



James Scarola  
Vice President  
Harris Nuclear Plant  
Progress Energy Carolinas, Inc.

Serial: HNP 03-070  
10 CFR 2.202

JUL 16 2003

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

**SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400 / LICENSE NO. NPF-63**

**SIXTY-DAY REPORT IN ACCORDANCE WITH NRC ORDER FOR  
ESTABLISHING INTERIM INSPECTION REQUIREMENTS FOR REACTOR  
PRESSURE VESSEL HEADS AT PRESSURIZED WATER REACTORS  
INSPECTION OF RPV HEAD DURING REFUELING OUTAGE**

Ladies and Gentlemen:

On February 11, 2003, the Nuclear Regulatory Commission issued an Order letter, Subject: "Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors." In the order, the Nuclear Regulatory Commission requires specific inspection of the Reactor Pressure Vessel (RPV) head and associated penetration nozzles at Pressurized Water Reactors (PWRs). The Commission stated that the actions in the Order are interim measures that are necessary to ensure that licensees implement and maintain appropriate measures to inspect and, as necessary, repair RPV heads and associated penetration nozzles. The Order required that licensees immediately start implementation of the requirements of the Order and report the results of the required inspections. As required by Section IV.E of the Order, Progress Energy Carolinas, Inc. (PEC) is providing the results of the inspections conducted during the recently completed refueling outage at the Harris Nuclear Plant.

The Harris Plant is in the category of plants considered to be of low susceptibility to Primary Water Stress Corrosion Cracking (PWSCC) based on calculations performed in accordance with Section III.A of the Order, as well as the absence of previous inspection findings indicating the presence of leakage. Accordingly, the Order requires that a 100% Bare Metal Visual Examination of the RPV head surface be performed within two refueling outages following issuance of the Order. The Harris Plant chose to perform this inspection at the earliest opportunity, which was Refueling Outage 11 (RFO-11) instead of waiting for a later inspection opportunity as allowed by the NRC Order. The Order allows HNP to perform the required inspections in Refueling Outage 12 (RFO-12), which is scheduled to occur in 2004.

P.O. Box 165  
New Hill, NC 27562

T > 919.362.2502  
F > 919.362.2095

A101

During the recently completed outage at HNP (April 26, 2003 to May 18, 2003), the RPV head was visually examined to satisfy the requirements of the Order in Section IV.C.3.a and to provide a baseline for future inspections. The inspection included 100% of the upper RPV head surface and 360° around each penetration. The entire as-found condition was videotaped to document the inspection. The inspection found no evidence of leakage from the head or nozzles. Old, small boron deposits were identified on the top side of nine penetrations. These were all in the immediate vicinity of Conoseal and canopy seal weld leaks from RFO-10 and 8, respectively, and were in areas that could not be seen without the removal of insulation or the use of the special cameras during the inspections. Radiochemical analysis of samples taken during the inspection confirmed the age of these deposits to be consistent with the previously identified Conoseal and canopy seal weld leaks. The deposits were cleaned and the penetrations re-inspected to confirm the absence of degradation. Finally, the entire head was cleaned to remove all dirt and debris and an as-left video recording made to serve as a baseline for future inspections.

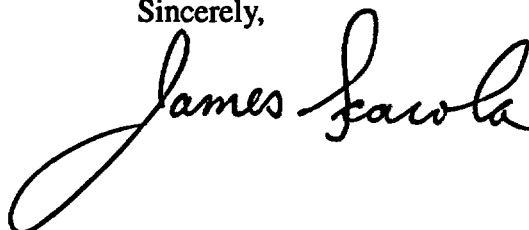
A visual inspection of areas above the head to identify potential boric acid leaks from pressure-retaining components was also performed as required by Section IV.D of the Order. No evidence of leakage was identified by these inspections and no boron deposits were found.

Along with the RPV upper head inspection, the Harris Plant proactively performed a 100% bare metal visual inspection for the bottom mounted RPV instrument nozzles during RFO-11. Although this examination was not required, it was felt that in light of recent industry events, such an inspection was prudent. The examination included videotaping and photographing the bottom reactor vessel penetrations and vessel surface to provide a baseline for future inspections. Indications of previous leakage through the cavity seal ring in the form of streaking on the surface of the reactor vessel were identified. This was expected based on past known leakage through the temporary cavity seal rings, which have since been replaced by a permanent ring that has eliminated such leakage. The most significant areas of the residue were removed; the remainder was light and did not mask the underlying metal or the intersections of the nozzles and head. No indications of leakage from the nozzles or corrosion of the bottom head were identified.

In summary, the Harris Plant submits this letter to report the results of the inspections required in Order Sections IV.C.3.a and IV.D, as required by Section IV.E. The inspections revealed no evidence of recent boric acid leakage or RPV head degradation.

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

Sincerely,

A handwritten signature in black ink that reads "James Sawola". The signature is written in a cursive style with a large, looping initial "J".

RTG

U. S. Nuclear Regulatory Commission

Serial: HNP 03-070

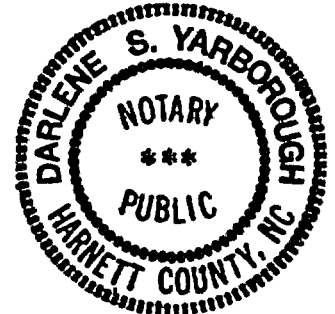
Page 3

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 Progress Energy Carolinas, Inc.

*Darlene S. Yarbrough*

My commission expires: 2-21-2005

Notary (Seal)



c:

USNRC Rulemakings and Adjudications Staff  
NRC Sr. Resident Inspector  
Ms. Beverly Hall, Section Chief, Radiation Protection Section, N.C. DENR  
Mr. C. P. Patel, NRC Project Manager  
Mr. L. A. Reyes, NRC Regional Administrator  
Director, Office of Nuclear Reactor Regulation  
Assistant General Counsel for Materials Litigation and Enforcement