RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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OFFICE OF SECRETARY
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Before the
ATOMIC SAFETY AND LICENSING BOARD

In the matter of:	)	
	)	
	)	
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE	)	Docket Nos.: 50-443
ET AL.	)	and
	)	50-444
	)	
(Seabrook Station, Units 1 and 2)	)	December 15, 1982

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

Pursuant to 10 C.F.R., Section 2.740(b) and 2.741, the Intervenor State of New Hampshire requests that the attached Second Set of Interrogatories be answered fully in writing and under oath by any members of the Public Service Company of New Hampshire, Inc. ("PSNH") who have personal knowledge thereof. The answer to each Interrogatory should contain the name(s) and identification of the person(s) supplying the answer and whether or not he or she has verified the answer.

As used herein, the term "document" means all original writings of any nature whatsoever and all non-identical copies thereof in the possession, custody, or control of PSNH and includes but is not limited to the following items: communications, correspondence, notes, field notes, studies, reports, summaries, instructions, charts, schedules, sketches and drawings, records, accounts and accounting records, opinions and reports of consultants.

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by steam flow, counter current flow limiting (CCFL) phenomena, or other factors which are conservative margins not considered in the ECCS evaluation model. (See, e.g., Staff response to Sunflower Alliance Requests for Admission #2 and #20, and Applicants' response to Requests for Admission #4, #10, and #12.) Rather, it must be demonstrated that the Perry ECCS will operate in accordance with its evaluation model, as required by the regulations.

5. (a) The Staff in its response to Request for Admission #2 refers to its evaluation of NEDO-20566-3 (see June 13, 1978 letter from O. Parr, NRC, to G. Sherwood, GE), in which the Staff concluded, based on BWR FLECHT data (APED-5529) and GE calculations of a figure of merit (FOM), that adequate spray flow exists even with the conservative consideration of steam effects. (FOM is the ratio of measured channel spray flow (one sparger, no simulation of steam effects) to the flow necessary to remove decay heat by vaporization.)

(b) GE believes that the FOM comcept, as a measure of core spray effectiveness, is limited and can be used only in a qualified manner due to its sensitivity to 2 inputs: decay heat curve and time of rated spray. (Letter, dated March 1, 1978, from A.J. Levine, GE, to D. Eisenhut, NRC, MFN 093-78.)

(c) APED-5529, "Core Spray and Core Flooding Heat Transfer Effectiveness in a Full-Scale Boiling Water Reactor Bundle" (June 1968) describes tests conducted on a

As used herein, the term "identify" means:

1. In the case of a natural person:

   (a) name;

   (b) last-known address;

   (c) employer or business affiliation; and

   (d) occupation and business position held.

2. In the case of a document:

   (a) identity of the person or persons preparing it;

   (b) its title or a description of the general nature of the subject matter;

   (c) the identity of the addressee;

   (d) date of preparation;

   (e) identity of persons who can identify it; and

   (f) all of the aforementioned information should be supplied with such reasonable particularity as is sufficient for a specific demand for production. In lieu of the foregoing, a copy of the document may be supplied.

3. In the case of oral statements and communications:

   (a) when and where they were made;

   (b) identity of each of the makers and recipients thereof;

   (c) the medium of communication; and

   (d) substance of the statement and/or communication.

Pursuant to 10 C.F.R., Section 2.740(e), responses should be supplemented. If PSNH cannot answer the Interrogatories in full, so state and indicate when PSNH expects to be able to answer the Interrogatory.

The State of New Hampshire further requests that PSNH, pursuant to 10 C.F.R., Section 2.741, provide copies of or make available for inspection and copying the documents identified by PSNH in response to certain of the accompanying Interrogatories within thirty (30) days after service hereof. Production of such documents shall be at the offices of PSNH in Manchester, New Hampshire, or a mutually convenient place.

I. INTERROGATORIES RELATED TO SPECIFIC CONTENTIONS

CONTENTION NH 9

Radioactive Monitoring

The Seabrook design does not provide an adequate program for monitoring the release of radioactivity to the plant and its environs either under normal operating conditions or in pre- and post-accident circumstances. Thus, the application is not in compliance with general design criteria 63, 64 of Appendix A, 10 C.F.R. Part 50, and the requirements of NUREG-0737 and NUREG-0800.

Definition

The term radioactivity monitoring system as used in these Interrogatories means the instrumentation and displays and sampling capability for the monitoring of radioactivity within systems and areas of the plant including both operational and post-accident monitoring systems.

NH 9.34

With regard to the location of certain radiation monitoring instruments, explain why the location was selected for each of the area monitors listed in FSAR Table 12.3-13.

NH 9.35

With regard to your answer to Interrogatory 9.12, explain why the other monitors listed in FSAR Tables 12.3-13, 12.3-14, and 12.3-15 are not Class I.E (safety related). In your explanation, identify the criteria used to make this determination. Identify all documents which are used as a basis for your explanation and produce such documents in accordance with 10 C.F.R. 2.741.

NH 9.36

With regard to NUREG 0737 II(B)(2), the NRC Staff has indicated that no formal submission addressing this action has been made by the Applicant. Please advise whether the Applicant intends to rely for compliance on the document identified in its answer to Interrogatory No. 9.13. "Post Accident DOR Engineering Manual, Seabrook Station" dated April 28, 1982. If another document is to be relied upon, please identify such document or explain when it will be available.

NH 9.37

Is the radiation monitoring system capable of detecting releases of radioactivity from the reactor containment? If so, please explain how the system is designed to detect such releases.

NH 9.38

The Applicant has indicated that it is committed to installing a leakage detection system. Please explain how such system will be coordinated with the radiation monitoring system.

NH 9.39

Explain what steps have been taken to insure that the leakage detection system does not interfere with or disrupt the Radiation Monitoring System.

NH 9.40

Is the radiation monitoring system capable of detecting releases of radioactivity from the reactor coolant pressure boundary. If so, please explain how the system is designed to detect such releases.

NH 9.41

With regard to the answer to Interrogatory 9.23 relating to the plant ventilating system, the Applicant indicated "In some cases, these dampers are also provided with limit switches which, in conjunction with other instrumentation, will annunciate a system failure." Identify each of the "some cases" referred to which are designed with instrumentation to annunciate a system failure. Also, please identify the "other instrumentation" and explain how a system failure will be annunciated in each case.

NH 9.42

With regard to the previous Interrogatory, explain the criteria used to select which "cases" (or dampers) would be designed with limit switches such that a system failure would be annunciated. What differentiates these selected cases from other dampers which are not equipped with limit switches.

NH 9.43

Referencing the Applicant's answer to NH 9.30: during accident conditions, how will control room personnel be able to determine the actual airborne hazard in the WPB and/or the PAB if the noble gas ventilation exhaust monitors in these buildings are indicating their maximum high range value of 10^{-3}MCi/cc while the plant vent monitor is indicating a value well above this?

NH 9.44

Referencing the Applicant's response to NH 9.11:

(a) Provide the correlation between detector RD numbers and FSAR instrument tag numbers;

(b) Referencing document #UE & C Foreign Print #71920 concerning the calibration of RD 60, General Atomic Company did not correct the iodine detector's response for charcoal cartridge self-absorption effects and detector geometry effects as a function of depth of penetration of iodine in the charcoal. Also, they did not check the detector for linearity as a function of source intensity. Please provide documents indicating that this has or will be done.

(c) Referencing document #UE & C Foreign Print #71849 concerning the calibration of RD 59, General Atomic Company has only calibrated this detector with chlorine-36 and barium-133 check sources and has not determined the detector's response to actual radioactive gases. Please provide documents indicating that this has or will be done.

NH 9.45

Please resolve the discrepancies between plant and detector numbers mentioned in the Applicant's response to Interrogatory NH 9.12, and those listed in FSAR Table 12.3-14.

CONTENTION NH 10

Control Room Design

The Seabrook Station control room design does not comply with General Design Criteria 19 through 22 and 10 C.F.R. Part 50, Appendix A, and NUREG 0737, Item I.D.1 and I.D.2.

NH 10.14

Please provide a drawing or picture of the Main Control Board, all other displays located in the Control Room, and the Remote Safe Shutdown Control Panels. The purpose of this request is so that the State can have a pictorial representation of the Seabrook Main Control Board and other displays, controls, and instruments as originally proposed.

NH 10.15

Please provide a detailed description of all changes to the Main Control Board, all other displays located in the Control Room and to the Remote Safe Shutdown Control Panels as of the date of answering this Interrogatory. Explain the reasons for these changes. Please provide the most up-to-date pictorial representation of the above-mentioned control boards, controls, and displays.

NH 10.16

Documents (see Letter dated 11/4/80 DeVincentis to Sturgeon) reflect that Human Factors review of Main Control Board was accomplished using General Electric owners group control room audit program. Please indicate whether this is the basis of review or whether other programs were used. If others used, please identify.

Please produce the results of such audit.

NH 10.17

Letter from DeVincentis to Sturgeon dated 12/9/80 states that certain changes suggested by Seabrook Staff would not be included in Main Control Board because of the construction schedule. Please identify changes not included and indicate whether changes were eventually included. If not, explain why not.

NH 10.18

Please identify the location of the Damper Status lights on Main Control Board.

NH 10.19

During the Control Room Design Review of the Seabrook Plant, will control boards in locations other than the Control Room be included? If so, please identify and provide a comprehensive description and/or pictorial representation of such boards.

CONTENTION NH 13

Operations, Personnel Qualifications and Training

The Applicant has not demonstrated that the following 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.) assistant station manager; (c.) senior reactor operators; (d.) reactor operators; (e.) shift technical advisors.

NH 13.1

Identify all persons who were or are responsible in a supervisory capacity for the general preparation of Ch. 13 of the FSAR, and, in particular, Sections 13.1 and 13.2.

NH 13.2

The February 12, 1982 John DeVincentis letter to Frank Miraglia of the NRC provides an "initial discussion" of the Applicant's compliance with NUREG 0737. Please provide an update on the status of the Applicant's compliance with the following items of NUREG 0737:

(a) I.A.1.1;

(b) I.A.2.3; and

(c) II.B.4.

NH 13.3

Identify and produce pursuant to 10 C.F.R. Section 2.741 all documents prepared by the Applicant addressing the Applicant's compliance with the three NUREG 0737 items listed in the previous Interrogatory.

NH 13.4

Describe in detail how and to what extent each phase of the control room operator training program provides or will provide for the following aspects of emergency response training:

(a) recognition of emergency conditions;

(b) classification of observed emergency conditions in accordance with the emergency classification system;

(c) notification of emergency to off-site authorities;

(d) recommendation of protective actions to off-site authorities; and

(e) direction of station staff to take protective actions.

NH 13.5

Identify and produce pursuant to 10 C.F.R. Section 2.741 all documents relating to the FSAR Ch. 13 review meeting with the NRC Region I representatives on January 4-6, 1982, which were submitted by the Applicant to the NRC following that meeting.

NH 13.6

Please describe the "oral or demonstrative audits" which will be conducted periodically to evaluate the effectiveness of the operator licensing training program, which audits are mentioned on p. 13.2-4 of the FSAR. Indicate what "independent third party" will perform these audits.

NH 13.7

How many candidates for licensed operators are currently in any phase of training?

NH 13.8

How many licensed operators does the Applicant estimate to be necessary for fully manned shift crews for the plant's operation? Indicate how many licensed operators will be necessary per unit per shift, and in what capacity they will be needed.

CONTENTION NH 20

The accident at Three-Mile Island demonstrated the inability of all parties involved to comprehend the nature of the accident as it unfolded; communicate the necessary information to one another, to the Federal, State, and local governments, and to the public in an accurate and timely fashion; and to decide in a timely manner what course to take to protect the health and safety of the public. The applicant in these proceedings has not adequately demonstrated that it has developed and will be able to implement procedures necessary to assess the impact of an accident, classify it properly, and notify adequately its own personnel, the affected government bodies, and the public, all of which is required under 10 C.F.R. 50.47 and Appendix E, and NUREG 0654.

NH 20.1

Please identify all the persons who were or are responsible in a supervisory capacity for the development generally of the Seabrook Station Radiological Emergency Plan, submitted as a separate volume of the Final Safety Analysis Report. Also identify those persons who were or are responsible in a supervisory capacity for the development of each of the following specific sections of the Emergency Plan:

§6.0 "Emergency Facilities and Equipment;"

§7.0 "Communications;"

§8.0 "Organization;"

§11.0 "Emergency Notification and Public Information;" and

§12.0 "Maintaining Emergency Preparedness."

NH 20.2

The Emergency Plan contains, as yet, no complete Emergency Action Levels. When does the Applicant expect to submit the Emergency Action Levels referenced in Appendix A of the Emergency Plan? Please produce, pursuant to 10 C.F.R. Section 2.741, all documents which have been developed to date with regard to Emergency Action Levels.

NH 20.3

Describe what steps have been taken to discuss the Emergency Action Levels with State and local governmental authorities. Please also describe the nature of the comments received from these authorities. Identify all documents which relate to such discussions and comments and produce these documents pursuant to 10 C.F.R. Section 2.741.

NH 20.4

Will emergencies of various classifications be declared whenever the Emergency Action Levels (EAL) indicate that such declarations are in order? Or will the Emergency Director have the discretion not to declare an emergency even though it is indicated by the applicable EAL? If the latter, describe the factors upon which the Emergency Director must make his determination. Identify all documents which relate to the process of declaring an emergency and produce such documents pursuant to 10 C.F.R. Section 2.741.

NH 20.5

Describe what steps have been or will be taken to ensure that the shift superintendent or unit shift supervisor will properly and promptly recognize emergency conditions and classify the observed conditions in accordance with the emergency classification system.

NH 20.6

Specify what steps have been or will be taken to ensure that the appropriate State of New Hampshire authorities will be notified within fifteen minutes of a classifiable event.

NH 20.7

Identify and produce pursuant to 10 C.F.R. Section 2.741 all documents which have been prepared for the purpose of studying, reviewing, or critiquing the emergency response organization and procedures as described in Section 8.2 of the Emergency Plan.

NH 20.8

Please describe in detail the "radio paging" system referred to at page 3-3 of the Emergency Plan as the primary notification mechanism for notification of members of the Emergency Response Organization.

NH 20.8-a

Identify and describe in detail the back up-system which will be used to notify members of the Emergency Response Organization.

NH 20.9

Describe in detail the primary and back-up communications systems for use between:

(a) the Emergency Operations Facility and the Media Center;

(b) the Technical Support Center and the Emergency Operations Facility;

(c) The Technical Support Center and the New Hampshire Incident Field Office for Seabrook; and

(d) all the emergency response centers described in Section 6.0 of the Emergency Plan and the New Hampshire Emergency Operations Center in Concord.

Please identify all documents which describe the communications systems referred to above and produce such documents pursuant to 10 C.F.R. Section 2.741.

NH 20.10

Identify and produce pursuant to 10 C.F.R. Section 2.741 all documents pertaining to the study, review, or critique of the communications systems described in answering Interrogatory NH 20.9.

NH 20.11

Have the communications systems described in Sections 7.1 and 7.3 of the Emergency Plan been tested by the Applicant? What are the results of any such testing? Please identify all documents relating to any such testing, and produce such documents pursuant to 10 C.F.R. Section 2.741.

NH 20.12

Has the Applicant considered whether a data transmission communications system is required to communicate the necessary amounts of information to the New Hampshire Emergency Operations Center? If so, explain how this has been considered. Identify all documents relating to this consideration, and produce such documents pursuant to 10 C.F.R. Section 2.741.

NH 20.13

Describe the steps that the Applicant has taken or will take to ensure that Seabrook Station's Radiological Emergency Plan properly interfaces with the State of New Hampshire radiological emergency response plan.

NH 20.14

What factors were considered in the decision to locate the Emergency Operations Facility at the Seabrook Station Training Center? Identify and produce pursuant to 10 C.F.R. 2.741 all documents relating to the Applicant's decision to locate the Emergency Operation Facility there.

NH 20.15

What factors were considered in the decision to locate the Emergency Operations Facility at the Media Center at Firemen's Association Building in Seabrook? Identify all documents relating to the Applicant's decision to locate the Emergency Operations Facility there.

NH 20.16

Identify all documents pertaining to any agreements which the Applicant believes to exist between the Applicant and the State of New Hampshire relative to protective action recommendations, such as the one referred to on page 3-3 of the Emergency Plan. Explain what "other station parameters" (again on page 3-3) the Emergency Director or other station personnel will use to identity the potential for radiological releases.

NH 20.17

Describe in detail the manner in which, and the extent to which, the Applicant will monitor all emergency station personnel accountability.

NH 20.18

Explain how the persons responsible for off-site radiation dose projections will make those projections and how those projections will be transmitted to the appropriate governmental entities.

NH 20.19

Please identify the radiological monitoring and dose assessment personnel who will be available for "immediate emergency actions", as defined in Table 8.1 of the Emergency Plan.

CONTENTION NH 21

The State contends that the Applicant's Emergency Plan does not demonstrate how, in case of an accident resulting in a site area or general emergency, the large number of people in the zone of danger may be protected or evacuated. Until there is reasonable assurance that adequate on-site and off-site protective measures can and will be taken, the Board should not issue an operating license.

NH 21.1

Please identify all the persons who were or are responsible in a supervisory capacity for the development of the following sections of the Emergeny Plan:

§9.0 "Emergency Response," and

§10.0 "Emergency Measures."

NH 21.2

Describe the arrangements which have been made for transportation of and medical treatment for injured personnel, specifying which particular hospital and transportation services have been arranged, and the training and experience of the hospital and transportation personnel in handling radiation emergency patients.

NH 21.3

Section 10.3 of the Emergency Plan, at page 10-3, states that "measures will be taken to minimize personnel exposures from external and/or internal sources of radiation." Please describe these measures. Identify all documents which discuss these measures and produce such documents pursuant to 10 C.F.R. Section 2.741.

NH 21.4

Describe in detail the "emergency radiological protection programs" referred to on page 10-3 of the Emergency Plan.

SAPL SUPPLEMENT 3

The applicable requirements of the Commission's Interim Policy Statement issued June 13, 1980, 45 Fed. Reg. 40101 on Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969 have not been met.

SAPL Supp. 3.13

In response to Interrogatory No. SAPL Supp. 3.6, Applicant indicates that it has not done an analysis of transients and accidents which postulate multiple failures including operators' errors. Under NUREG 0737, I.C.1., the Applicant is required to perform such an analysis. Please explain why such analysis has not been done to date and when it will be completed. Identify the documents which have been or will be produced to satisfy this requirement.

SAPL Supp. 3.14

Has the Applicant reconsidered the issue of ATWS since the adoption of the report "Westinghouse Anticipated Transients without Trip Analysis (1974)" in light of the publication of WASH-1400 (1975), NUREG 0460 (1978) and NUREG/CR-1400 (1978)? Please identify any review, reconsideration, or study that was conducted.

SAPL Supp. 3.15

Why was General Electric user group data used for the review of the Control Room Design Review? Are data from PWR users available?

Respectfully submitted,

THE STATE OF NEW HAMPSHIRE

GREGORY H. SMITH
ATTORNEY GENERAL

By _____
E. Tupper Kinder
Assistant Attorney General

Dated: December 15, 1982

By _____
G. Dana Bisbee
Attorney
Environmental Protection Div.
Office of Attorney General
State House Annex
Concord, New Hampshire 03301
Tel. (603) 271-3678

PUBLIC SERVICE COMPANY
OF NEW HAMPSHIRE, INC.

Dated: December , 1982

By _____

Its _____

THE STATE OF NEW HAMPSHIRE
HILLSBOROUGH, SS.

Personally appeared , before me, the undersigned officer, and made oath that the foregoing statements are true to his best knowledge and belief.

Notary Public/Justice of the Peace

Dated: _____

CERTIFICATE OF SERVICE

I, E. Tupper Kinder, Esquire, do hereby certify that a copy of the foregoing State of New Hampshire's Second Set of Interrogatories and Request for Production of Documents to Public Service Company of New Hampshire, Inc. has been mailed this 15th day of December, 1982, by first class mail, postage prepaid, to:

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OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH
DOCKETED
USNRC

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

Dr. Jerry Harbor
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. NRC
Washington, D.C. 20555

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

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

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

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

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

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

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

Robert K. Gad, Esquire
Thomas G. Dignan, Jr., Esquire
Ropes and Gray
225 Franklin Street
Boston, Massachusetts 02110

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

Atomic Safety and Licensing
Board Panel
U.S. NRC
Washington, D.C. 20555

David R. Lewis, Esquire
Atomic Safety and Licensing
Board
U.S. NRC - Room E/W - 439
Washington, D.C. 20555

E. Tupper Kinder

Dated: December 15, 1982