



Duke Power Company
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U.S. Nuclear Regulatory Commission
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Subject: Duke Energy Corporation
Oconee Nuclear Station
Docket Numbers 50-269, -270, and -287
McGuire Nuclear Station
Docket Numbers 50-369, and -370
Catawba Nuclear Station
Docket Numbers 50-413, and -414
Generic Letter 96-04, "Boraflex Degradation in Spent
Fuel Storage Racks"

By letter dated December 31, 1998, Duke Energy Corporation (Duke) informed NRC staff of the completion of commitments in response to the subject Generic Letter which requested affected licensees to provide an assessment of the physical condition of Boraflex used in spent fuel racks. The purpose of this letter is to provide the staff with an update of relevant activities completed at the McGuire and Oconee Nuclear Stations in 1999, and plans for 2000.

Note that Catawba Nuclear Station's spent fuel racks do not contain Boraflex and the Generic Letter is, therefore, not applicable to Catawba.

Background

By letters dated October 22, 1996, December 22, 1997, and December 31, 1998, Duke provided information to the NRC in its response to Generic Letter 96-04, "Boraflex Degradation in Spent Fuel Storage Racks." In these letters, five specific commitments were addressed. These are as follows:

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1. A RACKLIFE assessment of all four Oconee and McGuire spent fuel pools will be completed, and plans for future in-situ testing will be developed based upon these results.
2. The Oconee spent fuel storage racks will be analyzed taking reduced or no credit for Boraflex.
3. Demonstration of the EPRI Boraflex Boron Areal Density Gage (BADGER) will be performed for the McGuire Unit 2 spent fuel racks. These results will be compared to the areal density predicted by the RACKLIFE computer code and the RACKLIFE McGuire model will be adjusted, as required.
4. The need/schedule for future in-situ examinations at McGuire will be based upon the BADGER test results and RACKLIFE predictions for the McGuire pools.
5. The significance of the silica levels present in the Oconee and McGuire spent fuel pools and how it relates to Boraflex performance, as well as an assessment of the storage rack reactivity will be completed for all four pools.

Status

McGuire

As noted in the December 31, 1998 letter, Duke submitted a license amendment request (LAR) for the McGuire Nuclear Station Facility Operating Licenses (FOL) and Technical Specifications (TS) on April 5, 1999. This LAR changes the McGuire Technical Specifications to provide revised spent fuel pool storage configurations, revised spent fuel pool storage criteria, and revised fuel enrichment and burnup requirements which take credit for soluble boron in maintaining acceptable margins of subcriticality in the McGuire spent fuel storage pools.

This LAR also addresses the means and schedule for future verifications to ensure the minimum level of Boraflex assumed in the criticality analysis. In this regard, additional testing of both the McGuire Unit 1 and Unit 2 spent fuel pool racks will be performed in 2000 using the EPRI Boraflex Boron Areal Density

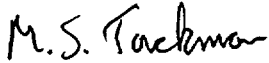
Gage (BADGER). Similar examinations of the Unit 2 spent fuel racks were last conducted in 1997.

Oconee

A RACKLIFE assessment of the Boraflex condition for the Oconee spent fuel pools, which included an assessment of the silica levels and their relationship to the Boraflex degradation, was completed in 1999. An analysis of the Oconee storage racks for zero Boraflex was also completed in 1999. A Technical Specification Change Request for Oconee will be submitted to the NRC by April 30, 2000. Similar to the McGuire submittal, the proposed amendment to the Oconee Technical Specification will define new spent fuel assembly storage limitations that utilize credit for soluble boron for the control of reactivity in the spent fuel pool while retaining the necessary margin of safety. However, unlike the McGuire submittal, the Oconee submittal will not rely on any credit for remaining Boraflex. While impractical for McGuire, this approach was feasible for Oconee due to the storage rack design and the greater flexibility afforded for fuel storage patterns. Since this approach would take no credit for Boraflex, RACKLIFE assessments will not be necessary once the LAR is approved and will be discontinued at that time.

Please address any questions to Jeff Thomas at (704) 373-3810.

Very truly yours,


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