



NRC-98-91

Wisconsin Public Service Corporation
a subsidiary of WPS Resources Corporation
Kewaunee Nuclear Power Plant
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Kewaunee, WI 54216-9511
920-588-2560

August 24, 1998

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Ladies/Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Amendment 132 to Kewaunee Plant Operating License - Clarification of Supplemental Information

Reference: Letter from M. L. Marchi (WPSC) to the Document Control Desk (NRC) dated August 13, 1998.

In the Reference, Wisconsin Public Service Corporation (WPSC) provided supplemental information to the Nuclear Regulatory Commission (NRC) to resolve concerns with Amendment 132 to the Kewaunee Plant Operating License. In a subsequent telecon, the NRC has requested that WPSC clarify the information provided regarding the Kewaunee containment ventilation system and the use of a mixing factor of 0.5.

Attachment 1 of the Reference provided a dose analysis for a fuel handling accident within the containment. The analysis states, "Mixing and dilution within the containment building will reduce the total release activity by at least a factor of two even with the conservative assumption of a continuous release flow at approximately 6000 scfm." The discussion continues by identifying that the basis for this assumption was developed and accepted by the NRC in a Prairie Island license action. WPSC's intent with this information was to indicate that WPSC followed the same methodology for establishing a mixing factor. While the containment free volumes are comparable for both Prairie Island and Kewaunee (i.e., 1.32E6 cubic feet), the Kewaunee containment ventilation system designs are not the same. During refueling operations, the Kewaunee containment ventilation system is generally operated in the vent mode with a supply and discharge of approximately 33,000 scfm. Unlike the Prairie Island design, both the supply and discharge lines have redundant containment isolation valves. The redundant valves are actuated by a Train A or B containment vent isolation signal initiated by a high radiation signal from the Train A or B radiation monitor respectively. Therefore following the postulated activity release from a fuel handling accident, the ventilation system isolates and provides no motive force for a release through an open personnel airlock. Since the isolation is redundant and therefore satisfying single failure criterion, WPSC concluded it was not reasonable to assume a continued

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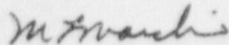
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release at this large value through this ventilation pathway. However to provide an assessment, WPSC assumed a rather arbitrary and conservative release rate of 6000 scfm. In addition, only 1E6 cubic feet was credited for mixing in the containment. Using the previously accepted NRC methodology, this results in a mixing factor of 0.5 for a two hour release.

If you have any questions concerning this information, please contact me or a member of my staff.

Sincerely,



Mark L. Marchi
Site Vice President-Kewaunee Plant

RPP

cc - US NRC Region III
US NRC Senior Resident Inspector