

DUKE POWER COMPANY

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NUCLEAR PRODUCTION

May 5, 1983

TELEPHONE
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Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: McGuire Nuclear Station
Docket No. 50-369

Dear Mr. Denton:

Before exceeding 50% power level during the upcoming startup of McGuire Unit 1, the Dynamic Rod Drop Test will be repeated. However, we request NRC approval of revised test method and acceptance criteria before the test is performed.

McGuire FSAR Table 14.1.4-1 (page 31 of 35) is an abstract of the test and states the acceptance criteria. The attachment to this letter proposes a revised test method and acceptance criteria and provides appropriate justification. This matter has been discussed with the NRC staff.

We respectfully request that the NRC provide a reply to this request by May 11, 1983, the scheduled date of the test. Please advise if there are any questions.

Very truly yours,

Hal B. Tucker/jfw

Hal B. Tucker

REH:jfw
Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

Mr. W. T. Orders
NRC Resident Inspector
McGuire Nuclear Station

13021

Attachment

JUSTIFICATION FOR CHANGING THE TEST ACCEPTANCE CRITERION FOR THE DYNAMIC DROPPED ROD TEST

During the upcoming startup of McGuire Unit 1, Duke Power Company is required to perform the dynamic dropped rod test at approximately 50% full power. The purpose of this test is to record data on the dynamic reactor response to a simultaneous drop of two selected control rods into the core. The data to be logged will be used to demonstrate the conservatism of the new Westinghouse dropped rod methodology.* This new methodology ensures that for any dropped rod pair which might result in excessive core power peaking, a reactor trip on negative flux rate will occur. For dropped rod pairs which do not result in excessive power peaking, then a reactor trip may occur but is not required to occur.

The test acceptance criterion for the dynamic dropped rod test specified that a reactor trip must occur. This acceptance criterion is not meaningful for this test on this core for the following reason. As stated above, a reactor trip is not required unless the summed worth is greater than 400 pcm. The maximum summed worth in this core is much less than 400 pcm. Based on previous test experience, there is a likelihood that a reactor trip may not occur. This situation was discussed with Mr. M. Dunenfeld of the Core Performance Branch on April 28, 1983. Based on the discussion with the NRC, the NRC has indicated a willingness to change the acceptance criterion from "reactor trip" to "record data". This change will ensure that the objective of the test is preserved and that an unnecessary and unmeaningful acceptance criterion will be deleted.

In addition, Mr. Dunenfeld expressed some concern regarding the summed worth of the rods to be dropped for this test. The predicted worth of the rod pair is 192 pcm. This rod pair does not represent the same rod pair as described in the test abstract (FSAR Table 14.1.4-1 pp 31 of 35). The rod pair has been changed based on the experience gained during the previous test, in order to make the test more meaningful. Since the Westinghouse methodology utilizes a threshold of 400 pcm, Duke Power and Westinghouse maintain that a very sufficient safety margin exists. Duke requests that any NRC objections regarding the summed worth of the rods, the core location of the rods to be dropped, or any other matter concerning the performance of this test be promptly forwarded. This is requested in order to avoid any re-test due to disagreement in any area.

* Reference Licensing Topical Report WCAP-10297(P), WCAP-10298-(NS-EPR-2545) Entitled "Dropped Rod Methodology for Negative Flux Rate Trip Plants".
NRC approval - March 31, 1983 letter from Cecil O. Thomas to E. P. Rahe, Jr.