

March 19, 2008

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: Response to Request for Additional Information Concerning Relief Requests
Associated with the Fourth Inservice Testing Interval

Reference: 1) Letter from P. B. Cowan (Exelon Generation Company, LLC) to U. S. Nuclear
Regulatory Commission, dated November 28, 2007
2) Letter from J. D. Hughey (U. S. Nuclear Regulatory Commission) to C. G.
Pardee (Exelon Generation Company, LLC), dated March 3, 2008

In the Reference 1 letter, Exelon Generation Company, LLC (EGC) submitted for your review relief requests 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 complies with the ASME OM Code, 2001 Edition through 2003 Addenda. In the Reference 2 letter, the U. S. Nuclear Regulatory Commission staff requested additional information. Please find attached our response.

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.

Sincerely,



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

Attachments: 1) Response to Request for Additional Information
2) Revised Relief Request GVRR-1
3) Revised Relief Request GVRR-2

cc: S. J. Collins, Regional Administrator, Region I, USNRC
F. Bower, USNRC Senior Resident Inspector, PBAPS
J. D. Hughey, Project Manager [PBAPS] USNRC
R. I. McLean, State of Maryland
R. R. Janati, Commonwealth of Pennsylvania

Attachment 1

Response to Request for Additional Information

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REGARDING REQUESTS FOR RELIEF ASSOCIATED
WITH THE FOURTH INSERVICE TESTING INTERVAL
PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3
DOCKET NOS. 50-277 AND 50-278

By letter dated November 28, 2007, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML073330605), Exelon Generation Company, LLC, submitted Relief Requests associated with the Fourth Inservice Testing Interval for Peach Bottom Atomic Power Station, Unit Nos. 2 and 3. The Nuclear Regulatory Commission (NRC) staff has reviewed the requests for relief the licensee provided in the November 28, 2007, submittal. In order for the NRC staff to complete its evaluation, response to the following requests for additional information (RAI) questions is requested.

RAIs Regarding Relief Request 01A-VRR-1:

RAI-01.1) Relief from an American Society of Mechanical Engineers Operation and Maintenance (ASME OM) Code relief valve 5-year setpoint test requirement is requested in accordance with Title 10 of the Code of Federal Regulations, Part 50, (10 CFR Part 50) Section 50.55a(a)(3)(ii). Explain why compliance with this requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Response:

This relief request addresses three valves. Two (2) valves, S/N 178 and S/N 20, are currently installed on Unit 2. One (1) valve, S/N 73 is currently installed on Unit 3. As noted in the relief request, the five (5) year test-to-test frequency will expire on 7/26/10 for S/N 178, 7/7/10 for S/N 20, and 8/2/09 for S/N 73. Failure to complete the ASME Code testing by the due dates will result in declaring each valve inoperable for not complying with Surveillance Requirement 3.4.3.1 ("Safety Relief Valves (SRVs) and Safety Valves (SVs)"). The Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3 Technical Specifications (TS) permit two (2) valves to be inoperable per unit.

The hardship associated with this relief request is documented below.

Section 2.5 of NUREG 1482, Rev.1 states the following:

"Nuclear power plant licensees may also propose alternatives to ASME Code requirements — even when such requirements would be “practical” to implement — if the proposed alternatives would provide an acceptable level of quality and safety or if compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety pursuant to 10 CFR 50.55a(a)(3)(i) and 10 CFR 50.55a(a)(3)(ii), respectively. The NRC staff has interpreted “hardship” to mean a high degree of difficulty or an adverse impact on plant operation, as illustrated by the following examples:

- having to enter multiple TS limiting conditions for operation
- raising ALARA concerns...”

The following is a discussion of the criteria contained in the NUREG-1482, Revision 1, and its applicability to these valves:

“having to enter multiple TS limiting conditions for operation”:

Limiting Condition for Operation (LCO) 3.4.3, Condition A, states that when one or more required SRVs or SVs become inoperable, that actions must be taken to shutdown the reactor. Each unit at PBAPS is equipped with a combination of thirteen (13) SRVs and SVs, of which only eleven (11) are required per Technical Specification Bases 3.4.3. Without the approval of this relief request, valves S/N 178 and S/N 20 currently installed in Unit 2 will need to be declared inoperable approximately three (3) months prior to the start of the 2010 refueling outage (when they are scheduled to be replaced) for failure to comply with Surveillance Requirement 3.4.3.1. This Surveillance Requirement requires the testing of the SRVs/SVs in accordance with the Inservice Testing Program.

In the event of an unforeseen condition that would result in an additional SRV/SV being declared inoperable, Unit 2 will be forced into a premature shutdown due to the inoperability of greater than 2 SRVs/SVs. In addition, without the approval of this relief request, valve S/N 73 currently installed in Unit 3 will need to be declared inoperable approximately two (2) months prior to the Unit 3 next scheduled refueling outage (September 2009).

As discussed in the relief request, it has been demonstrated that the effect of storage on these three (3) relief valves has no significant impact on relief valve setpoint. Additionally, the short extensions (maximum of three (3) months) requested by this relief request are not anticipated to impact the ability of the valves to meet the Technical Specification limit of plus or minus 1%, and therefore would not compromise the reactor steam dome safety limit specified in Technical Specifications (1325 psig). Declaring these valves inoperable in order to comply with an ASME test requirement is unnecessary in this case.

“raising ALARA concerns”:

The above valves are located in a high radiation area (i.e., the drywell). The total estimated dose to remove, replace and test one (1) SRV/SV is approximately 2.6 rem. As discussed in the relief request, either six (6) or seven (7) of the thirteen (13) SRVs/SVs are removed and tested each outage. Therefore, if the additional two (2) relief valves were replaced during the Unit 2 2008 refueling outage, with no expectation that the number of valves to be removed and tested in 2010 will be reduced, an additional 5.2 rem will be realized. Based on the demonstration that the effect of storage for the two (2) referenced SRVs has no significant impact on relief valve setpoint, the additional dose receive by replacing these two valves during the 2008 refueling outage would be unwarranted. This rem estimate would also apply to S/N 73.

This one-time request will avoid undue hardship in the form of additional dose (S/N 178 and S/N 20) and declaring the valves inoperable (S/N 178 (Unit 2), S/N 20 (Unit 2), and S/N 73 (Unit 3)) due to failure to comply with a Surveillance Requirement (SR 3.4.3.1), which could result in an unnecessary plant shutdown (LCO 3.4.3, Condition A).

We note that this relief request is for a short duration and as demonstrated by the testing results, the valve testing results are generally within the rigorous plus or minus 1% Technical Specification limit.

Question:

RAI-01.2) Explain why safety relief valve S/N 73 was not tested during the September 2007 Unit 3 refueling outage.

Response:

No spares for the setpoint of 1145 psig were available during the September 2007 refueling outage. In order to have replaced this valve during the September 2007 outage, this valve would have needed to be removed, refurbished, tested and replaced prior to restart, which is an approximate three week turnaround which could have resulted in additional dose and time to the outage length as well as additional costs associated with the expedited schedule which results in undue hardship. SRV S/N 73 is located in a high radiation area (i.e., Unit 3 drywell). The total estimated dose to remove, replace and test an SRV is approximately 2.6 rem. Therefore, if the SRV was replaced during the 2007 refuel outage an additional 2.6 rem would have been realized. Based on the fact that it has been demonstrated that the effect of storage for this relief valve has no impact on relief valve setpoint, the additional dose received by replacing this SRV during the 2007 refueling outage was unwarranted.

As noted above, this relief request is for a short duration and as demonstrated by the testing results, the valve testing results are generally within the rigorous plus or minus 1% Technical Specification limit.

A similar relief request was approved for Peach Bottom Atomic Power Station, Unit 2 on October 25, 2007.

RAIs Regarding Relief Request 01A-VRR-2:

Question:

RAI-02) Describe how proper installation of the electrical and air line connections to each pilot valve is verified following installation of the pilot and main valve assembly in the unit.

Response:

Two tests are performed every 24 months to verify proper installation of the electrical and air line connections to each Automatic Depressurization System (ADS) solenoid valve and main valve assembly. (Note: the term "pilot valve" used by the Nuclear Regulator Commission in RAI-02 is the "solenoid valve" for ADS SRVs at PBAPS.)

Electrical Connections:

Procedure ST-I-016-220-2(3) (for PBAPS, Units 2 and 3) tests:

- The ADS logic/function from the Main Control Room
- The ADS logic/function from the ADS Alternative Control Panels

- The ADS logic/function from the HPCI Alternative Shutdown Panel
- The logic/function of the Backup Nitrogen Supply Valves

Additionally, procedure M-001-006 is performed to verify the polarity of the SRV solenoid cables prior to the SRV solenoid being installed.

Air Line Connections:

Procedure ST-M-016-220-2(3) (for PBAPS, Units 2 and 3) performs a leak check of the air accumulators and piping used for actuation of the ADS SRVs.

RAIs Regarding Relief Request GVRR-1:

Question:

RAI-03.1) Clarify the specific requirements in the ASME OM Code for which relief is requested.

Response:

In the 2001 Edition through 2003 Addenda, the specific sections that would be superseded by the approval of Relief Request GVRR-1 (i.e., those sections dealing directly with the preservice and inservice testing aspects applied to active electrically operated motor operated valves), are as follows:

ISTC-3000, "General Testing Requirements" (excluding ISTC-3600)
ISTC-5120, "Motor-Operated Valves"

Section 3, "Applicable Code Requirements" of GVRR-1 will be revised to read as follows:

ISTC-3000, "General Testing Requirements" (excluding ISTC-3600)
ISTC-5120, "Motor-Operated Valves"

Section 4, "Reason for Request" of GVRR-1 will also be revised to read as follows:

"Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested from the requirements of OM Code, Subsection ISTC-3000, excluding ISTC-3600 and requested from the requirements of OM Code, Subsection ISTC-5120. The proposed alternative would provide an acceptable level of quality and safety."

This revised relief request is included as Attachment 2 to this response.

Question:

RAI-03.2) Identify the differences between the version of OMN-1 in the 2006 Addenda of the ASME OM Code and the version of OMN-1 conditionally approved in Regulatory Guide (RG) 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code." Discuss if the conditions for use of OMN-1 listed in RG 1.192 are applicable to the version of OMN-1 in the 2006 Addenda of the ASME OM Code.

Response:

The substantive changes between Revision 0 and Revision 1 of OMN-1 were the result of the incorporation of the three (3) provisions defined within Regulatory Guide 1.192 (June 2003) into the Code Case. Other modifications to Code Case OMN-1 include enhancements and/or clarifications and do not change the intent or methods prescribed by the Code Case.

In Regulatory Guide 1.192 (June 2003), the Nuclear Regulatory Commission documented their Conditional Acceptance of ASME Code Case OMN-1, Revision 0. The NRC's Conditional Acceptance of this Code Case contains three provisions.

Provision (1)

“The adequacy of the diagnostic test interval for each motor-operated valve (MOV) must be evaluated and adjusted as necessary, but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of OMN-1.”

In OMN-1, Rev. 0, Section 3.3.1.(b) states that if insufficient data exists to determine the inservice test frequency, then the MOV shall be tested at least every 2 refueling cycles or 3 years (whichever is longer) until sufficient data exists to determine a more appropriate test frequency.

In OMN-1, Rev. 1, in addition to Section 3.3.1.(b), Section 3.7.2.2(c) was added:

“LSSC MOVs that are not associated with an established group shall be inservice tested in accordance with para. 3.3 using an initial test interval of three refueling cycles or 5 years (whichever is longer) until sufficient data exist to determine a more appropriate test interval as described in para. 6.4.4.”

This added section in OMN-1, Rev. 1 addresses the NRC's provision (1) for the acceptance of Code Case OMN-1, Rev. 0 for LSSCs (i.e., Low Safety Significant Components).

OMN-1, Rev. 1, divides MOVs into either High Safety Significant Components (HSSCs) or Low Safety Significant Components (LSSCs). HSSCs are tested at a higher frequency, which meets the requirements of NRC's provision (1) as it relates to Code Case OMN-1, Rev. 0.

Therefore, the intent of provision (1) has been incorporated into this latest revision of OMN-1, Rev. 1.

Provision (2)

“When extending exercise test intervals for high risk MOVs beyond a quarterly frequency, licensees must ensure that the potential increase in Core Damage Frequency (CDF) and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement.”

The above Regulatory Guide 1.192 provision was added to supplement Code Case OMN-1, Revision 0, Sections 3.3.1 and 3.7. In Revision 1 to Code Case OMN-1, Section 3.7.2.1 has been added to address the above Regulatory Guide 1.192 provision and is presented below:

“HSSC MOVs shall be tested in accordance with para. 3.3 and exercised in accordance with para. 3.6 of this Code Case. HSSC MOVs that can be operated during plant operation shall be exercised quarterly, unless the potential increase in core damage frequency (CDF) and large early release (LER) associated with a longer exercise interval is small.”

The Commission’s Safety Goal Policy Statement (August 4, 1986) addresses risk posed to the public as a result of their proximity to nuclear facilities and discusses these risks in terms of severe core damage. OMN-1, Rev. 1, Section 3.7.2.1, requires that CDF and LER be considered in the frequency determination associated with HSSC thus meeting the intent of the Commission’s Safety Goal Policy Statement and meeting the second provision of Regulatory Guide 1.192.

Therefore, the intent of provision (2) has been incorporated into this latest revision of OMN-1, Rev. 1.

Provision (3)

“When applying risk insights as part of the implementation of OMN-1, licensees must categorize MOVs according to their safety significance using the methodology described in Code Case OMN-3, “Requirements for Safety Significance Categorization of Components Using Risk Insights for Inservice Testing of LWR Power Plants,” with the conditions discussed in this regulatory guide or use other MOV risk-ranking methodologies accepted by the NRC on a plant-specific or industry-wide basis with the conditions in the applicable safety evaluations.”

Provision (3) identifies Code Case OMN-3 as an acceptable categorization method and allows for alternate categorization methods, provided that they are accepted by the NRC. OMN-3 categorization methodology utilizes two risk categories, HSSC and LSSC.

Section 3.7.2 of Code Case OMN-1, Revision 1, has been revised to specify that each MOV will be categorized as either HSSC or LSSC. Section 3.7.2 of Code Case OMN-1, Revision 1 is presented below:

“Each MOV shall be evaluated and categorized using a documented risk ranking methodology. This Code Case provides test requirements for High and Low Safety Significant Component (HSSC/LSSC) categories. If an Owner established more than two risk categories, then the Owner shall evaluate the intermediate SSCs and select HSSC or LSSC test requirements for those intermediate SSCs.”

Code Case OMN-1, Revision 1 has been revised to use the same two-class categorization as prescribed by OMN-3 for risk ranking. Peach Bottom Atomic Power Station, Units 2 and 3 comply with this section of OMN-1, Revision 1.

Therefore, the intent of provision (3) has been incorporated into this latest revision of OMN-1, Rev. 1.

Question:

RAI-03.3) Relief Request GVRR-1 is requested pursuant to 10 CFR 50.55a(a)(3)(i) based on an alternative providing an acceptable level of quality and safety. However, GVRR-1 includes an exception to the ASME Omb Code-2006, OMN-1, Rev. 1, Section 3.6.1 which cites only hardship as a basis for relief. Describe how the proposed alternative provides an acceptable level of quality and safety. Include in this description an explanation of why the separation of oil and grease in a MOV actuator is not an issue for periods that exceed 24 months between cycling. Identify the approximately 20 MOVs to which this exception would apply and specifically explain why each MOV cannot be cycled every 24 months.

Response:

Following further review of OMN-1, Rev. 1, Section 3.6.1, Exelon Generation Company, LLC (EGC) is withdrawing it's requested exception to that section of the Code Case.

A copy of the revised GVVR-1 is attached.

RAIs Regarding Relief Request GVRR-2:

Question:

RAI-04) Clarify the specific requirements in ASME OM Code ISTC-3522, ISTC-5221, ISTC-5222, and ISTC-5223 that relief is being requested and why relief is needed for each requirement.

Response:

Initially, ISTC-3510 was referenced in the relief request as the applicable code requirement. ISTC-3510 provides references to ISTC-3522, ISTC-5221, and ISTC-5222. ISTC-5223 was provided in the relief request for reference only. Upon further review, EGC should have cited only ISTC-3522 as the applicable code requirement and not ISTC-3510. A revised Relief Request GVRR-2 is contained as Attachment 3, which cites ISTC-3522, "Category C Check Valves."

ISTC-3522 describes the exercise requirements associated with the testing of Category C check valves. This section describes testing in terms of how each "individual" check valve is tested. Relief is requested from this section only to test check valves in groups of four (4) in their series/parallel configuration.

Approval of this Relief Request would allow use of the testing methods prescribed by ISTC-3522 for the defined groups of check valves. EGC is not requesting relief from ISTC -5221, ISTC-5222 or ISTC-5223.

This relief applies the same testing methodology that is described in ISTC-5223, "Series Valves in Pairs," to test two groups of check valves installed in series, installed in parallel. Each group of four (4) valves are installed without provisions to verify individual reverse flow closure and without provisions to verify that either group of series check valves open to provide flow.

As part of the justification for this relief request, in order to test the check valves individually, extensive modifications in the form of replacing the valves would be necessary to provide the capability to test the valves individually. As discussed in the relief request, "Each group of four (4) check valves, made up of two parallel groups of two check valves in series, will be tested as a single unit." Testing the valves as a single unit will avoid the cost of valve modifications and provides an acceptable level of quality and safety as compared to testing the valves individually.

Attachment 2
Revised Relief Request GVRR-1

Revised Request Number GVRR-1
Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)
Alternative Provides Acceptable Level of Quality and Safety

Use of ASME Code Case OMN-1, Revision 1

1. ASME Code Component(s) Affected

All active, non-skid mounted, ASME Class 1, 2 and 3 Motor Operated Valves (MOVs) scoped into the Peach Bottom Atomic Power Station (PBAPS) Inservice Testing Program.

2. Applicable Code Edition and Addenda

The applicable code edition and addenda is the ASME OM Code, 2001 Edition through 2003 Addenda. The new interval begins on August 15, 2008, and will conclude on August 14, 2018.

3. Applicable Code Requirements

ISTC-3000, "General Testing Requirements", (excluding ISTC-3600)
ISTC-5120, "Motor-Operated Valves"

4. Reason for Request

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested from the requirements of OM Code, Subsection ISTC-3000, excluding ISTC-3600 and requested from the requirements of OM Code, Subsection ISTC-5120. The proposed alternative would provide an acceptable level of quality and safety.

5. Proposed Alternative and Basis for Use

The Nuclear Regulatory Commission (NRC) in a September 22, 1999, Federal Register Notice (64 FR 51370), issued a Final Rule on 10 CFR Part 50, "Industry Codes and Standards; Amended Requirements." In the final rule, the NRC amended its regulations to incorporate by reference the 1995 Edition and 1996 Addenda of the ASME Code for Operation and Maintenance of Nuclear Power Plants. The final rule also permits the use of alternate rules for IST of MOVs as described in ASME Code Case OMN-1 Rev. 0, in lieu of certain provisions of Subsection ISTC.

In the latest (last revised August 2, 2006) issuance of 10 CFR 50.55a, 10 CFR 50.55(a)(b) states in part, that Regulatory Guide 1.192, "Operating and Maintenance Code Case Acceptability, ASME Code" (June 2003), has been approved for incorporation by reference. In Regulatory Guide 1.192, it states within Table 2, "Conditionally Acceptable OM Code Cases," that the alternative rules of ASME Code Case OMN-1, Rev. 0, when applied in conjunction with the provisions for leakage rate testing in ISTC-3600, may be applied with the following provisions:

1. The adequacy of the diagnostic test interval for each valve must be evaluated and adjusted as necessary but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of ASME Code Case OMN-1.
2. When extending the exercise test intervals for high risk MOVs beyond a quarterly frequency, licensees shall ensure that the potential increase in core damage

Revised Request Number GVRR-1
Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)
Alternative Provides Acceptable Level of Quality and Safety

Use of ASME Code Case OMN-1, Revision 1

frequency and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement.

3. When applying risk insights as part of the implementation of OMN-1, licensees must categorize MOVs according to their safety significance using the methodology described in Code Case OMN-3, "Requirements for Safety Significance Categorization of Components Using Risk Insights for Inservice Testing of LWR Power Plants," with the conditions discussed in this regulatory guide or use other MOV risk-ranking methodologies accepted by the NRC on a plant-specific or industry-wide basis with the conditions in the applicable safety evaluations.

This conditional acceptance of OMN-1, Rev. 0, per Regulatory Guide 1.192 is applicable in lieu of the provisions for stroke-time testing in Subsection ISTC of the 1995 Edition, up to and including the 2000 Addenda, of the ASME OM Code.

PBAPS proposes to adopt the requirements of Code Case OMN-1, Rev. 1, as presented in the ASME Omb Code for 2006, in lieu of the performance of stroke time testing and position indication testing as described by ASME OM ISTC 2001/2003a.

Since Regulatory Guide 1.192 was last published, Code Case OMN-1 has been updated/modified to address and incorporate all of the original Regulatory Guide 1.192 listed provisions.

The PBAPS MOV testing program was developed as a result of Generic Letters (GL) 89-10, "Safety Related Motor Operated Valve Testing and Surveillance," and 96-05, "Periodic Verification of Design Basis Capability of Safety Related Motor Operated Valves," utilizing Topical Report MPR-1807, Rev. 2. PBAPS is currently utilizing MPR-2524-A, "Joint Owners' Group (JOG) Motor Operated Valve Periodic Verification Program Summary," (November 2006) for its MOV Program guidance. The adoption of OMN-1 will consolidate testing between the site's Inservice Testing (IST) and MOV Programs.

Technical Position

The following positions describe how the EGC interprets and complies with the various requirements of OMN-1 (ASME Omb Code-2006).

1. OMN-1, Section 3.1 allows for the use of testing that was conducted prior to the implementation of OMN-1 if it meets the requirements of the Code Case. PBAPS intends to utilize the testing credited under its GL 89-10/96-05 responses to satisfy the requirement for a one-time test to verify the capacity of each individual or group of MOV's safety-related design basis requirements.
2. OMN-1, Section 3.2 requires that each MOV be tested during the preservice test period or before implementing inservice inspection. PBAPS intends to utilize the testing credited under its GL 96-05 response to satisfy this requirement.

Revised Request Number GVRR-1
Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)
Alternative Provides Acceptable Level of Quality and Safety

Use of ASME Code Case OMN-1, Revision 1

3. OMN-1, Section 3.3(b) states that inservice tests shall be conducted in the as-found condition, and activities shall not be conducted if they might invalidate the as-found condition for inservice testing. PBAPS maintenance activities that would affect the as-found condition of the valve, such as motor operator preventive maintenance or stem lubrication, are typically scheduled to occur in conjunction with the performance of the MOV Periodic Verification Testing, and are performed after as-found testing. Any other activities that could affect the as-found test results are not performed until after the as-found testing has been conducted.
4. OMN-1 Section 3.3(c) requires the inservice test program to include a mix of static and dynamic MOV performance testing. PBAPS has utilized the JOG program's mix of static and dynamic MOV performance testing (MPR-2524-A) to develop its current MOV testing program. Additionally, PBAPS will continue to utilize the existing engineering standards, which are consistent with the JOG standards, to justify any changes to the mix of required MOV performance testing. The use of such an evaluation will serve to ensure PBAPS continues to meet this requirement.
5. OMN-1, Section 3.3(e) requires that Remote Position Indication shall be verified locally during inservice testing or maintenance activities. The PBAPS will continue to verify the operability of each MOV's position indication system as part of each MOV's diagnostic test. In addition, the function of each MOV's position indication system will be verified during the performance of maintenance activities affecting remote position indication.
6. OMN-1, Section 3.3.1(b) requires MOV inservice testing to be conducted every 2 refueling cycles or 3 years (whichever is longer), if insufficient data exists to determine inservice test frequencies. PBAPS has sufficient MOV testing data to justify its current testing frequencies, and therefore meets this requirement. If in the future, modification or replacement results in the necessity to re-baseline a valve or group of valves, the requirements of OMN-1 Section 3.3.1(b), or 3.7.2.2(c) as applicable, will be followed.
7. OMN-1, Section 6.4.4 requires that calculations for determining the MOV's functional margin are evaluated to account for potential performance-related degradation. The PBAPS MOV Program, including the corporate MIDAS Software (or similar updated product), takes into account performance-related degradation, to calculate valve margin.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the fourth ten-year interval.

7. Precedents

A similar relief was approved for LaSalle County Station, Units 1 and 2, Relief Request RV-02, in NRC Safety Evaluation Report dated September 26, 2007.

Attachment 3
Revised Relief Request GVRR-2

Revised Request Number GVRR-2
Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)
Alternative Provides Acceptable Level of Quality and Safety

Exercise Testing of Vacuum Relief Check Valves
In Series/Parallel Configuration

1. ASME Code Component(s) Affected

Valve	Description	Class	Category	Unit
VRV-2-13C-139A	RCIC Turbine Exh Line Vac Breaker	2	C	2
VRV-2-13C-139B	RCIC Turbine Exh Line Vac Breaker	2	C	2
VRV-2-13C-139C	RCIC Turbine Exh Line Vac Breaker	2	C	2
VRV-2-13C-139D	RCIC Turbine Exh Line Vac Breaker	2	C	2
VRV-2-23C-140A	HPCI Turbine Exh Line Vac Breaker	2	C	2
VRV-2-23C-140B	HPCI Turbine Exh Line Vac Breaker	2	C	2
VRV-2-23C-140C	HPCI Turbine Exh Line Vac Breaker	2	C	2
VRV-2-23C-140D	HPCI Turbine Exh Line Vac Breaker	2	C	2
VRV-3-13C-139A	RCIC Turbine Exh Line Vac Breaker	2	C	3
VRV-3-13C-139B	RCIC Turbine Exh Line Vac Breaker	2	C	3
VRV-3-13C-139C	RCIC Turbine Exh Line Vac Breaker	2	C	3
VRV-3-13C-139D	RCIC Turbine Exh Line Vac Breaker	2	C	3
VRV-3-23C-140A	HPCI Turbine Exh Line Vac Breaker	2	C	3
VRV-3-23C-140B	HPCI Turbine Exh Line Vac Breaker	2	C	3
VRV-3-23C-140C	HPCI Turbine Exh Line Vac Breaker	2	C	3
VRV-3-23C-140D	HPCI Turbine Exh Line Vac Breaker	2	C	3

2. Applicable Code Edition and Addenda

The applicable code edition and addenda is the ASME OM Code, 2001 Edition through 2003 Addenda. The new interval begins on August 15, 2008, and will conclude on August 14, 2018.

3. Applicable Code Requirement

ISTC-3522, "Category C Check Valves," requires that during operation, each check valve be exercised.

4. Reason for Request

Exelon Generation Company, LLC (EGC) is requesting relief from the identified code requirements on the basis that the proposed alternative will provide an acceptable level of quality and safety in accordance with 10 CFR 50.55a(a)(3)(i). These check valves, which function as vacuum relief valves, perform a safety function in the open direction to prevent siphoning of suppression pool water into the turbine exhaust line due to steam condensing when the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) systems are shut down. These valves also perform a safety function in the closed direction to prevent back flow of HPCI and RCIC turbine exhaust steam through the vacuum breaker lines.

Revised Request Number GVRR-2
Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)
Alternative Provides Acceptable Level of Quality and Safety

Exercise Testing of Vacuum Relief Check Valves
In Series/Parallel Configuration

The valves are installed in a series-parallel configuration such that each group of four (4) check valves consists of two groups of two check valves in series installed in parallel. These check valves are not provided with air operators to facilitate testing (exercising) nor does the configuration of the piping in this portion of the HPCI and RCIC systems provide for individual testing of these valves. ISTC-5223 addresses the testing of series valves in pairs but does not completely address the configuration of these groups of four valves.

5. Proposed Alternative and Basis for Use

Each group of four (4) check valves, made up of two parallel groups of two check valves in series, will be tested as a single unit. Each group of valves will be tested quarterly in the forward and reverse directions as a unit. Forward exercise testing will be performed by verifying the turbine exhaust lines are drained. Valve closure will be verified by monitoring the HPCI and RCIC turbine exhaust vent high temperature alarms located upstream of the valve assemblies. High temperature alarms will indicate steam leakage past the valves. All four (4) valves will be declared inoperable in the event of a failure of the system to perform its function.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the fourth ten-year interval.

7. Precedents

A similar relief request was previously approved for the third ten-year interval at PBAPS as relief request GVRR-7 in NRC Safety Evaluation Report dated May 11, 1998. Additional discussion concerning this relief request was provided in an NRC letter (J. W. Clifford (NRC) to J. A. Hutton (PECO Energy Company)) dated March 15, 2000.