

SERIAL: HNP-02-087  
10CFR50.54(f)

United States Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
SUPPLEMENT TO 15-DAY RESPONSE TO NRC BULLETIN 2002-01, REACTOR  
PRESSURE VESSEL HEAD DEGRADATION AND REACTOR COOLANT PRESSURE  
BOUNDARY INTEGRITY

Dear Sir or Madam:

By the letter dated March 18, 2002, the U. S. Nuclear Regulatory Commission (NRC) issued NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity". The Bulletin directs addressees to submit: (1) information related to the integrity of the reactor coolant pressure boundary including the reactor pressure vessel head and the extent to which inspections have been undertaken to satisfy applicable regulatory requirements, and (2) the basis for concluding that plants satisfy applicable regulatory requirements related to the structural integrity of the reactor coolant pressure boundary and future inspections will ensure continued compliance with applicable regulatory requirements, and (3) a written response to the NRC in accordance with the provisions of Title 10, Section 50.54(f), of the Code of Federal Regulations (10 CFR 50.54(f)) if they are unable to provide the information or they cannot meet the requested completion dates.

The Carolina Power and Light (CP&L) 15-Day and 60-Day responses to this letter included enclosures that described the Harris Nuclear Plant's (HNP) Boron Corrosion Control program, including inspections of the Reactor Coolant Pressure Boundary for leakage of borated water onto susceptible materials. On May 23, 2002, the NRC staff conducted a conference call with CP&L representatives to discuss the CP&L response dated April 2, 2002, to NRC Bulletin 2002-01.

**NRC Question:**

"Your Bulletin 2002-01 15-Day response discussed one instance of lower canopy seal weld leakage and two instances of conoseal connection leakage. The boric acid deposits were removed for all three leakage events. In addition, you stated that 85% of the head was inspected visually during refueling outage (RFO) -10 (the remaining 15% was assumed to be an area within a 3-foot

diameter circle). Discuss whether or not any of the leaks that have occurred at Shearon Harris would have resulted in leakage into the areas that were not inspected during RFO-10. Include a discussion of any deposits that were identified, and the source of the deposits.”

**CP&L Response:**

All three of the borated water leaks identified in the 15-Day response to NRC Bulletin 2002-01 occurred in areas where boric acid deposits on the reactor vessel head were inspected in RFO-10.

CP&L confirms that as described in the 15-Day response to NRC Bulletin 2002-01 the two indications of borated water leakage in RFO-10 were on thermocouple port column conoseals located on the outer periphery of the RPV head. Both of the two conoseal leaks, one upper and one lower, were on the same thermocouple port column located on the outer ring of the Control Rod Drive Mechanisms (CRDMs) penetrations. The thermocouple port column was in its own compartment such that borated water could not spray out onto a large portion of the Reactor Pressure Vessel (RPV) Head. Leakage from the thermocouple port column conoseals ran down the thermocouple column and deposited on the head where it was inspected and identified in RFO-10.

The RFO-10 inspection revealed that there was no evidence of boric acid on the insulation on the head. There was no indication of leakage originating from components located above the 3-foot diameter section of the RPV head described in the CP&L 15-Day bulletin response as not having been visually inspected. There was no residue adjacent to the 3-foot diameter area and there was no indication of leakage originating from within the 3-foot diameter area when viewed from the underside of the RPV head insulation.

In RFO-8 there was a canopy seal leak on penetration number 18. This was in a portion of the head that was visually inspected both in RFO-8 and RFO-10. The head area was cleaned after the leakage event. Visual indications left on the head were staining and very light residue.

This response reflects the information communicated on May 23, 2002 during the conference call between the NRC and the CP&L staff.

Please refer any questions regarding this submittal to Mr. John Caves at (919) 362-3137.

Sincerely,

RTG/rtg

James Scarola, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief, and the sources of his information are employees, contractors, and agents of Carolina Power & Light Company.

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Notary (Seal)

My commission expires:

c: Mr. J. B. Brady, NRC Sr. Resident Inspector  
Mr. Mel Fry, Director, N.C. DENR  
Mr. J. M. Goshen, NRC Project Manager  
Mr. L. A. Reyes, NRC Regional Administrator

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