January 28, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the matter of	
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, et al.	Docket No. 50-443 50-444
(Seabrook Station, Units 1 and 2)	

NECNP RESPONSE TO NRC STAFF'S INTERROGATORIES AND REQUEST FOR THE PRODUCTION OF DOCUMENTS

This document constitutes NECNP's response to the interrogatories submitted by the NRC Staff on November 11, 1982. NECNP is still in the course of evaluating many of the contentions and the materials submitted to us by Applicants and Staff, and where appropriate, answers will be supplemented when our evaluation is completed. We note that in many cases, we remain unable to fully develop our position on contentions until the Applicants complete and make available certain required documents.

Q.I(1)-(2). NECNP objects to these interrogatories insofar as they require identification of nonwitness experts retained or informally consulted by NECNP. Such a request goes beyond the scope of discovery of experts allowed by the Federal Rules of Civil Procedure, which generally govern NRC proceedings. Under Rule 26(b)(4)(B), the Staff must show special need before it can discover the identity or the facts and opinions held by

experts who are not expected to testify. Ager v. Jane C. Stormont Hospital and Training School for Nurses, 622 F.2d 496 (10th Cir. 1980). NECNP will identify its expert witnesses when we have made arrangements for their testimony.

Q.I(3)-(4). NECNP has not yet arranged to have expert witnesses testify on any of its contentions in this proceeding. We will supplement our answers to these interrogatories when we have determined who our expert witnesses will be.

Q.I(5). NECNP will identify documents relied on in the course of answering the Staff's interrogatories. The documents referenced include only NRC regulations, decisions, Regulatory Guides, Staff memoranda, and IEEE standards, which we presume the NRC Staff already posesses. Any documents which the Staff does not already have will be provided on request.

I(A)(2)(a). NECNP does not contend that Applicants must comply with NUREG-0588 instead of IEEE-323-1974, but that both standards must be complied with.

I(A)(2)(b). IEEE-382-1972 applies specifically to the qualification of electric valve operators. It contains the following general requirements peculiar to electric valve operators: equipment specifications, type test description, documentation, special procedures for aging simulation, and procedures for design basis accident simulation.

For a list of differences between IEEE-323-1974 and

NUREG-0588, see the memorandum from Edward J. Hanrahan to the Commissioners, dated January 9, 1980, re: Environmental Qualification of Class IE Electrical Equipment. Not the least of these differences is that NUREG-0588 contains a requirement that qualification be established through testing, while IEEE-323-1974 does not.

The DOR Guidelines are not applicable to Seabrook.

I(A)(2)(c). The DOR Guidelines are not applicable to Seabrook. NECNP contends that all requirements of NUREG-0588 should be met by Applicants. We note that these are now condified in the Commission's new environmental qualification rule, 10 CFR 50.49. 48 Fed. Reg. 2729 (January 21, 1983). Qualification may be achieved in a number of ways, which it is the Applicants' responsibility to describe. Since Applicants' environmental qualification report is not yet available for inspection, NECNP is currently unable to evaluate the adequacy of the qualification steps they have taken.

I(A)(2)(d). The Three Mile Island accident exposed safety equipment to harsher accident conditions for a longer duration than that for which equipment is currently qualified. The NRC's recognition that the TMI accident showed that the "Environmental Qualification envelope" should be expanded is reflected in a memorandum from Stephen S. Hanauer, DSS, re: Environmental Qualification (April 6, 1979).

I(B)(1)(a). Those components which NECNP contends must be

environmentally qualified include the steam dump valves, turbine valves, and the steam dump control system. NECNP will identify other specific pieces of residual heat removal equipment that must be qualified when our experts have completed their evaluation of the residual heat removal system.

I(B)(1)(b). The basis for NECNP's assertion that equipment listed in response to Interrogatory I(B)(1)(a) must be environmentally qualified is stated in NECNP's Supplemental Petition to Intervene (April 21, 1982) at 10-11 and NECNP's Reply to the Response by the Applicants and NRC Staff to NECNP's Contentions (June 17, 1982) at 5-6.

I(B)(1)(c). NECNP's reference to GDC 3 was a typographical error which was corrected to GDC 34 in our June 17 filing at page 5. GDC 34 requires that "a system to remove residual heat shall be provided." The standard further requires that

> Suitable redundancy in components and features, and suitable interconnections, leak detection, and isolation capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

NECNP maintains that GDC 34's requirement that a residual heat removal system be provided, with suitable redundancy to accomplish the "system safety function," requires environmental qualification of all residual heat removal systems which may be called upon to function during an accident, including those

specific systems identified in response to Interrogatory I(B)(1)(a).

I(B)(1)(d). A reliable heat removal system is one in which all safety related structures, systems and components and all other structures, systems and components that may be relied on to mitigate an accident and whose failure under postulated accident conditions could prevent the satisfactory accomplishment of required safety-related equipment are capable of functioning in the accident environment.

I(B)(1)(e). NECNP does assert that the decay heat removal system at Seabrook is not reliable. The bases for our assertion are described in the text of our April 21 and June 17 filings at pp. 10-11 and 5-6, respectively. To make the system reliable the Applicants must qualify all systems that may be relied upon to remove heat from the steam generators. At a minimum, these include the steam dump valves, turbine valves, and the steam dump control system.

NECNP has not yet had its experts evaluate this contention in light of the answers by Applicants and Staff to our interrogatories. Where necessary, we will supplement our answers to these interrogatories when this evaluation is completed.

I(B)(2)(a). The technical and regulatory bases for NECNP's assertion that equipment qualification must include specific durational parameters are found in GDC 4, CLI-80-21 and NUREG-0588. By stating that equipment important to safety must

be designed to "accomodate the effects of and be compatible with... the environmental conditions associated with ... accidents", GDC 4 implicitly requires that equipment be qualified to survive the duration of such an accident. A system which functions for a time and then fails could hardly be considered to be compatible with the accident environment. The Commission's own description of environmental qualification in CLI-80-21 reflects this consideration:

> [F]undamental to NRC regulation of nuclear power reactors is the principle that safety systems must perform their intended functions in spite of the environment which may result from postulated accidents. Confirmation that these systems will remain functional under postulated accident conditions constitutes environmental qualification .

Additionally, NUREG-0588, made enforceable by CLI-80-21, specifies that:

> Equipment that is used to perform a necessary safety function must be capable of maintaining functional operability under all service conditions postulated to occur during the installed life for the time it is required to operate. NUREG-0588 at 1.

I(B)(2)(b). NECNP asserts that all equipment which is important to safety must be qualified to function for the time period in which it may be called upon to operate during and following an accident. This includes the equipment listed in Applicants' FSAR at Table 3.11(B)-1 and Appendix 3H, plus other equipment which is important to safety but not included in those tables, which cover "safety related" and "Class IE" equipment. NECNP notes that under 10 CFR 50.49(d), it is Applicants' responsibility to submit to the NRC a list of all

equipment which is important to safety. 46 Fed Reg. 2729 (January 21, 1983). NECNP will review this list and comment on its sufficiency when it is made available.

I(B)(2)(c). The basis for characterizing any piece of equipment as "important to safety" is whether it meets the definition of "safety related" found in 10 CFR 50.49(b)(1) or constitutes equiment "whose failure under postulated environmental conditions could prevent the satisfactory accomplishment of required safety functions by safety related equipment." 10 CFR 50.49(b)(2). NECNP has not applied this analysis to each piece of equipment at the Seabrook facility, since that is Applicants' responsibility. NECNP intends to review Applicants' submittal under 10 CFR 50.49(d) and supplement the answer to this interrogatory regarding any deficiencies in Applicants' list of equipment considered important to safety.

I(C)(a). Because the emergency feedwater HVAC system functions and can be relied on to function only within a particular temperature range, the HVAC system is required to maintain temperatures within that range. Accordingly, GDC 4 requires that it must be environmentally qualified to assure that it will not fail during an accident and thereby allow conditions to occur which would cause or contribute to the failure of the emergency feedwater system.

I(C)(b). NECNP has not yet made a determination of the specific time periods for which equipment in the emergency

feedwater pumphouse HVAC system must be qualified. We intend to make our evaluation based on the conditions and the time specifications postulated in the Applicants' environmental report. Accordingly, we will supplment our answer to this interrogatory when the report is made available.

I(C)(c). At this point, NECNP has sufficient reason in that the HVAC system is equipment important to safety which is not environmentally qualified. Under the single failure criterion, unqualified equipment is assumed to fail in an accident, and therefore speculations about its reliability which are unrelated to its qualification are irrelevant.

I(C)(d). NECNP is not aware of the exact temperature range within which the emergency feedwater system can operate. We note, however, that the Applicants' FSAR states that the ventilation system is designed to keep the temperature below 104 degrees when it is 88 degrees or lower outside; and that the heating system is designed to maintain temperatures at 50 degrees or above when it is 0 degrees or above outdoors. FSAR at §9.4.11.1. These figures appear to represent the outward bounds of the temperatures under which the emergency feedwater system can function.

I(C)(e). NECNP's experts are currently evaluating Contention I.C. We will supplement our answer to this interrogatory when the information becomes available.

I(D)(1)(a). As stated in the text of our contention, this contention is based on a statement in Applicants' FSAR that

they do not completely comply with Reg. Guide 1.150. The FSAR did not explain the extent of the noncompliance. In Applicants' answers to NECNP's interrogatories, they stated that they comply with Recommended Changes to Reg. Guide 1.150, prepared by the Ad Hoc Committee of Electric Untility Industry. Applicants failed to describe, however, the exact manner in which this document differs from the Reg. Guide. When NECNP's experts have compared the Reg. Guide with the recommended changes, and when Applicants have submitted their preservice and inservice inspection plans, we will supplement our answer to this interrogatory.

I(D)(1)(b). NECNP contends that Applicants fail to satisfy the requirement of GDC 1 that:

> Structures, systems, and components important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions to be performed.

I(D)(2)(a). NECNP has described the technical and regulatory bases for this contention in our filing of April 21 at 15-16 and our filing of June 17 at 9-10. We note that Amendment 45 to the FSAR reduced the list of untested functions to eleven.

I(D)(2)(b). NECNP contends that the eleven functions should be tested at power. The regulatory basis for this position lies in Reg. Guide 1.22, which implements GDC 21, and NUREG 0737, Task II.D.1., which requires the testing of reactor coolant system relief and safety valves under test conditions

"equivalent to expected operating and accident conditions as prescribed in the final safety analysis report." NUREG 0737 at II.D.1-2.

I(D)(3)(c). GDC 30 requires the establishment of "means... for detecting, and to the extent practical, identifying the locatic of the source of reactor coolant leakage." Applicants' failure to provide for testing of the entire system at power does not provide adequate assurance that the system will perform when it is called upon to function.

I(D)(3)(d). The failure of the leakage detection system could lead to misinformed operator action and thereby cause or contribute to an accident. Therefore, it is a system "important to safety" which must be environmentally qualified under GDC 4 and 10 CFR 50.49.

I(D)(4)(a)-(c). At this time, NECNP does not intend to litigate Contention I.D.4 because the Staff has indicated a commitment to enforcing IEEE-338-1977. Therefore we have not answered any of the Staff's interrogatories on this contention. In the unlikely event that we should change our position on Contention I.D.4., we will promptly supplement our answers to these interrogatories.

I(F)(a)-(c). NECNP does not intend to pursue this contention because Applicants have stated that they comply with IEE-323-1974. If NECNP should determine that Applicants do not in fact comply with IEEE-323-1974, and renew this contention, we will supplement our answers to these interrogatories.

I(G)(a). No.

(I(G)(b). At this time, NECNP has not determined what additional steps are necessary to assure the accuracy and reliability of the RCS wide range pressure instruments.

I(I)(a). GDC 19 requires that

> Equipment at appropriate locations outside the control room shall be provided (1) with a design capability for prompt hot shutdown of the reactor, including necessary controls and instrumentation to maintain the unit in a safe shutdown condition during hot shutdown, and (2) with a potential capability for subsequent cold shutdown of the reactor through the use of suitable procedures.

I(I)(b). The Seabrook reactor can have no "potential capability" for cold shutdown unless the equiment which Applicants propose to use to reach cold shutdown is environmentally qualified, since unqualified equiment must be assumed to fail under the Single Failure Criterion.

I(I)(c). NECNP's experts are now in the process of evaluating this contention, and our answer to this is a partial one, which we will supplement when the information becomes available to us. We note that the Commission has recognized the importance of cold shutdown as opposed to hot standby in a recent revision to Task A-45 of the Unresolved Generic Safety Issues. See Memorandum from Stephen H. Hanauer, re "Approval of Revision 1 of Task Action Plan A-45, "Shutdown Decay Heat Removal Requirements", June 2, 1982, encl. at A-45/5.

I(I)(d). NECNP's experts are in the course of reviewing Contention I.I. in light of Applicants' and Staffs' answers to our interrogatories, and their evaluation is not yet available

to us. We will supplement our answer to this interrogatory when they have completed their evaluation.

I(L)(a). GDC 4; NUREG 0737, Item II.D.3.

I(L)(b). Applicants' FSAR states that Applicants use acoustic accelerometers to detect PORV position. This constitutes an indirect indicator of PORV position in violation of NUREG 0737, Item II.D.3. Applicants' and Staff's answers to our interrogatories indicate, however, that Applicants have actually provided for the installation of direct PORV position indicators. If this is the case, and they are environmentally qualified, NECNP's concern has been satisfied.

I(L)(c). Yes. It appears that they have. See our response to I(L)(b).

I(L)(d). GDC 4 requires that systems and components important to safety must be environmentally qualified.

I(L)(e). NECNP has no reason to believe that the direct PORV position indicators which are purportedly being installed are not qualified. We will reserve final comment on this question, however, until we have been able to examine Applicants' environmental qualification report, which has not yet been released.

I(M)(a)-(d). We have learned from Applicants' answers to our interrogatories that Applicants submitted a new fire protection plan in April of 1982. In light of this discovery, NECNP does not consider it a fruitful endeavor for any of the parties to continue disputing the 1977 plan. We will be

examining the new plan in the near future, and will update our contention and the answers to these interrogatories when we have examined the plan.

I(N)(a)-(b). NECNP has dropped Contention I.N.

I(U)(a). NECNP asserts that the containments of both Units 1 and 2 could be damaged if a turbine missile from one plant struck the other. The FSAR at Figure 3.5.1 shows the trajectory paths of each turbine intersecting the containment of the other plant. Applicants' failure to protect the containments adequately or to assure an acceptably low level of probability of damage due to turbine missiles violates GDC 4, which requires that structures, systems, and components important to safety be protected against the effects of turbine missiles whose launching might occur as a result of equipment failure.

I(U)(b)-(d). At this stage, NECNP relies on the information contained in our contentions on turbine missiles (April 21 filing at 49-50; June 17 filing at 28-30) for the answers to these interrogatories. Our experts are currently reviewing the answers by Applicants and Staff to our interrogatories, and we will supplement our answers to the Staff's interrogatories when they have completed their evaluation of turbine missiles at Seabrook.

II(B)(1)(a)-(b). Applicants' most recent revision of Chapter 17 of the FSAR is still under review by our consultants. We will supplement our answers to these

interrogatories when the information becomes available.

II(B)(3)(a). Applicants' FSAR was amended in August of 1982 to provide that the Nuclear Quality Manager reports to the Vice President--Nuclear Production instead of the Vice President--Production. §13.1. This has not changed the basis for NECNP's complaint that the Nuclear Quality Manager should not be reporting to a supervisor who has primary, first line upper management responsibility for maintaining energy production. That responsibility conficts with the duty to assure strict quality control, which can require frequent plant shutdowns and other actions that reduce electricity production.

NECNP contends that the Nuclear Quality Manager should report either to the Executive Vice President--Engineering and Production, who has overresponsibility for production and quality control but not first line responsibility for maximizing production, or to a lower level of management that is equal in authority to the Vice President--Nuclear Production, but that has no responsibility for maximizing production. It appears from the FSAR that the appropriate supervisor may be the Vice President--Engineering, although the FSAR does not provide enough information about the responsibilities of that position to determine whether it would be appropriate for that function.

II(B)(3)(b). See response to II(B)(3)(a).

II(B)(3)(c). NECNP is not currently aware of any

particular areas of the plant that do not meet regulatory requirements or have been constructed inconsistently with the public health and safety due to the lack of independence of the Quality Assurance Program. We note, however, that Contention II.B.3. relates to Applicants' Quality Assurance for Operations, and thus is distinct from the QA program for construction.

II(B)(3)(d). It is our understanding that Seabrook has not yet begun to operate. Thus, the Quality Assurance Program for Operations presumably has not yet been implemented. Accordingly, we cannot know of any situations in which the Vice-President--Production has overruled the Nuclear Quality Manager with respect to operations QA matters in favor of production.

II(B)(3)(e). See response to II(B)(3)(a). See 10 CFR Part 50, Appendix B, Criterion I, requiring "sufficient independence from cost and schedule when oppoised to safety considerations..."

II(B)(4)(a). The regulatory basis for the requirement that Applicants discuss maintenance, repair and rework over the life of the plant lies in 10 CFR 50.34(b), which requires the preparation of an FSAR discussing the design of the plant and compliance with NRC regulations. In particular, 10 CFR 50.34(b)(6)(iii) and (iv) require description of plans for quality assurance during the life of the plant.

II(B((4)(b). The basis for this assertion is the FSAR's

inadequate discussion of this subject.

II(B)(4)(c). NECNP contends that Applicants must develop a progam for the replacement of parts incorporated into systems, structures and components important to safety, committing to maintaining environmental qualification standards and using testing programs to maintain an assurance of safety.

II(B)(4)(d). The basis for NECNP's position is Applicants' failure to describe such a program in the FSAR.

II(B)(4)(e). NECNP's experts are in the course of reviewing Contention II.B.4, and we will supplement our answer to this interrogatory when the information becomes available.

II(B)(5)(a)-(b). NECNP is unable at this time to answer these interrogatories with any more specificity than that provided in our filings of April 21 (at 63, 65). We will supplement our response when more information becomes available.

Respectfully submitted,

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I hereby affirm that the facts alleged herein are true and correct to the best of my knowledge and belief.

Diane Curran

Diane Curran

Subscribed and sworn to before me this 28th day of January, 1983.

Donna Marie Hilsop

Notary Public

My Commission Expires July 31, 1987

CERTIFICATE OF SERVICE

I certify that copies of NECNP Response to NRC Staff's Interrogatories and Request for the Production of Documents were served this 28th day of January, 1983, by first-class mail or as otherwise indicated, on the following:

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