

# NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY  
THE HARTFORD ELECTRIC LIGHT COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
NEW ENGLAND WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

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August 26, 1981

Docket No. 50-336  
A01740

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

- References:
- (1) D. G. Eisenhut letter to W. G. Council, dated September 19, 1980, Transmitting the Revised Order for Modification of License.
  - (2) B. H. Grier letter to W. G. Council, dated January 14, 1980, Transmitting I&E Bulletin 79-01B.
  - (3) R. A. Clark letter to W. G. Council, dated October 24, 1980, Transmitting the Immediately Effective Order for Modification of License and Technical Specification.
  - (4) W. G. Council letter to D. G. Eisenhut, dated October 31, 1980.
  - (5) D. G. Eisenhut letter to All Licensees of Operating Plants and Applicants for Operating Licensees and Holders of Construction Permits, dated January 19, 1981.
  - (6) W. G. Council letter to D. G. Eisenhut, dated January 30, 1981.
  - (7) T. M. Novak letter to W. G. Council, dated April 14, 1981.
  - (8) W. G. Council letter to T. M. Novak, dated April 30, 1981.
  - (9) R. A. Clark letter to W. G. Council, dated May 27, 1981.
  - (10) W. G. Council letter to Dr. J. Hendrie, dated June 4, 1981.
  - (11) W. G. Council letter to H. R. Denton, dated July 16, 1981.
  - (12) NRC Staff Response to "Petition for Extension of Deadline for Compliance with CLI-80-21", dated July 31, 1981.
  - (13) W. G. Council letter to D. G. Eisenhut, dated August 14, 1981.
  - (14) W. G. Council letter to H. R. Denton, dated December 4, 1980.
  - (15) D. G. Eisenhut letter to W. G. Council, dated August 14, 1981.
  - (16) W. G. Council letter to D. G. Eisenhut, dated August 20, 1981.

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5/1/40

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2  
Environmental Qualification of Electrical Equipment

By Reference (1) the NRC issued an Order for Modification of License, effective immediately, which required Northeast Nuclear Energy Company (NNECO) to submit information regarding the environmental qualification of safety related electrical equipment by November 1, 1980. Specifically, the NRC ordered the submittal of information which fully and completely responded to the Staff's requests specified in Reference (2). By Reference (4), NNECO docketed a comprehensive submittal responding to the Commission's requirements regarding Environmental Qualification, thereby fulfilling the Order for Modification of License imposed on DPR-65.

Since the docketing of Reference (4), significant progress has been made toward the resolution of this most complex issue, thereby leading to compliance with the provisions of Reference (3) and the Commission's Memorandum and Order CLI-80-21. The purpose of this submittal is to provide a detailed synopsis of the progress achieved to date towards these goals, to docket a detailed response to the Safety Evaluation Report (SER) for Millstone unit No. 2 within the requested 90-day interval, and to demonstrate conclusively that continued operation of Millstone Unit No. 2 is consistent with public health and safety considerations.

The format of this report is comparable to that docketed in Reference (4). To facilitate Staff review of the contents of this report, the Staff is hereby provided the following sequence of major events and submittals summarizing the evolution of the Environmental Qualification issue for Millstone Unit No. 2. A complete sequence of events is provided in the Introduction and Chronology section of the attached report.

By Reference (5) the Staff clarified its requirements on four aspects of the Environmental Qualification issue. Of particular import was the revised position on requirements for equipment required only to achieve cold shutdown. Such equipment was addressed primarily by Reference (6), wherein it was stated that the Reference (5) guidance on cold shutdown was not incorporated. Reference (6) noted that subsequent evaluations and a review of the Staff's subsequently issued SERs may alter NNECO's commitments to upgrade or replace certain components. Such evaluations have been completed and the revised positions on equipment required only to achieve cold shutdown are identified in the attached report.

By Reference (7) the Staff transmitted its "Partial Review of the Equipment Evaluation Report by the Office of Nuclear Reactor Regulation" for Millstone Unit No. 2. The Staff stated that NNECO should review the identified deficiencies and their ramifications, and provide an overall finding regarding continued safe operation of the facility. Reference (8) provided NNECO's response to Reference (7) and reiterated its conclusion that the Staff concerns identified in Reference (7) do not alter the determination that Millstone Unit No. 2 can continue to be operated safely. Numerous and significant concerns and objections to the contents of Reference (7) were noted. Eight specific issues were identified in the transmittal letter of Reference (8); these formed the basis for NNECO's assertion that the then current status of the Staff SER did not accurately reflect the qualification status of electrical equipment at Millstone Unit No. 2. NNECO further suggested that the identified concerns be discussed and evaluated in detail prior to issuance of the SER and Technical Evaluation Report (TER) for Millstone Unit No. 2. NNECO was subsequently informed that scheduler and other constraints on the Staff would preclude such an exchange from occurring.

By Reference (9) the Staff transmitted the SER for Millstone Unit No. 2 and required an item-by-item reevaluation of the safety related electrical equipment within 90 days. Although revised interpretations articulated by the Staff since the issuance of Reference (9) have made our task much more difficult, NNECO committed the resources to assure that its response would be made on the 90-day schedule. Reference (9) also transmitted the associated TER which in some instances identified a qualification status or alleged a deficiency different from that documented in the SER or in NNECO's previously submitted Environmental Qualification documentation. Specific instances of such anomalies are identified in the attached report.

In Reference (10) NNECO summarized the basis for its recommendation that the June 30, 1982 deadline established by CLI-80-21 be extended. It was stated that full compliance with this deadline was neither appropriate, realistic, nor attainable. The concepts and concerns identified in Reference (10) were reiterated and endorsed by the majority of licensee representatives in attendance at the July 7 - 10, 1981, Environmental Qualification meeting in Bethesda, Maryland. NNECO's observations and feedback regarding the conduct of this meeting were documented in Reference (11). In response to statements and perceptions articulated by the Staff during the subject meeting, NNECO provided detailed comments in Reference (11) on the following subject areas:

- o Resource expenditures associated with equipment qualification issues.
- o Quality and accuracy of the SER. It was noted that in the case of Millstone Unit No. 2 the SER agreed with the previously docketed qualification status in only 64 percent of the cases. This percentage discounts the fact that Reference (9) states that some 251 equipment types were assessed by the Staff, whereas NNECO indicated that only 131 equipment types required qualification.
- o Actions appropriate for mild environments. NNECO indicated that no additional documentation is required to assure operability of safety related electrical equipment located in mild environments. Further, NNECO has concluded that for safety-related equipment located in mild environments, the license requirements issued by Reference (1) have been fulfilled.

- o The issue of the June 30, 1982 deadline.
- o NNECO also offers the observation that certain of the Staff's clarifications and interpretations are not specifically articulated in the DOR Guidelines or NUREG-0588. Inasmuch as these latter two documents are the qualification requirements imposed by Order, resolution of any discrepancies between the verbal Staff guidance and the requirements would facilitate resolution of this issue.

By Reference (12) the Staff formally responded to the Commission and provided a recommendation to the industry petition for extension of deadline for compliance with CLI-80-21. NNECO was a petitioner in this action. Of the four options identified by the Staff, the second option was endorsed. This action would extend the existing deadline for a period of one year. For reasons discussed above and in Reference (12), NNECO's current plans and schedules for achieving compliance reflect this revised schedule. It is recognized that such schedules do not conform to the existing license conditions; nonetheless, no other approach is feasible. If the Commission should reject the Staff recommendation on the deadline extension, the only alternative left to NNECO would be to seek a stay of exemption from the deadline, or affirm the hearing request. Of course NNECO and the NRC Staff prefer to avoid this situation.

In response to the Staff guidance on replacement parts included in Reference (5), NNECO docketed Reference (13). Evidence of application of the position presented in Reference (13) is retained in the central qualification file and is available for Staff review as required.

One of the major pending questions on this subject is the ultimate disposition of the Reference (14) request for hearing. Very recently, by Reference (15), the Staff proposed continued abeyance of this request until 30 days after Commission action on the industry petition. NNECO's concurrence in this approach was formalized by Reference (16). One of the purposes behind the extensive discussion on the evolution of the Environmental Qualification issue is to illustrate the frequency and specificity of NNECO reports aimed at resolution of disputed technical issues. We restate our preference to achieve resolution of disputed technical issues during the iterative process with the Staff. NNECO representatives have been intimately involved in the numerous forums established to discuss and resolve these technical issues. We are currently actively engaged in the finalization of industry positions on some 14 technical issues recently identified by the Staff as representative of major licensee concerns. These positions are applied to specific environmental parameters and/or components at the Millstone facility to provide a consistent position on these disputed matters. It is our intention that resolution of these issues on a generic basis will be facilitated by incorporating the industry position into the attached 90-day response on a component-basis as appropriate.

The attached report has been designed in a manner intended to simplify the interpretation of NNECO's positions. It is patterned after the Reference (4) submittal, and all System Component Evaluation Worksheets (SCEWs) are being resubmitted in this report. As identified in the Table of Contents, included are:

- o Introduction and Chronology. This section has been updated to reflect docketed correspondence since the submittal of Reference (4).
- o Environmental service conditions. A discussion of the applicable environmental parameters has been included where NNECO's position is changed from that previously documented. When the position is unchanged, a reference to the current status is provided. In addition to the previously discussed parameters, additional sections regarding margin and quality assurance procedures are included. These sections have been added in response to verbal Staff requests during the July 7 - 10 meeting.
- o Appendices I and III are unchanged from Reference (4) and are not addressed further in this report.
- o Appendix II has been updated in its entirety. Where the SCEW sheet demonstrates full and complete equipment qualification, one separate sheet has been attached to summarize our response to Reference (9). This separate sheet provides an explicit discussion of what new information is included in the SCEW sheet, a response to the SER concerns, a response to the TER concerns, corrective actions and schedules, and justification for continued operation. In the section responding to SER concerns, the deficiencies alleged by the Staff are repeated using the same coding to minimize the need to refer to the SER. Since numerous components have the same disposition, generic replacement schedules have been developed and are referenced on these separate sheets as appropriate. For those components where full qualification documentation has not been provided, discrepant equipment summary sheets in a format identical to Reference (4) are provided. It is reiterated that corrective action schedules reflect the Staff recommendation to the Commission on the deadline.

The transmittal letter of Reference (4) identified nine bases and assumptions utilized in its preparation. Unless superseded by the fulfillment of commitments made, such as addressing equipment required for cold shut-down or TMI related equipment, these assumptions were utilized again. Of particular relevance are the generically applicable considerations which supplement the component-specific justification for continued operation for components lacking full and complete qualification documentation.

Regarding our previously stated intention to pursue plant-specific meetings or other methods to resolve disputed technical issues, the following update is provided. During the interval between the July 7 through 10 meeting and the docketing of this letter, several telephone discussions with the Staff were made in an attempt to reduce the uncertainty in interpreting the NRC position. For instance, for one component located outside the containment building, the Staff alleged that the temperature and pressure qualification documentation was deficient. In fact, this component was located in an environment where the only parameter which becomes more severe as a result of a postulated High Energy Line Break (HELB) is radiation. This parameter becomes more severe because of the proximity of this component to recirculating radioactive fluids. When confronted with this anomaly, the Staff could not provide a response. Similar difficulties were encountered with other equally enigmatic alleged deficiencies.



Because of these verbal discussions with the Staff, and the proximity of the 90 day response date, NNECO opted to conduct the next iteration with the Staff on qualification status in writing. Another factor influencing this decision was the necessity to formally respond to all alleged deficiencies documented by the Staff independent of the results of any verbal exchange. In the interest of avoiding this unfortunate circumstance in the future, we recommend that our technical staffs interact to whatever degree is required to ensure that accurate and interpretable SER supplements are issued.

Quantification of NNECO's progress towards resolution of the environmental qualification issue is presented in the following table. A total of 128 equipment types (SCEW sheets) are addressed, rather than 131 as indicated in Reference (11), as three SCEWS were determined to be duplicates of a fourth SCEW sheet which remains applicable.

TOTAL SCEWS	128
Fully Environmentally Qualified NOW	87 (68%)
Full Qualification Scheduled To Be Achieved During 1981 Refueling Outage	23 (18%)
Full Qualification Scheduled To Be Achieved By June, 1983	18 (14%)

Please note that prior to resuming plant operation from the next refueling outage currently scheduled to begin in early December, 1981, approximately 86% of the equipment types which require environmental qualification will in fact be fully qualified.


In summary, we emphasize that favorable NRC Staff and Commission action on the major policy and technical issues will substantially influence our disposition of the hearing request currently being held in abeyance. The key issues for Millstone Unit No. 2 are:

- o The deadline
- o Mild environments
- o Cold shutdown
- o Aging
- o Issuance of accurate SER supplements

Throughout this effort we have evaluated the justification for continued operation and continue to conclude that there exists reasonable assurance that public health and safety is being adequately protected during the time necessary for corrective action. We will continue to be actively engaged in the resolution of the remaining issues and look forward to obtaining a favorable SER on all electrical components requiring Environmental Qualification.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
W. G. Counsil  
Senior Vice President

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

*August 26, 1981*

Then personally appeared before me W. G. Counsil, who being duly sworn, did state that he is Senior Vice President of Northeast Nuclear Energy Company, a Licensee herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Licensees herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

*Shirley M. Oster*  
Notary Public

My Commission Expires March 31, 1986