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10 CFR 50.55a

September 10, 2007

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Peach Bottom Atomic Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

Subject: Requests for Relief from ASME OM Code 5-year Test Interval for Safety Relief Valve/Safety Valves (SRV/SVs) (Relief Request (RR) – 01A-VRR-2)

In accordance with 10 CFR 50.55a, "Codes and standards," paragraph 10 CFR 50.55a(f)(5)(iii), Exelon Generation Company, LLC (EGC) requests NRC approval of proposed Relief Request (RR) – 01A-VRR-2 for four (4) Safety Relief Valve/Safety Valves (SRV/SVs) on the basis that performing the testing of the valves on-line is impractical.

EGC requests relief from the specified sections of the ASME OM Code discussed below, such that Unit 3 valves 71J(SRV)/70A(SV) remain in-place, and be removed for refurbishment during this upcoming PBAPS, Unit 3 refueling outage scheduled to begin September 2007. Additionally, we request that Unit 2 valves 71G(SRV)/70B(SV) remain in-place, and be removed for refurbishment during the next Unit 2 refueling outage (Fall 2008). We note that this relief will extend to the fourth interval for the two (2) Unit 2 valves (71G/70B), in addition to the current third interval. Unit 3 valves 71J/70A are scheduled to be removed for refurbishment during this upcoming PBAPS, Unit 3 refueling outage scheduled to begin September 2007, and will subsequently be in compliance with the code, and not need relief for the fourth interval.

Specifically, EGC requests relief from the ASME OM Code -1990, "Code for Operation and Maintenance of Nuclear Power Plants," Appendix I, "Inservice Testing of Pressure Relief Devices in Light-Water Reactor Power Plants," Section I 1.3.3, "Test Frequencies, Class 1 Pressure Relief Valves," for the current third interval. The current third interval began on August 15, 1998 and will expire on August 14, 2008. This code requirement applies to all four (4) valves.

PBAPS, Units 2 and 3 will be converting to a new edition of the code for the fourth interval. The new interval begins on August 15, 2008 and will conclude on August 14, 2018. PBAPS, Units 2 and 3 will comply with the ASME OM Code, 2001 Edition through 2003 Addenda. Therefore, in addition to the above, EGC requests relief from the ASME OM Code, "Code for Operation and Maintenance of Nuclear Power Plants," 2001 Edition through 2003 Addenda, Appendix I, "Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants," Section I-1320, "Test Frequencies, Class 1

Pressure Relief Valves". This code requirement applies only to Unit 2 valves 71G(SRV)/70B(SV).

EGC requests approval of this relief by October 25, 2007, at which time one valve (PBAPS, Unit 2 – 70B) will soon exceed its five (5) year interval (October 29, 2007).

There are no regulatory commitments contained within this letter.

If you have any questions concerning this letter, please contact Mr. Thomas Loomis at (610) 765-5510.

Respectfully,

PAK Pamela B. Cowan

Pamela B. Cowan
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachment: 1) Relief Request (RR) – 01A-VRR-2

cc: S. J. Collins, Regional Administrator, Region I, USNRC
F. L. Bower, USNRC Senior Resident Inspector, PBAPS
J. Hughey, Project Manager, USNRC

Attachment 1

Relief Request (RR) – 01A-VRR-2
Peach Bottom Atomic Power Station
Units 2 and 3

Proposed Relief in Accordance with 10 CFR 50.55a(f)(5)(iii)

Attachment 1
Relief Request (RR) – 01A-VRR-2
Peach Bottom Atomic Power Station
Units 2 and 3

1. ASME Code Component(s) Affected

Components:

Safety Relief Valves (SRVs): 71G (Unit 2)
71J (Unit 3)

Safety Valves (SVs): 70B (Unit 2)
70A (Unit 3)

Category:

Valve 71G (Unit 2) is Category B/C
Valves 71J (Unit 3), 70B (Unit 2) and 70A (Unit 3) are Category C

Manufacturer:

Target Rock, Model: 67F - 71G (Unit 2)
71J (Unit 3)

Dresser, Model: 3707RA – 70B (Unit 2)
70A (Unit 3)

Table 1 provides valve-specific identification data, test dates, installation dates, and requested extension duration for the four valves.

2. Applicable Code Edition and Addenda

ASME OM Code -1990, "Code for Operation and Maintenance of Nuclear Power Plants," for the current interval. The current third interval began on August 15, 1998 and will expire on August 14, 2008. This code requirement applies to all four (4) valves.

PBAPS, Units 2 and 3 will be converting to a new edition of the code for the fourth interval. The new interval begins on August 15, 2008 and will conclude on August 14, 2018. PBAPS, Units 2 and 3 will comply with the ASME OM Code, 2001 Edition through 2003 Addenda.

3. Applicable Code Requirements

Specifically, EGC requests relief from the ASME OM Code -1990, "Code for Operations and Maintenance of Nuclear Power Plants," Appendix I, "Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants," Section I 1.3.3, "Test Frequencies, Class 1 Pressure Relief Valves" for the current interval. The current third interval began on August 15, 1998 and will expire on August 14, 2008.

PBAPS, Units 2 and 3 will be converting to a new edition of the code for the fourth interval. The new interval begins on August 15, 2008 and will conclude on August 14, 2018. PBAPS, Units 2 and 3 will comply with the ASME OM Code, 2001 Edition through 2003 Addenda.

Therefore, in addition to the above, EGC requests relief from the ASME OM Code, Operations and Maintenance of Power Plants," 2001 Edition through 2003 Addenda, Appendix I, "Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants," Section I-1320, "Test Frequencies, Class 1 Pressure Relief Valves". This code requirement applies only to Unit 2 valves 71G(SRV)/70B(SV).

4. Reason for Request

Section ISTC 3.2 (ASME OM Code–1990) and ISTC–3200 (ASME OM Code, 2001 Edition through 2003 Addenda), "Inservice Testing," states that inservice testing shall commence when the valves are required to be operable to fulfill their required function(s). Section ISTC 3.4 (ASME OM Code –1990) requires that "safety and relief valves and non-reclosing pressure relief devices shall be tested as required by the replacement, repair, and maintenance requirements of Appendix I." Additionally, ISTC-5240, "Safety and Relief Valves," directs that safety and relief valves meet the inservice testing requirements set forth in Appendix I of the ASME OM Code. Appendix I, Sections I 1.3.3 (b) (ASME OM Code – 1990) and Section I-1320(a) (ASME OM Code, 2001 Edition through 2003 Addenda) states that Class 1 pressure relief valves shall be tested at least once every five years. The required test ensures that the SRV/SVs, which are located on the main steam lines between the reactor vessel and the first isolation valve within the drywell, will open at the pressures assumed in the safety analysis.

In accordance with 10 CFR 50.55a(f)(5)(iii), Exelon Generation Company, LLC (EGC) requests relief from the above requirements for two (2) valves (71J/70A) at PBAPS, Unit 3 until the sixteenth Unit 3 refueling outage (P3R16), which is scheduled to begin in September 2007, and two (2) valves (71G/70B) at PBAPS, Unit 2 until the seventeenth PBAPS, Unit 2 refueling outage (P2R17), which is scheduled to begin in Fall 2008.

We note that this relief will extend to the fourth interval for the two (2) Unit 2 valves (71G/70B), in addition to the current third interval. Unit 3 valves 71J/70A are scheduled to be removed for refurbishment during this upcoming PBAPS, Unit 3 outage scheduled to begin September 2007, and will subsequently be in compliance with the code, and not need relief for the fourth interval.

NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants," Section 3.1, "Inservice Test Frequencies and Extensions for Valve Testing," states that the USNRC may approve relief to extend a test interval for extenuating circumstances in which the system design makes compliance impractical. Impractical conditions that would justify a test deferral are those that result in an unnecessary plant shutdown, cause unnecessary challenges to safety systems, or cause unnecessary cycling of equipment.

Compliance with the applicable requirements of the ASME OM Codes for the two (2) SRV/SVs at PBAPS, Unit 3 prior to P3R16 and the two (2) SRV/SVs at PBAPS, Unit 2 prior to P2R17 is not practicable, in that the evolution would result in unnecessary plant shutdowns, unnecessary challenges to safety systems, and unnecessary cycling of equipment, all without a compensating increase in the level of quality or safety.

EGC typically removes and tests either six (6) or seven (7) of thirteen (13) SRV/SVs on PBAPS, Units 2 and 3 every refueling outage, so that all valves are removed and tested every two refueling outages. This methodology supports the ASME OM Code requirements for testing untested Class 1 pressure relief valves. After each valve is removed and tested, the SRV/SVs are overhauled to a like-new condition, and reset to an as-left nominal setpoint plus or minus 1%.

EGC utilizes an ASME OM Code-certified off-site vendor (Wyle Labs) to perform as-found and as-left testing of the PBAPS SRV/SVs. EGC utilizes ASME OM Code-certified off-site vendors (Target Rock Corporation and Dresser Flow Control) to perform disassemblies, inspections and refurbishments of the PBAPS SRV/SVs. EGC purchase orders require Target Rock Corporation (TRC) and Dresser Flow Control to comply with procedures to disassemble, inspect and refurbish each SRV/SV upon removal from service, independent of the as-found test results.

The TRC and Dresser Flow Control procedures identify the critical components that are required to be inspected for wear and defects, and the critical dimensions that are required to be measured during the inspection. If components are found worn or outside of the specified tolerances, the components are either reworked to within the specified tolerances, or replaced. All parts that are defective, outside-of-tolerance, and all reworked/replaced components are identified, and PBAPS is notified in writing of these components by the appropriate off-site vendor. The SRV/SV is then re-assembled, the as-left test is performed, and the SRV/SV is shipped by Wyle Labs to PBAPS.

At PBAPS, an EGC-qualified procedure is used for handling and storage of Safety Related and Augmented Qualified equipment (SM-AA-102, "Warehouse Operations"). The procedure requires the storage of SRV/SVs within a fire resistant, tear-resistant, weather-tight and well-ventilated building or equivalent enclosure. The procedure also states that the storage area or enclosure shall not be subject to flooding; the floor shall be paved or equal and well drained. The storage area must be provided with uniform heating and temperature control to prevent condensation and corrosion. Minimum and maximum temperatures are controlled.

As part of a review of the PBAPS inservice testing program with respect to a recent ASME OM Code interpretation, a discrepancy was identified relative to the five-year test interval. The ASME OM Code interpretation (i.e., ASME Code Interpretation 01-18 from the ASME OM Code, 2004 Edition) indicated that implementation of the five-year test interval should be based upon a "test-to-test" duration for the 1995 and later code editions. The historical EGC method with respect to SRV/SV testing has been to use an "installation-to-test" duration, and to ensure that all installed SRV/SVs would not exceed a five-year installed interval.

During the upcoming PBAPS, Unit 3 refueling outage (P3R16) scheduled to begin in September 2007, EGC will test and replace seven (7) SRV/SVs (approximately 50% of the total number of SRV/SVs). The two affected PBAPS, Unit 3 SRV/SVs that are listed in Table 1 of this relief request are currently scheduled to be removed and as-found tested during P3R16. These two (2) Unit 3 SRV/SVs will be replaced with certified SRV/SVs having the same nominal setpoints. This test and replacement schedule is consistent with

the historical EGC method for implementing Appendix I, Sections I 1.3.3 (b) (ASME OM Code –1990) (i.e., the valves will have been installed for less than or equal to two operating cycles). However, utilizing a test-to-test interpretation, the five-year interval for the two affected (71J/ 70A) PBAPS, Unit 3 SRV/SVs has already expired.

Similarly, during the next PBAPS, Unit 2 refueling outage (P2R17) scheduled to begin in Fall 2008, EGC will test and replace six (6) SRV/SVs (i.e., approximately 50% of the total number of valves). The two (2) affected PBAPS, Unit 2 SRV/SVs that are listed in Table 1 (71G/70B) are currently scheduled to be removed and as-found tested during P2R17. These two (2) Unit 2 SRV/SVs will be replaced with certified SRV/SVs having the same nominal setpoints. This test and replacement schedule is consistent with the historical EGC method for implementing the testing requirements (i.e., the valves will have been installed for less than or equal to two operating cycles). However, utilizing a test-to-test interpretation, the five-year interval for Unit 2 valve 71G has already expired, and the five-year interval for 70B will expire on October 29, 2007.

5. Proposed Alternative and Basis for Use

EGC requests relief from the specified sections of the ASME OM Code, such that Unit 3 valves 71J/70A remain in-place, and be removed for refurbishment during this upcoming PBAPS, Unit 3 outage scheduled to begin September 2007. Additionally, we request that Unit 2 valves 71G/70B remain in-place, and be removed for refurbishment during the upcoming Unit 2 outage (Fall 2008). The requested interval extensions to the five-year interval are included in Table 1.

As-found testing history for Peach Bottom's Target Rock Valves from 1999 to the present indicates that all as-found tests on Target Rock Valves (i.e., a total of 53 tests) that have been installed in PBAPS Unit 2 and Unit 3 for two operating cycles (48 months), have successfully passed the ASME OM Code as-found acceptance criteria of plus or minus 3%.

As-found testing history for Peach Bottom's Dresser Valves from 1996 to the present indicates that all as-found tests on Dresser Valves (i.e., a total of 11 tests) that have been installed in PBAPS Unit 2 and Unit 3 for two operating cycles (48 months), have successfully passed the ASME OM Code as-found acceptance criteria of plus or minus 3%.

Based on the historical SRV/SV test results, extending the test frequencies for the identified valves for the identified period as discussed in Table 1 would not be expected to result in exceeding the ASME OM Code as-found acceptance criteria of plus or minus 3%. Therefore, EGC has concluded that compliance with the OM Code for the four (4) SRV/SVs (i.e., replacement and testing of the SRV/SVs prior to P3R16 and prior to P2R17) is impracticable, and would not result in a compensating increase in the level of quality or safety.

6. Duration of Proposed Alternative

EGC requests relief from the specified sections of the ASME OM Code, such that Unit 3 valves 71J/70A remain in-place, and be removed for refurbishment during this upcoming PBAPS, Unit 3 outage scheduled to begin September 2007. Additionally, we request that

Unit 2 valves 71G/70B remain in-place, and be removed for refurbishment during the upcoming Unit 2 outage (Fall 2008). We note that this relief will extend to the fourth interval for two (2) valves on Unit 2 (71G/70B), in addition to the current third interval. Table 1 below provides the requested test interval extension for each of the four SRV/SVs. These requested interval extensions range from 8 months to 20 months. For all four (4) SRV/SVs, the total installed time for each of the valves will be 48 months.

7. Precedents

In Reference 1, the NRC reviewed and approved a relief request for Susquehanna Steam Electric Station, Units 1 and 2 to extend the main steam safety/relief valves test interval duration for individual valves to six years for the entire third 10-year Inservice Testing interval. In Reference 2, the NRC reviewed and approved a relief request for Nine Mile Point, Unit 2 to extend the main steam safety/relief valves test interval duration for individual valves to three refueling outages or approximately six years for the entire third 10-year Inservice Testing interval.

8. References

1) Letter from R. J. Laufer (USNRC) to B. L. Shriver (SSES), "Susquehanna Steam Electric Station Units 1 and 2 - Third 10-Year Interval Inservice Testing (IST) Program Plans," dated March 10, 2005.

2) Letter from M. Banerjee (USNRC) to J.H. Mueller (NMPC), " Nine Mile Point Nuclear Station, Unit No. 2 – Alternative to American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Regarding Inservice Testing of Main Steam Safety/Relief Valves (TAC No. MB0290)," dated April 17, 2001.

Attachment 1
Relief Request (RR) – 01A-VRR-2
Peach Bottom Atomic Power Station
Units 2 and 3

Table 1

Valve Location	Valve - Serial Number	Valve Mfg./ Model	Last Test Date	Installed (Month – Year)	Months Stored prior to Installation	Scheduled Replacement Outage	Scheduled Replacement (Month – Year)	Months Installed at Time of Replacement	Requested Interval Extension (months)
Unit 3 - 71J	17	Target Rock / 67F	01/16/02	Sept. 2003	20 months	P3R16	Sept. 2007	48 months	8 months
Unit 3 - 70A	1095	Dresser / *3707RA*	01/13/02	Sept. 2003	20 months	P3R16	Sept. 2007	48 months	8 months
Unit 2 - 71G	145	Target Rock / 67F	01/23/02	Sept. 2004	32 months	P2R17	Sept. 2008	48 months	20 months
Unit 2 - 70B	1103	Dresser / *3707RA*	10/29/02	Sept. 2004	23 months	P2R17	Sept. 2008	48 months	11 months