

Mr. M. L. Marchi
Site Vice President - Kewaunee Plant
Wisconsin Public Service Corporation
P.O. Box 19002
Green Bay, WI 54307-9002

Dear Mr. Marchi:

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

Original Signed by
William O. Long, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Enclosure: As stated

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NAME	WLong		EBarnhill		TSullivan*		TEssig*		MYoung*		CCarpenter*	
DATE	11/18/98		11/19/98		10/08/98		10/15/98		11/04/98		11/16/98	

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November 19, 1998

Mr. M. L. Marchi
Site Vice President - Kewaunee Plant
Wisconsin Public Service Corporation
P.O. Box 19002
Green Bay, WI 54307-9002

SUBJECT: KEWAUNEE - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO
SIGNIFICANT IMPACT RELATED TO A REQUEST FOR EXEMPTION FROM
CERTAIN REQUIREMENTS OF 10 CFR 50.60 (TAC NO. MA2471)

Dear Mr. Marchi:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact
related to your August 6, 1998, request for exemption from certain requirements of
10 CFR 50.60.

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

Sincerely,

Original Signed by
William O. Long, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-³⁰⁵~~331~~

Enclosure: As stated

cc w/encl: See next page

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**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

November 19, 1998

Mr. M. L. Marchi
Site Vice President - Kewaunee Plant
Wisconsin Public Service Corporation
P.O. Box 19002
Green Bay, WI 54307-9002

**SUBJECT: KEWAUNEE - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO
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CERTAIN REQUIREMENTS OF 10 CFR 50.60 (TAC NO. MA2471)**

Dear Mr. Marchi:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your August 6, 1998, request for exemption from certain requirements of 10 CFR 50.60.

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

Sincerely,

A handwritten signature in black ink, which appears to read "William O. Long".

William O. Long, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-305

Enclosure: As stated

cc w/encl: See next page

M. L. Marchi
Wisconsin Public Service Corporation

Kewaunee Nuclear Power Plant

cc:

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Kewaunee, WI 54216

Harold Reckelberg, Chairman
Kewaunee County Board
Kewaunee County Courthouse
Kewaunee, WI 54216

Attorney General
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Madison, WI 53702

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
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Kewaunee, WI 54216-9511

Regional Administrator - Region III
U.S. Nuclear Regulatory Commission
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Madison, WI 53707-7854

Mr. Bill Franz
Environmental Review Coordinator
77 West Jackson Blvd.
Chicago, IL 60604-3590

← Note: EPA
gets 5 copies

UNITED STATES NUCLEAR REGULATORY COMMISSIONWISCONSIN PUBLIC SERVICE CORPORATIONWISCONSIN POWER AND LIGHT COMPANYMADISON GAS AND ELECTRIC COMPANYKEWAUNEE NUCLEAR POWER PLANTDOCKET NO. 50-305ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of 10 CFR 50.60 to Wisconsin Public Service Corporation, Wisconsin Power and Light Company, and Madison Gas and Electric Company (the licensee), for the Kewaunee Nuclear Power Plant located in Kewaunee County, Wisconsin.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

By application dated August 6, 1998, the licensee requested an exemption from certain requirements of 10 CFR 50.60, "Acceptance criteria for fracture prevention measures for lightwater nuclear power reactors for normal operation," and 10 CFR Part 50, Appendix G, "Fracture Toughness Requirements." The proposed action would permit the licensee to use American Society of Mechanical Engineers (ASME) Code Case N-588 for analyses used to develop reactor pressure vessel (RPV) pressure-temperature (PT) limits, and the low temperature overpressure protection (LTOP) system pressure setpoint.

(NOTE: The application also encompassed the proposed use of Code Case N-514; however, this assessment applies only to N-588.)

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The Need for the Proposed Action:

Pursuant to 10 CFR 50.60(a), all lightwater nuclear power reactors must meet the fracture toughness requirements for the reactor coolant pressure boundary as set forth in 10 CFR Part 50, Appendix G. Appendix G of 10 CFR Part 50 defines PT limits during any condition of normal operation, including anticipated operational occurrences and system hydrostatic tests to which the pressure boundary may be subjected over its service lifetime, and Appendix G.IV.2. specifies that these PT limits must be at least as conservative as the limits obtained by the following methods of analysis and the margins of safety of the ASME Code, Section XI, Appendix G.

By application dated August 6, 1998, the licensee submitted an exemption request to enable use of ASME Code Case N-588. Code Case N-588 provides benefits in terms of calculating PT limits by revising the Section XI, Appendix G, to assume that a circumferential flaw, rather than an axial flaw, exists in each circumferential weld in a reactor vessel. This reference flaw is a postulated flaw that accounts for the possibility of a prior existing defect that may have gone undetected during the fabrication process. Any significant, undetected flaw in a circumferential weld in the beltline region of an RPV would be circumferentially oriented thereby having a lesser effect than an assumed axial flaw.

The effect of the change in reference flaw orientation for circumferential welds, in the calculation of PT limits, is to expand the resulting PT "operating window." For Kewaunee, this larger operating window will eliminate the current requirement to disable one reactor coolant pump during conditions of low reactor coolant system temperature.

Environmental Impacts of the Proposed Action:

The staff has completed its evaluation of the proposed action and concludes that it is acceptable because, with the application of Code Case N-588, the RPV will continue to be adequately protected against the possibility of brittle fracture. The proposed action will not increase the probability or consequences of accidents, no significant changes are being made in the types of any effluents that may be released offsite, and there is no significant increase in the allowable occupational or public radiation exposure. The staff has concluded that there is no significant radiological environmental impact associated with the proposed action.

The proposed action does not affect nonradiological plant effluents and has no other environmental impact. Accordingly, the Commission concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action:

Since the staff has concluded that there is no significant environmental impact associated with the proposed action, any alternatives with equal or greater environmental impact need not be evaluated. As an alternative to the proposed action, the staff considered denial of the action (no-action alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the Final Environmental Statement which was issued December 20, 1972.

Agencies and Persons Consulted:

In accordance with its stated policy, on November 19, 1998, the staff consulted with Ms. Sarah Denkins, of the Public Service Commission of the State of Wisconsin, regarding the environmental impact of the proposed action. The State official had no comments.

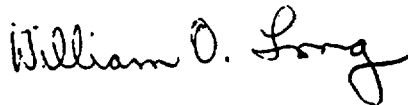
FINDING OF NO SIGNIFICANT IMPACT

Based upon the environmental assessment, the staff concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the staff has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated August 6, 1998, which is available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW, Washington, D.C., and at the local public document room located at the University of Wisconsin, Cofrin Library, 2420 Nicolet Drive, Green Bay, Wisconsin 54311-7001.

Dated at Rockville, Maryland, this 19th day of November 1998.

FOR THE NUCLEAR REGULATORY COMMISSION



William O. Long, Senior Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation