

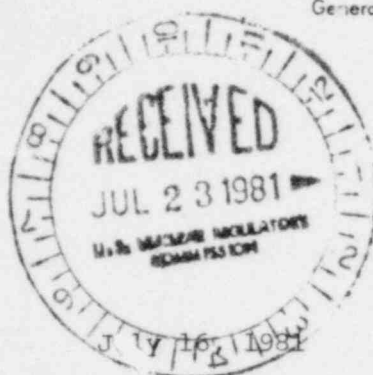
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Docket Nos. 50-213

50-245

50-336

B10233

Mr. Harold R. Denton
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

- References: (1) W. G. Council letter to D. G. Eisenhut, dated June 26, 1981.
(2) W. G. Council letter to Dr. J. Hendrie, dated June 4, 1981.
(3) W. G. Council letter to D. G. Eisenhut, dated December 4, 1980.

Gentlemen:

Haddam Neck Plant
Millstone Nuclear Power Station, Unit Nos. 1 and 2
Environmental Qualification

In the interest of ensuring timely feedback of the NRC Staff on key milestones on the issue of environmental qualification, we are taking this opportunity to provide our observations on the proceedings of the July 7-10, 1981 environmental qualification meeting in Bethesda. In addition, it is our intention to elucidate the major considerations utilized in arriving at the positions documented in this letter.

This letter addresses only the issue of environmental qualification of electrical equipment. The additional topics raised at the meeting, including the environmental qualification of mechanical equipment, and the seismic and dynamic qualification of mechanical and electrical equipment, will be the subject of separate correspondence.

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By Reference (1), Connecticut Yankee Atomic Power Company (CYAPCO) and Northeast Nuclear Energy Company (NNECO) provided their perception of the ability of the subject meeting to address the pending environmental qualification concerns as they exist at the Haddam Neck Plant, Millstone Unit No. 1, and Millstone Unit No. 2. A total of seven CYAPCO and NNECO representatives were in attendance at this meeting full time, to ensure that a representative would be present during all panel discussions and question and answer sessions. Several consultants were also in attendance to ensure that all pertinent information would be utilized during subsequent steps in the qualification process.

OBSERVATIONS OF THE JULY 7-10, 1981 MEETING

Specific comments regarding information obtained during the meeting and applications of that information to our three operating units are provided in the attachment to this letter. Based upon an evaluation of the proceedings during the meeting, it is our position that additional dialogue on a plant specific basis will be necessary to obtain the degree of understanding necessary to implement those corrective actions necessary to resolve the environmental qualification issue. The meeting was of some benefit in amplifying and clarifying the Staff's position on specific points. There remain a significant number of unresolved questions which we will first attempt to resolve by telephone. We currently believe that a meeting will be required to resolve the remaining questions.

BACKGROUND

Reference (2) identified the major environmental qualification concerns, especially with regard to the June 30, 1982 deadline, to the extent they could be defined prior to a review of the Safety Evaluation Reports (SER's) and Technical Evaluation Reports (TER's). An amplification of the Reference (2) concerns is provided below.

Since the issuance of I&E Bulletin 79-01B, CYAPCO and NNECO have collectively expended approximately \$1 million to date attempting to obtain all available qualification documentation, preparing submittals to the NRC, establishing and maintaining the central file, and conducting further engineering studies. In addition, approximately \$12 million has been expended in the implementation of environmental qualification. Prior to the issuance of the Bulletin, some \$4 million was expended on the replacement of all safety-related cable and all safety-related electrical penetrations at the Haddam Neck Plant. An additional \$3 million was expended to replace all the safety-related electrical penetrations at Millstone Unit No. 2. Dozens of projects have been initiated to evaluate the qualification documentation or investigate the availability of qualified equipment for those cases where the optimum corrective action has been determined to be replacement. We project that between \$10 million and \$50 million will be expended during this evolution. The broad range in projected expenditures results from uncertainties in the application of NRC criteria to the components installed at the three operating nuclear facilities as well as uncertainties in the costs associated with the engineering, procurement, and installation of new equipment. These projections also assume that implementation deadlines will be relaxed such that all modifications will be implemented during planned outages

scheduled for other purposes. If that assumption is incorrect, additional tens of millions of dollars in cost would be incurred.

STATUS OF THE SER's

In view of the magnitude of the financial exposure associated with this matter, it is imperative that the NRC document in complete SER's and supplements its concurrence with CYAPCO and NNECO proposed corrective actions prior to their implementation. The evolutionary nature of the Staff's requirements necessitates this position. The current version of the SER's and the TER's falls well short of these objectives. A synopsis of the current comparison between the qualification status docketed by CYAPCO and NNECO in the SER's is presented as follows. The comparison between the submitted material and the SER position is categorized in three types:

1. The submitted material agrees with the SER position.
2. The submitted material disagrees with the SER position, such that components previously docketed as qualified are alleged to be deficient.
3. The submitted material was not addressed in the SER.

	<u>Haddam Neck Plant</u>	<u>Millstone Unit 1</u>	<u>Millstone Unit 2</u>	<u>Total</u>
Total SCEWS* Submitted	52	110	131	293
1. SER Agreement	20 (38%)	64 (58%)	84 (64%)	168 (57%)
2. SER Disagreement	16 (31%)	26 (24%)	46 (35%)	88 (30%)
3. Not addressed by the SER	16 (31%)	20 (18%)	1 (1%)	37 (13%)

Our observations on the significance of the information tabulated in the above matrix follow.

1. For over 40% of the qualification sheets docketed, the NRC position conflicts with what we believe to be the correct qualification status.
2. The SER fails to provide the detailed basis for the deficiencies noted. It is difficult to respond to such deficiencies without more specific information.
3. We have been and are continuing to utilize the TER's in an attempt to obtain this more detailed information. In many instances it is difficult to establish an unambiguous correlation between the SER deficiencies and the TER data.
4. During the subject meeting, the Staff repeatedly stated that the majority of the qualification information submitted since November 1, 1980 has yet to be incorporated into the SER's. Over eight months have elapsed and a significant amount of data has been docketed during this interval. Our ability to meet the June 30, 1982 deadline or any

*System Component Evaluation Work Sheets

other extended deadline which we hope to establish continues to be severely compromised by the lag between presenting a position and obtaining feedback from the Staff. On several separate occasions during the meeting, the Staff expressed its intention to remain off the critical path in the qualification effort. For many components this is not the case. We noted above that for some 88 components (30% of the total), qualification documentation previously submitted is alleged to be deficient. Inadequate docketed bases for the NRC positions have been provided.

From a broader prospective, it has historically been proven to be imprudent to proceed with extensive plant modifications without a final, written Staff evaluation. With all the remaining uncertainties on this issue and the pendency of another Staff clarification letter, a complete and final SER must be issued before corrective actions can be implemented. It is emphasized that such a position is not illustrative of an interest to delay resolution of this issue. The sincerity of our efforts is exemplified by the previously noted fact that over \$20 million has already been expended in resolving environmental qualification concerns. The Staff's expressed intention to remain off the critical path does not alter our evaluation of the factual data presented above. The current Staff position requires implementation of plant modifications without written assurance of their ultimate acceptability to the NRC. This position represents an unacceptable financial burden to CYAPCO and NNECO.

During the latter part of 1980, without a request from CYAPCO and NNECO, the Staff elected to issue an Order for Modification of license and an amendment to the Technical Specifications regarding environmental qualification. The method that the Staff had elected to utilize to impose environmental qualification requirements is among the reasons that the Reference (3) hearing request was docketed. Such action was necessary to document formally our evaluation of the appropriateness of such action by the Staff. We have been, and continue to be, willing to explore other means to resolve these concerns. We have voluntarily agreed to hold the hearing request in abeyance until the 90-day response has been docketed; however, if the Staff fails to provide a more prompt and complete basis for the deficiencies noted and if the June 30, 1982 deadline fails to be relaxed in the interim for the reasons identified in Reference (2), we must proceed with the hearing alternative.

During the meeting the Staff provided its position on the legal significance associated with any interpretation or clarification provided during the proceedings. It was indicated that the DOR Guidelines and NUREG-0588 continue to be the documents containing the official Staff requirements. If the information presented during the meeting is to be utilized in the most meaningful fashion, it will be necessary for the Staff to identify the mechanism (Bulletin supplements, for example) by which such information can be officially quoted as an acceptable Staff position.

MILD ENVIRONMENTS

The current draft of the NRC position on mild environments also merits additional comment at this time. CYAPCO and NNECO emphatically endorse the AIF position paper on mild environments (see AIF letter, Stephen H. Howell to H. R. Denton, dated July 2, 1981). Equipment located in

mild environments does not experience significant stress due to a change in service conditions during a design basis event. Equipment failures due to aging degradation are adequately addressed by surveillance, testing, and periodic maintenance programs already in existence. The mild environment issue is not one that, from a technical and safety standpoint, is cause for concern. CYAPCO and NNECO will not initiate the manpower-intensive program discussed by the Staff during the meeting. The proposed program would require the following:

- (a) listing each electrical component in a mild environment
- (b) determining the service conditions of temperature, pressure, radiation, humidity, submergence, background vibration, chemical environment, and dust
- (c) reviewing the design specifications for each component, and
- (d) assessing the relationship between the design specification and the plant environment.

CYAPCO and NNECO conclude that these tasks are not necessary from a plant safety perspective. Further, CYAPCO and NNECO assert that imposition of this requirement would result in a decrease in plant safety as the limited supply of engineers and technicians would be directed from numerous other tasks which would improve overall plant safety and reliability. We strongly urge the NRC to reconsider its current position regarding mild environments in view of its failure to contribute to overall plant safety. Confidence that safety-related electrical equipment will function as designed is achieved by demonstrating and verifying its operability, as opposed to enlarging the central qualification file.

THE JUNE 30, 1982 DEADLINE EXTENSION

Our preferred approach to the June 30, 1982 deadline extension is a two-step process. The optimum vehicle to document deadlines of this nature is not the facility license or the Technical Specifications. The term "deadline" should be changed to "commitment date" which would be documented in normal correspondence to the NRC. The two-step process is discussed as follows.

For reasons identified in Reference (2) and in the Petition for Extension of Deadline for Compliance with CLI-80-21, a generic extension to July 29, 1983 should be authorized. This would afford all licensees ample time to resolve the majority of the components which require qualification. For those instances when additional time is necessary, a specific, component-oriented schedule for

compliance would be developed. The basis for an extended schedule would be thoroughly discussed by specifying the sequential steps involved in the qualification process, and would accompany the extension letter. This two-step process constitutes a reasonable compromise between the generic and component-specific alternatives. If the Commission considers that the schedule for compliance must exist in the license, the second step of this process would be accomplished via License Amendment requests. We note that the preferred approach offers the significant advantage of avoiding the issuance of numerous License Amendments and accompanying Safety Evaluations. With the preferred approach, the Staff would not be required to document its position unless it disagreed with the licensee's position. In either case, the two-step concept appears to be the most viable alternative.

This concept is also in full accord with the current draft of the AIF position on the deadline extension, which is currently being finalized. For those instances where replacement or testing is necessary, the numerous sequential steps involved and the uniqueness of their application on a plant-specific basis eliminates the establishment of generic, attainable deadline for all plants before 1985 at the earliest. The two-step process reduces the number of components which require unique evaluation to a manageable size.

In summary:

1. The July 7-10, 1981 meeting was of some benefit in comprehending the Staff's position.
2. Issuance of another Bulletin supplement or generic letter would further our understanding of the current Staff positions.
3. As projected in Reference (1), the subject meeting was not a substitute for plant-specific meetings.
4. A two-step process to extend the deadline is appropriate. The licensed condition on the deadline should be eliminated.
5. CYAPCO and NNECO do not intend to conduct any documentation review on the issue of mild environments.
6. Complete and accurate SER's are a necessary step in the qualification endeavor.

We intend to maintain communications with the three project managers to obtain verbal clarifying information and to ascertain the optimum time and agenda for plant-specific meetings designed to resolve the above concerns.

My Staff remains available to amplify any of the above points or recommendations as you require.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

W. G. Council

W. G. Council
Senior Vice President

John P. Cagnetta

By: J. P. Cagnetta
Vice President Nuclear and
Environmental Engineering

ATTACHMENT

OBSERVATIONS OF THE JULY 7-10, 1981 MEETING

1. To exemplify our difficulties in reaching an understanding with the Staff on the issue of containment temperature profiles, CYAPCO provides the chronological evolution of this issue for the Haddam Neck Plant as follows.
 - (a) On October 31, 1980, a plant-specific analysis for containment temperature was provided in full accordance with the DOR guidelines.
 - (b) On February 13, 1981, in its EER, the Staff stated that a higher temperature should have been used. No technical deficiencies in the analysis were identified by the Staff. As a result of information presented during the meeting, we now know such a position was docketed because of the Staff's screening criteria.
 - (c) On February 27, 1981, in the ten-day response to the EER, CYAPCO responded to the points raised in the EER to the extent possible.
 - (d) The recently issued SER does not respond to any of the points raised in the EER, but merely restates that the temperatures are too low. To further complicate the issue, the TER for the Haddam Neck Plant evaluates all equipment within the containment against the profiles provided by CYAPCO.
 - (e) During the period between February 27, 1981 and the issuance of the SER, CYAPCO responded to the SEP Topics on mass/energy releases and containment response. A detailed modeling report and parameter list was provided by letter from W. G. Council to D. M. Crutchfield, dated April 27, 1981. The Staff has not provided any feedback on these submittals.
 - (f) As encouraged by the Staff during the meeting, CYAPCO representatives attempted to resolve this question. The only information obtained was a January 16, 1980 (apparently intended to be 1981) memorandum from W. T. Russell to Z. Rosztoczy. We are currently reviewing this document, but note that a considerable amount of docketed information has been provided on this subject since January 16, 1981. We also question the timeliness of the availability of such information to CYAPCO.

Resolution of this issue is quite significant as all components within containment are potentially affected.

2. A considerable number of clarifications and interpretations were provided during the meeting. While we believe our understanding has been enhanced, there remains considerable uncertainty as to how these clarifications will be applied to the Haddam Neck Plant, Millstone Unit No. 1, and Millstone Unit No. 2. Until these clarifications are published and finalized, convergence to a fully qualified status will be impossible. To illustrate this point, please refer to a NRC-slide used during the morning of Friday, July 10, 1981. On the slide entitled "Test Report Evaluations - 2," Franklin Research Center (FRC) indicated their review was conducted in relation to:

"NRC DOR Guidelines, as modified by NRC Staff interpretations."

We are unaware of the substance of these modifications. This information supports our position on the necessity of a full and complete SER discussed later in this section.

3. Although not documented in official NRC positions, the Staff apparently intends for CYAPCO and NNECO to expand the scope of review previously completed as follows.
 - (a) Re-review of all test reports to develop point specific justification for each service condition.
 - (b) Further subdivide the list of instrumentation included in emergency procedures.
 - (c) Investigate the potential for submergence outside containment to a level of detail beyond that described in previous high energy line break reports.
 - (d) Further evaluate the chemical spray parameter to consider corrosion and analyze long term effects.
 - (e) Regarding aging, it now appears that even 40-year qualified components must be incorporated into the required maintenance and surveillance programs.

The relationship between the DOR Guidelines, the SER evaluations, and the above positions is unclear.