

REQUEST FOR ADDITIONAL INFORMATION

3RD 10-YEAR INTERVAL RELIEF REQUEST I3R-07

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1

CAROLINA POWER & LIGHT CO.

DOCKET NO. 50-400

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc., for the Shearon Harris Nuclear Power Plant, Unit 1, in its letter dated May 27, 2010, and has determined that additional information is necessary to complete the review of Relief Request I3R-07. Accordingly, please provide a response which addresses the following question.

The 2001 Edition through 2003 Addenda of the American Society of Mechanical Engineers (ASME) Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," Table IWB-2500-1, specifies that the acceptance standard for Examination Category B-F, Item B5.10, is IWB-3514. Later versions of the ASME Code (2007 Edition with 2009 Addenda) no longer permit the use of IWB-3514 for pressurized water reactors with nickel alloy welds that are susceptible to primary water stress corrosion cracking (PWSCC) for planar, surface-connected flaws which are in contact with the reactor coolant environment during normal operation. Additionally, MRP-139, "Primary System Piping Butt Weld Inspection and Evaluation Guideline," Section 7, "Evaluation Methodologies," specifies that "any flaw attributed to PWSCC, regardless of depth, will be evaluated even if it meets the IWB-3500 requirements." As such, please justify the continued specification of the IWB-3514 acceptance criteria when the flaw is determined to be surface-connected.