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**DUKE POWER**

March 24, 1994

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

Subject: McGuire Nuclear Station, Units 1 and 2  
Docket Nos. 50-369 and 50-370  
10 CFR 50, Appendix H  
Capsule V and Z Test Report

Dear Sir:

Please find attached a copy of the following Westinghouse test report: WCAP-13949, "Analysis of Capsule V Specimens and Dosimeters and Analysis of Capsule Z Dosimeters from the Duke Power Company McGuire Unit 1 Reactor Vessel Radiation Surveillance Program". This report is provided pursuant to the regulatory requirements of 10 CFR 50, Appendix H, Section III.A.

This test report presents the results of the examination of the test specimens and dosimeters from Capsule V and the results of the examination of the dosimeters from Capsule Z. These capsules are the third and fourth capsules removed from the McGuire Unit 1 reactor vessel. The capsules were removed during the Unit 1 end-of-cycle 8 refueling outage, which began March 12, 1993 and ended June 15, 1993. The capsules were removed from the reactor after 7.24 Effective Full Power Years (EFPY).

The capsules were shipped to the Westinghouse Science and Technology Center Hot Cell Facility, where the mechanical testing of the Charpy V-notch impact and tensile specimens from Capsule V was performed. For Capsule Z, only the dosimeters were analyzed at this time and the test specimens were placed in storage at the Westinghouse Science and Technology Center Hot Cell Facility.

A proposed Technical Specification amendment request concerning the heatup and cooldown pressure-temperature limit curves for Unit 1 is currently in preparation. The expected date for submitting this request is May, 1994.

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By a letter dated January 31, 1994, The NRC issued Amendment Number 139 to Facility Operating License NPF-9 and Amendment Number 121 to Facility Operating License NPF-17 for McGuire. The amendments removed the Reactor Vessel Material Surveillance Program - Withdrawal Schedule (Table 4.4-5) from the Technical Specification and made other administrative changes associated with the removal of the withdrawal schedule in response to Generic Letter 91-01. The NRC letter also advised that the request for NRC approval of the new withdrawal schedule, was still being reviewed and would be addressed in a sperate letter.

The Westinghouse test report (WCAP-13949), also, recommends a surveillance capsule withdrawal schedule for Unit 1. This information is provided within Section 7.0 and Table 7-1 of the test report. The recommended schedule meets the requirements of ASTM E185-82. Further, please note that the recommended schedule is consistent with the new withdrawal schedule currently under review by the NRC staff.

In accordance with the regulatory requirements of 10 CFR 50, Appendix H, Section II.C., an integrated surveillance program maybe considered for a set of reactors that have similar design and operating features. As specified by the regulatory requirements, an integrated surveillance program must be approved by the NRC on a case-by-case basis. As a result of the analysis of surveillance Capsule V, the limiting material for the generation of the heatup and cooldown curves for Unit 1 has changed from the intermediate shell longitudinal weld seam to the lower shell longitudinal weld seam. Due to this change, an integrated surveillance program was determined to be warranted.

Accordingly, NRC approval for using Diablo Canyon Unit 2 surveillance weld data for the prediction of the McGuire Unit 1 lower shell longitudinal weld seam is requested. In support of this effort, Appendix D of the Westinghouse test report (WCAP-13949) discusses the feasibility of utilizing the Diablo Canyon Unit 2 surveillance weld metal as a credible data source for the calculation of the  $RT_{NDT}$  of the limiting McGuire Unit 1 lower shell longitudinal weld seam. Additional information to address, in full, all of the criteria necessary for approving an integrated surveillance program is still under development and preparation. The anticipated date for submitting this additional information is May 10, 1994.

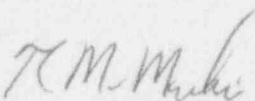
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NRC approval for utilizing the Diablo Canyon Unit 2 surveillance weld data is requested prior to the startup of McGuire Unit 1 Cycle 10, which is currently scheduled to begin in October of this year. Although all the information required for approval has not been submitted, sufficient information is provided within Appendix D of the Westinghouse test report to initiate the review process.

Timely NRC approval is necessary to support efforts to enhance the overpressure protection system during low temperature operating conditions. In addition, other submittals (a Technical Specification amendment request and an Exemption request) in support of enhancing overpressure protection during low temperature operation are being developed and will be submitted in the near future. NRC approval of these submittals will be needed prior to the startup of McGuire Unit 1 Cycle 10 as well.

Please contact Paul Guill at (704) 875-4002 if there are any questions regarding this Westinghouse test report

Very truly yours,

  
T. C. McMeekin

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