

December 18, 1991

Docket No. 50-289

Mr. T. Gary Broughton, Vice President
and Director - TMI-1
GPU Nuclear Corporation
Post Office Box 480
Middletown, Pennsylvania 17057

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Dear Mr. Broughton:

SUBJECT: NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION
DETERMINATION, AND OPPORTUNITY FOR HEARING -
THREE MILE ISLAND NUCLEAR GENERATING STATION, UNIT 1
(TAC NO. M79289)

Enclosed is a copy of the subject notice for your information. This notice
relates to your application dated November 14, 1990, as supplemented June 6,
June 14, and September 18, 1991, pertaining to the spent fuel pool storage
capacity expansion for the Three Mile Island Nuclear Generating Station, Unit 1.

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

Sincerely,



Ronald W. Hernan, Sr. 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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Mr. T. Gary Broughton
GPU Nuclear Corporation

Three Mile Island Nuclear Station,
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cc:

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Harrisburg, Pennsylvania 17120

Sally S. Klein, Chairperson
Dauphin County Commissioner
Dauphin County Courthouse
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Thomas M. Gerusky, Director
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Pennsylvania Department of
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Kenneth E. Witmer, Chairman
Board of Supervisors
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UNITED STATES NUCLEAR REGULATORY COMMISSIONGPU NUCLEAR CORPORATIONDOCKET NO. 50-289NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION
DETERMINATION, AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-50, issued to GPU Nuclear Corporation, (the licensee), for operation of the Three Mile Island Nuclear Station, Unit 1 located in Dauphin County, Pennsylvania.

The proposed amendment would increase the number of spent fuel assemblies which may be stored in the spent fuel pool (SFP) from 749 assemblies to 1494 assemblies through use of high density spent fuel storage racks whose design incorporates Boral as a neutron absorber. The changes would affect Technical Specification Sections 5.4.1.a and 5.4.2. and adds a Figure 5-4.

Projections now indicate that full core discharge capability will be lost following the scheduled 1993 refueling outage. The increased storage capacity will extend this capability to the year 2023, well beyond the present license expiration date of 2014.

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. Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability of occurrence or the consequences of an accident previously evaluated. The following previously analyzed accident scenarios have been considered as part of the analyses required to support the installation of high density spent fuel storage racks:
 - a. Spent Fuel Assembly Drop - The criticality acceptance criterion, K_{eff} [less than or equal to] 0.95, is maintained and the radiological consequences remain bounded by previous analysis. Therefore, the proposed change has no effect on this accident scenario.
 - b. Spent Fuel Cask Drop - TMI-1 Technical Specifications preclude movement of spent fuel cask when fuel is stored in the spent fuel storage pools. Therefore, the proposed change has no effect on this accident scenario.
 - c. Seismic Event - The new racks are designed and fabricated to remain functional during and after a Safe Shutdown Earthquake under all loading conditions. Analysis has demonstrated that no rack-to-rack or rack-to-wall impacts occur. The potential for overturning has been analyzed and shown to be not possible. Pool slab analysis has demonstrated adequate structural integrity for all postulated loading conditions. Therefore, the proposed change has no effect on this accident scenario.
 - d. Loss of Spent Fuel Pool Cooling - Sufficient time is available to provide an alternate means of cooling in the event of a failure in the cooling system. Therefore, the proposed change has no effect on this accident scenario.

Accordingly, the proposed modification does not increase the probability of occurrence or the consequences of an accident previously evaluated.

2. Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated. Administrative controls during rack installation will preclude the movement of a new or existing rack[s] directly over any fuel. The new fuel storage vault and the decontamination pit will be equipped with structural impact shields adequate to sustain a potential rack drop. The Fuel Storage Building crane has sufficient safety factor to preclude potential single-failure mechanisms. Therefore, this change has no effect on the possibility of creating a new or different kind of accident from any accident previously evaluated.

3. Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety. Analysis has demonstrated that the established criticality acceptance criterion, K_{eff} [less than or equal to] 0.95 including uncertainties, is maintained with the racks fully loaded with fuel of the highest anticipated reactivity. Thermal-hydraulic analyses demonstrate that the maximum allowable temperature for bulk boiling is not exceeded for the increase in pool heat load, and that the maximum local water temperature along with the hottest fuel assembly is below the nucleate boiling condition value. The maximum calculated bulk pool water temperature of 160°F results in a negligible decrease in the time-to-boil margin of safety. The rack materials used are compatible with the spent fuel pool and the spent fuel assemblies. The structural considerations have maintained margins of safety against tilting and deflection or movement. Therefore, this change has no effect on the margins of safety related to nuclear criticality, thermal and structural integrity, and material compatibility.

The proposed amendment is considered to be in the same category as example (x) of amendments that are considered not likely to involve significant hazards consideration as provided in the final NRC adoption of 10 CFR 50.92 published on page 7751 of the Federal Register Volume 51, No. 44, March 8, 1986. This example indicates that an amendment is not likely to involve a significant hazards condition as follows:

Criterion (1)

The storage expansion method consists of either replacing existing racks with a design which allows closer spacing between stored spent fuel assemblies or placing additional racks of the original design on the pool floor if space permits.

Proposed Amendment:

The TMI-1 spent fuel pool rerack involves both replacing existing and adding new racks where space permits. The new racks allow closer spacing of the stored spent fuel by incorporating a neutron absorber and requiring that only burned fuel be stored in Region II. Region I is designed for allowing safe storage of fresh or irradiated fuel.

Criterion (2)

The storage expansion method does not involve rod consolidation or double tiering.

Proposed Amendment:

The TMI-1 racks are not double tiered and all racks will sit on the spent fuel pool floor. Additionally, the amendment application does not involve consolidation of spent fuel.

Criterion (3)

The K_{eff} of the pool is maintained less than or equal to 0.95.

Proposed Amendment

The design of the new spent fuel racks contains a neutron absorber, Boral, to allow close storage of spent fuel assemblies while ensuring that the K_{eff} remains less than 0.95 under all operating conditions with pure water in the pool.

Criterion (4)

No new technology or unproven technology is utilized in either the construction process or the analytical techniques necessary to justify the expansion.

Proposed Amendment

The rack designer, Holtec International, has licensed at least ten (10) other racks of the same design. The construction processes and analytical techniques remain substantially the same as these other ten (10) rack installations. Thus, no new or unproven technology is utilized in the construction or analysis of the high density TMI-1 spent fuel racks.

Thus, the submittal meets example (x) presented in the supplementary information accompanying publication of the Final Rule and is considered as not involving significant hazards considerations.

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 thirty (30) days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Written comments may be submitted by mail to the Regulatory Publications 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. 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 January 27, 1992, 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 Government Publications Section, State Library of Pennsylvania, Walnut Street and Commonwealth Avenue, Box 1601, Harrisburg, Pennsylvania 17105. 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 a 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 fifteen (15) days prior to the first pre-hearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than fifteen (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.

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.

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 ten (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) 325-6000 (in Missouri 1-(800) 342-6700). The Western Union operator should be given Datagram Identification Number 3737 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 Ernest L. Blake, Jr., Esquire, Shaw, Pittman, Potts & Trowbridge, 2300 N Street, NW, Washington, DC 20037, 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 (NWSA), 42 U.S.C. 10154. Under section 134 of the NWSA, 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

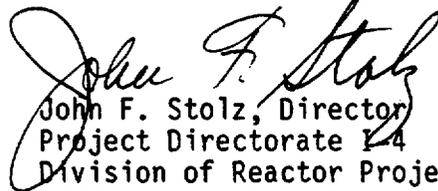
resolved in an adjudicatory hearing. Actual adjudicatory hearings are to be held on only those issues found to meet the criteria of section 134 and set for hearing after oral argument.

The Commission's rules implementing section 134 of the 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 an 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 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 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 November 14, 1990, as supplemented June 6, June 14, and September 18, 1991, which is 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 Government Publications Section, State Library of Pennsylvania, Walnut Street and Commonwealth Avenue, Box 1601, Harrisburg, Pennsylvania 17105.

Dated at Rockville, Maryland, this 18th day of December 1991.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, reading "John F. Stolz", is written over the typed name and title.

John F. Stolz, Director
Project Directorate 14
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation