Exelon Nuclear
200 Exelon Way
Kennett Square, PA 19348

www.exeloncorp.com

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10 CFR 50.90

July 24, 2001

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

Subject: Peach Bottom Atomic Power Station, Unit 3
Facility Operating License No. DPR-56
NRC Docket No. 50-278
License Amendment Request (LAR) 01-00430

References: 1) Letter from J. A. Hutton (Exelon Generation Company, LLC) to U. S. Nuclear Regulatory Commission (NRC), dated May 30, 2001

2) Letter from J. A. Hutton (Exelon Generation Company, LLC) to U. S. Nuclear Regulatory Commission (NRC), dated May 30, 2001

3) Letter from J. P. Boska (NRC) to J. A. Hutton (Exelon Generation Company, LLC), dated July 6, 2001

Dear Sir/Madam:

In a letter dated May 30, 2001, Exelon Generation Company, LLC, submitted License Amendment Request 01-00430, in accordance with 10 CFR 50.90, requesting an amendment to the Technical Specifications (Appendix A) of Operating License No. DPR-56, for Peach Bottom Atomic Power Station (PBAPS), Unit 3. This proposed change will revise Technical Specifications (TS) Section 5.5.12 ("Primary Containment Leakage Rate Testing Program") to reflect a one-time deferral of the Type A Containment Integrated Leak Rate Test (ILRT). Additionally, in a separate letter also dated May 30, 2001, Exelon Generation Company, LLC, submitted detailed performance based, risk-informed information to support this License Amendment Request.

In the Reference 3 letter, the staff requested additional information. Attached is our response to your request.

If you have any questions, please do not hesitate to contact us.

Very truly yours,

D. A. Hulton /for

James A. Hutton
Director - Licensing

Enclosures: Affidavit, Attachments

cc: H. J. Miller, Administrator, Region I, USNRC
A. C. McMurtray, USNRC Senior Resident Inspector, PBAPS
R. R. Janati, Commonwealth of Pennsylvania

A001

bcc: PSEG, Financial Controls and Co-Owner Affairs
R. I. McLean, State of Maryland
A. F. Kirby, III, Atlantic City Electric
C. P Lewis - KSB 3-2
J. J. Hagan - KSA 3-N
J. Benjamin - Cantera
J. Doering - PB, SMB4-9
G. L. Johnston - PB, A4-1S
P. J. Davison - PB, SMB3-2A
J. P. Grimes - KSA 2-N
P. G. Chabot - KSA 3-N
A. A. Winter - PB, A4-5S
D. P. Helker/TRL - KSA 3-E
PBAPS Nuclear Oversight Manager - PB, SMB4-6
Commitment Coordinator - KSA 3-E
Correspondence Control Desk - KSA 1-N-1
DAC - KSA 1-N-1
J. A. Jordan, Jr. – PB, SMB3-2
J. R. Berg – PB, SMB3-2
D. E. Portrey – PB, WE-1
R. E. Ciemiewicz – PB, SMB3-6
A. Knoll – PB, SMB3-6
G. Krueger – KS
M. Fauber - TMI

COMMONWEALTH OF PENNSYLVANIA:

: ss.

COUNTY OF CHESTER :

J. J. Hagan, being first duly sworn, deposes and says:

That he is Senior Vice President of Exelon Generation Company, LLC, the Applicant herein; that he has read the attached response to the Request for Additional Information concerning License Amendment Request 01-00430 involving a one-time deferral of the integrated leak rate test for Peach Bottom Facility Operating License DPR-56, and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

Senior Vice President

Subscribed and sworn to
before me this 24th day
of July 2001.

Notary Public

Notarial Seal
Vivia V. Gallimore, Notary Public
Tredyffrin Twp., Chester County
My Commission Expires Oct. 6, 2003
Member, Pennsylvania Association of Notaries

RESPONSE TO THE REQUEST FOR ADDITIONAL INFORMATION PEACH BOTTOM ATOMIC POWER STATION, UNIT 3 ONE TIME DEFERRAL OF INTEGRATED LEAK RATE TESTING

QUESTION 1:

"On page 5 of the "Supporting Information," attached to the letter, you state, "Primary Containment Pressure is continuously indicated and periodically monitored from the Main Control Room." In the discussion during the meeting of June 21, 2001 with the staff, you indicated that this pressure is maintained at a slightly higher pressure than the pressure in the surrounding Secondary Containment. Please provide information related to the maintenance of this positive pressure, such as, the average positive pressure maintained, how often it is monitored, and corrective actions you plan to take if the positive pressure is not maintained due to a small, continuous leakage from the primary containment."

RESPONSE:

During power operation the primary containment atmosphere is inerted with nitrogen to ensure that no external sources of oxygen are introduced into containment. As a result of this operational requirement, primary containment is typically maintained at an average positive pressure of 0.5 psig. Primary pressure is continuously indicated and periodically monitored from the Main Control Room. Abnormal (high or low) drywell pressure is annunciated in the Main Control Room at setpoints of 0.25 psig and 0.75 psig. Primary containment pressure is periodically monitored in accordance with plant surveillance tests. Daily surveillance logs for Modes 1, 2 and 3 include drywell pressure as one of the parameters logged once per shift. Additionally, a containment gross leakage rate detection test is performed once per 24 hours by control room operators. This test involves review of primary containment pressure trends and nitrogen makeup periodicity for the latest 72 hour period to identify excessive primary containment leakage trends. In the event of unsatisfactory test results, or in the case of abnormal drywell pressure annunciation, operators would review current plant conditions and evolutions that could explain an unacceptable containment leakage trend, and initiate troubleshooting of systems that typically influence containment leakage when in an unisolated condition. If a primary containment leak is identified, then the Technical Specification action for an inoperable primary containment would be entered.

QUESTION 2:

"Based on the description of the containment inspection on page 8 of the "Supporting Information," the staff understands that you are using the 1992 Edition and the 1992 Addenda of Subsection IWE of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI (Code). IWE-1240 requires you to identify the surface areas requiring augmented examinations. Please provide the locations of the drywell and the torus of the PBAPS, Unit 3, which you have identified as requiring augmented examination, and a summary of findings of the examinations performed."

RESPONSE:

Locations within the PBAPS, Unit 3 containment vessel that have been identified as requiring augmented examination include the wetted and submerged portions of the torus. No locations within the drywell have been identified as requiring augmented examination.

Details regarding the torus augmented examinations are included in the PBAPS, Units 2 and 3 Alternative Examination, CRR-11, which was submitted to the NRC on February 17, 1999, and approved for use by an NRC Safety Evaluation Report dated September 17, 1999. CRR-11 describes the ongoing augmented examination program and a summary of examination findings through 1997, which includes: water chemistry controls, visual examinations, Ultrasonic Testing (UT) thickness examinations, pit depth measurements, and projected growth rates for specific areas of the torus identified in previous inspections.

QUESTION 3:

"For the examination of seals and gaskets, and examination and testing of bolts associated with the primary containment pressure boundary (Examination Categories E-D, and E-G), you had requested and have been authorized to use an alternative to these Code requirements. As an alternative, you plan to examine these components during the leak rate testing of the primary containment. With the flexibility provided in Option B of Appendix J for Type B and Type C testing (as per Nuclear Energy Institute (NEI) report 94-01 and Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program", September 1995), and the extension requested in this amendment for Type A testing, please provide the schedule for the examination and testing of seals, gaskets, and bolts that provides assurance of the integrity of the containment pressure boundary."

RESPONSE:

The testing of seals and gaskets is discussed in the PBAPS, Units 2 and 3 Alternative Examination, CRR-01, which was submitted to the NRC on February 17, 1999, and

approved for use by an NRC Safety Evaluation Report dated September 17, 1999. As discussed in this alternative, the leak-tightness of seals and gaskets is tested in accordance the 10 CFR 50, Appendix J, Option B, which includes Type B testing. Until Option B was adopted, Type B testing was performed every two years. Upon adoption of Option B, the test frequency has been extended to once every six years. Additionally, testing of similar components, such as seals and gaskets, is staggered such that similar components are not always tested during the same refueling outage. In the event that the Type B test fails for the seal or gasket, the inspection frequency is increased in accordance with NEI 94-01 ("Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J"). The one-time extension to the Integrated Leak Rate Test will not impact the Type B testing methods or frequency.

The examination of specific seals and gaskets will continue to be performed each time a specific joint is disassembled. Numerous Type B penetrations are disassembled to support outage activities, and are inspected and tested more frequently than required by Option B.

The examination of containment pressure retaining bolting is also discussed in the PBAPS, Units 2 and 3 Alternative Examination, CRR-07 (approved for use by an NRC Safety Evaluation Report dated September 17, 1999). As discussed in CRR-07, exposed surfaces of bolted connections are visually examined in accordance with Subsection IWE, Category E-A, every other refueling outage. These connections are also tested in accordance with 10 CFR 50, Appendix J, Option B, Type B testing. In the event that the Type B test fails for the bolting connection, the inspection frequency is increased in accordance with NEI 94-01. The one-time extension to the Integrated Leak Rate Test will not impact the Type B testing methods or frequency.

QUESTION 4:

"The stainless steel bellows have been found to be susceptible to trans-granular stress corrosion cracking, and the leakages through them are not readily detectable by Type B testing (see NRC Information Notice 92-20, "Inadequate Local Leak Rate Testing"). In general, boiling water reactor Mark I primary containments have bellows on the vent lines between the drywell and the torus, as well as on several process piping penetrations in the drywell. If degraded, the bellows could allow the drywell steam and air to bypass the suppression pool during loss-of-coolant accidents and core damage accidents. Please provide information regarding inspection and testing of the bellows at PBAPS, Unit 3, and how such behavior has been factored into the risk assessment."

RESPONSE:

There are two categories of primary containment bellows at PBAPS, Unit 3: (1) The bellows that are on the vent lines between the drywell and the torus, and (2) bellows that exist on various drywell pipe penetrations.

The drywell vents for PBAPS, Unit 3 are provided with two-ply expansion bellows located on the exterior of the vent pipes at the connection to the torus shell. These bellows prevent a leakage path from the torus airspace (primary containment) to the reactor building (secondary containment). They do not form a part of the pressure boundary separating the drywell and the torus airspace.

The bellows for PBAPS, Unit 3 are testable bellows and are tested in accordance with 10 CFR 50, Appendix J, Option B, Type B testing. Until Option B was adopted, Type B testing was performed every two years. Since that time, the test frequency has been extended to once every six years. A review of records since June 1977 has revealed no failures of these bellows leakage tests. Additionally, local leak rate test procedures for containment expansion bellows include verification of flow through the annulus between plys of the bellows, which ensures that restrictions between the plys that could conceal a leakage path do not exist. Information Notice 92-20 included a discussion concerning bellows restrictions resulting in inadequate Appendix J testing of expansion bellows.

Penetrations, hatches, bolting surfaces, and structural members (including the steel shell) are considered in the PRA structural analysis to assess the failure pressure and failure location of containment. If evidence of component degradation occurs, then that information is fed back into the PRA containment performance analysis to reassess the containment failure pressure, temperature and failure location. At this time, no degradation of the bellows or the steel shell has occurred.

QUESTION 5:

"Inspections of some of the Mark I containments have indicated degradation from the uninspectable side of the drywell steel shell and steel liner of the primary containments. These degradations cannot be detected unless they are through the thickness of the shell or liner, or the uninspectable side of the surfaces are periodically examined by ultrasonic testing. Please provide information as to how the potential leakages under high pressures during the core damage accidents are factored into the risk assessment related to the extension of the integrated leak rate test."

RESPONSE:

Degradation of the outer surface has been identified at another Mark I containment. The cause of this degradation was determined to be from water entering the drywell air gap region, and becoming trapped in the sand cushion region at the base of the air gap. However, PBAPS, Unit 3 has not identified evidence of water intrusion in this region, based on periodic examination of the drywell air gap drains. These drains have been periodically tested to assure that they remain capable of draining any water from the air gap region. Therefore, degradation of the PBAPS, Unit 3 containment outer surface,

resulting in potential leakage during an accident, is not considered to be a credible scenario.

Penetrations, hatches, bolting surfaces, and structural members (including the steel shell) are considered in the PRA structural analysis to assess the failure pressure and failure location of containment. If evidence of component degradation occurs, then that information is fed back into the PRA containment performance analysis to reassess the containment failure pressure, temperature and failure location. The conservative increase in failure probability calculated in the ILRT submittal due to the extension of the ILRT interval (i.e., a factor of 100 increase in containment leakage probability) reflects the fact that such failure modes may go undetected for an additional period of time.