

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

February 10, 1986 PUBLIC COCUMENT ROOM

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Docket No. 50-305

TIME REQUESTED

Mr. D. C. Hintz Manager - Nuclear Power Wisconsin Public Service Corp. P.O. Box 19002 Green Bay, Wisconsin 53407-9002

Dear Mr. Hintz:

We are conducting a review of your Part 21 letter dated December 20, 1985, related to the environmental qualification of Limitorque actuators used on valves in safety related systems at the Kewaunee Nuclear Power Plant. In order to complete our review we find we need the additional information provided in the enclosure to this letter.

Our Generic Letter 85-15 dated August 6, 1985, requested, in part, for equipment found to be in noncompliance with 10 CFR 50.49, after November 30, 1985, that: "Evaluations of the significance of and corrective action for all actual and potential noncompliances should be documented as should the circumstances of discovery of the noncompliance or suspected noncompliance." Verify that you have performed and have available for inspection such analyses for the subject valve actuators. You should confirm that your analyses addressed the material in the enclosed request for additional information. It is not our intent that you perform additional analyses based on these requests. If no such analyses exist, kindly inform us of this fact.

As we perceive that no additional analyses is required on your part please respond within five working days of receipt of this letter. This review is being done under our TAC number 60362.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

morton B. Fairtie

Morton B. Fairtile, Project Manager Project Directorate #1 Division of PWR Licensing-A

Enclosure: As stated

cc w/enclosure: See next page

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D. C. Hintz

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cc: C. E. Rossi A/D, PWR-A, NRC

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QUESTIONS FOR THE LICENSEE ON THE KEWAUNEE EQ ISSUE

The Licensee's environmental qualification program includes a total of 68 Limitorque valve actuators. Thirteen (13) of the 68 were previously determined to be in a mild environment and two were reclassified to a mild environment which results in a total of 15 actuators in a mild environment. It was determined that seven (7) actuators are not required to operate to mitigate a accident and 14 were reclassified to category H3 because they fulfill their safety-related function prior to being exposed to a harsh environment. These 14 actuators and the nine actuators previously classified in category H3 total - 23 actuators in this category. This leaves 23 actuators that must operate in a harsh environment to complete their safety function and are classified H1 and H2. In summary, there are:

15 actuators in a mild environment and classified as M.

7 actuators not required to mitigate on accident and classified as N.

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- 23 actuators that complete their safety function prior to exposure to a harsh environment and are classified as H3.
- 23 actuators that must complete their safety function in a harsh environment and are classified H1 and H2.

In order to obtain staff concurrence with this classification the licensee should provide the following information:

- For the 15 actuators classified as M, confirmation that the environment that this equipment is required to operate in will at no time be significantly more severe than the environment that would occur during normal plant operation, including anticipated operational occurrences, and that the radiation environment is ≤10⁴ RADS total integrated dose (TID). If any actuator in this group might experience ≥10⁴ RADS TID, identify the actuator, the system it is in and provide justification for the "mild" classification.
- 2) For the seven actuators classified as N and the 23 actuators classified as H1 and H2, confirmation that a failure mode and effects analysis has been performed; that the analysis included consideration of a spectrum of pipe breaks, and whether there was a potential need for the equipment later in an event or during recovery operations. The licensee should also confirm that the results of the analysis established that failure of that equipment would not be detrimental to plant safety or mislead the operator.
- 3) For the 23 actuators classified as H3, confirmation for each piece of equipment, that documented justification exists for a time margin less than

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one hour in accordance with the recommendation of Reg. Guide 1.89 including: (1) consideration of a spectrum of breaks; (2) potential need for the equipment later in an event or during recovery operations; (3) a determination that failure of the equipment after performance of its safety function will not be detrimental to plant safety or mislead the operator; and (4) a determination that the margin applied to minimum operability time is conservative.

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The staff believes that a limit of $\le 10^4$ RADS TID represents an acceptable cutoff for a mild environment for equipment other than some electronic components and semiconductors, in which case the staff believes that $\le 10^3$ RADS TID represents an acceptable cutoff. These guidelines will be used by the staff in future audits.