

NORTHEAST UTILITIES



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

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December 19, 1983

Docket No. 50-423

B10976

Director of Nuclear Reactor Regulation
Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Reference: (1) W. G. Counsil to B. J. Youngblood, NRC Instrumentation and Control Systems Branch (ICSB) Review Meeting - Summary of Discussion, dated September 13, 1983.

Dear Mr. Youngblood:

Millstone Nuclear Power Station, Unit No. 3
NRC Instrumentation and Control Systems Branch (ICSB)
Review Meeting - Summary of Discussion

A meeting was held between the NRC-ICSB, Stone and Webster and Northeast Nuclear Energy Company (NNECO) in Bethesda on December 1, 1983 to discuss eight open agenda items that were a result of the July 26-28, 1983 ICSB meeting (Reference 1). During the meeting each of the eight agenda items was discussed. Attachment I provides the status of those agenda items. It was agreed that a letter would be transmitted to the NRC providing a summary of discussion on each agenda item by December 19, 1983. The attached summaries of discussion (Attachment II) to the agenda items simply formalize the above commitment given orally at the meeting. Also Attachment II provides additional information on the agenda items 9, 10 and 19 as committed in Reference 1.

During the meeting, the NRC Staff indicated an additional concern that was not originally included in the agenda items and requested NNECO to provide a formal response to the concern. Attachment III lists this new concern. A response to this new item will be provided to the NRC by March 31, 1984.

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If you have any concerns related to the information contained herein or any questions related to our responses, please contact our Licensing representative directly.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL

By NORTHEAST NUCLEAR ENERGY COMPANY, Their Agent

A handwritten signature in cursive script, appearing to read "W. G. Coursil", written over a horizontal line.


W. G. Coursil
Senior Vice President

A handwritten signature in cursive script, appearing to read "R. P. Werner", written over a horizontal line.

By: R. P. Werner
Vice President
Generation Engineering & Construction

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Then personally appeared before me R. P. Werner, who being duly sworn, did state that he is Vice President of Northeast Nuclear Energy Company, applicant herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the applicants herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.


Marjorie J. Bolles
Notary

My Commission Expires March 31, 1988

Attachment I

Status of Agenda Items Discussed at the Meeting
with the NRC-ICSB on December 1, 1983

<u>Item No.</u>	<u>Status</u>
12	Confirmatory
16	Confirmatory
41	Confirmatory
23/58	Open
A-1	Closed
A-2	Closed
A-4	Closed
A-6	Closed

Attachment II

Summaries of discussion of eight (8) Agenda items discussed
during December 1, 1983 ICSB Meeting

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item 12 (7.1):

The FSAR Table 1.8N-1, Conformance to Regulatory Guide 1.53, you state that Failure Mode and Effect Analysis (FMEA) results from WCAP-8584 are equally applicable to actuation and actuated equipment. Provide information to demonstrate that the interface criteria in Appendix B & C of WCAP-8584 has been incorporated in BOP design.

Summary of Discussion: (7/83 meeting)

A response will be provided at a later date.

Status: (7/83 meeting)

This item is open.

Summary of Additional Discussion (12/83 meeting)

We have reviewed the referenced WCAP-8584 and have determined that the system designs within the BOP scope meet the interface criteria in Appendix B and C of WCAP-8584. FSAR Section 7.3 will be revised to include a specific statement to demonstrate that the interface criteria in Appendix B & C of WCAP-8584 have been incorporated in BOP design.

Status: (12/83 meeting)

This item is confirmatory

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item 16 (7.2):

Using detailed plant design drawings, discuss the reactor trip breaker and undervoltage relay testing procedures, and the capability of independent verification of the operability of reactor trip breaker shunt and undervoltage coils.

Summary of Discussion (7/83 meeting)

A discussion of the diverse features of the undervoltage and shunt trip of the reactor trip breakers (present design) and testability of both was provided in the ICSB meeting. The present Millstone 3 reactor trip breaker design does not have the design provision for the shunt trip to be independently tested. The Westinghouse Owners Group (WOG) generic solution for the modification of the Westinghouse-design reactor protection system to accommodate the addition of an automatic reactor trip via the reactor trip switchgear shunt coil trip attachment will be evaluated.

Status: (7/83 meeting)

This item is open.

Summary of Additional Discussion (12/83 meeting)

On August 10, 1983, the NRC issued the Final Safety Evaluation Report (SER) on the Westinghouse Owners' Group (WOG) generic design modification to provide automatic reactor trip system actuation of the breaker shunt trip attachments. The SER endorsed the generic design, but listed thirteen items that must be addressed on a utility-specific basis prior to implementation of the shunt trip modification. The generic design has been evaluated to determine the applicability to Millstone 3 plant. The WOG generic modification for the automatic shunt trip actuation of the reactor trip system breakers will be incorporated to Millstone 3 design. The specific information package will be submitted to the NRC for review when finalized.

Status: (12/83 meeting)

This item is confirmatory

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item 41 (7.3)

Discuss the testing provision in the engineered safety feature P-4 interlocks.

Summary of Discussion: (7/83 meeting)

A discussion of the testing provisions in the engineered safety feature P-4 interlocks was provided at the ICSB meeting. The discussion included implementing the Westinghouse recommendation into the test procedure. Specific testing provisions will be submitted to the NRC for review when finalized.

Status: (7/83 meeting)

This item is open.

Summary of Additional Discussion: (12/83 meeting)

A discussion of the engineered safety feature P-4 interlock testing was presented during the ICSB meeting.

The discussion included implementing the Westinghouse recommendation into the test procedure by testing at the switchgear or implementing NNECO's test procedure by installing a permanently installed voltmeter in the control room and hardwiring into the system.

An evaluation of both procedures is under review at this time and a specific test procedures will be submitted to the NRC for review when finalized.

Status: (12/83 meeting)

This item is confirmatory.

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item 23 (7.2) (7.6):

Using detailed schematics, describe the design of pressurizer PORV control and the block valves control, and verify that no single failure will preclude the automatic actuation logic for all modes of operation.

Summary of Discussion: (7/83 meeting)

The design of pressurizer PORV control and the block valves control was discussed at the ICSB meeting. The discussion focused on the possibility that a single failure could preclude the automatic actuation logic for all modes of operation including low temperature operation. The updated versions of electrical schematics for pressurizer PORV control and the block valves control will be provided to the NRC for review.

Status: (7/83 meeting)

This item is open.

Summary of Additional Discussion: (12/83 meeting)

The updated versions of electrical schematics for pressurizer PORV control and the block valves control will be provided to the NRC for review by end of March 1984.

Status: (12/83 meeting)

This item is open.

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item 58 (7.6):

Discuss interlocks for RCS pressure control during low temperature operation.

Summary of Discussion (7/83 meeting)

Refer to Agenda Item 23.

Status: (7/83 meeting)

This item is open.

Summary of Additional Discussion: (12/83 meeting)

The updated versions of electrical schematics for pressurizer PORV control and block valves control will be provided to the NRC for review by end of March 1984.

Status: (12/83 meeting)

This item is open.

ADDITIONAL AGENDA ITEMS
INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item A.1:

Control Building Isolation Reset - Whenever an automatic isolation signal is bypassed, all other control building isolation signals are blocked.

Summary of Discussion: (12/83 meeting)

A discussion of the Control Building isolation reset was presented using revised marked-up electrical schematics at the ICSB meeting. The NRC staff accepted the new logic used to preclude the blocking of the control building isolation signals whenever an automatic isolation signal is bypassed.

Status: (12/83 meeting)

This item is closed.

ADDITIONAL AGENDA ITEMS
INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item A.2:

The Transfer Switch Problem - Whenever the control for the turbine-driven auxiliary feedwater pump is transferred from the main control room to the auxiliary shutdown panel, the turbine-driven auxiliary feedwater pump starts automatically.

Summary of Discussion: (12/83 meeting)

A discussion of the control of the turbine-driven auxiliary feedwater pump from the main control room and from the auxiliary shutdown panel was presented using revised marked-up electrical schematics. The NRC staff accepted the new logic used to preclude the above concern.

Status: (12/83 meeting)

This item is closed.

ADDITIONAL AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item A.4:

Power lock-out feature for certain Motor Operated Valves - Certain valve operators can be power locked out during plant operation from the rear of the main control board. In this mode a spurious operation at the main control board (involving an operator action) will result in the erroneous indication of the valve position.

Summary of Discussion: (12/83 meeting)

A discussion of the power lock-out feature for certain motor operated valves was presented using revised marked-up electrical schematics. Also an informational list of affected motor operated valves was provided to the NRC staff. The NRC staff accepted the new schematic used to preclude the above concern.

Status: (12/83 meeting)

This item is closed.

ADDITIONAL AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item A.6:

Hot & Cold Leg Temperature indication as per 1.97 - The present Millstone 3 design provides a single point hot and cold temperature measurement for each RCS loop. Further, all cold leg temperature measurements are dependent on one power source and all hot leg temperature measurements are dependent on another power source. Thus the loss of a single power source could result in the loss of all hot leg or cold leg temperature indication.

Summary of Discussion: (12/83 meeting)

A copy of the Westinghouse Owners Group (WOG) letter dated June 14, 1983 (NSID/WOG-108) to the NRC on the above concern was presented to the NRC staff during the ICSB meeting. It was stated that the applicant concurs with WOG position. It was also pointed out that a diverse measurement is available for hot leg and cold leg temperature measurement in case of loss of all hot leg or cold leg temperature indications. (core exit thermocouples for hot leg temperature and the steam line pressure of appropriate loop for cold leg temp.)

Status: (12/83 meeting)

This item is closed.

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda item 9 (7.1)

We request that the setpoint methodology for each Reactor Protection System (RPS) and Engineered Safeguards Features (ESF) trip setpoint values be provided for both NSSS and BOP scope of supply at the time the Technical Specifications are submitted for review.

Summary of Discussion: (7/83 meeting)

For Millstone 3, the setpoint methodology for each Reactor Protection System (RPS) and Engineered Safeguards Features (ESF) trip setpoint for NSSS scope of supply will be similar to the Virgil Summer and D.C. Cook plant. The determination of the Millstone 3 setpoints within the scope of NSSS will be consistent with the method used for the Summer plant. The setpoint methodology for BOP scope of supply is presently under review. When finalized, the setpoint methodology will be submitted to the NRC for review. This information is expected to be submitted by January 1985.

Status: (7/83 meeting)

This item is confirmatory.

Additional Information: (12/83)

The setpoint methodology for BOP scope of supply (NETM-43) was submitted to the NRC for review during ICSB meeting.

Status: (12/83)

This item is closed.

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item 10 (7.1):

The FSAR information which discusses conformance to Regulatory Guide 1.22 is incomplete. Section 7.1.2.5 has not provided the justification for not testing at power the main feedwater isolation valves, feedwater control valves, reactor coolant pump cooling water isolation valves, and reactor coolant pump breakers. Provide the justification for not testing for these items at power. Also discuss the capability to perform 10 percent partial stroke of main steam isolation valves and main feedwater isolation valves.

Summary of Discussion: (7/83 meeting)

During initial submittal of the Millstone 3 FSAR, a discussion on the justification for not testing the main feedwater isolation valves, feedwater control valves, reactor coolant pump cooling water isolation valves at power was inadvertently omitted from FSAR Section 7.1.2.5. The Millstone 3 FSAR Section 7.1.2.5 will be revised to include the above justification. During the ICSB meeting the justification for not testing the reactor coolant pump breaker at power was provided to the staff. Refer to the response to Agenda Item 32 for discussion on the capability to perform 10-percent partial stroke of the main steam isolation valves and main feedwater isolation valves.

Status: (7/83 meeting)

This item is confirmatory.

Additional Information: (12/83)

Millstone 3 FSAR Section 7.1.2.5 was revised to include the justification for not testing at power the main feedwater isolation valves, feedwater control valves, reactor coolant pump cooling water isolation valves and reactor coolant pump breakers. (See Amendment 3 to FSAR dated September 1983.)

Status: (12/83)

This item is closed.

AGENDA ITEMS

INSTRUMENTATION AND CONTROL SYSTEMS BRANCH

Agenda Item 19 (7.2)(7.6)

Using detailed plant design drawings, discuss the reactor coolant loop isolation design and valve interlocks.

Summary of Discussion: (7/83 meeting)

A discussion of the reactor coolant loop isolation design and valve interlocks was provided using P&IDs and schematics during the ICSB meeting. The option of N-1 loop operation for Millstone 3 is being evaluated. When the evaluation is completed, additional information on N-1 loop operation will be submitted to the NRC for review.

Status: (7/83 meeting)

This item is confirmatory.

Additional Information (12/83)

The applicant has determined to use the option of N-1 loop operation for Millstone 3 and the appropriate changes to the FSAR will be submitted to the NRC for review when finalized.

Status: (12/83)

This item is confirmatory.

Attachment II

Description of the NRC Concern

Agenda Item A.7:

The compliance analysis provided in the Section 7.3 to satisfy the requirements of Section 4 of IEEE 279-1971 for the ESF control systems (within BOP scope of supply) is not adequate. Discuss the requirements of IEEE std. 279, such as testability, manual initiation, etc. and revise FSAR Section 7.3.