

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD



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In the Matter of )  
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PUBLIC SERVICE COMPANY OF )  
NEW HAMPSHIRE, et al. )  
 )  
(Seabrook Station, Units 1 )  
and 2) )  
\_\_\_\_\_ )

Docket Nos. 50-443  
50-444

NECNP MOTION TO AMEND  
PETITION TO INTERVENE

Pursuant to 10 C.F.R. § 2.714(a)(3), NECNP moves to amend its Petition to Intervene by adding Contention VII, "Environmental Qualification of Electrical Equipment Important to Safety." As discussed at pages 7 through 10, infra, this filing meets the Commission's standards for amending petitions to intervene found at 10 C.F.R. § 2.714(a)(1) (i)-(v).

NECNP Contention VII. Environmental Qualification of  
Electrical Equipment Important to Safety

Applicants' program for the environmental qualification of electrical equipment at Seabrook does not comply with 10 C.F.R. § 50.49 or General Design Criterion 4 in the following respects:

a) Applicants' program does not provide for the qualification of all electrical equipment "important to safety" as defined by 10 C.F.R. § 50.49(b).

b) Applicants have not met the requirements of 10 C.F.R. § 50.49(d) in that they have not prepared a list of all

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electrical equipment important to safety, including the following required information:

(1) The performance specifications under conditions existing during and following design basis accidents.

(2) The voltage, frequency, load, and other electrical characteristics for which the performance specified in accordance with paragraphs (d)(1) of this section can be ensured.

(3) The environmental conditions including temperature, pressure, humidity, radiation, chemicals, and submergence at the location where the equipment must perform as specified in accordance with paragraphs (d)(1) and (2) of this section.

10 C.F.R. § 50.49(d)(1)-(3). This information is only partially supplied with respect to safety related equipment, and not supplied at all for nonsafety related equipment that is important to safety.

(c) Applicants have not performed an analysis to ensure that the Seabrook plant can be safely operated pending environmental qualification of those components important to safety which Applicants have not yet qualified or as to which the documentation for qualification is not complete.

Basis: The Nuclear Regulatory Commission considers environmental qualification to be "fundamental to NRC regulation of nuclear power reactors." Petition for Emergency and Remedial Action, CLI-80-21, 11 NRC 707, 710 (1980). The Commission's requirement for environmental qualification is expressed in General Design Criteria 1 and 4 of Appendix A to

Part 50; Criterion III of Appendix B to Part 50, and 10 C.F.R. § 50.55a(h). In 1980, in CLI-80-21, the Commission established NUREG-0588 and the DOR Guidelines for Evaluating Environmental Qualification of Electrical Equipment in Operating Reactors as the technical requirements for meeting GDC 4.

Until recently, CLI-80-21 constituted the Commission's standard for compliance with GDC 4. However, on January 6, 1983, the Commission promulgated a final rule on environmental qualification, which became effective February 22, 1983. 48 Fed. Reg. 2732 (January 21, 1983). The rule made several clarifications or changes to pre-existing environmental qualification requirements. The most fundamental clarification in the new rule was its broad definition of the type of equipment which must be qualified to meet GDC 4. This includes not only "safety related" electrical equipment<sup>1</sup>, but non-safety related electrical equipment "whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions..." 10 C.F.R. § 50.49(b)(2).<sup>2</sup>

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<sup>1</sup>"Safety related electrical equipment" is defined in the new rule as equipment "relied upon to remain functional during and following design basis events to ensure (i) the integrity of the reactor coolant pressure boundary, (ii) the capability to shut down the reactor and maintain it in a safe shutdown condition, and (iii) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the 10 CFR Part 100 guidelines. 10 C.F.R. § 50.49(b)(1).

<sup>2</sup>The proposed version of the rule would have required environmental qualification only for "safety related" equipment and excluded nonsafety related equipment whose failure could prevent successful accomplishment of safety functions. 47 Fed. Reg. 2876 (January 20, 1982).

The new rule also requires all licensees and license applicants to prepare a list of equipment important to safety, including detailed information on performance specifications, electrical characteristics, and environmental conditions at the locations where the equipment must perform its function. 10 C.F.R. § 50.49(d)(1)-(3).

Where some equipment remains unqualified, license applicants must submit to the Director of the Office of Nuclear Reactor Regulation an analysis ensuring that the plant can be operated safely pending completion of environmental qualification. This analysis must be submitted in time to allow the DNRR to consider it before the license is granted, and must address specific criteria outlined in 10 C.F.R. § 50.49(i)(1)-(5).

#### Specific Areas of Noncompliance by Applicants

a) The Commission's environmental qualification rule requires that a license applicant's environmental qualification program encompass all electrical equipment which is important to safety, including both safety related equipment and nonsafety related equipment whose failure could impair the function of safety related equipment. 10 C.F.R. § 50.49(a),(b). According to Applicants' answers to NECNP's interrogatories, Applicants have only provided for the qualification of "safety related equipment." Applicants' Answers to NECNP Second Set of Interrogatories on Contentions I.A.2, I.B.1, I.B.2, and I.C, at 3-4 (filed December 16,

1982). In their answers to interrogatories, Applicants equated "safety related" with "important to safety" under the narrow definition which the Commission applies to safety related equipment.<sup>3</sup> Applicants did not recognize or provide for the qualification of an additional category of nonsafety related equipment whose failure could prevent satisfactory accomplishment of safety functions. The overly narrow scope of Applicants' qualification program is confirmed in the Staff's Safety Evaluation Report, which calls for the additional submittal of environmental qualification information from Applicants, stating that "All electrical equipment important to safety, as defined in 10 CFR 50.49, should be included in the environmental qualification program." NUREG-0896, Safety Evaluation Report Related to the Operation of Seabrook Station, Units 1 and 2 at 3-42 (March, 1983).

b) Section (d) of the new rule requires operating license applicants to prepare a list of electrical equipment important to safety. Applicants' FSAR contains a list of "safety related" equipment in Appendix 3H. That list does not include nonsafety related equipment whose failure could prevent the satisfactory accomplishment of safety functions, and therefore fails to satisfy 10 C.F.R. § 50.49(d). The list must also

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<sup>3</sup>See footnote 1.



include the information specified in 10 C.F.R. § 50.49(d)(1) through (3), addressing performance specifications, electrical characteristics, and environmental conditions at the locations where the equipment must perform its function. This information has only been partially provided in Applicants' listing of safety related equipment, and of course has not been provided at all for the important to safety equipment not included in the list. For example, Appendix 3H does not describe performance specifications required by 10 C.F.R. § 50.49(d)(i), such as how quickly after an accident equipment must perform its function; the duration of function after an accident; or the maximum qualification time duration. For many of the components listed in Appendix 3H, there is no information on the safety function. Appendix 3H does not describe the electrical characteristics of the components at all, as required by 10 C.F.R. § 50.49(d)(ii). The environmental parameters described do not include chemicals or submergence, as required by 10 C.F.R. § 50.49(d)(iii). Some of this information is also required by Appendix E to NUREG-0588, which Applicants have not satisfied with respect to equipment located in a harsh environment, according to the SER. SER at 3-42.

(c) For all electrical equipment important to safety for which environmental qualification has not been demonstrated, the new rule requires license applicants to submit

justifications for plant operation pending completion of environmental qualification. 10 C.F.R. § 50.49(i). Applicants must submit this information to the Director of Nuclear Reactor Regulation "for consideration prior to the granting of an operating license." Id.

The Applicants have neither demonstrated that there are no important to safety components which are not qualified, nor submitted a list of such components with justification for operation pending qualification. Furthermore, Applicants have not submitted justifications for plant operation with respect to the identified safety related components whose qualification documentation in Appendix 3H is incomplete. Therefore they violate 10 C.F.R. § 50.49.

Justification for Late Filing Pursuant to 10 C.F.R. § 2.714(a)

This contention is filed as a result of the promulgation of new requirements for environmental qualification of electrical equipment, which were promulgated January 6, 1983, were noticed January 21, 1983, and became effective on February 22, 1983. 48 Fed. Reg. 2732. In addition, the recently issued Safety Evaluation Report for Seabrook Station shows that Applicants have not complied with the new rule. Because this information was not previously available to NECNP, good cause exists for filing this contention at this time. During the five weeks which have expired since publication of the SER, no prejudice

to Applicants has occurred as a result of NECNP's not having filed this contention any earlier, as the SER has already put Applicants on notice that their environmental qualification program is incomplete, in part for failure to include electrical equipment important to safety. SER at 3-42. To this date, Applicants' environmental qualification program remains unapproved by the Staff.

Furthermore, there exists no other means by which NECNP's interest in this issue can be protected, as no other forum exists for the litigation of Applicants' compliance with the Commission's environmental qualification requirements.

NECNP's litigation of this issue will assist the Board in developing a sound record for this case. NECNP is already pursuing several other contentions regarding various aspects of the environmental qualification issue, including Contentions I.A.2, I.B.1, I.B.2, and II.B.4. NECNP has already produced an expert affidavit on qualification of the residual heat removal system at Seabrook, and expects to provide expert testimony on all the aspects of environmental qualification it has raised in this proceeding.

This contention has been raised for the first time by NECNP. No other party represents NECNP's interest in litigating this issue.

NECNP does not anticipate that litigation of this contention will cause significant delays in this proceeding.



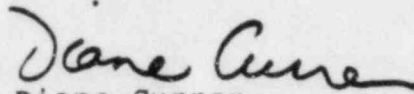
NECNP seeks compliance with straightforward requirements of the new environmental qualification rule. The Applicants are on notice that they must comply with the rule before they receive a license. If any aspect of this issue causes delay in issuance of an operating license, it will be the fact that Applicants have still not provided the NRC Staff with all the information necessary to approve the Applicants' environmental qualification program.

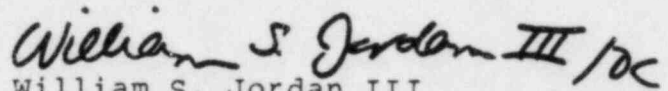
Furthermore, this contention will not broaden the issues in this litigation significantly beyond those already raised. NECNP has a number of contentions addressing specific areas of noncompliance with the Commission's environmental qualification rule. This contention applies the same principle to the broad spectrum of equipment important to safety at Seabrook. The legal issue at the heart of all of these contentions is whether Applicants have provided for environmental qualification of all electrical equipment important to safety.

The Commission is in the process of applying a new rule which embodies one of the most important principles of nuclear reactor regulation, i.e., the concept that safety systems must be qualified to survive accidents in order to perform their functions. It is clear from Applicants' answers to interrogatories that they did not contemplate having to qualify the broader category of equipment which includes nonsafety related equipment that is important to safety. In addition,

the SER has found numerous deficiencies in Applicants' environmental qualification program. It is especially important, therefore, that the Licensing Board address Applicants' compliance with the new rule before the operating license is issued. In the face of Applicants' clear noncompliance with one of the Commission's most fundamental licensing requirements, the Board should accept this contention.

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April 21, 1983

CERTIFICATE OF SERVICE

I certify that on April 21, 1983, copies of NECNP MOTION TO AMEND PETITION TO INTERVENE were served by first-class mail on the following:

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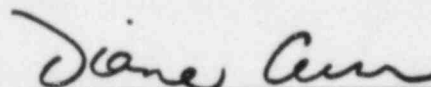
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