



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

June 7, 1996

Mr. Michael B. Roche  
 Vice President and Director  
 GPU Nuclear Corporation  
 Oyster Creek Nuclear Generating Station  
 Post Office Box 388  
 Forked River, New Jersey 08731

SUBJECT: DENIAL OF AMENDMENT REQUEST NO. 229 (TAC NO. M93980)

Dear Mr. Roche:

By letter dated October 26, 1995, GPU Nuclear Corporation (GPUN) requested a change to Appendix A of the Oyster Creek Facility Operating License, DPR-16. The subject Technical Specification Change Request (TSCR) No. 229 proposed to amend paragraph 2.C(5) of Facility Operating License No. DPR-16 for future core spray sparger inspections. Specifically, the intent of this amendment is to utilize a visual inspection technique in accordance with the American Society of Mechanical Engineers (ASME) Code, Section XI, and to eliminate the requirements to docket inspection results and the need to obtain NRC restart authorization for each refueling outage. GPUN's justification for the request was based mainly on the positive results from the 1983 through 1994 inspections. The results of these inspections showed that no significant crack indications were found in the spargers and associated piping and that the repair clamp assemblies were intact.

After careful review of GPUN's submittal, the NRC staff has concluded that GPUN's TSCR No. 229 cannot be approved because GPUN has not provided adequate justification to resolve the staff's concern over the long-term behavior of the core spray sparger system. On November 7, 1988, the staff denied a similar request submitted by GPUN. Our denial is based on the following considerations:

- (1) During the 1978 and 1980 inspections, crack indications were found in the spargers and annulus piping. The worst crack reported was a through-wall circumferential crack extending about halfway around an upper sparger. Ten clamp assemblies were installed as an interim repair. This repair is not a Code-approved repair and is acceptable only on an interim basis. During the 1992 inspection, a small pin hole leak was found in the annulus piping. The results of the reinspection in 1994 reported that this flaw did not grow in size. However, because the intergranular stress corrosion cracking is known to be initiated from the piping inside-diameter surface, the visual examinations of the piping outside-diameter surface can only identify through-wall cracks; hence, the extent of cracking that may be associated with the observed defect at the piping inside-diameter surface is not known. Therefore, for a better characterization of the observed defect in the core spray

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sparger system, GPUN should consider using ultrasonic examination in future inspections. GPUN currently has no plan to replace these defective components. Therefore, for continued safe operation of the degraded core spray sparger system, the staff considers that NRC review and approval of the test methods and results during each refueling outage is necessary to ensure that an acceptable safety margin exists to ensure the integrity of the degraded core spray sparger system during each cycle of operation.

- (2) Although the latest inspections did not find significant through-wall cracks in the core spray sparger system, there is no evidence that the driving forces for the crack initiation and propagation have been completely removed from the system. Furthermore, because stress corrosion cracking is a time-dependent process, it takes time for the cracks to initiate and grow to a through-wall size that is visually observable. The residual stresses from welding, cold work, and fit-up are usually considered as the main driving forces for the reported cracking. Since these driving forces may be still present, cracking might continue in the long-term. Therefore, because of the uncertainties in the long-term behavior of the degraded core spray sparger system, the staff concludes that the license condition as stipulated in the license for the inspection of spargers and piping should be retained to ensure that there is no unacceptable degradation in the system integrity.
- (3) GPUN proposed to perform visual inspections in accordance with ASME Code, Section XI (VT-1 for spargers and VT-3 for piping), 1988 edition without NRC review of the inspection method. The staff considers that this may not provide an adequate examination of the core spray sparger system. The staff required that normal methods with resolutions as stipulated in IE Bulletin 80-13 should be used and, when necessary, supplemental inspection by means of ultrasonic examination should be considered to further characterize the observed cracking. The staff's review of the licensee's inspection methods is necessary to ensure that the method used for the detection and sizing of the flaws is adequate and to ensure meaningful comparisons of results with those from previous inspections can be made.

It should be noted that the staff is currently evaluating changes to the inspection requirements of various boiling-water reactor (BWR) internal components in conjunction with its review of the BWRVIP document BWRVIP-03 (BWR Vessel and Internals Project, Reactor Pressure Vessel and Internals Examination Guidelines) that provides examination guidelines for BWR vessels and internals. It is expected that a future supplement to BWRVIP-03 will address revised inspection requirements for the BWR core spray piping, spargers, and associated components inside the reactor vessel. At that time, the staff will reassess the need to revise inspection requirements generically for the core spray sparger system.

Mr. Michael B. Roche

June 7, 1996

A copy of the Notice of Denial of Amendment to be published in the Federal Register is enclosed for your information.

Sincerely,

(Original Signed By)

Ronald B. Eaton, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure: Notice of Denial

cc w/enclosure: See next page

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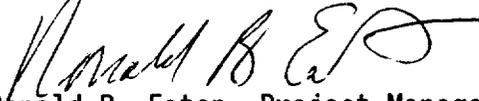
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Mr. Michael B. Roche

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Sincerely,



Ronald B. Eaton, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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Enclosure: Notice of Denial

cc w/enclosure: See next page

M. Roche  
GPU Nuclear Corporation

Oyster Creek Nuclear  
Generating Station

cc:

Ernest L. Blake, Jr., Esquire  
Shaw, Pittman, Potts & Trowbridge  
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Forked River, NJ 08731

Resident Inspector  
c/o U.S. Nuclear Regulatory Commission  
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Forked River, NJ 08731

Kent Tosch, Chief  
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Environmental Protection  
Bureau of Nuclear Engineering  
CN 415  
Trenton, NJ 08625

UNITED STATES NUCLEAR REGULATORY COMMISSIONGPU NUCLEAR CORPORATIONDOCKET NO. 50-219NOTICE OF DENIAL OF AMENDMENT TO FACILITY OPERATING LICENSE  
AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) has denied a request by GPU Nuclear Corporation, (licensee) for an amendment to Facility Operating License No. DPR-16 issued to the licensee for operation of the Oyster Creek Nuclear Generating Station, located in Forked River, New Jersey. Notice of Consideration of Issuance of this amendment was published in the FEDERAL REGISTER on December 7, 1995, (60 FR 62895).

The purpose of the licensee's amendment request was to modify the License Condition 2.C(5) to utilize a visual inspection technique in accordance with the American Society of Mechanical Engineers (ASME) Code, Section XI, and to eliminate the requirements to docket inspection results and the need to obtain NRC restart authorization for each refueling outage.

The NRC staff has concluded that the licensee's request cannot be granted and has advised the licensee that the proposed amendment is denied because the licensee has not provided adequate justification to resolve the staff's concern over the long-term behavior of the core spray sparger system. The licensee was notified of the Commission's denial of the proposed change by a letter dated June 7, 1996.

By July 15, 1996, the licensee may demand a hearing with respect to the denial described above. Any person whose interest may be affected by this proceeding may file a written petition for leave to intervene.

A request for hearing or 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, by the above date.

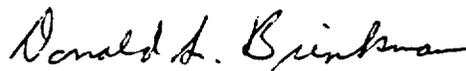
A copy of any petitions should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Ernest L. Blake, Jr., Esquire, Shaw, Pittman, Potts & Trowbridge, 2300 N Street, NW., Washington, DC 20037, attorney for the licensee.

For further details with respect to this action, see (1) the application for amendment dated October 26, 1995, and (2) the Commission's letter to the licensee dated June 7, 1996.

These documents are 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 Ocean County Library, Reference Department, 101 Washington Street, Tom's River, NJ 08753.

Dated at Rockville, Maryland, this 7<sup>th</sup> day of June 1996.

FOR THE NUCLEAR REGULATORY COMMISSION



Donald S. Brinkman, Acting Project Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation