August 4, 1993

Docket No. 50-336

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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: NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING - MILLSTONE NUCLEAR POWER STATION, UNIT 2 (TAC NO. M86361)

Enclosed is a copy of the subject notice for your information. This notice relates to you application dated May 14, 1993, pertaining to a proposed modification to the spent fuel storage pool for Millstone Unit 2 that would introduce neutron absorbing (poison) rodlets (pins) into the stored fuel and increase the required burnup in Region C to permit removal of the cell blockers, thus increasing by 234 fuel assemblies the storage capacity of the spent fuel storage pool. Additional information was supplied by letters dated June 10, 1993, and July 16, 1993.

The notice has been forwarded to the Office of Federal Register for publication.

Sincerely,

Original signed by

Guy S. Vissing, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
As stated

NRC FILE CENTER COPY

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

August 4, 1993

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Executive Vice President, Nuclear
Connecticut Yankee Atomic Power Company
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Post Office Box 270
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Enclosure:
As stated

cc w/enclosure:
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UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO. 50-336

NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-65, issued to Northeast Nuclear Energy Company (NNECO/the licensee), for operation of the Millstone Nuclear Power Station, Unit No. 2, located in New London County, Connecticut.

The proposed amendment would modify the Millstone 2 Technical Specifications to accommodate a proposed modification in Region C of the Spent Fuel Storage Pool. The modification would introduce neutron absorbing (poison) rodlets (pins) into the stored fuel and increase the required burnup in Region C to permit removal of cell blocking devices that are located in the fourth location of the 3-out-of-4 configuration. Three rodlets in spent fuel assemblies, where required, would be located in opposite corner and center control rod guide tubes. The modification would add 234 cell locations for the storage of spent fuel assemblies and consolidated spent fuel boxes.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

> In accordance with 10CFR50.92, NNECO has reviewed the proposed changes and has concluded that they do not involve a significant hazards consideration (SHC). The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed changes do not involve an SHC because the changes would not:
>
> 1. Involve a significant increase in the probability or consequences of an accident previously evaluated.
>
> Final Safety Analysis Report (FSAR) Chapter 14 accidents previously analyzed that are relevant to fuel in the spent fuel pool (SFP) are:
>
> a. Fuel Handling accident (FSAR 14.7.4)
>
> b. Spent Fuel Cask Drop accident (FSAR 14.7.5)
>
> The addition of poison pins or removal of blocking devices will not have any effect on the probability of occurrence of either of these two previously analyzed accidents. Both the radiological and criticality consequences of these two accidents must be considered. An assessment of the criticality aspects of these two accidents was reperformed to ensure that the $\leq .95$ K_{eff} criterion was not violated. The criticality analyses show that under normal and accident conditions, this criterion is not violated. There is no change in the radiological consequences of the dropped fuel assembly accident since the installation of poison pins will not change the damage caused by the fuel assembly drop. The cask drop accident has been reanalyzed for the radiological consequences due to the change in fuel storage capacity in the "targeted footprint area." The calculated radiological consequences from the rupture of one-year-old

fuel assemblies in the cask drop footprint (782 assemblies) is bounded by the current analysis. The thyroid dose is zero, since all of the iodine has decayed. The whole body dose calculated value is 0.097 roentgen equivalent man (REM). This is less than the limiting dose presented in the FSAR of 0.241 REM for the rupture of 587 assemblies with 120 days decay. All of the above consequences are less than 1 percent of the 10CFR100 limit. Based on this analysis, the decay time was increased from 120 days to 1 year for fuel within the footprint area, prior to allowing a cask to be brought to the refueling floor.

Fuel/fuel rack and fuel pool qualifications have been evaluated and determined to be unaffected by this change. The mechanical design configuration of the rodlets is similar to the shape, size, and weight of a control element assembly (CEA) finger. The rodlets are approximately 0.87 inch outside diameter (OD) borated stainless steel, with a boron content of 2 weight percent (w/o). The OD of the poison rodlet is approximately 0.75 inch longer than a CEA finger. The weight of three poison rodlets is less than that of a CEA. The material (borated stainless steel) is American Society for Testing and Materials (ASTM) approved and has been licensed by the NRC for use in spent fuel storage technologies and spent fuel pools. The thermal considerations of fuel are unaffected by the presence of the rodlets because the guide tube is designed for the presence of a CEA; therefore, it is not a primary coolant flow area. The fuel rack normal thermal cooling and malfunction blocked cooling scenarios are unaffected by the presence of the rodlets in the fuel assembly. The fuel pool cooling scenarios of normal, abnormal, single-active failure, and loss of forced cooling are unaffected by the increase in intact fuel storage resulting from the rodlets because License Amendment No. 128, dated March 31, 1988, accounted for an intact spent fuel inventory decay heat history to a maximum of 1965 fuel assemblies. Therefore, the pool cooling scenarios are bounded by previous licensed analyses. The structural effect of the weight of the rodlet on the fuel/fuel rack/fuel pool structural interfaces and drop qualifications are unaffected because, with respect to the fuel, the combined weight of three rodlets is less than the weight of a CEA. With respect to the fuel rack and fuel pool structural interfaces, they are bounded by the weight of a consolidated fuel storage box (-2500 lbs.) in every one of the 1346 storage locations per License Amendment No. 128, dated March 31, 1988. Therefore, this proposed change does not involve an increase in the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident than any previously evaluated.

The removal of the blocking devices could not create the possibility of a new or different type of accident. The blocking devices were never credited in any analysis. These were considered as a backup to administrative control. The storage of additional fuel assemblies could not create the possibility of a new or different type of accident. Accidental withdrawal of the poison pins is not possible since special tooling is required to remove them, and they are completely contained within the guide tubes of the designated assemblies. Misloading of the poison pins is prevented due to the design of the installation equipment, strict procedural controls, and double verification that will be in place to ensure the poison pins are installed properly. The use of burnup versus enrichment curves has already been used in the Millstone Unit No. 2 SFP and, therefore, does not create the possibility of a new or different type of accident.

All failure modes that cause an accident have been evaluated (design bases, fuel handling, and cask drop accidents). A new failure mode that could represent a new unanalyzed accident has not been identified.

Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

All conditions that constitute a malfunction have been evaluated (fuel/fuel rack/fuel pool structural interface qualifications). A new condition that represents a malfunction has not been identified. Therefore, no new malfunction has been created.

3. Involve a significant reduction in a margin of safety.

The margin of safety for criticality is the 0.95 K_{eff} criterion for normal and accident conditions. The criticality analyses show that under normal and accident conditions, 0.95 K_{eff} or less is maintained.

The mechanical properties and weight of the fuel assemblies remain essentially unchanged. The fuel racks are freestanding, and with the inclusion of the weight of the three rodlets per assembly, the original mechanical and thermal analyses of the fuel assembly/fuel rack and fuel pool building interfaces currently approved by License Amendment No. 128, dated March 31, 1988, remain valid and conservative. Therefore, this change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the FEDERAL REGISTER a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Rules Review and Directives Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room P-223, Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland, from 7:30 a.m. to 4:15 p.m. Federal workdays. Copies of written comments received may

be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555.

The filing of requests for hearing and petitions for leave to intervene is discussed below.

By September 9, 1993 , the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at the Learning Resources Center, Thames Valley State Technical College, 574 New London Turnpike, Norwich, Connecticut 06360. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board Panel, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The

petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to 15 days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than 15 days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a

genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman

Building, 2120 L Street, NW., Washington, DC 20555, by the above date. Where petitions are filed during the last 10 days of the notice period, it is requested that the petitioner promptly so inform the Commission by a toll-free telephone call to Western Union at 1-(800) 248-5100 (in Missouri 1-(800) 342-6700). The Western Union operator should be given Datagram Identification Number N1023 and the following message addressed to John F. Stolz: petitioner's name and telephone number, date petition was mailed, plant name, and publication date and page number of this FEDERAL REGISTER notice. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Gerald Garfield, Esquire, Day, Berry & Howard, City Place, Hartford, Connecticut 06360-3499, attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

The Commission hereby provides notice that this is a proceeding on an application for a license amendment falling within the scope of section 134 of the Nuclear Waste Policy Act of 1982 (NWPA), 42 U.S.C. 10154. Under section 134 of the NWPA, the Commission, at the request of any party to the proceeding must use hybrid hearing procedures with respect to "any matter

which the Commission determines to be in controversy among the parties." The hybrid procedures in section 134 provide for oral argument on matters in controversy, proceeded by discovery under the Commission's rules, and the designation, following argument, of only those factual issues that involve a genuine and substantial dispute, together with any remaining questions of law, to be resolved in an adjudicatory hearing. Actual adjudicatory hearings are to be held on those issues found to meet the criteria of section 134 and set for hearing after oral argument.

The Commission's rules implementing section 134 of the NWPA are found in 10 CFR Part 2, Subpart K, "Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors" (published at 50 FR 41670, October 15, 1985) to 10 CFR 2.1101 et seq. Under those rules, any party to the proceeding may invoke the hybrid hearing procedures by filing with the presiding officer a written request for oral argument under 10 CFR 2.1109. To be timely, the request must be filed within 10 days of an order granting a request for hearing or petition to intervene. (As outlined above, the Commission's rules in 10 CFR Part 2, Subpart G, and 2.714 in particular, continue to govern the filing of requests for a hearing or petitions to intervene, as well as the admission of contentions.) The presiding officer shall grant a timely request for oral argument. The presiding officer may grant untimely request for oral argument only upon showing of good cause by the requesting party for the failure to file on time and after providing the other parties an opportunity to respond to the untimely request. If the presiding officer grants a request for oral argument, any hearing held on the application shall be conducted in accordance with hybrid hearing procedures.

In essence, those procedures limit the time available for discovery and require that an oral argument be held to determine whether any contentions must be resolved in adjudicatory hearing. If no party to the proceedings requests oral argument, or if all untimely requests for oral argument are denied, then the usual procedures in 10 CFR Part 2, Subpart G, apply.

For further details with respect to this action, see the application for amendment dated May 14, 1993, and supplements dated June 10, 1993, and July 16, 1993, which are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at the Learning Resources Center, Thames Valley State Technical College, 574 New London Turnpike, Norwich, Connecticut 06360.

Dated at Rockville, Maryland, this 4th day of August 1993.

FOR THE NUCLEAR REGULATORY COMMISSION

Guy S. Vissing, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation