Filed: January 29, 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 Nos. 50-443 OL 50-444 OL
(Seabrook Station, Units 1 & 2)	)	

APPLICANTS' ANSWERS TO
"NECNP SECOND SET OF INTERROGATORIES AND
REQUESTS FOR DOCUMENTS TO APPLICANTS ON
CONTENTIONS I.D.1., I.D.4., I.F., I.I.,
I.L., and II.B." AND
MOTION FOR A PROTECTIVE ORDER

Pursuant to 10 CFR § 2.740b, the Applicants hereby respond to "NECNP Second Set of Interrogatories and Requests for Documents to Applicants on Contentions I.D.1., I.D.4., I.F., I.I., I.L., and II.B.," served on them by mail on January 7, 1983.

SPECIFIC INTERROGATORIES

Interrogatory No. 1.

Question:

Identify PSNH's contractor for the preparation of Applicants' "Reactor Vessel Examination Plan."

Answer:

The contractor for the preparation of the Applicants' "Reactor Vessel Examination Plan" is: Nuclear Energy Services, Inc., Danbury, Connecticut.

Interrogatory No. 2

Question:

To what degree is Applicants' "Reactor Vessel Examination Plan" completed and when will it be submitted to the NRC?

Answer:

A preliminary draft version of the "Reactor Vessel Examination Plan" is under review by the Applicant. We expect to submit a draft document to the NRC during the Summer of 1983.

Interrogatory No. 3

Question:

Please provide access to any drafts of the "Reactor Vessel Examination Plan."

Answer:

Access to the draft version of the "Reactor Vessel Examination Plan" will be afforded at the time of submittal to the NRC, which as stated above will be during the Summer of 1983.

Interrogatory No. 4

Question:

Please complete the last sentence in Applicants' answer to NECNP Interrogatory I.D.2-8.

Answer:

Our response to Interrogatory I.D.2-8, Item b, should read:

b) See the response to Interrogatory I.D.2-1.

Interrogatory No. 5

Question:

The answer to NECNP Interrogatory I.D.2-1 is incomplete. FSAR at 7.1.2.5 does not refer to the specific means by which Applicants determined that the probability that protections systems will fail without testing the equipment is acceptably low. Describe all quantitative calculations of probability and identify in detail the parameters of all qualitative judgments on probability. Provide access to all documents relied upon in reaching the judgments which are summarized in the FSAR.

Answer:

We have determined that the probability that protections systems will fail without testing the

actuated equipment is acceptably low by qualitative judgment using good engineering practice based on the design of similar systems and equipment at similar plants.

Interrogatory No. 6

Question:

Applicants' answer to NECNP Interrogatory I.D.4-16 is not responsive. Chapter 7 of the FSAR, Section 7.2, discusses the Reactor Trip system and does not discuss in detail redundancy within the safety systems and the design criteria for the systems. Please describe how, if at all, there is sufficient redundancy within each safety system to provide redundancy even when degraded by a single random failure.

Answer:

Detailed information on the design of the safety systems is provided in the references listed in FSAR Section 7.2.4.

Interrogatory No. 7

Question:

Identify and describe any tests or studies at Seabrook on the interaction of safety functions and control functions.

Answer:

Control and protection system interaction is discussed in FSAR Sections 7.2.2.2.c.7 and 7.2.2.3.

Interrogatory No. 8

Question:

Identify and describe Applicants' program for periodic testing of diesel generators used for emergency electric power.

Answer:

The Applicant's program for periodic testing of diesel generators used for emergency electric power is described in Section 4.8 of the Seabrook Technical Specifications.

Interrogatory No. 9

Question:

Have Applicants done any probabalistic studies on the importance to safety of diesel generators? If so, please identify them and describe their results.

Answer:

No probablistic studies regarding the importance to safety of diesel generators have been performed by the Applicant.

Interrogatory No. 10

Question:

Have Applicants performed any analyses of the reliability of diesel generators at Seabrook? If so, please describe the results and identify and provide access to all relevant documents.

Answer:

The Applicant has performed a type qualification testing program meeting the requirements of IEEE 387-1977 on one diesel generator unit. The type qualification testing program is described in FSAR Section 8.3. Regulatory Guide 1.9, Revision 2 states that IEEE 387-1977 "delineates principal design criteria and qualification testing requirements that, if followed, will help ensure the selected diesel-generator units meet their performance and reliability requirements." Analysis of the reliability of the Seabrook diesel generators will be included in the Seabrook Station PRA scheduled to be completed in October, 1983.

Interrogatory No. 11

Question:

Have Applicants performed any analyses of the reliability of diesel generators at Seabrook as it relates to the method and frequency of testing? If so, please describe the results and identify and provide access to all relevant documents.

Answer:

No analyses of the reliability of diesel generators at Seabrook as it relates to the method and frequency of testing has been performed. The method and

frequency of testing is based on NRC guidance contained in Regulatory Guide 1.108.

Diesel generator reliability as it relates to the method and frequency of testing can be derived from the Seabrook Station PRA scheduled to be completed in October, 1983.

Interrogatory No. 12

Question:

Do Applicants meet all the requirements of IEEE 338-1977? If the answer to this question is no, please explain the discrepancy between your answer and the Staff's answer to Interrogatory I.D.4.-1.

Answer:

The Applicants meet all the requirements of IEEE 338-1977.

Interrogatory No. 13

Question:

Do Applicants comply with IEEE 323-1974 in every respect?

a) Identify any and all aspects of noncompliance.

b) For each instance of noncompliance, identify any alternative means by which Applicants intend to comply with the requirements of GDC 17.

Answer:

For diesel generators, the Applicants comply with IEEE 323-1974 in every respect.

Interrogatory No. 14

Question:

Describe the differences between IEEE 323-1974 and IEEE 387-1977.

a) Do Applicants believe that compliance with IEEE 387-1977 provides an equivalent assurance of safety as compliance with IEEE 323-1974? State the reasons for your answer.

Answer:

IEEE 323-1974, "IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations," describes the basic requirements for qualifying Class 1E equipment. IEEE 387-1977, "IEEE Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations," provides principal design criteria and specific qualification testing criteria for diesel-generator units.

a. For diesel generators, compliance to both IEEE 387-1977 and IEEE 323-1974 provides the required assurance that the diesel generators are qualified for use as Class 1E equipment for nuclear power stations.

Interrogatory No. 15

Question:

In the answer to NECNP Interrogatories I.F.-1 and I.F.-7, Applicants state that "The Seabrook Station meets the requirements of IEEE 323-1974." Does the qualification of diesel generators in particular meet the requirements of IEEE 323-1974?

Answer:

The qualification of diesel generators, in particular, meets the requirements of IEEE 323-1974.

Interrogatory No. 16

Question:

Applicants' answer to NECNP Interrogatory I.I-8 was not responsive. NECNP asked Applicants to consider a situation in which the single safety grade path to cold shutdown which Applicants plan to identify cannot be used. NECNP's interrogatory is consistent with NRC regulations, which require Applicants to consider a single failure of safety grade components to determine adequate accident response capability.

Answer:

Seabrook's method of achieving cold shutdown via safety grade equipment utilizes redundant systems and equipment such that, even considering a single failure, a qualified path to achieve cold shutdown still remains.

Interrogatory No. 17

Question:

Applicants' answer to NECNP Interrogatory I.I-23 was not responsive. Applicants state that they comply with NUREG-0588. The question put to Applicants, however, was whether they have complied with all the provisions of IE Bulletin No. 79-01B, Rev.3. Please answer the question.

Answer:

Supplement No. 2 to IE Bulletin 79-01B, page 2, "Answer A.3," clearly shows that all plants with construction permits are required to comply with NUREG-0588 (Category I). For such plants, compliance with NUREG-0588 (Category I) is all that is required by 1E Bulletin 79-01B. Applicants have not reviewed the Seabrook design for compliance with 1E Bulletin 79-01B.

Interrogatory No. 18

Question:

In answering NECNP Interrogatory I.B.1-16, the Staff states that the safety related steam generator power operated atmospheric relief valves are used to vent vaporized secondary coolant. This action discharges secondary fluid directly to the atmosphere. If steam generator tubes are leaking at this time, either due to a deteriorated condition prior to the accident or leakage developed during the accident, primary coolant containing radioactivity has a direct path to the atmosphere. Does the Seabrook design have any means to detect the discharge of such radioactivity and an appropriate method to isolate the correct steam generator?

Answer:

The Seabrook design has the capability of detecting radioactivity upstream of the steam generator power-operated atmospheric relief valves and identifying which steam generator is leaking. The appropriate valve can then be manually closed, from the control board, to isolate the affected steam generator.

Interrogatory No. 19

Question:

Identify the location and function of all power-operated relief valves in the reactor coolant pressure boundary, including valves that provide isolation for the system.

Answer:

There are two power-operated relief valves (PORVs) within the reactor coolant system pressure boundary. They are identified as PCV-456A and B and are located on the top of the pressurizer (see FSAR Figure 5.1-1, Sheet 6). Upstream motor-operated isolation valves, RC-V122 and V124, are also provided.

The PORV's limit system pressure for large power mismatch events and prevent unnecessary operation of the Code safety valves. The PORV's are also used as a vent system for the Reactor Coolant System during

certain accident conditions and provide a qualified means of depressurizing the Reactor Coolant System to achieve safe cold shutdown.

Interrogatory No. 20

Question:

In answer to NECNP Interrogatory I.L-5, Applicants stated that acoustic accelerometers are not used to detect PORV flow. In light of that statement, please answer the following questions:

a) Explain the discrepancy between Applicants' answer and the FSAR at Table 1.3-2, sheet 4 and § 5.2.2.8, which state that acoustic accelerometers are used.

b) Explain the reasons for the change.

c) Identify and provide access to any documents which reflect the change from acoustic accelerometers to other flow detection devices.

d) Describe in detail the new flow detection devices.

e) Are these devices environmentally qualified?

Answer:

a. The FSAR will be revised as delineated in the Applicants' letter dated November 24, 1982 to G. W. Knighton of the NRC. The FSAR revisions will support the Applicants' response to NECNP Interrogatory I.L-5 in which it was stated that acoustic accelerometers are not used to detect PORV flow.

b. The change is due to the fact that the Applicants have purchased qualified PORVs with qualified direct position indication therefore the need for acoustic accelermoeters to detect PORV flow has been obviated.

c. The FSAR will be revised as delineated in the Applicants' letter dated November 24, 1982 to G. W. Knighton of the NRC. The FSAR revisions will support the Applicants' response to NFCNP Interrogatory I.L-5 in which it was stated that acoustic accelerometers are not used to detect PORV flow.

d. This response is provided in Applicants response to Interrogatory I.L-6.

e. This response is provided in Applicants response to Interrogatory I.L-6.

Interrogatory No. 21

Question:

Please list those individuals responsible for the implementation of the QA program at Seabrook.

a) Provide the qualifications of each individual for implementation of the QA program.

b) Describe the previous experience of each individual with former construction projects of PSNH and others.

Answer:

As stated in the Seabrook FSAR Section 17.2.1.3.a.5(a), the Station Manager will be responsible for implementation aspects of the Program at Seabrook Station. As stated in the FSAR Section 17.2.1.3.a.1 the Nuclear Quality Manager will be responsible to oversee and evaluate the implementation of the program. These individuals are listed in the FSAR Section 13A.

a. The qualifications of the personnel mentioned above are listed in the FSAR Section 13A.

b. The Applicants' object to this question on the ground that they do not understand the reference to "former construction projects" and believe, therefore, that the question is unintelligible, and on the ground that, insofar as the question refers to construction projects, it is not relevant to the admitted contention. The Applicants' move for a protective order excusing them from answering this question.

Interrogatory No. 22

Question:

Please identify and provide access to:

a) Applicants' Quality Assurance Program for operations.

b) All procedures for implementation of Applicants' Quality Assurance Program for Operations.

c) Any and all programs for the review of Applicants' Quality Assurance Program for Operations.

Answer:

a. The FSAR Section 17.2 describes the QA program.

b. The procedures which implement the QA Program are not yet fully approved and are still under review and development. They will be made available when finally approved.

c. The Nuclear Safety Audit and Review Committee (NSARC) performs or causes to be performed review of the program. The NSARC is described in FSAR Section 13.4.2 Also the Institute of Nuclear Power Operations (INPO) conducts reviews on a periodic basis.

Signatures

As to Answers:

I, Wendell P. Johnson, being first duly sworn, do depose and say that the foregoing answers are true, expect 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, 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 'NECNP Second Set of Interrogatories and Requests for Documents to Applicants on Contentions I.D.1, I.D.4, I.F., I.I., I.L., and II.B' and Motion for a Protective Order", by mailing copies thereof, postage prepaid, to:

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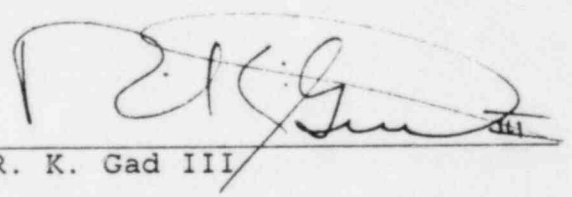

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