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August 4, 1988

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'88 AUG -5 P4:26

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	
Vermont Yankee Nuclear Power Corporation	Docket No. 50-271-OLA (Spent Fuel Pool)
(Vermont Yankee Nuclear Power Station)	

NECNP'S THIRD SET OF INTERROGATORIES AND REQUESTS FOR THE PRODUCTION OF DOCUMENTS TO VERMONT YANKEE NUCLEAR POWER CORPORATION

INSTRUCTIONS FOR USE

The following interrogatories are to be answered in writing and under oath by an employee, representative or agent of the Applicants with personal knowledge of the facts or information requested in each interrogatory. We remind you of your obligation to supplement answers to interrogatories, under 10 C.F.R. § 2.740(e).

The following definitions shall apply to these interrogatories:

1) "Document" shall mean any written or graphic matter or communication, however produced or reproduced, and is intended to be comprehensive and include without limitation any and all correspondence, letters, telegrams, agreements, notes, contracts, instructions, reports, demands, memoranda, data, schedules, notices, work papers, recordings, whether electronic or by other means, computer data, computer printouts, photographs, microfilm,

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microfiche, videotapes, charts, analyses, intra-corporate or intra-office communications, notebooks, diaries, sketches, diagrams, forms, manuals, brochures, lists, publications, drafts, telephone minutes, minutes of meetings, statements, calendars, journals, orders, confirmations and all other written or graphic materials of any nature whatsoever.

2) "Identify" with respect to any document shall mean to state the following: the document's title, its date, the author of the document, the person to whom to document was sent, all persons who received or reviewed the document, the substance and nature of the document, and the present custodian of the document and of any and all copies of the document.

3) "Identify" with respect to any action or conduct shall mean state the following regarding any such action or conduct: the person or persons proposing and taking such action; the date such action was proposed and/or taken; all persons with knowledge or information about such action; the purpose or proposed effect of such action; and any document recording or documenting such action.

4) "Identify" with respect to an individual shall mean state the individual's name, address, employer, occupation, and title.

5) "Describe" with respect to any action, event or matter shall mean state the following regarding such action, event or matter: the date of such action, event, or matter; the substance

or nature of such action, event or matter; the persons participating in or having knowledge of such action, event or matter; the current and past business positions and addresses of such persons; and the existence and location of any and all documents relating to such action or matter.

6) "Describe" with respect to any piece of equipment shall mean the type, manufacturer, equipment tag number and model number of the equipment.

GENERAL INTERROGATORIES

1. Please identify all persons who participated in the preparation of answers to these interrogatories, and identify the portions of your response to which each person contributed.

2. Please identify all persons on whose factual knowledge, opinions, or technical expertise you rely or intend to rely for the design, installation or testing of the "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage," or the systems described therein.

3. Please provide all documents which describe, comment upon or evaluate the Fuel Pool Cooling and Demineralizer System, the Emergency Standby Subsystem, or other the systems described in "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage," dated June 7, 1988, including but not limited to consultants' reports, and engineers' reports, safety evaluations, or design change packages.

4. Please provide all documents which describe or otherwise portray (as in the form of drawings, diagrams, schematics,

engineering drawings, etc.) the systems described in the "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage," dated June 7, 1988.

5. Please describe in detail your schedule for completing the design, installation, and testing of the system described in the "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage," including but not limited to the date this system is expected to be operational.

6. To the best of your knowledge, is the system described in the "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage" similar to any used in other nuclear power plants? If yes, please identify those plants, describe their systems, and describe any differences in Vermont Yankee's proposal from those systems.

7. Please produce copies of the technical specifications for the existing Vermont Yankee spent fuel pool cooling system.

8. Please identify and describe every change in the technical specifications for the Vermont Yankee Nuclear Power Plant that will be required by the "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage."

9. Please identify the sources for the following design bases for the Fuel Pool Cooling and Demineralizer System described in the "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage," (A-1, A-2), including but not limited to NRC regulations, regulatory guides, NRC Staff

positions, or the Licensee's engineering judgment, and describe or explain in detail what you plan to do in order to meet these regulatory requirements or standards:

3 Power Generation Design Bases

1. The Fuel Pool Cooling and Demineralizer System shall minimize corrosion product buildup within the spent fuel pool and shall maintain proper water clarity, so that the fuel assemblies can be efficiently handled underwater.

2. The Fuel Pool Cooling and Demineralizer System shall minimize fission product concentration in the spent fuel pool water, thereby minimizing the radioactivity which could be released from the pool to the Reactor Building environment.

3. The Fuel Pool Cooling and Demineralizer System shall monitor fuel pool water level and maintain a water level above the fuel sufficient to provide shielding for normal building occupancy.

4. The Fuel Pool Cooling System shall be capable of maintaining the spent fuel pool temperature below 150 F.

A.4 Safety Design Basis

The Fuel Pool Cooling and Demineralizer System shall be designed to remove the decay heat from the fuel assemblies and maintain fuel pool water temperature at a level which will help maintain the Reactor Building environment within the bounding limits of the environmental qualification of electrical equipment.

10. Please explain in detail how the Emergency Standby Subsystem satisfies each of the requirements of 10 C.F.R. § 50.49 to ensure operability after exposure to a harsh environment.

11. Please identify and list all components of the Emergency Standby Subsystem. For each of those electric components, please identify those that are environmentally qualified pursuant to 10 C.F.R. § 50.49.

12. For each of the qualified components listed above, provide the following information:

(a) Identify and describe the performance specifications under conditions existing during and following design basis accidents;

(b) Identify and describe the voltage, frequency, load, and other electrical characteristics for which the performance specifications identified in the preceding paragraph can be met;

(c) Describe the environmental conditions, including temperature, pressure, humidity, radiation, chemicals, and submergence at the locations where the equipment must perform during an accident;

(d) Produce the service environment charts or any other documentation showing the postulated accident conditions for which each component will be qualified. If none is available, explain why this documentation is not available and state when it will be available.

(e) Produce the equipment qualification file and any other documentation required by 10 C.F.R. §§ 50.49(d) and 10 C.F.R. § 50.49(j) for each component. If none is available, explain why this documentation is not available and state when it will be available.

13. Describe how the system described in the "Vermont Yankee Proposed Technical Specification Change for New and Spent

Fuel Storage" is designed to survive a safe shut-down earthquake, and remain operational following the safe shut-down earthquake. Identify all NRC regulations, regulatory guides, staff positions, or engineering judgments relied upon to conclude that the system is designed to survive a safe shut-down earthquake.

14. Identify and describe all changes in the technical specifications of the Emergency Standby Subsystem. If there will be no changes, explain how you intend to justify your surveillance, inspection, and testing requirements.

15. Describe how the Emergency Standby Subsystem, including all cables and instrumentation used in the system, will be located or designed to prevent common mode failure from fire, flooding and missiles. Provide any drawings, schematics, or other documentation that describes the fire, flooding, and missile protection designs.

16. Please identify all standards, including but not limited to NRC regulations, regulatory guides, NRC Staff positions, or the Licensee's engineering judgment, that you complied with in order to conclude that the Emergency Standby Subsystem is located or designed to prevent common mode failure from fire, flooding and missiles, and describe or explain in detail what you have done in order to meet these regulatory requirements or standards.

17. The "Vermont Yankee Proposed Technical Specification Change for New and Spent Fuel Storage" states that the Fuel Pool

Cooling and Demineralizer System (FPCDS), centrifugal pumps, related piping and valves, will be of corrosion resistant material. Describe the metallurgical composition of all component parts of the FPCDS, and describe your program for monitoring and controlling corrosion in all component parts of the FPCDS.

Respectfully submitted,

Andrea Ferster
HARMON & WEISS
2001 "S" Street N.W. Suite 430
Washington, D.C. 20009
(202) 328-3500

CERTIFICATE OF SERVICE

I certify that on August 4, 1988, copies of the foregoing pleading were served by first-class mail, or as otherwise indicated, on all parties listed below.

Charles Bechhoefer, Chairman
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Glenn O. Bright
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. James H. Carpenter
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Secretary of the Commission
Attn: Docketing and Service Section
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Christine N. Kohl, Chairman
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

George Dean, Esq.
Assistant Attorney General
Commonwealth of Massachusetts
Department of the Attorney General
One Ashburton Place
Boston, MA 02108

David J. Mullett, Esq.
Vermont Department of Public Service
120 State Street
Montpelier, VT 05602

Ann Hodgdon, Esq.
Office of the General Counsel Bethesda
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Diana Sidebotham

R.F.D. #2
Putney, Vermont 05346

R.K. Gad III *
Ropes & Gray
225 Franklin Street
Boston, MA 02110

Gary J. Edles
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Howard A. Wilber
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Geoffrey M. Huntington, Esq.
Office of the Attorney General
Environmental Protection Agency
State House Annex
25 Capitol Street
Concord, NH 03301-6397

Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Andrea Ferster

* By overnight mail