

UNITED STATES NUCLEAR REGULATORY COMMISSION

VERMONT YANKEE NUCLEAR POWER CORPORATION

DOCKET NO. 50-271

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-28 issued to Vermont Yankee Nuclear Power Corporation (the licensee) for operation of the Vermont Yankee Nuclear Power Station located in Vernon, Vermont.

The proposed amendment would increase the spent fuel storage capacity of the Vermont Yankee spent fuel pool from 2,870 to 3,355 fuel assemblies.

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:

1. The operation of Vermont Yankee Nuclear Power Station in accordance with the proposed amendment, will not involve a significant increase in the probability or consequences of an accident previously evaluated.

Vermont Yankee has determined that the proposed change to increase the spent fuel pool capacity does not involve a significant increase in the probability or consequences of an accident previously evaluated. The installation of new storage racks of similar design to the existing racks does not increase the probability or consequences of a fuel handling accident. Fuel handling equipment is not affected by the proposed amendment and the top of the new racks will be at the same elevation as the existing racks to prevent operator difficulties during fuel handling.

VY's proposed storage expansion method consists of installing up to three additional freestanding racks of a design similar to the existing proven design. Vermont Yankee has performed nuclear, thermal-hydraulic, mechanical, and structural analyses of normal and abnormal conditions which could create potential hazards. These include criticality considerations, seismic and mechanical loading, spent fuel pool cooling, and long-term corrosion and oxidation of fuel cladding.

Additionally, the neutron poison and rack structural materials were evaluated and shown to be compatible with the pool environment. The probability and occurrence of potential abnormal conditions and accident scenarios initiated either by external events (such as a seismic event) or by failure of an engineered system (such as dropping a fuel assembly) are not affected by the racks themselves; thus, the racking does not increase the probability of these conditions and accidents. Cask handling and installation of the new racks will meet the applicable NUREG 0612 guidance, therefore the proposed change does not increase the probability or consequences of an accident previously evaluated.

The radiological consequences of a fuel handling accident have been previously analyzed and remain unchanged by the proposed new rack installation. Radiological shielding analyses are unaffected by the proposed new rack installation. Installing additional racks on the east end of the spent fuel pool does not increase the consequences of a fuel handling accident.

2. The operation of Vermont Yankee Nuclear Power Station in accordance with the proposed amendment, will not create the possibility of a new or different kind of accident from any accident previously evaluated.

VY has determined that the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. VY has evaluated the proposed additional racks in accordance with the NRC paper, "NRC Guidance on Spent Fuel Pool Modification Review and Acceptance of Spent Fuel Storage and Handling Applications (April 14, 1978 with revision January 18, 1979)," as well as appropriate NRC Regulatory Guides, appropriate NRC Standard Review Plan sections which were used for guidance and appropriate industry codes and standards.

In addition, VY has reviewed the NRC Safety Evaluation Report for the previous VY spent fuel rack replacement application and for other prior spent fuel pool rerackings. The proposed storage expansion method consists of installing up to three new racks of similar design to the existing racks with a previously approved and proven design. The credible accidents and consequences evaluated have been found to be conservatively bounded and no new categories or types of accidents have been identified.

3. The operation of Vermont Yankee Nuclear Power Station in accordance with the proposed amendment, will not involve a significant reduction in a margin of safety.

VY has determined that the proposed change does not involve a significant reduction in a margin of safety. The issue of "margin of safety" when applied to a reracking modification, includes the following considerations:

- a. Nuclear criticality considerations,
- b. Thermal-hydraulic considerations,
- c. Mechanical, material and structural considerations.

The margin of safety that has been established for nuclear criticality considerations is that the effective neutron multiplication factor ( $k_{eff}$ ) in the spent fuel pool is to be less than or equal to 0.95, including all reasonable uncertainties and under all postulated conditions. The criticality analysis for the proposed modification which analyzed both the new and existing racks concluded that for all bounding normal and abnormal storage conditions, the subcritical multiplication factor ( $K_{eff}$ ) was verified to be less than the criticality criterion of 0.95 at the 95/95 probability/confidence level under all postulated conditions. The proposed reracking does not involve a significant reduction in the margin of safety for nuclear criticality.

The margin of safety that has been established for the thermal-hydraulic considerations is that fuel pool cooling be capable of maintaining spent fuel pool water temperatures at or below the Technical Specification limit of 150°F with maximum postulated pool heat load. Analyses performed verify that the installed fuel pool cooling equipment can maintain spent fuel pool water temperature during the maximum decay heat load assuming full core discharge during the Fall, 2008 refueling outage.

The maximum heat load predicted for a full pool with the proposed additional racks, remains within the design capacity of existing equipment. It has also been demonstrated that if the Spent Fuel Pool Cooling System is lost for any reason, there is sufficient time and make-up capacity available to maintain pool water level. Thus, the proposed additional storage racks do not involve a significant reduction in any thermal-hydraulic margins of safety.

The racks are designed in accordance with applicable NRC Regulatory Guides, Standard Review Plans used as guidance, position papers and appropriate industry codes and standards, as well as to Seismic Category I requirements. All



materials selected are corrosion-resistant. The materials utilized for the proposed new racks are compatible with the existing spent fuel racks, the spent fuel pool and the spent fuel assemblies. The conclusion of the analyses is that the margin of safety is not significantly reduced by the proposed reracking.

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 Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room 6D59, Two White Flint North, 11545 Rockville Pike, Rockville, 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.

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

By October 30, 1998, 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, and at the local public document room located at the Brooks Memorial Library, 224 Main Street, Brattleboro, VT 05301. 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, 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 20555-0001, Attention: Rulemakings and Adjudications Staff, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, by the above date. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and Mr. David R. Lewis, Shaw, Pittman, Potts and Trowbridge, 2300 N Street, NW., Washington, DC 20037-1128, 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, preceded 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 only those issues found to meet the criteria of section 134 and set for hearing after oral argument.

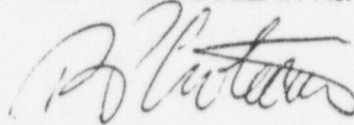
The Commission's rules implementing section 134 of the NWPAA are found in 10 CFR Part 2, Subpart K, "Hybrid Hearing Procedures for Expansion of Spent Fuel Storage Capacity at Civilian Nuclear Power Reactors" (published at 50 FR 41662 dated October 15, 1985). Under those rules, any party to the proceeding 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 ten (10) days of an order granting a request for hearing or petition to intervene. The presiding officer must grant a timely request for oral argument. The presiding officer may grant an untimely request for oral argument only upon a 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 must be conducted in accordance with the 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 an adjudicatory hearing. If no party to the proceeding timely requests oral argument, and 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 September 4, 1998, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Brooks Memorial Library, 224 Main Street, Brattleboro, VT 05301.

Dated at Rockville, Maryland, this 24th day of September 1998.

FOR THE NUCLEAR REGULATORY COMMISSION



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