

10 CFR 50.55a

April 13, 2017

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: Submittal of Relief Request Associated with the Fourth Inservice Testing Interval – Revise Main Steam Isolation Valve Partial Stroke Testing Frequency

In accordance with 10 CFR 50.55a, “Codes and standards,” paragraph (z)(1), Exelon Generation Company, LLC (EGC), hereby requests NRC approval of the attached relief request associated with the fourth inservice testing (IST) interval for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The fourth interval of the PBAPS, Units 2 and 3, IST Program began on August 15, 2008, and complies with the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 2001 Edition with addenda through OMB-2003.

Proposed Relief Request No. 01A-VRR-4 requests authorization to exercise valves on a limited basis, in accordance with the Surveillance Frequency Control Program, that will soon be restricted to cold shutdown testing requirements in accordance with ISTC-3521(b). The basis for this request is provided in the Attachment.

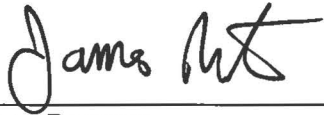
We are requesting your review and approval of this relief request prior to the requirement to perform the next quarterly test which is currently scheduled for May 17, 2017. Incorporation of this testing into the Surveillance Frequency Control Program will minimize challenges to the units (e.g., reactivity events).

There are no regulatory commitments contained in this submittal.

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If you have any questions or require additional information, please contact Stephanie J. Hanson at (610) 765-5143.

Respectfully,

A handwritten signature in black ink, appearing to read "James Barstow", written over a horizontal line.

James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachment: 10 CFR 50.55a Relief Request No. 01A-VRR-4

cc: USNRC Region I, Regional Administrator
USNRC Senior Resident Inspector, PBAPS
USNRC Project Manager, PBAPS
R. R. Janati, Pennsylvania Bureau of Radiation Protection
S. T. Gray, State of Maryland

ATTACHMENT

**PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3**

**PROPOSED RELIEF REQUEST ASSOCIATED WITH THE FOURTH INSERVICE TESTING
INTERVAL – REVISE MAIN STEAM ISOLATION VALVE PARTIAL STROKE TESTING
FREQUENCY**

RELIEF REQUEST 01A-VRR-4

10 CFR 50.55a Request Number 01A-VRR-4
Proposed Alternative In Accordance with 10 CFR 50.55a(z)(1)
Alternative Provides Acceptable Level of Quality and Safety
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1. ASME Code Component(s) Affected

<u>Component Number</u>	<u>System</u>	<u>Code Class</u>	<u>Category</u>
AO-2(3)-01A-080A	MS	1	A
AO-2(3)-01A-080B	MS	1	A
AO-2(3)-01A-080C	MS	1	A
AO-2(3)-01A-080D	MS	1	A
AO-2(3)-01A-086A	MS	1	A
AO-2(3)-01A-086B	MS	1	A
AO-2(3)-01A-086C	MS	1	A
AO-2(3)-01A-086D	MS	1	A

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTC-3520, "Exercising Requirements", Section ISTC-3521(b) states "if full-stroke exercising during operation at power is not practicable, it may be limited to part-stroke during operation at power and full-stroke during cold shutdown".

4. Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (z)(1), relief is requested from the requirement of ASME OM Code ISTC-3521(b). The basis of the relief request is the proposed alternative would provide an acceptable level of quality and safety.

An existing PBAPS Inservice Testing (IST) Program Cold Shutdown Justification (CSJ) 01A-VCS-2, for full stroke testing, under ISTC-3521(c), will be modified to remove the existing quarterly partial stroke exercise testing of the Main Steam Isolation Valves (MSIV), under ISTC-3521(b). This will be done to address the potential for the valves to fully close inadvertently during the quarterly exercise testing. Full closure of the valves, at power, will cause a reactivity event and potential loss of power production of the affected unit. Challenges like these, and their potential consequence, have also been recognized in NUREG-1482, Revision 2. The NUREG discusses activities generating these challenges and states they should be considered impracticable, thereby supporting the CSJ principal arguments.

In PBAPS Technical Specification (TS) 3.3.1.1 – Reactor Protection System (RPS) Instrumentation, Surveillance Requirement (SR) 3.3.1.1.9 – Channel Functional Test (CFT), the frequency of testing is stated as "In accordance with the Surveillance Frequency Control Program (SFCP)." The only practical method to perform the Reactor Protection System CFT for the MSIV position switch input into the RPS logic is to actually stroke the MSIV.

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There are no other Technical Specification compliant methods available without reducing reactor power and entering the normally inerted primary containment. This would result in unwarranted power reductions and personnel radiation exposures.

PBAPS has elected, due to recent documentation describing MSIV industry test failures, to utilize the SFCP for the CFT to extend the test frequency of the CFT in increments, over a period of time, up to two years. A two year test frequency would coincide with refueling outages and eliminate stroking of MSIVs during power operation of the units.

In order to utilize the SFCP for this MSIV testing, the valves will have to be partial stroke exercised at power, for a number of years, to achieve the final goal of stroking at a two year frequency. This methodology will allow for a progressively longer test interval until the final biennial testing interval is achieved. This test frequency change cannot be done with the CSJ in the IST Program, as the stroking of the valves in accordance with the SFCP would be in contradiction with the CSJ, which would not permit stroking of the valves during normal power operation (except for emergent issues such as post maintenance testing).

5. Proposed Alternative and Basis for Use

PBAPS proposes to continue partial stroke exercising the MSIVs for the sole purpose of supporting the requirements of the SFCP testing intervals that would require progressively longer surveillance intervals until the final biennial testing frequency is achieved. The CSJ would restrict any other stroking of the MSIVs, except for emergent issues such as post maintenance testing. Both the CSJ and the SFCP are needed together to address the removal of the challenges of partial stroke exercising, as defined in the CSJ, to support safer and more reliable continued operation of the units.

6. Duration of Proposed Alternative

The proposed alternative will be utilized for the remainder of the fourth 120-month interval which is currently scheduled to end on August 14, 2018.

7. Precedents

None

8. Reference

1. ASME OMB Code -2003 Addenda to ASME OM Code-2001, "Code for Operation and Maintenance of Nuclear Power Plants," dated August 29, 2003.