

October 9, 1996

Mr. M. L. Marchi  
Manager - Nuclear Business Group  
Wisconsin Public Service Corporation  
Post Office Box 19002  
Green Bay, WI 54307-9002

SUBJECT: NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION  
DETERMINATION, AND OPPORTUNITY FOR A HEARING - KEWAUNEE NUCLEAR  
POWER PLANT (TAC NO. M96562)

Dear Mr. Marchi:

Enclosed is a copy of the subject notice related to your application for  
amendment, dated September 6, 1996, to allow a laser-welded repair of  
Westinghouse hybrid expansion joint (HEJ) sleeved steam generator tubes.

This notice is being forwarded to the Office of the Federal Register for  
publication.

Sincerely,

Original signed by:

Richard J. Laufer, Project Manager  
Project Directorate III-3  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Docket No. 50-305

Enclosure: Notice

cc w/encl: See next page

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Mr. M. L. Marchi  
Wisconsin Public Service Corporation

Kewaunee Nuclear Power Plant

cc:

Foley & Lardner  
Attention: Mr. Bradley D. Jackson  
One South Pinckney Street  
P. O. Box 1497  
Madison, Wisconsin 53701-1497

Chairman  
Town of Carlton  
Route 1  
Kewaunee, Wisconsin 54216

Mr. Harold Reckelberg, Chairman  
Kewaunee County Board  
Kewaunee County Courthouse  
Kewaunee, Wisconsin 54216

Chairman  
Wisconsin Public Service Commission  
610 N. Whitney Way  
Madison, Wisconsin 53705-2729

Attorney General  
114 East, State Capitol  
Madison, Wisconsin 53702

U. S. Nuclear Regulatory Commission  
Resident Inspectors Office  
Route #1, Box 999  
Kewaunee, Wisconsin 54216

Regional Administrator - Region III  
U. S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, Illinois 60532-4531

Mr. Robert S. Cullen  
Chief Engineer  
Wisconsin Public Service Commission  
610 N. Whitney Way  
Madison, Wisconsin 53705-2829

UNITED STATES NUCLEAR REGULATORY COMMISSIONWISCONSIN PUBLIC SERVICE COMPANYWISCONSIN POWER AND LIGHT COMPANYMADISON GAS AND ELECTRIC COMPANYDOCKET NO. 50-305NOTICE 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 Nos. DPR-43 issued to Wisconsin Public Service Corporation, Wisconsin Power and Light Company, and Madison Gas and Electric Company (the licensee), for operation of the Kewaunee Nuclear Power Plant, located in Kewaunee County, Wisconsin.

The proposed amendment would change Technical Specification (TS) requirements related to steam generator tubes to allow a laser-welded repair of Westinghouse hybrid expansion joint (HEJ) sleeved steam generator tubes.

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 KNPP in accordance with the proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The laser weld repair of HEJ sleeved tubes will not affect the tube, sleeve or weld stress conditions or fatigue usage factors such that the limits of the ASME Boiler and Pressure Vessel Code are exceeded. Strain gauge testing of the laser-weld repaired HEJ sleeved tubes indicates tube far field stresses above and below the upper HEJ are similar. The magnitude of these stresses are slightly less than those associated with far field residual stresses for the two most recent domestic LWS programs. Accelerated corrosion testing of the prototypic repair welds in special fixtures designed to simulate locked tube configuration show that the expected lifetime of the repair welds exceeds the current license. Therefore, use of the laser-welded repair process will not result in an increased probability of an accident previously evaluated.

A post weld UT inspection will be required to verify minimum acceptable weld thickness to ensure that weld stresses do not exceed ASME Code limits for both stress intensity and fatigue usage. Leakage testing of LWS joints at pressure conditions far exceeding any plant normal or faulted conditions indicate the weld is leaktight at all plant conditions. Mechanical testing of 7/8 inch laser welded tubesheet sleeves installed in roll expanded tubes has shown that the individual joint structural strength of Alloy 690 laser welded sleeves under normal, upset and faulted conditions provides margin to acceptable limits. These acceptance limits bound the most limiting (3 times normal operating pressure differential) recommended by RG 1.121.

The HEJ sleeve plugging limit as currently defined in the KNPP TSs is reduced from 31% to 24% throughwall due to the use of ASME code minimum material property values for the sleeve material. A parent tube plugging limit of 50% continues to apply to the tube length adjacent to and above the weld. Minimum wall thickness requirements (used for developing the depth based plugging limit for the sleeve) are determined using the guidance of RG 1.121 and the pressure stress equation of Section III of the ASME Code.

The hypothetical consequences of failure of the laser-welded repaired HEJ would be bounded by the current SG tube rupture analysis covered in the KNPP Updated Safety Analysis Report. Due to the slight reduction in diameter caused by the sleeve wall

thickness, primary coolant release rates would be slightly less than assumed for the SGTR, and therefore would result in lower primary fluid mass release to the secondary system. For a postulated break location immediately above the repair weld the metal-to-metal interference fit provided by the original roll expansion would greatly reduce leak rates. Tube fixity conditions in the Kewaunee SGs at the support plate intersections are such that sufficient resistance to end cap loads are believed to be provided, therefore, axial motion of the postulated separated tube is not expected to occur, and leak rates would be expected to be well below make-up capacity.

The laser weld repair process does not change existing reactor coolant system flow conditions, therefore, existing LOCA analysis results will be unaffected. Plant response to design basis accidents for the current tube plugging and flow conditions are not affected by the repair process; no new tube diameter restrictions are introduced. Therefore, the application of the repair weld will not increase the consequences of a previously evaluated accident.

2. The proposed license amendment request does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Application of laser-welded repair of HEJ sleeved tubes will not introduce significant or adverse changes to the plant design basis. The general configuration of the HEJ sleeve is unaffected by the repair weld process. The repair process also does not represent a potential to affect any other plant component. Stress and fatigue analysis of the repair has shown that the ASME Code and Regulatory Guide 1.121 criteria are not exceeded. Application of the laser weld repair of HEJ sleeved tubes maintains overall tube bundle structural and leakage integrity at a level consistent to that of the originally supplied tubing during all plant conditions. The laser weld repair process does not provide a mechanism resulting in an accident outside of the area affected by the repair. Any hypothetical accident as a result of potential tube or sleeve degradation in the repaired portion of the joint is bounded by the existing tube rupture accident analysis. Therefore, use of the laser-welded repair process will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed license amendment does not involve a significant reduction in the margin of safety.

The laser weld repair of the HEJ sleeved tubes has been shown to restore integrity of the tube bundle consistent with its original design basis conditions, i.e., tube/sleeve operational and faulted load stresses and cumulative fatigue usage are bounded by the ASME Code requirements and the repaired tubes are leaktight under all

plant conditions. Application of the laser-welded repair will not result in a significant reduction in the 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 preventing startup 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 6D22, 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 November 14, 1996 , 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 University of Wisconsin, Cofrin Library, 2420 Nicolet Drive, Green Bay, Wisconsin. 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, 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. 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 Gail H. Marcus: 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 Charnoff, Esq., Shaw, Pittman, Potts, and 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).

For further details with respect to this action, see the application for amendment dated September 6, 1996, 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 University of Wisconsin, Cofrin Library, 2420 Nicolet Drive, Green Bay, Wisconsin.

Dated at Rockville, Maryland, this 9th day of October 1996.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Richard J. Laufer, Project Manager  
Project Directorate III-3  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Distribution:  
 Locket File  
 PDIII-3 Reading  
 R. Laufer  
 D. Foster-Curseen

October 9, 1996

**MEMORANDUM TO:** Rules Review and Directives Branch  
 Division of Freedom of Information and Publications Services  
 Office of Administration

**FROM:** Office of Nuclear Reactor Regulation

**SUBJECT:** NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY  
 OPERATING LICENSE.....KEWAUNEE NUCLEAR POWER PLANT (TAC #96562)

One signed original of the *Federal Register* Notice identified below is attached for your transmittal to the Office of the Federal Register for publication. Additional conformed copies ( 5 ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for submission of Views on Antitrust matters.
- Notice of Consideration of Issuance of Amendment to Facility Operating License. (Call with 30-day insert date).
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Order.
- Exemption.
- Notice of Granting Exemption.
- Environmental Assessment.
- Notice of Preparation of Environmental Assessment.
- Receipt of Petition for Director's Decision Under 10 CFR 2.206.
- Issuance of Final Director's Decision Under 10 CFR 2.206.
- Other: \_\_\_\_\_

**DOCKET NO.** 50-305  
**Attachment(s):** As stated  
**Contact:**  
**Telephone:**

**DOCUMENT NAME:**

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NAME	D. Foster-Curseen									
DATE	10/9/96									

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