

February 4, 1994

Docket No. 50-213

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Mr. John F. Opeka  
Executive Vice President, Nuclear  
Connecticut Yankee Atomic Power Company  
Northeast Nuclear Energy Company  
Post Office Box 270  
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

SUBJECT: HADDAM NECK PLANT - SPENT FUEL AND NEW FUEL STORAGE MODIFICATIONS  
REQUEST FOR ADDITIONAL INFORMATION (TAC NO. M88585)

By letter dated January 6, 1994, Connecticut Yankee Atomic Power Company requested a Technical Specification change to allow an increase in the maximum nominal fuel enrichment allowed to be stored in both the new fuel storage racks and the spent fuel pool to a nominal 5.0 weight-percent U-235. Based on our review of your submittal, the staff has determined that additional information is necessary to complete our review. Enclosed are additional questions regarding the storage of the higher enriched fuel at your facility. Please respond within 30 days of receipt of this letter.

This requirement affects one respondent and, therefore, is not subject to Office of Management and Budget review under P.L. 96-511.

Sincerely,

Original signed by:

Alan B. Wang, Project Manager  
Project Directorate I-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

cc w/enclosure:  
See next page

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Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

cc w/enclosure:  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555-0001

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Connecticut Yankee Atomic Power Company  
Northeast Nuclear Energy Company  
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Sincerely,

A handwritten signature in cursive script that reads "Alan Wang".

Alan B. Wang, Project Manager  
Project Directorate I-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

cc w/enclosure:  
See next page

Mr. John F. Opeka  
Northeast Nuclear Energy Company

Haddam Neck Plant

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HADDAM NECK NEW AND SPENT FUEL STORAGE MODIFICATIONS  
REQUEST FOR ADDITIONAL INFORMATION

1. The required Action for proposed TS 3.9.14 is not appropriate. The k-eff of the pool must be no greater than 0.95 without credit for boron in the pool water, as required by TS 5.6.1.1a. If the placement of fuel assemblies does not meet Fig. 3.9-1 or 3.9-2, the required Action should be to correct the loading error.
2. Westinghouse 15x15 fresh fuel assemblies may be placed in the fresh fuel racks if they either comply with the enrichment-IFBA requirements of TS Fig. 5.6-1 or have a reference k-infinity less than or equal to 1.483. Therefore, why isn't the k-infinity requirement also in the TS?
3. Are 61 spaces for new fuel assembly storage sufficient for a reload batch?
4. Please discuss the number of neutron histories used in the KENO Monte Carlo calculations and why this is sufficient to assure convergence.
5. Since nominal boron carbide absorber plate dimensions were assumed, why weren't the uncertainties due to manufacturing tolerances for thickness and length also included in the reactivity analysis?
6. Since the spent fuel assembly storage array was assumed to be infinite in lateral and axial extent, it appears that an average assembly burnup was assumed in the burnup credit reactivity equivalencing. What is the effect of axial burnup distribution on assembly reactivity?