



November 30, 2005

L-2005-242

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Re: St. Lucie Unit 2
Docket No. 50-389
NRC Information Notice 2005-26
Results of Chemical Effects Head Loss Tests in a
Simulated PWR Sump Pool Environment

On September 16, 2005, NRC issued Information Notice (IN) 2005-26, "Results of Chemical Effects Head Loss Tests in a Simulated PWR Sump Pool Environment." This IN described the results of a simulated PWR sump environment containing phosphate and dissolved calcium. The IN requested recipients review the information contained in the notice for applicability to their facilities and consider taking actions, as appropriate, to avoid similar issues. During the public meeting concerning GSI-191 chemical effects held on September 30, 2005, Nuclear Energy Institute (NEI) requested stations potentially affected to provide a written response to the NRC describing the actions taken by November 30, 2005. This letter summarizes the actions taken by St. Lucie Unit 2 in regard to the IN.

Upon receipt, the IN was reviewed for applicability to St. Lucie Unit 2 and was entered into the corrective action program. Trisodium phosphate (TSP) is utilized as a post-LOCA buffering agent in the St. Lucie Unit 2 sump and the unit utilizes small quantities of calcium silicate insulation (cal-sil) in small-bore pipe supports. An assessment concluded that the results of the chemical tests performed by Argonne National Laboratory (ANL), as documented in the IN, were not directly applicable to St. Lucie Unit 2. The primary factor leading to this conclusion is the small quantity of cal-sil used at St. Lucie Unit 2. Specifically, less than 10 ft³ of cal-sil is estimated to be transported to the sump screen, which corresponds to approximately 0.15% of the concentration of the ICET 3 test being simulated by ANL. Note that the 10 ft³ applies to a large-break loss-of-coolant accident (LOCA) and would be significantly less for a small-break LOCA. Additionally, the ratio of cal-sil to fiber at St. Lucie Unit 2 is extremely small (~1:148 cal-sil/fiber vs. 4:1 cal-sil/fiber) in comparison to the test condition; the approach velocities to the sump at St. Lucie Unit 2 (0.03 ft/s vs. 0.1 – 0.2 ft/s) are lower than the velocities utilized in the testing and; the St. Lucie Unit 2 pH at recirculation initiation is higher than the pH utilized in the testing (6.93 vs. approximately 4.0 pH).

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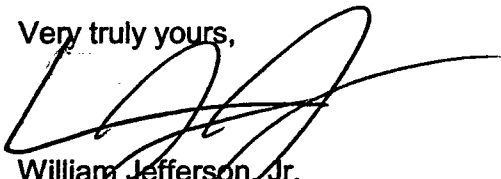
Add: Paul Klein
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Florida Power & Light Company is participating in the Westinghouse Owners Group project to develop methods for evaluating post-accident chemical effects in containment sump fluids. We will continue to evaluate our assessment of chemical effects as industry testing becomes available and implement the actions identified in our September 1, 2005 response to NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors."

Please contact us should there be any questions concerning this information.

Very truly yours,



William Jefferson, Jr.
Vice President
St. Lucie Plant

WJ/PKG