

Filed: January 29, 1983

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
before the  
ATOMIC SAFETY AND LICENSING BOARD

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In the Matter ofPUBLIC SERVICE COMPANY OF NEW  
HAMPSHIRE, et al.(Seabrook Station, Units 1 & 2)

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Docket Nos. 50-443 OL  
50-444 OL

APPLICANTS' ANSWERS TO  
"THE STATE OF NEW HAMPSHIRE'S THIRD SET OF  
INTERROGATORIES AND REQUEST FOR PRODUCTION OF  
DOCUMENTS TO PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, INC."

Pursuant to 10 CFR § 2.740b, the Applicants hereby  
respond to "The State of New Hampshire's Third Set of  
Interrogatories and Request for Production of Documents  
to Public Service Company of New Hampshire, Inc.,"  
served on them by mail on January 7, 1983.

## SPECIFIC INTERROGATORIES

### Interrogatory No. 9.46

#### Question:

Is the emergency operations facility equipped with necessary indicators to monitor containment conditions and releases of radioactivity from the plant? If the answer is yes, please indicate whether these indicators and associated circuitry meet Class 1E requirements.

#### Answer:

The Emergency Operations Facility (EOF) will be equipped with the necessary indicators to monitor containment conditions and releases of radioactivity from the plant. The indicators and associated circuitry do not, and are not required to, meet Class 1E requirements.

### Interrogatory No. 9.47

#### Question:

Some problems associated with the accelerated aging technique used in environmental qualification of Class 1E electrical equipment are discussed in the literature (W.W. Weaver, Aging Techniques and Qualified Life for Safety System Components, Nuclear Safety, Vol. 21, P.51, January 1980). If the Applicant is using this technique to qualify Class 1E instruments, such as the Manipulator Crane Monitors, the Containment Structure Monitors, the Plant Vent Monitors, and the Control Room Air Intake Monitors, please provide documentation as to

how these problems (such as synergistic effects) have been resolved for each instrument tested.

Answer:

The qualification programs for Class 1E equipment are developed by the equipment manufacturer and test laboratory. During the development of the test program, the equipment is reviewed to determine if any problems such as synergistic effects exist. If any problems are identified, they are then accounted for in the test program. In addition, these programs are reviewed by us. Our review of the qualification programs is discussed in Section 3.11 of the FSAR.

As can be seen from the above, we agree with the author of the reference article, in that each equipment type must be reviewed independently for the specific applicant to develop a meaningful test program. The documentation of these equipment test programs is maintained as indicated in Section 3.11 of the FSAR.

Interrogatory No. 10.20

Question:

a) What are the critical plant variables and parameters which will be presented by the safety parameter display system (SPDS)? Explain how these variables were selected. Identify all documents which describe the basis on which parameters were selected.

- b) Where will the SPDS be located?
- c) Please provide a pictorial representation of the SPDS display.
- d) Explain how the SPDS is designed to incorporate accepted human factor principles.
- e) Does the Applicant intend to rely on the Preliminary Design Assessment or on the Detailed Control Room Design Review for licensing? Explain the basis of this decision.

Answer:

(Items a through d:)

Supplement 1 to NUREG-0737 was issued by the NRC on December 17, 1982 and provided clarification for Items I.D.1 and I.D.2. Supplement 1 also called for development of plant-specific schedules for implementation of the requirements in Supplement 1. We will submit our proposed schedule for implementing the requirements of Supplement 1 to NUREG-0737 by April 15, 1983. Design details will be available consistent with the overall schedule.

(Part e:)

A Detailed Control Room Design Review is currently in progress and upon its completion will be submitted to the NRC for their review. A Preliminary Design Assessment of the Control Room is not required of

Applicants who will complete the detailed review prior to issuance of a license.

Interrogatory No. ("I.B.1")

Question:

Please provide design date and specifications of the steam generator of the Seabrook plant. Indicate whether the specifications have been modified or changed from the original version. If they have been modified, please specify the changes and the basis for them. Identify and produce, pursuant to 10 C.F.P. 2.741 all documents pertaining to any modifications in the specifications of the steam generator.

Answer:

With respect to design date of steam generators contained in the Seabrook Plant, said design date is September, 1976.

With respect to the specifications of the steam generators of the Seabrook Plant refer to section 5.4.2 of the FSAR.

With respect to the changes and bases, see Table 1.2-2 of the FSAR. Additionally, the major changes and bases for such major changes are identified as follows:

Design Change

Basis for Change

Feedwater introduced  
via a feeding and J  
nozzles from above the  
top of the bundle

Alternate design with no change  
to physical layout of containment  
or operating conditions which offers  
increased conservatism and simplicity  
while maintaining plant performance.  
J. nozzles minimize the  
potential for water hammer.

Tube dimensions  
0.688" OD x 0.040" wall

Maintain tube bundle height  
and primary volume criteria  
within existing containment design  
limitations.

5626 steam generator tubes,  
55,000 ft<sup>2</sup> heat transfer  
area

Compensate for preheater efficiency  
by increasing the heat transfer  
area.

Tube material: thermally  
treated Inconel 600

Additional resistance to  
corrosion.

Quatrefoil tube support  
plate holes

Minimizes the potential for  
local concentration around the  
tube support plate. Provide  
additional circulation flow.

Ferritic stainless steel  
tube support plate material

Additional resistance to  
corrosion.

Interrogatory No. I.B.1.2

Question:

Please describe the chemical water treatment  
process used for the steam generator, identifying and  
producing all documents relating to this process  
pursuant to 10 C.F.R., 2.741.

Answer:

[To be supplied.]

Interrogatory No. I.B.1.3

Question:

Have any alternatives been or are any being considered to lessen the reliance on the steam generator as the means of residual heat removal in the event of an accident? If so, please describe those alternatives. If not, please explain why no such consideration was undertaken.

Answer:

No. The steam generators are relied upon to provide the first phase of residual heat removal until plant conditions permit the use of the Residual Heat Removal System. Because only two steam generators are necessary to perform the residual heat removal function, and the Seabrook design provides four steam generators, redundancy is inherent in the design and other alternatives are not being considered.

Interrogatory No. I.B.1.4

Question:

Please describe the efforts that have been or are being made to deal with the generic safety issue of tube rupture problems in steam generators of PWR plants. Please identify and produce pursuant to 10 C.F.R., 2.741 all documents relating to such an effort.

Answer:

The Westinghouse Owners Group Committee is preparing guidelines for the development of procedures

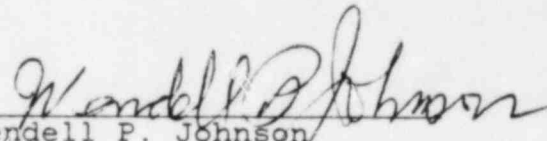
to deal with tube ruptures should they occur during station operation. Please refer to our response to SAPL Supp. 3.13.



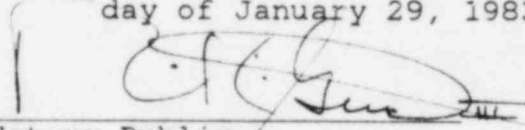
Signatures

As to answers:

I, Wendell P. Johnson, being first duly sworn, do depose and say that the foregoing answers are true, except insofar as they are based on information that is available to the Applicants but not within my personal knowledge, as to which I, based on such information, believe them to be true.

  
Wendell P. Johnson

Sworn to before me this  
day of January 29, 1983:


  
Notary Public  
My Commission expires: \_\_\_\_\_

ROBERT K. GAD, III

NOTARY PUBLIC

My Commission Expires Sept. 5, 1986

As to Objections:

  
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CERTIFICATE OF SERVICE

I, R. K. Gad III, one of the attorneys for the Applicants herein, hereby certify that on January 29, 1983, I made service of the within "Applicants' Answers to 'The State of New Hampshire's Third Set of Interrogatories and Requirrest for Production of Documents to Public Service Company of New Hampshire, Inc.'", by mailing copies thereof, postage prepaid, to:

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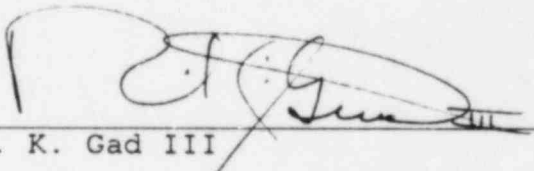
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