



PECO ENERGY

GL 88-01, Supplement 1

PECO Energy Company
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May 24, 1995

Docket Nos. 50-277
50-278
License Nos. DPR-44
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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Peach Bottom Atomic Power Station, Units 2 and 3
Generic Letter 88-01, Supplement 1, "NRC Position on
Intergranular Stress Corrosion Cracking (IGSCC) in BWR
Austenitic Stainless Steel Piping"

- References: 1) Letter from G. J. Beck (Philadelphia Electric Company) to
U. S. Nuclear Regulatory Commission (USNRC) dated
August 17, 1992
- 2) Letter from G. A. Hunger, Jr. (PECO Energy Company) to
USNRC dated February 13, 1995
- 3) Letter from G. A. Hunger, Jr. (PECO Energy Company) to
USNRC dated April 14, 1994

Dear Sir:

In the Reference 1 letter, PECO Energy Company committed to implement the staff position in Generic Letter (GL) 88-01, Supplement 1, "NRC Position on Intergranular Stress Corrosion Cracking (IGSCC) in BWR Austenitic Stainless Steel Piping," that at least 10% of the IGSCC susceptible Reactor Water Cleanup (RWCU) System welds be inspected on a sampling basis each refueling outage. Additionally, we stated that a reduction of this 10% weld inspection would be pursued following resolution of issues related to GL 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance - 10 CFR 50.54(f)," as suggested in GL 88-01, Supplement 1.

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In our Reference 2 letter, PECO Energy Company provided notification that GL 89-10 actions have been completed for Peach Bottom Atomic Power Station (PBAPS), Unit 2. Remaining GL 89-10 actions regarding motor operated valves (MOV's) for PBAPS, Unit 3 will be completed during the PBAPS, Unit 3 upcoming tenth refueling outage per our commitment discussed in the Reference 3 letter. We anticipate that all activities to assure the capability of the RWCU System primary containment isolation valves will be completed by the conclusion of the upcoming tenth refueling outage at PBAPS, Unit 3.

Accordingly, PECO Energy Company is requesting approval to reduce our GL 88-01 actions by eliminating inspections of the RWCU System welds outboard of the primary containment isolation valves. Weld examinations will be continued on the safety-related portions of the RWCU System piping inboard of the containment isolation valves. This approval is requested in accordance with PBAPS, Units 2 and 3 Technical Specification 4.6.G. Our justification for eliminating these inspections is provided below.

The inspections of the RWCU System welds outside of primary containment isolation valves have been performed during the previous two outages for PBAPS, Unit 2 (23 welds) and the previous outage for PBAPS, Unit 3 (10 welds). No IGSCC was detected as a result of these inspections. This 10% inspection program was targeted to address IGSCC susceptibility such that the most highly susceptible welds were inspected during the first outage, and future outages would address weld susceptibility in decreasing order.

Inspections performed to date on the safety-related RWCU System piping welds, inside the containment boundary, have detected one IGSCC crack on each unit. These cracks were located at the same (corresponding) location in each unit. They were found on the inlet side of the relocated 2 (3)-12-62 check valves. These cracks are unique in nature, in that the associated welds are not original construction welds. The cracking is believed to be the result of excessive cold working of the inner diameter of the connecting piping, which occurred during the replacement of this check valve. The cracks were repaired on each unit with a weld overlay.

Water chemistry is considered to be a significant contributor to IGSCC, and PBAPS, Units 2 and 3 have made substantial improvements in water chemistry over the last few years. This improvement in water chemistry will slow the initiation of IGSCC and reduce crack growth rates should cracking occur.

It is our determination that since no IGSCC has been detected on the most highly susceptible welds in the RWCU System outboard of the primary containment valves, and water chemistry has improved, weld related failure due to IGSCC is not considered imminent. Even if an IGSCC failure would occur, we anticipate that this failure would occur as a "leak-before-break." There are several activities currently in place to ensure that this leaking would be detected: periodic visual examinations of the RWCU System piping

May 24, 1995

Page 3

(contaminated pipe walk downs), and continuous high temperature monitoring of equipment rooms and related areas. If such a leak were to be detected outboard of the containment isolation valves, the appropriate portions of the RWCU System piping could be isolated and repairs could be initiated. The safety implications of a "leak-before-break" scenario in the RWCU System piping are considered to be minimal to the point that repairs would most likely be performed while continuing plant operation.

The RWCU System is designed to automatically isolate and contain postulated losses of reactor coolant. Since the RWCU System down stream of the primary containment isolation valves does not perform a safety-related function, failure of this piping is not considered to adversely impact the accident analyses discussed in the PBAPS, Units 2 and 3 Updated Final Safety Analyses Report (UFSAR).

It should be noted that significant person-Rem has already been expended to support this 10% weld inspection requirement. Based on data gathered during these inspections, we estimate that an additional 30 person-Rem would be involved in performing the next equivalent-size inspections for both units.

In summary, the inspections of the welds in the RWCU System piping outboard of the primary containment isolation valves have a small effect on improving plant safety and present a significant burden in the form of high radiation exposure and cost in performing the inspections. As demonstrated through inspection, the RWCU System piping does not present a potential for imminent failure. Additionally, adequate programs and automatic system actuations are in place to ensure that the implications of a failure of this portion of RWCU System piping would not impact plant safety. With the GL 89-10 activities to be completed for the RWCU System valves during the upcoming PBAPS, Unit 3 outage, we believe the concerns surrounding the effects of IGSCC in the down stream portion of RWCU System piping will have been addressed per the intent of GL 88-01, Supplement 1.

We request your approval of this approach by August 1, 1995 in order to support the elimination of these inspections for the upcoming PBAPS, Unit 3 outage scheduled for this Fall.

Very truly yours,

G. A. Hunger, Jr.

G. A. Hunger, Jr.
Director - Licensing

cc: T. T. Martin, Administrator, Region I, USNRC
W. L. Schmidt, USNRC Senior Resident Inspector, PBAPS
R. R. Janati, Commonwealth of Pennsylvania