. M. Crutchfield, "Supplement 1 to NUREG-0737, Revision 2 to Regulatory Guide 1.97," dated April 9, 1984.

3. W. G. Counsil letter to J. R. Miller/D. M. Crutchfield, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL 82-33)," dated December 20, 1983.

4. W. G. Counsil letter to D. G. Eisenhut, "Supplement 1 to NUREG-0737, Requirement for Emergency Response Capability (GL 82-33)," dated November 28, 1983.

5. W. G. Counsil letter to R. A. Clark/D. M. Crutchfield, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL 82-33), dated August 11, 1983.

6. W. G. Counsil letter to D. G. Eisenhut, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL 82-33), dated April 15, 1983.

7. D. G. Eisenhut letter to Licensees of Operating Reactors, Applicants for Operating licenses and Holders of Construction Permits, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability (GL 82-33)," dated December 17, 1982.