



PECO NUCLEAR

A Unit of PECO Energy

PECO Energy Company
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November 14, 1996

Docket No. 50-277

License No. DPR-44

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

SUBJECT: Peach Bottom Atomic Power Station, Unit 2
Discovery of Indication in a Reactor Water Cleanup
System

Dear Sir:

This letter is in response to a telephone conversation between PECO Energy Company (PECO Energy) and the U. S. Nuclear Regulatory Commission (USNRC) on September 19, 1996, regarding the discovery of a crack-like indication in the unclassified portion of the Reactor Water Cleanup (RWCU) System piping during outage examinations (2R11) at Peach Bottom Atomic Power Station (PBAPS), Unit 2. In that conversation, PECO Energy Company committed to supplying information regarding the discovery within 45 days following the completion of 2R11. The weld was repaired by the overlay method in accordance with Code Case N-504. Therefore, no request was necessary for permission to restart in accordance with Generic Letter 88-01 ("NRC Position on Intergranular Stress Corrosion Cracking (IGSCC) in BWR Austenitic Stainless Steel Piping").

This crack-like indication, characteristic of IGSCC, was identified on September 17, 1996, in the pipe-to-elbow heat affected zone of weld (12-14-5) in the RWCU System piping at PBAPS, Unit 2 during the performance of augmented examinations. The augmented inspections were conducted as described in the PBAPS, Units 2 and 3, "inservice Inspection (ISI) Program Second Ten Year Interval" (Specification M-733), AUG-1 examination program during the 2R11 refueling outage.

The indication is located in the four (4) inch RWCU System return line, upstream of MO-2-12-68, in unclassified pipe outboard of the primary containment boundary. The PBAPS, Unit 2 indication was 0.6 inches long around the circumference with a maximum depth of 0.132 inches. The measured pipe thickness is 0.337 inches. The piping is Code Class B31.1 piping with a design pressure of 1300 lbs. and a standard operating pressure of 550 degrees fahrenheit. This crack was identified by General Electric Nuclear Energy personnel performing ultrasonic testing (UT). These examinations consisted of 60 and 70 degree shear waves.

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A Non-conformance Report (NCR) was originated to address this crack indication. The disposition of the NCR was to repair the weld using a full structural overlay. This overlay was performed in accordance with Code Case N-504, which has been approved for usage as documented in Regulatory Guide 1.147, Revision 11.

The indication was in the heat affected zone of a weld that was not part of the augmented examination sample (2%), but was a reexamination of a weld examined during 2R10. The 2% sample examination of unclassified RWCU System piping revealed no indications. However, as a result of this discovery, the sample of welds was expanded by doubling the sample (2%) which corresponds to 2 additional welds. These welds were located in the same horizontal run of piping and were chosen for their high susceptibility to IGSCC. No additional indications were discovered. In accordance with the guidance provided in your letter dated September 15, 1995 (letter from J. W. Shea (USNRC) to G. A. Hunger, Jr. (PECO Energy Company)), the sample of RWCU System welds to be examined will remain at 2% for future examinations.

The additional examinations were performed in the outboard Main Steam Isolation Valve Room. Several RWCU System indications have been found in this location at both Units (e.g., 12-I-1D (2R08), 12-I-1C (3R08), 12-14-5 (2R11)). The pipe at these locations is Type 304 stainless steel. Operating at service conditions creates the susceptibility to IGSCC at these locations.

To date, 30 of 108 welds have been examined in the PBAPS, Unit 2 RWCU System piping outboard of the containment isolation valves in accordance with the GL 88-01 requirements. Including this indication, a total of two (2) indications have been identified at PBAPS, Unit 2. These indications are located in close proximity. The previous indication was repaired with a weld overlay and was approved by the USNRC in a letter dated November 8, 1991 (letter from R. J. Clark (USNRC) to G. J. Beck (PECO Energy)). Based on the minimal number of identified indications, continued performance of the 2% sample is considered to be a prudent course of action.

If you have any question, please contact us.

Very truly yours,

G. A. Hunger, Jr.

G. A. Hunger, Jr.
Director
Licensing Section

cc: H. J. Miller, Administrator, Region I, USNRC
W. L. Schmidt, USNRC Senior Resident Inspector, PBAPS

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