Progress Energy

Serial: HNP-04-166
10 CFR 50.54(f)

JAN 1 4 2005

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

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1
DOCKET NO. 50-400/LICENSE NO. NPF-63
60-DAY REPORT
NRC BULLETIN 2004-01, INSPECTION OF ALLOY 82/182/600 MATERIALS USED IN THE FABRICATION OF PRESSURIZER PENETRATIONS AND STEAM SPACE PIPING CONNECTIONS AT PRESSURIZED-WATER REACTORS, REQUEST (2)

Ladies and Gentlemen:

On July 27, 2004, Carolina Power & Light Company doing business as Progress Energy Carolinas, Inc., submitted the 60-day response (HNP-04-097) to NRC Bulletin 2004-01 for the Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors. In the response to Request (2) of that letter, Harris Nuclear Plant (HNP) stated, "HNP will comply with this request by submitting the information described above to the NRC within 60 days of plant restart following the next scheduled inspection of the components listed in Table C [of HNP-04-097]."

Attachment 1 provides the 60-day report of the RFO-12 inspection results.

Please refer any question regarding this submittal to Mr. Dave Corlett at (919) 362-3137.

I declare, under penalty of perjury, that the attached information is true and correct (Executed on JAN 1 4 2005).

Sincerely,

Terry C. Morton
Manager – Support Services

TCM/jpy

Attachment:

1. 60-Day Report, NRC Bulletin 2004-01, Request (2)

A110

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill, NC 27562

c:

Mr. R. A. Musser, NRC Senior Resident Inspector
Ms. B. O. Hall, N.C. DENR Section Chief
Mr. C. P. Patel, NRC Project Manager
Dr. W. D. Travers, NRC Regional Administrator

Attachment 1 to SERIAL: HNP-04-166
60-Day Report, NRC Bulletin 2004-01, Request (2)

On July 27, 2004, Carolina Power & Light Company doing business as Progress Energy Carolinas, Inc., submitted the 60-day response (HNP-04-097) to NRC Bulletin 2004-01 for the Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors. In that letter, Harris Nuclear Plant (HNP) included the following response to NRC Request (2):

NRC Request

(2) Within 60 days of plant restart following the next inspection of the Alloy 82/182/600 pressurizer penetrations and steam space piping connections, the subject PWR licensees should either:

(a) submit to the NRC a statement indicating that the inspections described in the licensee's response to item (1)(c) of this bulletin were completed and a description of the as-found condition of the pressurizer shell, any findings of relevant indications of through-wall leakage, followup NDE performed to characterize flaws in leaking penetrations or steam space piping connections, a summary of all relevant indications found by NDE, a summary of the disposition of any findings of boric acid, and any corrective actions taken and/or repairs made as a result of the indications found,

or

(b) if the licensee was unable to complete the inspections described in response to item (1)(c) of this bulletin, submit to the NRC a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the pressurizer shell, any findings of relevant indications of through-wall leakage, followup NDE performed to characterize flaws in leaking penetrations or steam space piping connections, a summary of all relevant indications found by NDE, a summary of the disposition of any findings of boric acid, and any corrective actions taken and/or repairs made as a result of the indications found. In addition, supplement the answer which you provided to item (1)(d) above to explain why the inspections that you completed were adequate for the purpose of maintaining the integrity of your facility's RCPB and for meeting all applicable regulatory requirements which pertain to your facility.

Response (2)

HNP will comply with this request by submitting the information described above to the NRC within 60 days of plant restart following the next scheduled inspection of the components listed in Table C.

Inspection Results

As discussed above, HNP provides the following 60-day report of the results of the RFO-12 inspection of the Alloy 82/182 pressurizer (PZR) penetrations and steam space piping connections. HNP does not have Alloy 600 in the PZR penetrations and steam space piping connections.

On October 22, 2004, during HNP's RFO-12, VT-2 qualified inspection personnel performed a 100% Bare Metal Visual (BMV) examination (i.e., insulation was removed from the components) of the Alloy 82/182 PZR penetrations and steam space piping connections listed in Table C of HNP-04-097. Each of the five components (one PZR Spray Nozzle Safe End and four PZR Safety and Relief Nozzle Safe Ends) was visually examined directly without visual aids. Sufficient lighting was provided to meet VT-2 inspection requirements.

No indications of boric acid leakage were found on any of the components during the inspections. However, on one of the PZR safety nozzle to safe end welds (Weld ID #II-PZR-01NSEW-19), inspection personnel found a thin, dry and mostly transparent white residue. The residue was approximately 1.0 inch wide by 4.5 inches in length and was oriented axially across the weld area and the carbon steel nozzle. Photos are included in this report.

After cleaning, the area was visually examined and no evidence of cracking or leakage was noted. In addition, a liquid penetrant examination was performed on the area and no indications were found. Consequently, since no indications of leakage were identified, no corrective action was required or taken.

The source of the residue was not identified. The amount of residue was too small to provide an adequate sample. No residue was identified on either the inside or outside of the removed insulation. The component is located under platform grating, and several valves are located above the grating. In addition, personnel had been working in this area between the time that the insulation was removed and the examination performed. The most likely source, therefore, is either a component above the grating or from work being performed in that area.

As stated in the 60-day response (HNP-04-097) to NRC Bulletin 2004-01, BMV exams will be performed on these welds during every refueling outage until mitigation is performed, additional guidance is provided by the Materials Reliability Program (MRP), or new Code or regulatory requirements are imposed. Consequently, follow-up examinations of this area will be performed every outage for additional confirmation of the conclusions reached during this examination.

In addition to the BMV examinations described above, inspections of the PZR penetrations and steam space piping connections at HNP are performed every refueling outage as part of the ASME Section XI Class 1 system leakage test. These examinations are performed with the system at normal operating pressure and temperature and with the insulation in place. The inspections are performed under HNP plant procedure EST-227, *ASME Section XI Class 1 System Pressure Test*, in accordance with ASME Section XI requirements, and are documented on a system pressure test report in accordance with the HNP ASME Section XI Program. As with the BMV examinations, no evidence of leakage was found on the Alloy 82/182 PZR penetrations and steam space piping connections addressed by NRC Bulletin 2004-01.

Photo of White Residue

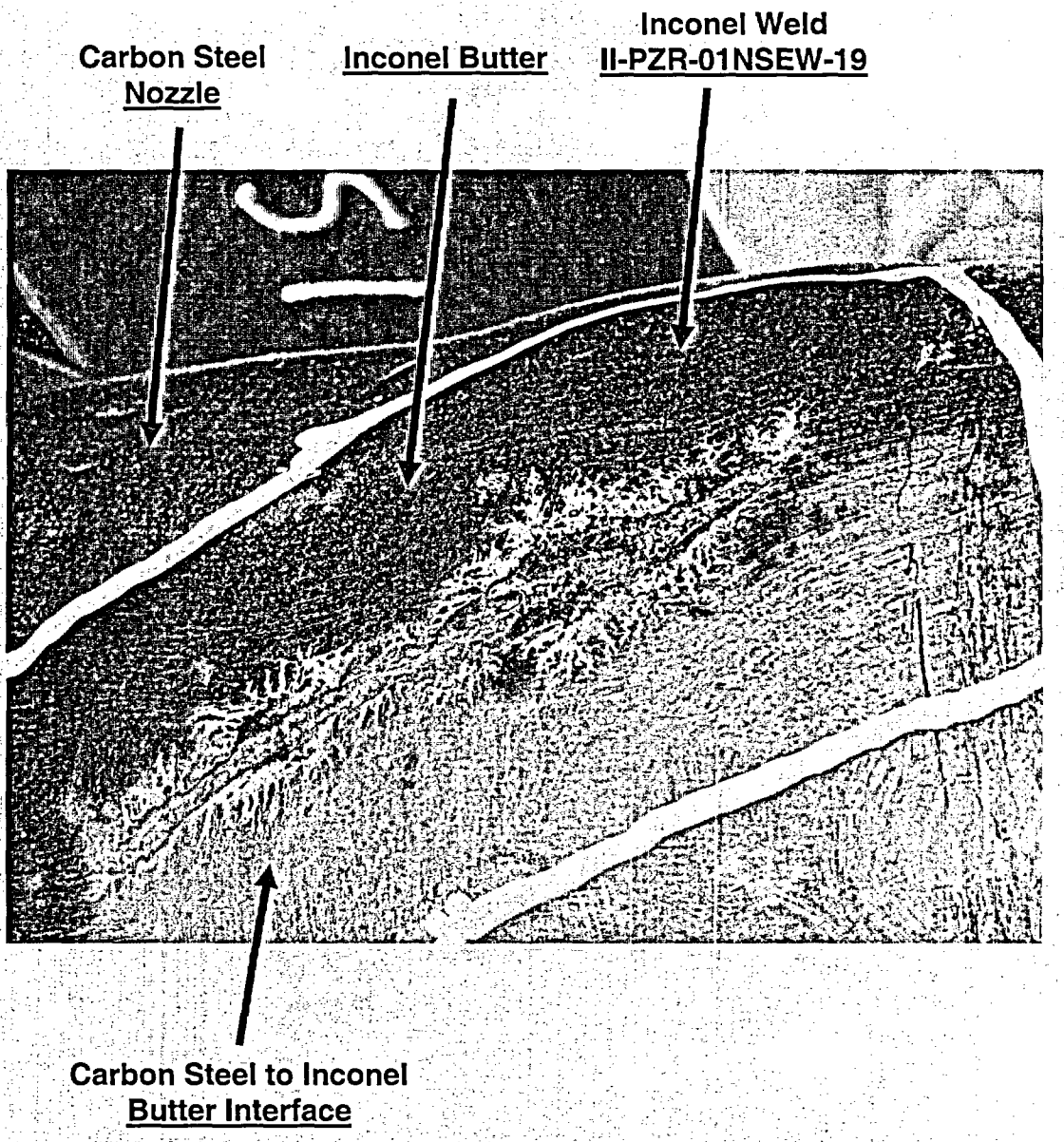

Photo of Area After Cleaning