UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'82 MAY 26 A10:25

Before the
ATOMIC SAFETY AND LICENSING BOARD

In the matter of:	)	
	)	
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, ET AL.	)	Docket Nos.: 50-443 and 50-444
	)	
(Seabrook Station, Units 1 and 2)	)	
	)	

AMENDED CONTENTIONS OF THE STATE OF NEW HAMPSHIRE
AND GREGORY H. SMITH, ATTORNEY GENERAL
OF THE STATE OF NEW HAMPSHIRE

I. INTRODUCTION

The State of New Hampshire and Attorney General Gregory H. Smith (hereinafter "State of New Hampshire" or "State") filed their Amended Petition to Intervene with contentions on April 5, 1982. At the May 6-7, 1982, Special Pre-hearing Conference, the Board granted leave to the State of New Hampshire to file amended contentions by May 28, 1982, for the purposes of specifying the bases of certain contentions, and rephrasing others. In conformance with the Board's directive, the State of New Hampshire now files its amended contentions.

To amplify the arguments made on behalf of the State of New Hampshire in support of the admissibility of its contentions, the State offers the following discussion on the general requirements for the admissibility of contentions.

II. ADMISSIBILITY OF CONTENTIONS GENERALLY

In responding to the objections interposed by the NRC Staff and the Applicant, the State of New Hampshire faces a dilemma; the Applicant suggests that the State's contentions be more broadly stated, while the Staff would require that the contentions be more specific. Additionally, the Staff has not consistently applied their version of the requirements of admissibility of contentions under 10 C.F.R. Section 2.714(b) in responding to the State's contentions. The Staff, for example, objects to sixteen of New Hampshire's twenty-two contentions on the ground of lack of specificity. The Staff has not, however, objected to the State's contention No. 9 and parts of contention No. 10, even though the bases of these contentions are specified in no greater detail than the State's other contentions. In an effort to clarify the conflicting and internally inconsistent responses from the Staff and the Applicant, the State of New Hampshire outlines below its position of the basis requirement for contentions.

The "reasonable specificity" requirement mandated by 10 C.F.R. Section 2.714(b) is designed to ensure that only concrete and litigable issues are allowed into the proceedings, and to put the parties sufficiently on notice of the general nature of the issues. Philadelphia Electric Co. (Peach Bottom Atomic Power Stations, Units 2 and 3), ALAB-216, 8 A.E.C. 1,

20-21 (1974). It is indisputable that detailed evidence in support of a contention is not required. Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1) ALAB-590, 11 N.R.C. 542 (1980); Peach Bottom, supra at 20.

The Appeals Board in Peach Bottom recognized that these broadly stated principles require an exercise of judgment by a licensing board on a case-by-case basis. Peach Bottom, supra at 20. While the Board recognized that the other parties have to be on sufficient, general notice, it also noted that the licensing proceedings should be available for those persons with real interests at stake and for concrete issues. Id.

The State of New Hampshire has raised in each of its contentions very concrete issues, all of which are put forth to assure that Seabrook Station can be operated without endangering the public health and safety. No one has suggested that New Hampshire has approached its contentions in any other way. The Applicant and Staff, furthermore, are sufficiently on notice generally of what issues they must prepare to defend or oppose. Detailed specifics of every possible litigable issue within a general contention are not required under the "reasonable specificity" standard. As the Appeals Board in its Peach Bottom decision recognized, those asserted contentions which cannot be supported in fact are subject to summary rejection under 10 C.F.R. Section 2.749. Id.

Furthermore, the discovery procedures established under the NRC rules are there for a purpose. These procedures enable an intervenor to gain detailed information needed to litigate properly its contentions. They also allow the Applicant and Staff to determine the factual basis of contentions. To accept the Staff's view of specificity would be to view discovery as an unimportant process, serving no effective purpose, since the Staff would require the State to detail its evidence in the basis of its contention. The State strenuously disagrees with the Staff's apparent position with regard to discovery. It is a proper vehicle for the full and fair investigation and litigation of important issues.

The Staff and the Applicant have objected to the State of New Hampshire's contentions on certain unresolved safety issues and on off-site emergency planning on the ground that they are premature, asserting that these issues can be raised later should the Staff's Safety Evaluation Report (SER) and the State and local emergency plans expose any inadequacies. The State of New Hampshire contends that these issues are not raised prematurely. That the State and local emergency response plans and the Staff's SER are not yet complete, and are not yet part of the operating license application is basis enough for a contention based on any of those documents. The State should not have to overcome the burden of justifying late-filed contentions. For these reasons, the Board should

either (a) admit the contentions now subject to refinement when the SER and emergency plans are submitted, or (b) grant the State of New Hampshire leave to file contentions based on the SER and emergency plans when they are submitted.

III. AMENDED CONTENTIONS

The State of New Hampshire offers the following amended contentions in response to the objections by the Applicant and the Staff, in conformance with the Board's granting leave to the State to amend its contentions and their bases. All the State's contentions are listed below; where a contention or its basis is left unchanged, however, reference is made to the State of New Hampshire's original contentions filed on April 5, 1982.

Index of Contentions

A. TECHNICAL SAFETY CONTENTIONS

1. Interim Reliability Evaluation Program and Systems Interaction

The Applicant and and the Staff have not applied an adequate methodology to Seabrook to analyze the reliability of systems, taking into account systems interactions and the classification and qualification of systems important to safety, to determine which sequences of accidents should be considered within the design basis of the plant, and if so, whether the design basis of the plant in fact adequately protects against every such sequence. In particular, proper systematic methodology such as the fault tree and event tree logic approach of the IREP program or a systematic failure modes and effect analyses has not been applied to Seabrook. Absent such methodological approach to defining the importance to safety of each piece of equipment, it is not possible to identify the items to which General Design Criteria 1, 2, 3, 4, 10, 13, 21, 23, 24, 29, 35, 37 apply, and thus it is not possible to demonstrate compliance with these cirteria.

Basis

The State of New Hampshire reasserts the bases set forth in its original contentions Nos. 1 and 2.

State of New Hampshire's Position

This rephrased contention combines the State's original contentions Nos. 1 and 2, and it is nearly identical to an admitted contention in the recent Shoreham Atomic Safety and Licensing Board proceeding, Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), Docket No. 50-332-OL, "Memorandum and Order Confirming Rulings at Conference of Parties", p. 12 (March 15, 1982).

3. Class 9 Accidents .

The requirements of NUREG 0737, Item I.C.1 and the Commission's Interim Policy Statement issued June 13, 1980, 45 Fed. Reg. 40101, on Nuclear Power Plant Accident Considerations Under the Nuclear Energy Power Act of 1969 have not been met.

Basis

The State of New Hampshire reasserts the basis set forth in its original contention No. 3.

State of New Hampshire's Position

This re-drafted contention incorporates modifications suggested by the Applicant in its response to SAPL's Supplemental Contention No. 3.

4. Anticipated Transients Without Scram (ATWS)

The State of New Hampshire reasserts its original contention No. 4 and its basis.

State of New Hampshire's Position

This contention should be allowed as either (a) the subject of proposed rulemaking, 46 F.R. 57521 (November 24, 1981), that will probably not be completed until after these proceedings (see Long Island Lighting Co. [Shoreham Nuclear Power Station Unit 1] Docket 50-322-OL, "Memorandum and Order ...," pp. 15-17 [March 15, 1982]), or (b) as an unresolved safety issue which will be discussed in the SER.

5. Liquid Pathway Impact

The Applicant has not satisfied the requirements of 10 C.F.R Section 51.21 and the requirements of the Commission's Interim Policy Statement issued June 13, 1980, 45 Fed. Reg. 40101, by failing to consider adequately liquid pathway accident impacts and corrective measures.

Basis:

In the event of a core-meltdown accident at the Seabrook plant, groundwater will constitute an important pathway for radioactive releases to the hydrosphere. It is paramount to have the consequences of a core-meltdown accident

quantitatively assessed so that the impact on drinking water in the surrounding area and the beaches, harbors, and marine life in the vicinity of the plant can be determined. It is critical to develop the appropriate design of and plan for interdiction at the source of the release in the event of a core-meltdown accident.

Core-melt accidents which may result in liquid pathway releases must be carefully studied. The NRC instituted a research program at Sandia Laboratories on this point which resulted in a report being released in August of 1981. (Sandia Laboratories Study for U.S. NRC, 'Effect of Liquid Pathways on Consequences of Core Melt Accidents.") The dispersal of radiation through liquid pathways is more complex than the air pathway dispersal mechanisms because of the variations in hydro-geological conditions and because of the parameters of interaction between a molten core and surrounding soil and water table. The probability of a core-meltdown accident, moreover, has been estimated by the WASH 1400 report at 1 in 20,000 per reactor-year. According to the NRC report, NUREG-0440 "Impact of Accidental Radioactive Releses to the Hydrosphere from Floating and Land-Based Nuclear Power Plants," the expected, or best-estimate consequences of coremelt releases via the liquid pathway are about 0.3×10^6 man-rem for a land-based plant (LBP). However, it is estimated that the releases can possibly be reduced by several orders of magnitude with the benefits of interdiction at the source.

Interdiction or prevention of liquid pathway releases at the source may be possible if adequate design and control measures are taken. In a paper on "Severe Accident Mitigation Studies" presented by H.J. Reilly at the 9th Water Reactor Safety Research Information Meeting held at NBS, Gaithersburg, Maryland, October 26-30, 1981, the author reported that the studies at EG and G Idaho has led to specific design solutions to reduce the risk of uncontrolled reaction among molten core materials, water, and structural support metal in the event of a core-meltdown accident.

Section 2.4 of the FSAR, "Hydrologic Engineering," sets forth the hydrologic description of the site. However, in evaluating the impact of a radioactive release, the FSAR considers only minor spills and not a major release which would occur under major accident conditions. Under such conditions, dilution, which is apparently relied upon for protection, may not be sufficient to protect the public. (See, FSAR 2.4.13.3) The Environmental Report (ER 7.4.1.2) does not study the liquid pathway because it was believed by the applicant to be slower than atmospheric pathways, and thus not important.

Evaluation of liquid pathway impacts should be undertaken before an operating license is issued, such that modifications or corrective measures can be implemented before such measures are foreclosed. Safety systems to flood runaway

reactor cores with cooling water, "core catchers" to contain a melting core for several days, and interdiction mechanisms should be evaluated. The radiation dose to the nearby population should not be the only factor in consideration. At the Seabrook site, contamination of the estuarian and marine systems through the liquid pathway would have an adverse economic effect on the New Hampshire seacoast and the State as a whole, regardless of the actual radiation dose to the human population. The information contained in the FSAR is inadequate to evaluate properly the impact of liquid pathway releases and modifications to mitigate the impact of such releases.

6. Environmental Qualification of Safety Related Equipment

The Applicant has not complied with the requirements of the Division of Operating Reactors Guidelines and NUREG 0588 and NUREG 0737. The environmental qualification of safety related equipment is inadequate in four aspects:

a. the parameters of the relevant accident environment have not been identified;

b. the length of time the equipment must operate in the environment has been underestimated;

c. the methods used to qualify the equipment are not adequate to give reasonable assurances that the equipment will remain operable; and

d. the effects of aging and cumulative radiation on the equipment has not been adequately considered.

All safety-related equipment must be demonstrated to be qualified to operate as required by Appendix A, G, and K of Part 50 and Criteria III and XI of Appendix B, Part 50 and 10 C.F.R. 50.55a. In the absence of this demonstration, the standards by 10 C.F.R. Section 50.40 have not been satisfied.

Further, the Applicant must perform the radiation qualification review required by NUREG 0737 II.B.2. and implement the testing program for reactor solvent system relief and safety values required by II.D.1.

Basis

The State of New Hampshire reasserts the basis for its original contention No. 6.

State of New Hampshire's Position

This contention has been rephrased to address the Applicant's response to the State's original contention No. 6.

7. Instrumentation

The Seabrook Station instrumentation is not in compliance with General Design Criteria 13, 10 C.F.R. Part 50, Appendix A and the requirements of NUREG 0737.

Basis:

The results of the investigation at the Three-Mile Island II accident indicated a need for more direct indications of low-reactor coolant levels, reactor vessel water level, inadequate cooling, and hydrogen generation. The Three-Mile Island II accident also demonstrated the inadequacy of post-accident monitoring in terms of the parameters monitored, the range and accuracy of instrumentation, and the qualification of the instrumentation for the accident and post-accident environment. The concerns over this issue were clearly pointed out by the Kemeney Commission in its Report of the President's Commission on the Accident at Three-Mile Island (1979) at page 72, 73. The NRC staff, furthermore, has identified the following as critical areas requiring improvement:

a. Direct and unambiguous measurements of parameters, such as water level in the reactor vessel and the relief valve position;

b. Extended range measurement of important parameters, such as in-core thermocouples and radiation monitors to cover both normal operational and accident conditions;

c. Ability to function in high radiation and high temperature environments, especially during and after an accident; and

d. Information displayed to the operator in a comprehenisve form. "Some Possible Ways to Improve Nucle r Power-Plant Instrumentation" Y.Y. Hsu and L.M. Hon, Nuclear Safety, Vol. 22, No. 6, pp. 728-737 (1981).

Instrumentation must be considered safety related, as perhaps its greatest significance is operation under accident conditions. Also, the lack of adequate instrumentation affects public health and safety because accurate information is required by public officials to provide bases for decision-making related to emergency actions.

State of New Hampshire's Position

This contention has been rephrased to address the Applicant's response to the State's original contention No. 7.

8. Hydrogen Control System

The State of New Hampshire reasserts its original contention No. 8 and its basis.

9. Radioactivity Monitoring

The Seabrook Station in-plant monitoring system is not in conformity with GDC Nos. 63 and 64 of 10 C.F.R. Part 50, Appendix A, or the requirements of NUREG 0737.

Basis

The State of New Hampshire reasserts the basis for its original contention No. 9.

State of New Hampshire's Position

The Applicant and the Staff indicated in their response to the State's original contentions their acceptance of this contention as rephrased.

10. Control Room Design

The Seabrook Station Control Room Design does not comply with General Design Criteria 19 through 22 in 10 C.F.R. Part 50, Appendix A, and NUREG 0737, Items I.D. 1 and I.D. 2.

Basis

The State of New Hampshire reasserts the basis stated in its original contention No. 10.

The State of New Hampshire's Position

This contention has been re-drafted to address the Applicant's response to the State's original contention No. 10.

11. Deviation From Current Regulatory Practice

The State of New Hampshire reasserts its original contention No. 11 and its basis.

12. Quality Assurance

The Applicant has failed to establish and execute a quality assurance/quality control program which adheres to the criteria set forth in 10 C.F.R. Part 50, Appendix B.

Basis

The State of New Hampshire reassets the basis for its original contention No. 12.

State of New Hampshire's Positicn

This contention has been rephrased to address the Applicants response to this contention as originally stated.

The basis of this contention is set forth with reasonable specificity. The examples cited constitute evidence of the inadequate implementation of the quality assurance program generally. This contention should be admitted so as to permit discovery on and litigation, if necessary, of the issue of the quality assurance programs and its implementation.

13. Operations, Personnel Qualifications and Training

The Applicant has not demonstrated that the following and all other operations personnel, are qualified and properly trained in accordance with NUREG 0737, Items I.A.1.1, I.A.2.1, I.A..2.3, II.B.4, I.C.1, and Appendix C.:

a. Station Manager

b. Assistance Station Manager

c. Senior Reactor Operators

d. Reactor Operators; and

e. Shift Technical Advisors.

Basis

The State of New Hampshire reasserts the basis for its original contention No. 13.

14. Reliable Operation Under On-Site Emergency Power

The applicant has not demonstrated in its FSAR that the on-site power system complies with General Design Criteria 2, 4, 5, and 50 of 10 C.F.R., Part 50, Appendix A, and thereby has not adequately ensured reliable operation of Seabrook Station in the event of loss of off-site power and a LOCA at the plant.

Basis:

The NRC staff has recognized the generic, unresolved, safety problems arise from the unreliability of emergency on-site diesel generators. A recent article in Nuclear Safety on "Dependent Failures of Diesel Generators" by T. Mankamo and U. Pulkkinen (Vol. 23, No. 1, pp.32-40), based on 433 failures largely discovered during periodic surveillance testing, stated the average probability of a double failure to be 2.3×10^{-3} per test.

Obviously, the unavailability of power sources essential to emergency power would create a severe condition for public health and safety in the event of accident conditions. In order to insure reliable operation, the diesel generator system must be supplied with high reliability controls and monitoring instrumentation for temperature and pressure, for its cooling water system and engine lubrication system. The ability of the generator unit to start up and operate properly on demand in an emergency situation is imperative. Furthermore, the status of the diesel generators should be known at all times, through adequate testing and maintenance. The applicant's FSAR 9.5 fails to adequately address adequately these problems associated with diesel generator reliability in the event of loss of off-site power and in the event of a LOCA.

15. Unresolved Safety Issues

The State of New Hampshire reasserts its original contention No. 15 and its basis.

State of New Hampshire's Position

As explained in the discussion of the admissibility of contentions generally, this contention should be admitted now and not left to be raised at a later date. If the Board chooses not to allow this contention in at the

present time, it should grant leave to the State of New Hampshire to file without prejudice contentions based on the SER when it is submitted by the Staff.

16. Ultimate Heat Sink.

The State of New Hampshire voluntarily withdraws this contention.

17. Environmental Impact and

18. Health and Environmental Monitoring

The State of New Hampshire reasserts its contentions Nos. 17 and 18 and their bases.

State of New Hampshire's Position

This contention should be admitted now, or leave should be granted to the State of New Hampshire to file without prejudice contentions arising out of the SER at a later time.

Although this issue was raised during the construction phase of the Seabrook licensing proceedings, the requirements of Appendix I to 10 C.F.R. Part 50 have been added since that stage of the proceeding. This change in circumstances vitiates a claim of collateral estoppel on this issue, and it should be admitted. Alabama Power Co. (Farley Nuclear Power Plant, Units 1 and 2), CLI-74-12, 7 A.E.C. 203 (1974).

B. EMERGENCY PLANNING CONTENTION

19. Financial Qualifications.

The State of New Hampshire reasserts its original contention No. 19 and its basis.

20. Emergency Assessment, Classification, and Notification

21. Protective Action, and

22. Emergency Planning Zone.

The State of New Hampshire reasserts its contentions Nos. 20, 21, and 22 and their bases.

State of New Hampshire's Position

The State of New Hamphire raises the first two emergency planning issues as two separate contentions for purposes of organization; the emergency planning issue can be appropriately divided between on-site and off-site emergency planning contentions. The State would not object, however, to the Board's acceptance of one broad emergency planning issue, encompasing the State's contentions Nos. 20 and 21, subject possibly to refinement when the State and local plans are submitted.

The question of the proper delineation of the Plume Exposure EPZ should remain a separate contention. WECH

Respectfully submitted,

THE STATE OF NEW HAMPSHIRE AND
GREGORY H. SMITH, ATTORNEY
GENERAL

By E. Tupper Kinder

E. Tupper Kinder
Assistant Attorney General
Environmental Protection Div.
Attorney General's Office
State House Annex
Concord, New Hampshire 03301
Tel. (603) 271-3679

Dated: May 24, 1982

CERTIFICATE OF SERVICE

I, E. Tupper Kinder, Esquire, hereby certify that a copy of the foregoing Amended Contentions has been mailed this 24th day of May, 1982, by first class mail, postage prepaid, to:

Helen F. Hoyt, Chm.
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. NRC
Washington, D.C. 20555

Dr. Emmeth A. Luebke
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. NRC
Washington, D.C. 20555

Dr. Oscar H. Paris
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. NRC
Washington, D.C. 20555

Paula Gold, Asst. AG
Stephen M. Leonard, Asst. AG
Jo Ann Shotwell, Asst. AG
Office of the Attorney General
One Ashburton Place, 19th Floor
Boston, MA 02108

Lynn Chong
Bill Corkum
Gary McCool
Box 65
Plymouth, NH 03264

Nicholas J. Costello
1st Essex District
Whitehall Road
Amesbury, MA 01913

Roy P. Lessy, Jr., Esquire
Robert Perliss, Esquire
Office of Executive Legal Director
U.S. NRC
Washington, D.C. 20555

Mrs. Beverly Hollingsworth
822 Lafayette Road
P.O. Box 596
Hampton, NH 03842

Robert A. Backus, Esquire
116 Lowell Street
P.O. Box 516
Manchester, NH 03105

William S. Jordan, II, Esquire
Ellyn R. Weiss, Esquire
Harmon & Weiss
1725 I Street, N.W.
Suite 506
Washington, D.C. 20006

Phillip Ahrens, Esquire
Assistant Attorney General
State House, Station #6
Augusta, ME. 04333

Edward J. McDermott, Esquire
Sanders and McDermott
408 Lafayette Road
Hampton, NH 03842

Donald L. Herzberger, MD
Hitchcock Hospital
Hanover, NH 03755

Senator Robert L. Preston
State of New Hampshire
Senate Chambers
Concord, NH 03301

Wilfred L. Sanders, Esquire
Sanders and McDermott
408 Lafayette Road
Hampton, NH 03842

Thomas G. Dignan, Jr., Esquire
Ropes and Gray
225 Franklin Street
Boston, MA 02110

Robert L. Chiesa, Esquire
Wadleigh, Starr, Peters, Dunn & Kohls
95 Market Street
Manchester, NH 03101

Docketing and Service Sec.
Office of the Secretary
U.S. NRC
Washington, D.C. 20555

E. Tupper Kinder

Dated: May 24, 1982