

March 31, 2003

LICENSEE: Duke Energy Corporation

FACILITY: McGuire Nuclear Station, Units 1 and 2

SUBJECT: SUMMARY OF MEETING ON MARCH 6, 2003, WITH DUKE ENERGY ON
SPENT FUEL POOL BORAFLEX UPDATE FOR MCGUIRE

Representatives of the Duke Energy Corporation (Duke), met with members of the U.S. Nuclear Regulatory Commission (NRC) staff at NRC Headquarters on March 6, 2003 in Rockville, Maryland. The meeting addressed issues related to the degradation of Boraflex panels in the McGuire Nuclear Station, Units 1 and 2, spent fuel pool (SFP) storage racks. Previous meetings on this subject were held on December 11, 2001, and December 10, 2002. A list of attendees is provided in the Attachment and Duke's handouts provided in the meeting have been placed into ADAMS and may be found at ADAMS Accession Number ML030710321.

Duke's presentation provided (a) an introduction, (b) an overview of the McGuire SFP management program, (c) a discussion of the Duke engineering analysis methods for RackSaver inserts, (d) a discussion of Technical Specifications (TS) for RackSaver inserts and (e) a planned schedule. Duke recapped the discussion presented in the December 10, 2002, meeting of its ongoing initiatives including dry storage, continued BADGER testing of the amount of Boraflex remaining in the SFP racks, the ongoing reracking of SFP Region 1 and revised soluble boron credit and RackSaver poison rack inserts for SFP Region 2. Region 1 contains 286 storage spaces and Region 2 contains 1177 storage spaces. Installation of the new racks for Region 1 is planned for the period of April to July 2003. License amendments were issued on February 4, 2003, revising the soluble boron credit for SFP Region 2.

Duke stated that it had evaluated several options for Region 2 including reracking, RackSaver poison inserts and cooling time credit and has chosen the options of RackSaver poison inserts and cooling time credit for further evaluation. With respect to cooling time credit, Duke noted that many fuel assemblies have now cooled in the pool for 15 to 20 years.

Duke's overview of its license amendments application, to be submitted by July 31, 2003, indicated that the application would reflect the following: (a) elimination of credit for Boraflex in all SFP racks, (b) the reracking of Region 1 and use of RackSaver inserts combined with cooling time reactivity credit for Region 2, and (c) an increase in the allowable fuel enrichments in the new and spent fuel pools from 4.75 percent to 5.00 percent Uranium 235. Duke outlined its analysis methodology on pages 10, 11, and 12 of its presentation materials. Pages 13 through 17 described the proposed storage configurations.

The staff stated that the forthcoming application should include the following: (a) a description of the manufacturing technique for RackSaver inserts, (b) the industry standards (American Society for Testing Materials, etc.) used for fabrication of RackSaver inserts, (c) a description of the materials used, (d) the techniques for verification of boron-10 loading, and (e) the test reports that demonstrate suitability of RackSavers in an SFP environment.

The methodology for criticality analysis was presented on pages 18, 19, and 20 of Duke's presentation. In response to the presentation on determination of nominal axial profiles on

page 19, the staff commented that Duke would have to demonstrate that this methodology is conservative. This could involve review by the NRC staff of the detailed data supporting this methodology.

The implementation of this methodology to determine where a given fuel assembly may be stored was discussed on Duke presentation page 21. Duke questioned the staff regarding whether this approach seemed reasonable. The staff replied that, of course, the staff would have to review the application upon its submittal to make that determination but, within the scope of this meeting, the staff did not identify aspects that would indicate the approach to be non-viable.

The seismic and structural analysis (page 23) and the thermal-hydraulic analysis (page 24) were said to be consistent with methodology previously used on a number of rerack projects throughout the industry.

Prospective TSs were discussed on presentation pages 26 through 32. Considerable discussion was held during the meeting on the development of appropriate TS. Duke and the NRC staff agreed that further development of the TS would be productive in facilitating an NRC staff review of the forthcoming application.

Duke presented a schedule plan as follows:

Submit license amendment application to NRC	July 31, 2003
Desired date for NRC decision on application	July 30, 2004
Fabrication and delivery of RackSaver inserts	August 2004 - April 2005
Effective date of revised TS	June 15, 2005

/RA/

Robert E. Martin, Senior Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Attachment: Attendance List

cc w/att: See next page

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Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

PACKAGE NUMBER: ML030900178

Attachment: Attendance List

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Accession Number: ML030900101

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MARCH 6, 2003

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