April 7, 1994

Docket No. 50-423

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: MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3 - REQUEST FOR ADDITIONAL INFORMATION (TAC NO. M87864)

Your request of September 30, 1993, proposed technical specification changes related to the emergency diesel generator fuel oil storage capacity. In our review of your request we find that we need additional information. Please provide the information described in the enclosure to this letter within 45 days of the date 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:

Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor regulation

Enclosure:
Request for Additional Information

cc w/enclosure:
See next page

DISTRIBUTION:

Docket File	ACRS (10)
NRC & Local PDRs	LDoerflein, RGI
PDI-4 Plant	CMcCraken
SVarga	DShum
JCalvo	
VRooney	
SNorris	
OGC	

OFFICE	LA:PDI-4	PM:PDI-4	D:PDI-4	SPLB	
NAME	SNorris	VRooney:bp	JStolz	CMcCraken	
DATE	4/6/94	4/6/94	4/7/94	4/7/94	/ /

OFFICIAL RECORD COPY
Document Name: G:\ROONEY\87864.req

-40058

April 7, 1994

Docket No. 50-423

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: MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3 - REQUEST FOR ADDITIONAL INFORMATION (TAC NO. M87864)

Your request of September 30, 1993, proposed technical specification changes related to the emergency diesel generator fuel oil storage capacity. In our review of your request we find that we need additional information. Please provide the information described in the enclosure to this letter within 45 days of the date 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:

Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor regulation

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

DISTRIBUTION:

Docket File	ACRS (10)
NRC & Local PDRs	LDoerflein, RGI
PDI-4 Plant	CMcCraken
SVarga	DShum
JCalvo	
VRooney	
SNorris	
OGC	

OFFICE	LA:PDI-4	PM:PDI-4	D:PDI-4	SPLB	
NAME	SNorris	VRooney:bp	JStolz	CMcCraken	
DATE	4/6/94	4/7/94	4/7/94	4/7/94	/ /

OFFICIAL RECORD COPY
Document Name: G:\ROONEY\87864.req

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 7, 1994

Docket No. 50-423

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: MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3 - REQUEST FOR ADDITIONAL INFORMATION (TAC NO. M87864)

Your request of September 30, 1993, proposed technical specification changes related to the emergency diesel generator fuel oil storage capacity. In our review of your request we find that we need additional information. Please provide the information described in the enclosure to this letter within 45 days of the date 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,

Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor regulation

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

cc:

Gerald Garfield, Esquire
Day, Berry and Howard
Counselors at Law
City Place
Hartford, Connecticut 06103-3499

J. M. Solymossy, Director
Nuclear Quality & Assessment Services
Northeast Utilities Service Company
Post Office Box 270
Hartford, Connecticut 06141-0270

Kevin T. A. McCarthy, Director
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

Allan Johanson, Assistant Director
Office of Policy and Management
Policy Development and Planning Division
80 Washington Street
Hartford, Connecticut 06106

S. E. Scace, Vice President
Nuclear Operations Services
Northeast Utilities Service Company
Post Office Box 270
Hartford, Connecticut 06141-0270

F. R. Dacimo, Nuclear Unit Director
Millstone Unit No. 3
Northeast Nuclear Energy Company
Post Office Box 128
Waterford, Connecticut 06385

Burlington Electric Department
c/o Robert E. Fletcher, Esq.
271 South Union Street
Burlington, Vermont 05402

Nicholas S. Reynolds
Winston & Strawn
1400 L Street, NW
Washington, DC 20005-3502

R. M. Kacich, Director
Nuclear Planning, Licensing & Budgeting
Northeast Utilities Service Company
Post Office Box 270
Hartford, Connecticut 06141-0270

J. P. Stetz, Vice President
Haddam Neck Plant
Connecticut Yankee Atomic Power Company
362 Injun Hollow Road
East Hampton, Connecticut 06424-3099

Regional Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

First Selectmen
Town of Waterford
Hall of Records
200 Boston Post Road
Waterford, Connecticut 06385

P. D. Swetland, Resident Inspector
Millstone Nuclear Power Station
c/o U.S. Nuclear Regulatory Commission
Post Office Box 513
Niantic, Connecticut 06357

M. R. Scully, Executive Director
Connecticut Municipal Electric
Energy Cooperative
30 Stott Avenue
Norwich, Connecticut 06360

David W. Graham
Fuel Supply Planning Manager
Massachusetts Municipal Wholesale
Electric Company
Post Office Box 426
Ludlow, Massachusetts 01056

Donald B. Miller, Jr.
Senior Vice President
Millstone Station
Northeast Nuclear Energy Company
Post Office Box 128
Waterford, Connecticut 06385

REQUEST FOR ADDITIONAL INFORMATION FOR
MILLSTONE UNIT 3 TECHNICAL SPECIFICATION CHANGE REQUEST
FOR EMERGENCY DIESEL GENERATOR FUEL OIL STORAGE CAPACITY
TAC NO. M87864

1.0 Provide the detailed calculations (e.g. calculation 91-019-152M3, etc.) which were performed to verify usable storage capacities of the EDG fuel oil storage tanks and the EDG fuel oil day tanks. The calculations should reflect: the increase in the post-accident electrical loads due to corrections in the calculation and improvements in the calculation methodology that have occurred since the original design calculation in 1985; instrument errors; effect of variations in fuel oil properties; and vortex formation in the EDG day tank.

2.0 In Attachment 1 of the letter, dated June 30, 1993, NNECO indicated that: a re-evaluation of the large break LOCA and loss of offsite power load shedding calculation would be performed to demonstrate the ability to extend the EDG run-time by October 31, 1993; and the guidance for electrical load shedding would be incorporated into Emergency Plan Implementing Procedure (EPIP) 4400, "Notifications and Communications," by July 31, 1993. Provide the following:

- the details (e.g. conservative assumptions, justifications for shedding each electrical load, the duration of each constant load on the EDG(s), EDG fuel oil consumption rate during the duration of each constant electrical load, and the fuel oil inventory at the beginning of each duration, etc.) of the above cited electrical load shedding calculation.

- the time (following the onset of a LOCA) to initiate the electrical load shedding and each step taken to shed the electrical loads.

- the location of guidance to operators (procedure numbers) to perform the following: order fuel oil within 4 hours of LOCA; monitor fuel oil inventory; and isolate the empty fuel storage tank of one EDG and align the fuel oil transfer pump discharge header to facilitate the use of the fuel oil storage tank. The staff intends to review the time at which operator action for load shedding is called for in the procedures, to assure that it corresponds with the time credited for load shedding in diesel generator fuel oil consumption calculations.

3.0 With regard to the design of the minimum usable fuel oil storage capacity in the day tank, ANSI N195-1976 requires that each diesel shall be equipped with day or integral tank or tanks whose capacity is sufficient to maintain at least 60 minutes of operation at the level where oil is automatically added to the day or integral tank or tanks. This capacity shall be based on the fuel consumption at a load of 100% of the continuous rating of the diesel plus a minimum margin of 10%. As stated in the SER and SSER-4, NNECO's licensing commitment (stated in the FSAR) that the design bases for the EDG fuel oil storage and transfer system at Millstone 3 were in accordance with ANSI N195-1976, was one of the bases for the staff's acceptance of the EDG fuel oil storage and transfer system at Millstone 3.

In addition, Westinghouse Standard TS Bases for the day tank states that the day tank TS minimum contained volume is based on providing adequate fuel oil for a minimum of 1 hour of EDG operation at full load plus 10%.

Therefore, the make-up setpoints of the fuel oil transfer pumps should be readjusted and the Millstone 3 TS should be revised accordingly to ensure that fuel oil inventory in the day tank will be maintained to satisfy the above licensing commitment by NNECO and the guidance of ANSI N195-1976 and Westinghouse Standard TS.

4.0 With regard to EDG fuel oil consumption rate, there are numerous discrepancies, for example:

- In the safety assessment of the proposed TS change, NNECO stated that the proposed TS changes would increase the minimum volume of fuel oil required to be stored in the EDG day tank from 205 gallons to 278 gallons. The run-time would be extended from 23 minutes to approximately 27 minutes.

  From this information, one will predict the following EDG fuel oil consumption rates:

  1) [205 - (278 - 189)]/23 = 5.17 gpm
  2) (278 - 205) /(27 - 23) = 18.25 gpm

- In the bases for the proposed TS change, NNECO stated that 413 gallons usable volume corresponded to approximately 60 minutes of EDG operation and 284 gallons usable volume corresponded to approximately 42 minutes of EDG operation.

  From this information, one will predict the following EDG fuel oil consumption rates:

  1) 413/60 = 6.88 gpm
  2) 284/42 = 6.76 gpm

Provide clarification for the above discrepancies.