UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 26, 2009

Mr. Charles G. Pardee
President and Chief Nuclear Officer
Exelon Generation Company, LLC
200 Exelon Way
Kennett Square, PA 19348

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 – REQUESTS FOR RELIEF ASSOCIATED WITH THE THIRD AND FOURTH INSERVICE TESTING INTERVALS AND THE FIRST AND SECOND CONTAINMENT INSERVICE INTERVALS (TAC NOS. MD8294, MD8295, MD8296, MD8297, MD8298, MD8299, MD8300, MD8301, MD8302, MD8303, MD8304, MD8305, MD8306, MD8307, MD8308 AND MD8309)

Dear Mr. Pardee:

By letter dated February 29, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML080640587), as supplemented by letters dated May 13, 2008, August 4, 2008, October 9, 2008, November 13, 2008, and January 9, 2009, (ADAMS Accession Nos. ML081350177, ML082200279, ML082880120 ML083220143, and ML090130128, respectively), Exelon Generation Company, LLC (Exelon) submitted relief requests associated with the third and fourth Inservice Inspection (ISI) intervals and the first and second Containment Inservice Inspection (CISI) intervals for the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3.

Relief request I3R-45 is associated with the third ISI interval which began on November 5, 1998, and ended on November 4, 2008, for PBAPS Unit 2. The PBAPS Unit 3 third ISI interval began on August 15, 1998, and ended on August 14, 2008. Relief requests I4R-08, I4R-25, I4R-44, I4R-46 and I4R-47 are associated with the fourth ISI interval which began on November 5, 2008, and ends on November 4, 2018, for PBAPS Unit 2. The PBAPS Unit 3 fourth ISI interval began on August 15, 2008, and will end on August 14, 2018.

Relief request I3R-45 requests that the PBAPS Unit 3 end date of the third interval be extended to November 4, 2008, and that the start date for the fourth interval be extended to November 5, 2008, in order to create a common start date with Unit 2. Similarly, the Unit 3 fourth interval end date would be extended to the same Unit 2 end date of November 4, 2018. The Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's analysis in support of the relief request I3R-45. Request No. I3R-45 is authorized pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 55a(a)(3)(i), on the basis that the proposed alternative provides an acceptable level of quality and safety.

The NRC staff has reviewed the licensee's analysis in support of relief requests I4R-25, I4R-44, I4R-46 and I4R-47. Request Nos. I4R-44 and I4R-47 are authorized for the duration of the fourth 10-year inspection interval pursuant to 10 CFR Part 50 Section 55a(a)(3)(i), on the basis that the proposed alternatives provide an acceptable level of quality and safety.

Relief Request I4R-25 requests relief from performing a system leakage test of the reactor vessel head flange seal leak detection piping at the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (Code)-required test pressure corresponding to nominal operating pressure during system operation. The configuration of the leak detection piping precludes implementing the Code-required pressure test either with the vessel head installed or while removed. The NRC staff has determined, with regard to I4R-25, that conformance with the specified code requirements is impractical and granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. The NRC staff also finds that the proposed alternative provides reasonable assurance of structural integrity. Relief request I4R-25 is granted, pursuant to 10 CFR 50.55a(g)(6)(i), for PBAPS Units 2 and 3 for the fourth 10-year ISI interval.

The NRC staff determined that the alternative to the ASME Code-required test proposed in relief request I4R-46 is not applicable since the piping associated with the alternative is beyond the ASME Code pressure boundary. Therefore, the NRC staff concluded that the ASME Code relief sought in relief request I4R-46 is not required and, therefore, relief is not granted for the alternative associated with this relief request.

Relief request I4R-08 was withdrawn by the licensee in the supplement dated October 9, 2008. The NRC staff recognized that the relief was submitted in accordance with the precedence of similar relief requests. However, the NRC staff has adopted a change in policy regarding some relief requests pursuant to 10 CFR 50.55a(g)(5)(iii) for impracticality of compliance. Specifically, the NRC staff will not review selected requests under 10 CFR 50.55a(g)(5)(iii) in advance of the applicable inspection interval.

Relief requests CRR-12 and CRR-13 are associated with the first and second CISI intervals for PBAPS Units 2 and 3. The first CISI interval for Unit 2 began on November 5, 1998, and ends on November 4, 2008. The second CISI interval for Unit 2 began on November 5, 2008, and ends on November 4, 2018. The first CISI interval for Unit 3 began on November 5, 1998, and ends on November 4, 2009, due to a one-year extension invoked by Exelon in October 2007, per ASME Code Section IWA-2430(d) of the 1992 Edition through 1992 Addenda. The second CISI interval for Unit 3 begins on November 5, 2009, and ends on November 4, 2019.

Relief request CRR-12 requests that the PBAPS Unit 3 first interval end date be changed to November 4, 2008, in order to create a common start date with Unit 2. The NRC staff has reviewed the licensee's analysis in support of the relief request CRR-12. Request No. CRR-12 is authorized pursuant to 10 CFR, 50.55a(a)(3)(i), on the basis that the proposed alternative provides an acceptable level of quality and safety. Relief request CRR-13 requests relief for Unit 2 and Unit 3 from ASME Code, Section XI, Subsection IWE examination of the N-3 construction manway penetration in the drywell because of impracticality since the penetration was made inaccessible during original construction. The NRC staff has determined with regard to CRR-13 that conformance with the specified code requirements is impractical and granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. The NRC staff also finds that the proposed alternative provides reasonable assurance of structural integrity. Relief request CRR-13 is granted, pursuant to 10 CFR 50.55a(g)(6)(i), for PBAPS Units 2 and 3 for the first and second CISI intervals.

The NRC staff's Safety Evaluation regarding relief requests I3R-45, I4R-25, I4R-44, I4R-46, I4R-47, CRR-12 and CRR-13 is enclosed. This completes the NRC staff's efforts on TAC Nos. MD8294, MD8295, MD8296, MD8297, MD8298, MD8299, MD8300, MD8301, MD8302, MD8303, MD8304, MD8305, MD8306, MD8307, MD8308 and MD8309.

If you have any questions, please contact the PBAPS Project Manager, Mr. John Hughey, at 301-415-3204.

Sincerely,

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosure: As stated

cc w/encl: Distribution via ListServ

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUESTS I3R-45, I4R-25, I4R-44, I4R-46 AND I4R-47

ASSOCIATED WITH THE THIRD AND FOURTH

INSERVICE INSPECTION INTERVALS

AND RELIEF REQUESTS CRR-12 AND CRR-13

ASSOCIATED WITH THE FIRST AND SECOND

CONTAINMENT INSERVICE TESTING INTERVALS

EXELON GENERATION COMPANY, LLC

PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3

DOCKET NOS. 50-277 AND 50-278

1.0 INTRODUCTION

By letter dated February 29, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML080640587), as supplemented by letters dated May 13, 2008, August 4, 2008, October 9, 2008, November 13, 2008, and January 9, 2009, (ADAMS Accession Nos. ML081350177, ML082200279, ML082880120 ML083220143, and ML090130128, respectively), Exelon Generation Company, LLC (Exelon) submitted relief requests associated with the third and fourth Inservice Inspection (ISI) intervals and the first and second Containment Inservice Inspection (CISI) intervals for the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3.

Relief request I3R-45 requests that the PBAPS Unit 3 end date of the third ISI interval be extended to November 4, 2008, and that the start date for the fourth ISI interval be extended to November 5, 2008, in order to create a common start date with Unit 2. Similarly, the Unit 3 fourth ISI interval end date would be extended to the same Unit 2 end date of November 4, 2018. Relief requests I4R-44, I4R-46 and I4R-47 are associated with the fourth ISI interval for PBAPS Units 2 and 3. The submittal requests authorization for the use of alternatives to certain ISI requirements in the 2001 Edition through 2003 Addenda of the American Society of Mechanical Engineers *Boiler and Pressure Vessel Code* (ASME Code).

Relief Request I4R-25 requests exemption from performing a system leakage test of the reactor vessel head flange seal leak detection piping at the ASME Code-required test pressure corresponding to nominal operating pressure during system operation. The configuration of the leak detection piping precludes implementing the Code-required pressure test either with the vessel head installed or while removed.

Relief request CRR-12 requests that the PBAPS, Unit 3 first CISI interval end date be changed to November 4, 2008, in order to create a common start date with Unit 2. Relief request CRR-13 requests exemption for Unit 2 and Unit 3 from ASME Code, Section XI, Subsection IWE examination of the N-3 construction manway penetration in the drywell because of impracticality since the penetration was made inaccessible during original construction.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.55a(g), "Inservice inspection requirements," specifies that ISI of nuclear power plant components shall be performed in accordance with the requirements of the ASME Code, Section XI, except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). 10 CFR 50.55a(g)(6)(i) states that the Commission may grant such relief and may impose such alternative requirements as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest, given the consideration of the burden upon the licensee. 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the Nuclear Regulatory Commission (NRC), if (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee has submitted relief requests I3R-45, I4R-44, I4R-47, and CRR-12 pursuant to 10 CFR 50.55a(a)(3)(i) and relief request I4R-46 pursuant to 10 CFR 50.55a(a)(3)(ii).

10 CFR 50.55a(g)(5)(iii) states that if the licensee has determined that conformance with certain code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in 10 CFR 50.4, information to support the determinations. Pursuant to 10 CFR 50.55a(g)(6)(i), the Commission will evaluate determinations under paragraph (g)(5) that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. The licensee has submitted relief requests I4R-25 and CRR-13 pursuant to 10 CFR 50.55a(g)(5)(iii) which the Commission may grant pursuant to 10 CFR 50.55a(g)(6)(i).

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that ISI of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of

Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein.

The common code of record for the third interval Inservice Inspection (ISI) program is based on the 1989 Edition of the ASME Code, Section XI, for PBAPS Units 2 and 3. The Containment Inservice Inspection (CISI) first interval code of record is the ASME Code, Section XI, 1992 Edition through 1992 Addenda. The ISI program for the fourth interval, as well as the second CISI interval, is based on the ASME Code, Section XI, 2001 Edition through the 2003 Addenda.

The NRC's findings with respect to authorizing alternatives to the ASME Code are given below.

3.0 TECHNICAL EVALUATION

3.1 Relief Request I3R-45

3.1.1 Introduction

Relief Request I3R-45 requests relief from certain ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plants Components," requirements related to the timing and length of the 10-year inspection intervals at PBAPS, Units 2 and 3. Specifically, the licensee has requested to extend PBAPS, Unit 3's third 10-year ISI interval by approximately 13 weeks beyond the one-year extension allowed by ASME Code, Section XI, IWA-2430(b) and (d) to create a common fourth ISI interval for PBAPS Units 2 and 3. The request is for the third inservice inspection (ISI) interval at PBAPS, Unit 3 which started August 15, 1998, and ended August 14, 2008.

3.1.2 Components for Which Relief is Requested

The proposed relief request applies to Class 1, 2 and 3 pressure retaining components and their supports.

3.1.3 ASME Code Requirements

The licensee states that for PBAPS, Unit 3, the third 10-year ISI interval was scheduled to end on August 14, 2008, and the PBAPS, Unit 2 third 10-year ISI interval ended November 4, 2008. The ASME Code of Record for the third 10-year ISI interval was the 1989 Edition of the ASME Code, Section XI.

Paragraph IWA-2430(b), "Inspection Intervals," requires the inspection interval to be determined by calendar years following placement of the plant into commercial service.

Paragraph IWA-2432, "Inspection Program B," requires that each inspection interval consist of a 10-year duration, except as modified by IWA-2430(d) which permits the inspection interval to be reduced or extended by as much as one year, provided that successive intervals are not altered by more than one year from the original pattern of intervals.

3.1.4 Licensee Proposed Alternative and Basis for Use

As an alternative to the third 10-year interval duration requirements of IWA-2430(b) and (d) and IWA-2432, the licensee proposes to modify the interval end date of the Unit 3 third ISI interval to conclude on November 4, 2008. This will permit the subsequent ISI programs for both units to share a common inspection interval and to implement common Code Editions for Class 1, 2 and 3 components.

As a result of these interval modifications to extend the Unit 3 interval by approximately 13 weeks, the start date of the fourth interval ISI program for both Units 2 and 3 will be November 5, 2008. Using this date, the PBAPS, Unit 2 Fall refueling outage in September 2008 (P2R17) remains as currently scheduled in the third ISI interval, and the PBAPS, Unit 3 Fall refueling outage in September 2009 (P3R17) remains as currently scheduled, the first refueling outage of the fourth ISI interval. Therefore, this change will not impact inservice inspections for the upcoming outages and is administrative in nature. As required by ASME Section XI, the intervals will be scheduled in 10-year increments from November 5, 2008, forward with the modifications allowed by IWA-2430 available to future intervals and periods.

3.1.5 NRC Staff's Evaluation of Proposed Alternative

In the subject relief request the licensee proposed an alternative to the ASME Code, Section XI, IWA-2432 requirements. The proposed alternative will increase the duration of the third 10-year ISI interval of PBAPS, Unit 3 by approximately 13 weeks beyond the scheduled end date of August 14, 2008. IWA-2430(d) permits the inspection interval to be reduced or extended by as much as one year, provided that successive intervals are not altered by more than one year from the original pattern of intervals. Increasing the interval by application of the extension guidance of IWA-2430(d) is not permitted for PBAPS, Unit 3 because this would cause the successive intervals to be altered by more than 1 year from the original pattern required in IWA-2430(b) (NRC letter to licensee dated January 30, 1997, ADAMS Legacy Accession No. 9702070120). Therefore, to determine whether the proposed alternative will provide an acceptable level of quality and safety, the NRC staff's review will focus on its effect on the implementation of the ASME Code required ISI activities.

Currently, PBAPS, Units 2 and 3 have different 10-year ISI interval dates due to different commercial operating dates. This may result in different governing code editions in subsequent ISI intervals which may require the implementation of different code requirements between the units. The proposed alternative will synchronize the 10-year ISI interval between Units 2 and 3. This will establish a common interval for the ISI programs at PBAPS, Units 2 and 3, and allow the use of a common Code of Record. The common Code of Record will be 2001 Edition through the 2003 Addenda of ASME Code, Section XI for the fourth 10-year ISI interval at both units. There are distinct advantages in implementing the same code requirements at both units in a common interval. The advantages include the reduction of administrative burden of maintaining different sets of procedures and requirements and result in a significant decrease in the chances of applying the wrong requirements. In addition, the proposed alternative has no impact on the scheduling of the required ASME Section XI ISI examinations since the dates of the September 2008 and 2009 refueling outages are unaffected. Therefore, the proposed extension of the PBAPS, Unit 3 third 10-year interval by 13 weeks beyond the scheduled end date of August 14, 2008, does not add or subtract any scheduled examinations for the interval.

Based on the above, the NRC staff has determined that the licensee's proposed alternative will make implementation of the ISI programs at PBAPS, Units 2 and 3 more efficient and effective with no change to the frequency of required examinations. Therefore, the NRC staff finds that the licensee's proposed alternative will provide an acceptable level of quality and safety.

3.1.6 Conclusion

Based on the information provided in the licensee's submittal, the NRC staff concludes that the licensee's proposed alternative to the requirements of ASME Code, Section XI, IWA-2432 is acceptable because it will provide an acceptable level of quality and safety. The NRC staff has determined that the licensee's proposed alternative will make the implementation of the ISI programs at PBAPS more efficient and effective with no change to the frequency of required examinations. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i) the alternative is authorized for the PBAPS, Unit 3.

3.2 Relief Request I4R-25

3.2.1 Introduction

Relief Request I4R-25 requests relief from performing a system leakage test of the reactor vessel head flange seal leak detection piping at the ASME Code-required test pressure corresponding to nominal operating pressure during system operation. The licensee has stated in the request for relief that the configuration of the leak detection piping precludes implementing the Code-required pressure test either with the vessel head installed or while removed. Therefore, the Code requirement for system pressure test of the reactor vessel head flange seal leak detection piping is impractical and would necessitate redesign of the O-ring and its groove in the reactor vessel head flange if the requirement is imposed. The licensee requested relief pursuant to 10 CFR 50.55a(g)(5)(iii). The NRC staff has evaluated the licensee's proposed alternatives in the relief request pursuant to Title 10 to Code of Federal Regulations (10 CFR) 50.55a(g)(6)(i).

3.2.2 Components for Which Relief is Requested

The proposed relief request applies to the reactor vessel head flange seal leak detection piping.

3.2.3 ASME Code Requirements

The 2001 Edition of ASME Code, Section XI, Table IWC-2500-1, Examination Category C-H, Item Number C7.10, requires a system leakage test conducted at the system pressure obtained while the system, or portion of the system, is in service performing its normal operating function or at the system pressure developed during a test conducted to verify system operability (e.g., to demonstrate system safety function or satisfy technical specification surveillance requirements).

3.2.4 Licensee Proposed Alternative and Basis for Use

Relief is requested from performing the system leakage test at a pressure corresponding to nominal operating pressure during system operation. The licensee has proposed an alternative pressure testing requirement in lieu of the system leakage test required under ASME Code,

IWC-5221, for the reactor vessel head flange seal leak detection piping. The licensee proposes that a VT-2 visual examination and the system leakage test will be performed on the reactor vessel head flange seal leak detection piping during flood-up of the refueling pool during a refueling outage. This examination will be performed with the frequency specified by ASME Code, Table IWC-2500-1 for an ASME Code IWC-5220 test (once each inspection period).

The reactor vessel head flange seal leak detection piping is separated from the reactor pressure boundary by one passive membrane, which is an o-ring located on the vessel flange. A second o-ring is located on the opposite side of the tap in the vessel flange. This piping is required during plant operation in order to indicate failure of the inner flange seal o-ring. Failure of the o-ring would result in the annunciation of a High Level alarm in the Control Room. Failure of the inner o-ring is the only condition under which this line is pressurized.

The configuration of this piping precludes system pressure testing while the vessel head is removed because the odd configuration of the vessel tap coupled with the high test pressure requirement prevents the tap in the flange from being temporarily plugged or connected to other piping. The opening in the flange is smooth walled, making the effectiveness of a temporary seal very limited. Failure of this seal could possibly cause ejection of the device used for plugging or connecting to the vessel.

The configuration also precludes pressure testing with the vessel head installed because the seal prevents complete filling of the piping, which has no vent available. The top head of the vessel contains two grooves that hold the o-rings. The o-rings are held in place by a series of retainer clips that are housed in recessed cavities in the flange face. If a pressure test was performed with the head on, the inner o-ring would be pressurized in a direction opposite to what it would see in normal operation. This test pressure would result in a net inward force on the inner o-ring that would tend to push it into the recessed cavities that house the retainer clips. The thin o-ring material would very likely be damaged by this inward force.

3.2.5 NRC Staff's Evaluation of Proposed Alternative

Operational testing of the reactor vessel head flange seal leak detection piping is precluded, because the line will only be pressurized in the event of a failure of the inner o-ring. It is impracticable to purposely fail the inner o-ring in order to perform a pressure test. To perform the system leakage test in accordance with the ASME Code requirements, the reactor vessel head flange seal leak detection piping would have to be redesigned, fabricated, and installed. This would impose a severe burden on the licensee.

The licensee has proposed to perform a VT-2 visual examination of the reactor vessel head flange seal leak detection piping when the reactor cavity is flooded with water during a refueling outage. Since the alternative requires that the head cavity be flooded above the vessel flange, the hydrostatic head developed is sufficient to detect any gross inservice flaws, if present, in the subject piping. Therefore, the NRC staff finds that the proposed testing provides reasonable assurance of structural integrity.

3.2.6 Conclusion

Based on the above evaluation, the NRC staff finds that a system leakage test of the reactor vessel head flange seal leak detection piping at the ASME Code-required test pressure corresponding to the nominal operating pressure during system operation is impractical and would cause severe burden on the licensee if the requirement is imposed. The NRC staff has determined that conformance with the specified code requirements is impractical and granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. The NRC staff also finds that the proposed testing provides reasonable assurance of structural integrity. Relief request I4R-25 is granted, pursuant to 10 CFR 50.55a(g)(6)(i), for PBAPS Units 2 and 3 for the fourth 10-year ISI interval.

3.3 Relief Request I4R-44

3.3.1 Introduction

By letter dated February 29, 2008, with supplements dated May 13, 2008, and January 9, 2009, the licensee proposed a risk-informed inservice inspection (RI-ISI) program as an alternative to a portion of their current inservice inspection program for PBAPS, Units 2 and 3. The scope of the RI-ISI program is limited to the ASME Code, Section XI, Class 1 and 2 piping welds (Categories B-F, B-J, C-F-1, and C-F-2 welds) only. The PBAPS RI-ISI program for the third 10-year ISI interval was submitted to the NRC by letters dated June 25, 2002, January 10, 2003, and May 30, 2003 (ADAMS Accession Nos. ML021910049, ML030230374, and ML031610998, respectively). The NRC staff authorized PBAPS to implement an RI-ISI program during the third 10-year ISI interval by letter dated August 27, 2003 (ADAMS Accession No. ML032250066).

The licensee considered relevant information since the development of the program implemented during the third 10-year ISI interval and reviewed and updated the RI-ISI program. The licensee's February 29, 2008, submittal requests authorization to extend the RI-ISI program for the fourth 10-year interval.

The licensee's RI-ISI program was developed in accordance with the methodology contained in the Electric Power Research Institute's (EPRI's) topical report (TR) EPRI TR-112657, B-A, "Revised Risk-Informed Inservice Inspection Evaluation Procedure, Final Report," December 1999, which was reviewed and approved by the NRC staff, as supplemented by ASME Code Case N-578-1, "Risk-Informed Requirements for Class 1, 2, or 3 Piping, Method B." All risk-informed applications are assessed against Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment [PRA] in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," November 2002. RG 1.174 states that a PRA used in risk-informed regulation should be performed in a manner that is consistent with accepted practices. In Regulatory Information Summary 2007-06, "Regulatory Guide 1.200 Implementation," (RIS 2007-06, March 22, 2007), the NRC clarified that, for all risk-informed applications received after December 2007, the NRC staff will use RG 1.200, "An Approach For Determining The Technical Adequacy Of Probabilistic Risk Assessment Results For Risk-Informed Activities," January 2007, to determine whether the technical adequacy of the PRA used to support a submittal is consistent with accepted practices.

The PBAPS RI-ISI program is an alternative pursuant to 10 CFR 50.55a(a)(3)(i). The licensee requests NRC authorization to extend the RI-ISI program, previously approved for use in the third ISI interval, to the fourth ISI interval at PBAPS. The program scope will be implemented as an alternative to the ASME Code, 2001 Edition through the 2003 Addenda, Section XI examination program for Class 1 Examination Categories B-F and B-J and Class 2 Examination Categories C-F-1 and C-F-2 piping welds. The proposed alternative is sought for the fourth 10-year ISI interval which began November 5, 2008, and will conclude November 4, 2018.

The information provided by the licensee in support of the request has been evaluated and the basis for the NRC staff's finding is documented below.

3.3.2 Components for Which Relief is Requested

System: Various ASME Code Class 1 and 2 Systems
Code Class: ASME Code Class 1 and 2
Component Description: ASME Code Class 1 and 2 Piping Welds
Components Affected:

Weld Numbers	Description	Code Category	Code Item Number
Various	ASME Code Class 1 Piping Welds	B-F	B5.10, B5.20
Various	ASME Code Class 1 Piping Welds	B-J	B9.11, B9.21, B9.31, B9.32, B9.40
Various	ASME Code Class 2 Piping Welds	C-F-1	C5.11
Various	ASME Code Class 2 Piping Welds	C-F-2	C5.51, C5.81

3.3.3 ASME Code Requirements

ASME Code, Section XI, Sub article IWB-2500 and IWC-2500, Tables IWB-2500-1 and IWC-2500-1, Examination Categories B-F, B-J, C-F-1, and C-F-2, "Pressure Retaining Welds in Piping."

3.3.4 Licensee Proposed Alternative and Basis for Use

Pursuant to 10 CFR 50.55a(a)(3), relief is requested for the above-stated piping welds. The initial PBAPS RI-ISI Program was submitted during the third 10-year ISI interval. This initial RI-ISI program was developed in accordance with EPRI TR-112657, Revision B-A, as supplemented by Code Case N-578-1. The program was approved for use by the NRC via Safety Evaluation as transmitted to the licensee on August 27, 2003 (ADAMS Accession No. ML032250066). In its February 29, 2008, submittal, the licensee states that the RI-ISI program has been updated and continues to meet EPRI TR-112657 and RG 1.174 risk acceptance criteria.

In the February 29, 2008, submittal, the licensee states that the fourth interval program will be a continuation of the current application which included two enhancements to the EPRI methodology.

In lieu of the evaluation and sample expansion requirements in Section 3.6.6.2, "RISI Selected Examinations," of EPRI TR-112657, PBAPS will utilize the requirements of Sub article-2430, "Additional Examinations," contained in ASME Code Case N-578-1. In addition, PBAPS intends to perform additional examinations required due to the identification of flaws, which are determined to exceed the acceptance standards, during the current refueling outage prior to the units return to service.

To supplement the requirements listed in Table 4-1, "Summary of Degradation-Specific Inspection Requirements and Examination Methods" of EPRI TR-112657, PBAPS will utilize the provisions listed in Table 1, Examination Category R-A, "Risk-Informed piping Examinations" contained in ASME Code Case N-578-1. Table 1 of Code Case N-578-1 will be used as it provides a detailed breakdown for examination method and categorization of parts to be examined. The ultrasonic examination volume to be used based on degradation mechanism and component configuration will be the examination figures specified in Section 4 of EPRI TR-112657.

In addition to this risk-informed evaluation, selection, and examination procedure, all ASME Section XI piping components, regardless of risk classification, will continue to receive Code-required pressure testing as part of the current ASME Section XI program.

3.3.5 NRC Staff's Evaluation of Proposed Alternative

In its submittal, the licensee requested relief pursuant to 10 CFR 50.55a(a)(3(i). The licensee sought relief from the requirements of ASME Code, Section XI to utilize an RI-ISI Program at PBAPS during the fourth 10-year ISI interval. The fourth interval RI-ISI Program is a continuation of the current application with no changes to the evaluation methodology as currently implemented. The ISI program approved for use in the third 10-year interval contained the same enhancements to the EPRI TR-112657 methodology.

An acceptable RI-ISI program plan is expected to meet the five key principles discussed in RG 1.178, "An Approach for Plant-Specific Risk-Informed Decision Making: Inservice Inspection of Piping," September 2003, and EPRI TR-112657, as summarized below:

1. The proposed change meets the current regulations unless it is explicitly related to a requested exemption or rule change.

2. The proposed change is consistent with the defense-in-depth philosophy.

3. The proposed change maintains sufficient safety margins.

4. When proposed changes result in an increase in Core Damage Frequency (CDF) or risk, the increases should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.

5. The impact of the proposed change should be monitored by using performance measurement strategies.

The first principle is met in this relief request because an alternative ISI program may be authorized pursuant to 10 CFR 50.55a(3)(i) and, therefore, an exemption request is not required. The second and third principles require assurance that the alternative program is consistent with the defense-in-depth philosophy and that sufficient safety margins are maintained, respectively. Assurance that the second and third principles are met is based on the application of the approved methodology and not on the particular inspection locations selected. The licensee stated that they are using the same methodology as the original submittal. Since the methodology used to develop the RI-ISI program for the fourth 10-year interval is unchanged from the methodology approved for development of the RI-ISI program used in the third 10-year ISI interval, the second and third principles are met.

The fourth principle, that any increase in core damage frequency and risk are small and consistent with the Commission's Safety Goal Policy Statement, requires an estimate of the change in risk. The change in risk estimate is dependent on the location of inspections in the proposed ISI program compared to the location of inspections that would be inspected using the requirements of ASME Code, Section XI, and the technical adequacy of the PRA.

The licensee's February 29, 2008, submittal states that the original methodology of the change in risk calculation was not changed, and the change in risk was re-assessed using the initial 1989 Section XI program prior to RI-ISI and the new element selection for the fourth 10-year interval RI-ISI program. Relief was granted in NRC letter dated August 27, 2003 (ADAMS Accession No. ML032250066), from selected requirements in the 1989 Edition of Section XI, which was the licensee's Code of Record when relief was requested. The licensee stated in its February 29, 2008, submittal that its Code of Record for the fourth interval is the ASME Section XI 2001 Edition through 2003 Addenda. This change in the Code of Record might require changes to a few inspection locations for the fourth interval ASME inspection program from which the licensee is requesting relief. Minor changes in ASME locations may affect the risk calculation required by the RI-ISI methodology. However, the change in risk calculation uses simple bounding calculations to access the acceptability of the proposed program. Such minor changes do not warrant development of a new ASME inspection program to be used simply as a baseline program for determining the change in risk calculation. Therefore, the NRC staff finds the comparison of the risk estimate between the proposed RI-ISI program and the ASME program based on the Code of Record from which relief was granted appropriate and acceptable.

In its May 13, 2008, supplement, the licensee reported the results of the evaluation of its PRA against the PRA Standard RA-Sb-2005 (American Society of Mechanical Engineers, Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications, ASME RA-Sb-2005, New York, New York, December 2005.). In its January 9, 2009, supplement the licensee stated that it had reviewed the changes between Appendix A in Revision 0 and Appendix A in Revision 1 of RG 1.200 and identified no additional issues in any of the NRC clarifications that would impact the results of the PRA quality assessment reported in the May 13, 2008, supplement. The NRC staff concludes that the licensee has evaluated its PRA against ASME PRA Standard RA-Sb-2005 taking into consideration the NRC staff positions and clarifications identified in Appendix A of RG 1.200. The licensee evaluated all the significant issues and observations

developed during the reviews of its PRA according to the guidelines in RG 1.200 and determined that any issues that were not resolved would not impact the results of the proposed RI-ISI program. The licensee's evaluation of PRA quality is consistent with the guidelines in RIS 2007-06 and no deviations from the risk-acceptance criteria were identified. Therefore, the NRC staff finds that the process applied by the licensee to estimate the change in risk and perform the risk ranking provides assurance that the fourth key principle is met.

Section 3.6.6.1 of EPRI TR-112657 states, in part, that the service history and susceptibility review and ongoing industry events reviews assure that the industry trends are being monitored to assure that if an unexpected or new mechanism is identified, or a new component is identified as susceptible to an existing degradation mechanism, the RI-ISI program will be updated to reflect that change. The program update will incorporate any additional inspections mandated by the NRC, as well as those inspections deemed appropriate by the industry groups addressing the specific issues.

As stated in the licensee's submittal, all dissimilar metals (DM) welds, as characterized in ASME Section XI IWA-9000, have been evaluated for failure potential and consequence of failure along with the other non-exempt piping. The piping segments containing the DM welds were classified into the appropriate RI-ISI categories, and appropriate elements were selected per the category requirements for examination during the third inspection interval.

DM welds that are susceptible to intergranular stress-corrosion cracking (IGSCC) (i.e., IGSCC Categories B through G, as applicable) and not subject to other degradation mechanism(s) are removed from the RI-ISI program population. They are contained in the Peach Bottom ISI Augmented Program 01, "USNRC Generic Letter 88-01, Intergranular Stress Corrosion Cracking," and are subject to the inspection requirements of BWRVIP-75-A, "BWR [boiling-water reactor] Vessel and Internals Project Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules." Furthermore, all DM welds classified as Category A (resistant material) per BWRVIP-75-A are included in the RI-ISI program. Removal of a well-defined population of welds whose sole degradation mechanism is targeted by an approved augmented program was accepted by the NRC staff in NRC letter dated August 27, 2003 (ADAMS Accession No. ML032250066), and is therefore acceptable.

The licensee's January 9, 2009, supplement clarifies that as part of the fourth interval update process, the consequence and degradation assignments have been reassessed, component risk ranking have been confirmed or updated, element selections have been adjusted, and the risk impact assessment has been revised. These assessments are consistent with the living program as approved by the NRC staff in the NRC letter dated August 27, 2003, "Peach Bottom Atomic Power Station, Units 2 and 3 - American Society of Mechanical Engineers, Boiler and Pressure Vessel Code - Relief for Risk-Informed Inservice Inspection of Piping" (ADAMS Accession No. ML032250066). Therefore, the NRC staff concludes that the RI-ISI program continues to be a living program and that the fifth key principle is met.

Based on the above discussion, the NRC staff finds that the five key principles of risk-informed decision making are ensured by the licensee's proposed fourth 10-year RI-ISI interval program plan and therefore, the proposed program for the fourth 10-year ISI satisfies the guidelines in RG 1.178.

3.3.6 Conclusion

Based on the review of the information provided in the licensee's submittals, the NRC staff has determined that the proposed alternative provides an acceptable level of quality and safety, and therefore the proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the fourth 10-year ISI inspection interval at Peach Bottom Atomic Power Station, Units 2 and 3.

3.4 Relief Request I4R-46

3.4.1 Introduction

Relief Request I4R-46 requests relief from performing the ASME Code-required pressure test of three separate trains of the emergency service water (ESW) and high-pressure service water (HPSW) return piping between motor-operated (MO) valves MO-0-33-498, MO-2-32-2486 and MO-3-32-3486 discharging to a discharge pond through three locked open gate valves.

3.4.2 Components for Which Relief is Requested

Buried Class 3 components in the ESW and HPSW return lines.

3.4.3 ASME Code Requirements

The 2001 Edition through the 2003 Addenda of ASME Code, Section XI, Table IWD-2500-1, Examination Category D-B, Item No. D2.10 requires a system leakage test and a VT-2 visual examination. For buried components where a VT-2 visual examination cannot be performed, the examination requirement of Item No. D2.10 is satisfied by the following:

> The system pressure test for buried components that are isolable by means of valves shall consist of a test that determines the rate of pressure loss. Alternatively, the test may determine the change in flow between the ends of the buried components. The acceptable rate of pressure loss or flow shall be established by the Owner.

3.4.4 Licensee Proposed Alternative and Basis for Use

The buried piping in question consists of one 20-inch diameter common return header for ESW downstream of MO-0-33-0498 to the discharge pond; and two 24-inch diameter return headers for HPSW downstream of MO-2-32-2486 and MO-3-32-3486 to the discharge pond (one for Unit 2 and one for Unit 3). These components are all buried between the MO valves and the discharge pond with the exception of a valve pit that includes a manually-operated gate valve and small amount of the associated piping on each of the HPSW and ESW returns to the discharge pond. There is no access to the buried sections without excavation. In addition, no annulus was provided during original construction that would allow for examination of these buried sections of piping. ASME Code IWA-5244(b)(1) requires that the buried sections of piping be examined by a pressure decay test or a test that determines the change in flow between the buried ends. In order to perform a pressure decay test, it would be necessary to close the associated large gate valves to isolate the buried portion of each return header. This would also result in the isolation of portions of the emergency core cooling systems (ECCS), which would place technical specification limitations on the plant. The subject gate valves in the

return headers are not expected to provide the leak-tight capability which would be necessary to perform a pressure decay test due to the age of the valves. In order to perform a pressure decay test, it would be necessary to either replace these gate valves with valves that possess better leakage characteristics or to install blind flanges on piping.

The other potential test would be a change-in-flow test. However, the buried ECCS return headers were not designed with the plant instrumentation and flow orifices that would be required to determine the flow rates. Installation of flow measurement devices would result in plant modifications.

Relief is requested pursuant to 10 CFR 50.55a(a)(3)(ii) on the basis that compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee proposes to utilize the requirements of IWA-5244(b)(2) for the HPSW and ESW buried piping sections of PBAPS Units 2 and 3, in addition to data obtained during quarterly Inservice Testing (IST) trending to provide an adequate level of quality and safety. The ASME Code IWA-5244(b)(2) requirements call for a test that confirms flow is unimpaired in nonisolable buried components. To confirm that flow is unimpaired in these buried pipes, PBAPS IST procedures will be used to ensure adequate flow during operation using the Owner-established minimum flow rate contained in the site IST surveillances as the acceptance criteria for IWA-5244 pressure testing of HPSW and ESW system buried piping. Failure to meet the minimum flow requirement would result in the associated system being declared inoperable and the initiation of the requirements of the Exelon corrective action program.

3.4.5 NRC Staff's Evaluation of Proposed Alternative

The Code of Record defines boundaries for system pressure test under paragraph IWD-5240 of Article IWD-5000, ASME Code, Section XI. In accordance with the applicable Code, the NRC staff has determined that the pressure retaining boundary includes the piping upstream of MO valves MO-0-33-0498 in ESW system and MO-2-32-2486 and MO-3-32-3486 in HPSW system including the valves. These valves are capable of automatic closure and are intended to serve as boundary valves. Downstream of the subject valves are three separate trains of buried piping discharging to a pond in each unit through three locked open gate valves. The gate valves are provided for maintenance purposes and have no pressure boundary function. The Code of Record in paragraph IWD-5240(b) states categorically that items outside the boundaries of the subject MO valves and open-ended discharge piping, which is also the case for the downstream portion of the MO valves, are excluded from the examination requirement. Therefore, the NRC staff has determined that no system pressure test is required for the subject buried piping requested in licensee's Relief Request I4R-46.

3.4.6 Conclusion

The NRC staff concludes that the buried portion of return header for HPSW and ESW piping identified in licensee's relief request I4R-46, are open-ended discharge piping between the MO boundary valves and the discharge pond. In accordance with the Code of Record, the 2001 Edition through the 2003 Addenda of ASME Section XI, paragraph IWD-5240 (b), no pressure test is required. Therefore, the alternative to the ASME Code-required test proposed in relief request I4R-46 is not applicable since the piping associated with the alternative is beyond the

ASME Code pressure boundary. Therefore, the NRC staff concludes that the ASME Code relief sought in relief request I4R-46 is not required and, therefore, relief is not granted for the alternative associated with this relief request.

3.5 Relief Request I4R-47

3.5.1 Introduction

By letters dated February 29, 2008, and November 13, 2008, the licensee submitted Relief Request I4R-47, related to the ASME Code Section XI requirements for the Fourth 10-Year Interval Inservice Inspection (ISI) Program for the PBAPS, Units 2 and 3. The licensee proposed an alternative to perform the Code-required end-of-interval system leakage test of the control rod drive (CRD) pressure boundary while the unit is operating below 40% reactor power during a Scram Time test as opposed to performing the test prior to plant startup as required by the Code. During the Scram Time test, a VT-2 visual examination of the Code-required CRD pressure boundary would be performed at the designated test pressure, thus completing the end-of-interval system leakage test.

Pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff has evaluated the ISI program alternative proposed in relief request I4R-47 to determine whether it would provide an acceptable level of quality and safety during the fourth 10-year inservice inspection (ISI) interval for PBAPS, Units 2 and 3.

3.5.2 Components for Which Relief is Requested

Class 1 piping in the CRD pressure boundary between CV-2(3)-03A-13-127 (valves AA through HC inclusive, total of 185 valves) and HV-2(3)-03A-13112 (valves AA through HC inclusive, total of 185 valves).

3.5.3 ASME Code Requirements

The 2001 Edition of ASME Code, Section XI, Table IWC-2500-1, Examination Category B-P, Item Number B15.10, requires a system leakage test be conducted prior to plant startup following a reactor refueling outage. ASME Code IWB-5222(b) requires that the pressure retaining boundary during the system leakage test, conducted at or near the end of each inspection interval, be extended to all Class 1 pressure retaining components within the system boundary.

3.5.4 Licensee Proposed Alternative and Basis for Use

The licensee has requested relief from performing the end-of-interval system leakage test for the portion of CRD pressure boundary prior to plant startup following a refueling outage. The end-of-interval system leakage test and the VT-2 visual examination of CRD piping between the valves CV-2(3)-03A-13-127 and HV-2(3)-03A-13112 for each of the 185 CRDs, will be conducted during the Scram Time testing to pressurize this segment of CRD piping and the test will be performed prior to achieving 40% power following startup after a refueling outage. A VT-2 qualified individual will be present during the Scram Time testing to perform each visual examination. The proposed alternative also stipulates that, as part of this test, procedures will

be revised to ensure that the VT-2 examiner confirms with the control room that the examination is complete prior to the test switch being returned to normal.

The piping in question is the Class 1 piping between CV-2(3)-03A-13-127 valve (total of 185 valves) and HV-2(3)-03A13112 valve (total of 185 valves) for each of the 185 control rod drive mechanisms (CRDM). During normal system lineup required for startup, the CV-2(3)-03A-13-127 valves are in the closed position. The HV-2(3)-03A-13112 valves are in the open position. The only time the CV-2(3)-03A-13-127 valves are open is during a plant scram or during CRD Scram Time testing.

During system leakage testing conducted at or near the end of the 10-year ISI interval in accordance with Subsection IWB-5222(b) of the applicable ASME Code, Section XI, the pressure boundary extends to all Class 1 pressure retaining components which includes the piping between CV-2(3)-03A-13-127 and the scram discharge volume (HV-2(3)-03A-13-13112). In order to pressurize the piping between the control valve and the outlet valve to scram discharge volume and hold it for inspection, all 185 valves (HV-2(3)-03A-13-13112) would have to be manually closed prior to inserting a scram signal. Alternately, the piping could be pressurized for testing by isolating each of the 185 segments of piping, and pressurizing with a manual hydro pump. This approach would involve filling and venting of the subject piping, and manipulating 4 valves and installing a fill hose at a threaded connection for each of the 185 piping segments. However, each of the 185 piping segments is pressurized to the required test pressure during a plant scram or during the Scram Time testing required to be completed prior to achieving 40% power in accordance with Peach Bottom Technical Specifications. The licensee proposes that performing a VT-2 visual examination of the piping segments during this testing would ensure compliance to the Code requirement of the end-of-interval system leakage test.

ASME Code, Section XI, Table IWB-2500-1, Item B15.10, Note 2, states that the system leakage test shall be conducted prior to plant startup following each reactor refueling outage. The licensee states that the proposed alternative to perform the end-of-interval system leakage test prior to 40% reactor power during the Scram Time testing of CRDMs, as opposed to performing the test prior to plant startup, would provide an acceptable level of quality and safety.

The piping in question is approximately 24 inches of 3/4-inch nominal diameter, schedule 80 stainless steel socket welded piping for each CRD. The licensee notes that this piping is not susceptible to a corrosive environment nor is it susceptible to vibrations that would induce cracking. In addition, there have been no known leaks in this piping at PBAPS Units 2 and 3.

3.5.5 NRC Staff's Evaluation of Proposed Alternative

The ASME, Section XI Code of Record requires that for all Class 1 pressure retaining components, the end-of-interval system leakage test shall be conducted prior to plant startup following a reactor refueling outage. The licensee has proposed an alternative to perform the end-of-interval system leakage test for a short segment of CRD piping between CV-2(3)-03A-13-127 and HV-2(3)-03A-13112 following a plant startup prior to achieving 40% reactor power during Scram Time testing in order to pressurize the subject piping.

The licensee is required to perform a Scram Time test for each CRD mechanism at reactor power below 40% when the subject piping segment would be pressurized to the required test

pressure. Therefore, by performing the Code-required VT-2 visual examination of the piping segments during the Scram Time test, the licensee would comply with the Code requirement in regard to test pressure and test boundary for the end-of-interval system leakage test. The NRC staff finds that the alternative will provide reasonable assurance of structural integrity for the CRD pressure boundary.

The licensee has further stated that, as part of the proposed alternative, the VT-2 examiner would confirm with the control room that the examination is complete prior to the test switch being returned to normal. The NRC staff finds that this evolution provides reasonable assurance that the subject piping will remain pressurized for the duration of the examination such that a valid VT-2 examination is performed.

The NRC staff, therefore, authorizes the licensee's proposed alternative in relief request I4R-47 for the portion of CRD piping between the subject valves on the basis that the proposed alternative of performing the end-of-interval system leakage test post startup prior to achieving 40% reactor power, as opposed to pre-startup required by the Code, would provide an acceptable level of quality and safety.

3.5.6 Conclusion

In lieu of the requirement of the ASME Code of Record to conduct an end-of-interval system leakage test prior to startup, the licensee has proposed to conduct the test during technical specification surveillance testing for scram time of the CRD conducted post startup below 40% reactor power. The portion of CRD piping in question is 03A-13-127 and the HV-2(3)-03A-13112 for each CRD. Based on the NRC staff's evaluation, conducting the end-of-interval system leakage test during the Scram Time test below 40% reactor power following a reactor startup as opposed to pre-startup will provide an acceptable level of quality and safety. The NRC staff concludes that the licensee's proposed alternative in relief request I4R-47 to perform the test during Scram Time testing of CRDs provides reasonable assurance of structural integrity of the portion of CRD piping between the subject valves. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the proposed alternative in relief request I4R-47 is authorized for the fourth 10-year ISI interval of PBAPS, Units 2 and 3.

3.6 Relief Request CRR-12

3.6.1 Introduction

Pursuant to 10 CFR 50.55a(a)(3)(i), the licensee has requested relief from sub-paragraph IWA-2430(d) of the ASME Code, Section XI, 1992 Edition and 1992 addenda (the Code of Record for the First CISI interval) that would allow overlap of approximately one year of the First and Second 10-year CISI intervals at PBAPS, Unit 3. Sub-paragraph IWA-2430(d) of the ASME Code, Section XI, 2001 Edition and 2003 Addenda (would-be Code of Record for the Second CISI interval) explicitly allows the requested relief.

3.6.2 Components for Which Relief is Requested

Code Class:	MC
Code Reference:	ASME Code, Section XI, Sub article IWA-2430 and IWA-2432

Examination Category:	All
Item Number:	All
Description:	Overlap of the First and Second Ten-Year CISI Intervals for Unit 3
Component Number:	All Class MC Components

3.6.3 ASME Code Requirements

The Code of Record for the current (first) CISI Interval at PBAPS, Unit 3, is the ASME *Boiler and Pressure Vessel Code*, Section XI, 1992 Edition and 1992 Addenda of Subsections IWA and IWE (hereafter referred to as the 1992 ASME Code).

Consistent with 10 CFR 50.55a(g)(4)(ii), the Code of Record for the Second CISI Interval, proposed to start on November 5, 2008, will be the ASME *Boiler and Pressure Vessel Code*, Section XI, 2001 Edition, 2003 Addenda (hereafter referred to as the 2001 ASME Code).

Paragraph IWA-2432 of both the 1992 ASME Code and 2001 ASME Code requires that the inspection intervals under Inspection Program B be of 10 years duration except as modified by IWA-2430(d).

Sub-paragraph 2430(b) of both the 1992 ASME Code and 2001 ASME Code requires that the inspection interval shall be determined by calendar years following placement of the plant into commercial service.

Sub-paragraph IWA-2430(d) of the 1992 ASME Code, Section XI, in its entirety, states that: "For components inspected under Program B, each of the inspection intervals may be extended or decreased by as much as 1 year. Adjustments shall not cause successive intervals to be altered by more than 1 year from the original pattern of intervals."

Sub-paragraph IWA-2430(d) of the 2001 ASME Code, Section XI, in its entirety, states that:

"For components inspected under Program B, the following shall apply:

(1) Each inspection interval may be reduced or extended by as much as one year. Adjustments shall not cause successive intervals to be altered by more than one year from the original pattern of intervals. If an inspection interval is extended, neither the start and end dates nor the inservice inspection program for the successive interval need be revised.

(2) Examinations may be performed to satisfy the requirements of the extended interval in conjunction with examinations performed to satisfy requirements of the successive interval. However, an examination performed to satisfy the requirements of either the extended interval or the successive interval shall not be credited to both intervals.

(3) That portion of an inspection interval described as an inspection period may be reduced or extended by as much as one year to enable an inspection to coincide with a plant outage. The adjustment shall not alter the requirements for scheduling inspection intervals.

(4) The inspection interval for which an examination was performed shall be identified on examination records."

3.6.4 Licensee Proposed Alternative and Basis for Use

The licensee stated that the current CISI interval dates and the proposed CISI interval dates, as requested in this relief, and the respective code editions of record (consistent with 10 CFR 50.55a(g)(4)(ii)) for PBAPS are shown in the Table 1 and Table 2, respectively.

Table 1: Current CISI Interval Dates

	First CISI Interval		Second CISI Interval	
	Start Date	End Date	Start Date	End Date
Unit 2	Nov 5, 1998	Nov 4, 2008	Nov 5, 2008	Nov 4, 2018
Unit 3	Nov 5, 1998	Nov 4, 2009	Nov 5, 2009	Nov 4, 2019
ASME SC XI Code of Record	1992 edition, 1992 addenda for Unit 2 and Unit 3		Unit 2: 2001 edition, 2003 addenda Unit 3: Latest edition/addenda incorporated by reference in 10 CFR 50.55a as of Nov 5, 2008	

Table 2: Proposed CISI Interval Dates (by this RR)

	First CISI Interval		Second CISI Interval	
	Start Date	End Date	Start Date	End Date
Unit 2	Nov 5, 1998	Nov 4, 2008	Nov 5, 2008	Nov 4, 2018
Unit 3	Nov 5, 1998	Nov 4, 2009	Nov 5, 2008 (*)	Nov 4, 2018 (*)
ASME SC XI Code of Record	1992 edition, 1992 addenda for Unit 2 and Unit 3		2001 edition, 2003 addenda for Unit 2 and Unit 3	

(*) Change from current date which will result in approx. one year overlap between first and second CISI intervals.

The licensee stated that the requirement in sub-paragraph IWA-2430(d) of the 1992 ASME Code does not contain the statement in sub-paragraph IWA-2430(d)(1) of the 2001 Edition and 2003 Addenda of the Code that "if an inspection interval is extended, neither the start and end dates nor the ISI program for the successive interval need be revised." Further, sub-paragraph IWA-2430(d)(2) of the 2001 ASME Code allows examinations to be performed to satisfy the requirements of the extended interval in conjunction with examinations performed to satisfy requirements of the successive interval provided the examination performed is not credited to both intervals. These provisions in the 2001 ASME Code, but not in the 1992 ASME Code applicable to the first CISI interval, would permit overlap of the first and second CISI intervals for Unit 3.

The licensee has, therefore, requested relief from the requirement in IWA-2430(d) and IWA-2432 of the 1992 ASME Code (Code of Record for the first CISI interval) for PBAPS, Unit 3, in order to overlap the duration of the first and second CISI intervals by approximately one year as

permitted in IWA-2430(d) of the 2001 Edition through the 2003 Addenda. The licensee stated that the relief would allow it to commence the second interval on time and keep it aligned with the Unit 2 CISI interval while finishing the first CISI interval. In addition, this will also allow the CISI and ISI intervals to remain aligned by start and end dates as well as on the same edition of the Code.

The licensee stated that, initially, the PBAPS CISI first 10-year interval for both Units 2 and 3 was scheduled to end on November 4, 2008. Currently, the Unit 3 first CISI interval is scheduled to end on November 4, 2009, based on a one-year extension that was invoked in October 2007 in accordance with IWA-2430(d) of the 1992 ASME Code. The licensee stated that the extension resulted in a one-year gap between the two units' CISI programs, which may result in different governing Code editions, different program requirements, and the need for different parallel implementing procedures for the second CISI interval.

The licensee stated that the remaining examinations required to be completed for the first CISI interval at PBAPS, Unit 3, in accordance with the 1992 ASME Code, will be completed in the next refueling outage scheduled for the Fall of 2009. These examinations, which are also required in the second CISI interval, in accordance with the 2001 ASME Code, will be scheduled to be completed at the end of the second interval. This method of scheduling will maintain the original sequence of examinations and thus will not affect the frequency of examination and will ensure that the examinations performed during the overlapping period is not credited to both intervals.

The licensee has requested relief from the 10-year interval requirements contained within IWA-2430 (b) and (d) and IWA-2432 of the 1992 ASME Code for the first 10-year CISI interval at PBAPS Unit 3, pursuant to 10 CFR 50.55a(a)(3)(i), on the basis that the proposed alternative provides an acceptable level of quality and safety.

As the alternative to the full 10-year interval duration requirements of IWA-2430(b) and (d) and IWA-2432 of the 1992 ASME Code for Unit 3 first and second CISI intervals, PBAPS proposes to modify the interval dates of the Unit 3 first and second CISI intervals, using the provisions of IWA-2430(d) of the 2001 ASME Code, as indicated in Table 2 in Section 3.1.4. This will permit the Unit 2 and Unit 3 CISI programs to share a common inspection interval and to implement common Code Editions for Class MC components. Consistent with 10 CFR 50.55a(g)(4)(ii) for the proposed interval dates, the common Code of Record for the second interval CISI programs will be the 2001 Edition through 2003 Addenda of ASME Code, Section XI.

As a result of these interval modifications, the finish date of the first interval CISI Program will be November 4, 2009, for the PBAPS, Unit 3. The start date for the second interval CISI program will be November 5, 2008, for PBAPS, Unit 3. Using this date, the Peach Bottom, Unit 3 Fall 2009 refueling outage (P3R17) will be the last refueling outage of the first interval and the first refueling outage of the second interval. The intervals will be scheduled in 10-year increments from this point forward with the modifications allowed by IWA-2430 fully available to future intervals and periods of the adjusted programs (PBAPS, Units 2 and 3 CISI) based on this new common interval date replacing the sequence previously established for the respective units.

Any examinations required to complete the remainder of the PBAPS, Unit 3 first interval under the previous CISI interval Code (i.e., ASME Section XI, 1992 Edition through 1992 Addenda),

will be completed in the next refueling outage in Fall 2009. The examinations will be conducted and credited under the rules of the Code of Record applicable to the first interval and not credited for the second interval. The examinations, which are also required in the second interval under the second CISI interval Code (i.e., ASME Section XI, 2001 Edition through 2003 Addenda), will be scheduled to be completed at the end of the second interval. This method of scheduling will maintain the original sequence of examinations and thus will not affect the frequency of examination.

The relief is requested for PBAPS Unit 3 for the first 10-year CISI interval which began on November 5, 1998, and ends on November 4, 2009. The second 10-year CISI interval for both Unit 2 and Unit 3 will begin November 5, 2008, and end on November 4, 2008.

3.6.5 NRC Staff's Evaluation of Proposed Alternative

By this relief request for the first CISI interval at PBAPS Unit 3, the licensee is proposing to use only the provision in IWA-2430(d) of the 2001 ASME Code in lieu of the IWA-2430(d) provision in its Code of Record (1992 ASME Code) for the first CISI interval. This would allow the licensee to start the second CISI interval for Unit 3 on November 5, 2008, (with the 2001 ASME Code as the code of record) even though the extended first CISI interval would only end on November 4, 2009, and thus allow approximately a one-year overlap between the first and second CISI intervals. During the overlap period, the examinations remaining for the first CISI interval will be conducted and credited under the rules of the 1992 ASME Code applicable to the first interval and will not be credited for the second interval. The Code of Record that will be used for the second CISI interval beginning November 5, 2008, would be the 2001 Edition through 2003 Addenda (2001 ASME Code). This is the latest code edition and addenda incorporated by reference in 10 CFR 50.55a(b) as of 12 months before (i.e. November 5, 2007) the start of the second CISI interval and is therefore consistent with the Code of Record requirement for successive intervals in 10 CFR 50.55a(g)(4)(ii). Also, 10 CFR 50.55a(g)(4)(iv) allows portions of subsequent editions and addenda of the ASME code, incorporated by reference in 10 CFR 50.55a(b), to be used for an interval provided that all related requirements of the respective editions and addenda are met. The licensee meets this requirement by using the applicable provisions of IWA-2430(d) of the 2001 ASME Code in its entirety for the Unit 3 first CISI interval for Class MC components. Further, 10 CFR 50.55a(b) does not place any limitation or modification of the provisions of IWA-2430(d) of the 2001 ASME Code.

Based on the above, the NRC staff finds that the licensee-proposed alternative provides an acceptable level of quality and safety.

3.6.6 Conclusion

Based on the information provided in the licensee's submittal and the NRC staff evaluation above, relief request CRR-12 is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the first CISI interval at PBAPS Unit 3. Authorization of relief request CRR-12 will allow overlapping of the duration of the first and second CISI intervals by approximately one year. The first CISI interval ends on November 4, 2009, for Unit 3 and the second CISI interval begins on November 5, 2008, and ends on November 4, 2018.

3.7 Relief Request CRR-13

3.7.1 Introduction

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief request CRR-13 requests relief from IWE-1232 to exempt the N-3 construction manway penetration in the drywell of Unit 2 and Unit 3 from IWE examination because of impracticality since the penetration was made inaccessible during original construction. The NRC staff has evaluated the licensee's proposed alternatives in the relief request pursuant to 10 CFR 50.55a(g)(6)(i).

3.7.2 Components for Which Relief is Requested

Code Class:	MC
Code Reference:	ASME Code, Section XI, Sub article IWE-1232
Examination Category:	E-A
Item Number:	E1.11, E1.12
Description:	Alternative Examination Requirements of ASME Section XI, IWE-1232 "Inaccessible Surface Areas"
Component Number:	Penetration N-3
Drawing Numbers:	6280-S-53, 6280-C2-103-6, and 6280-C2-341-3

3.7.3 ASME Code Requirements

First CISI Interval (Nov. 5, 1998, to Nov. 4, 2008, for Unit 2 and Nov. 5, 1998, to Nov. 4, 2009, for Unit 3): ASME *Boiler and Pressure Vessel Code*, Section XI, 1992 Edition and 1992 Addenda.

Second CISI Interval (Nov. 5, 2008, to Nov. 4, 2018, for Unit 2 and Unit 3):
ASME *Boiler and Pressure Vessel Code*, Section XI, 2001 Edition, 2003 Addenda.

Paragraph IWE-1232(a) of the ASME Code, Section XI, 1992 Edition, 1992 Addenda states that:

> "Portions of Class MC containment vessels, parts, and appurtenances that are embedded in concrete or otherwise made inaccessible during construction of the vessel or a result of vessel repair/replacement activities are exempted from examination, provided:
> (1) no openings or penetrations are embedded in concrete;
> (2) all welded joints that are inaccessible for examination are double butt welded and are fully radiographed and, prior to being covered, are tested for leaktightness using a gas medium test, such as Halide Leak Detector Test;
> (3) all weld joints that are not double butt welded remain accessible for examination from the weld side; and
> (4) the vessel is leak rate tested after completion of construction or repair/replacement activities to the leak rate requirements of the Design Specifications."

Paragraph IWE-1232(a) of the ASME Code, Section XI, 2001 Edition, 2003 Addenda states that:

> "Portions of Class MC containment vessels, parts, and appurtenances that are embedded in concrete or otherwise made inaccessible during construction of the vessel or a result of vessel repair/replacement activities are exempted from examination, provided:
> (1) no openings or penetrations are embedded in concrete;
> (2) all welded joints that are inaccessible for examination are double butt welded and are fully radiographed and, prior to being covered, are tested for leaktightness using a gas medium test, such as Halide Leak Detector Test; and
> (3) the vessel is leak rate tested after completion of construction or repair/replacement activities to the leak rate requirements of the Design Specifications."

3.7.4 Licensee Proposed Alternative and Basis for Use

Pursuant to 10 CFR 50.55a(g)(5)(iii) and 10 CFR 50.55a(g)6)(i), the licensee has requested relief on the basis that conformance with the code requirements is impractical and conformance would require extensive modifications to the primary containment.

The licensee stated that while the drywell was being constructed, a 24-inch construction manway N-3 (shown on Figures CRR-13-1 and CRR-13-2 in the submittal) was placed in the bottom head of the drywell. During construction, when the manhole was no longer needed, the penetration was seal welded, inspected, and embedded in concrete.

The licensee stated that based on the original construction drawings, the manhole is a bolted, gasket connection that was seal welded, the handles were ground smooth and either a magnetic particle test or dye penetrant examination was performed. The N-3 manhole was seal welded and cannot meet the IWE-1232(a)(2) code requirement for a double butt weld in order to be exempted from examination.

The licensee stated that adding a double butt weld would involve a modification to the drywell that would require excavation of the concrete around the bottom head of the drywell or removal of the drywell floor thus making the code requirement impractical.

The licensee stated that Integrated Leak Rate Testing will be performed in accordance with the Station Appendix J Program, which is maintained independent of the CISI program.

The relief is requested for the first and second 10-year intervals of the CISI program at PBAPS, Unit 2 and Unit 3, whose start and end dates are as indicated in the Table below after the relief request CRR-12 authorized in Section 3.1 is incorporated.

	First CISI Interval		Second CISI Interval	
	Start Date	End Date	Start Date	End Date
Unit 2	Nov 5, 1998	Nov 4, 2008	Nov 5, 2008	Nov 4, 2018
Unit 3	Nov 5, 1998	Nov 4, 2009	Nov 5, 2008	Nov 4, 2018
ASME SC XI Code of Record	1992 edition, 1992 addenda for Unit 2 and Unit 3		2001 edition, 2003 addenda for Unit 2 and Unit 3	

3.7.5 NRC Staff's Evaluation of Proposed Alternative

In RR CRR-13, the licensee has requested relief from the requirements of IWE-1232(a)(2) in order to exempt the 24-inch N-3 construction manway penetration located at the bottom of the drywell at PBAPS Unit 2 and Unit 3 from IWE examination because of impracticality since the penetration was made inaccessible during original construction. During construction, when the manhole was no longer needed, the penetration was seal welded, inspected and embedded in concrete. The manhole was covered with a bolted gasket connection that was seal welded and does not meet the IWE-1232(a)(2) requirement for a double butt welded joint for welds inaccessible for examination. Adding a double butt weld would place a significant burden on the licensee since it would involve a major modification to the drywell that would require excavation of few feet of concrete around the bottom head of the drywell or removal of the drywell floor, which is also a very high radiation area, thus making the code requirement impractical. The proposed alternative was that the periodic Integrated Leak Rate Testing (Type A test) of the drywell performed as part of the 10 CFR Part 50, Appendix J Program would verify the overall leaktightness of the drywell that includes the embedded manhole penetration.

In order to facilitate the NRC staff's understanding of the as-constructed configuration of the drywell with the embedded construction manway N-3, the NRC staff requested the licensee to provide additional information. Specifically, a detail drawing was requested of a vertical section of the drywell passing through the location of the N-3 manway and showing the detail of the as-constructed structural configuration of the drywell including its concrete components (i.e., concrete floor, concrete foundation and concrete wall with important dimensions and elevations).

In its response dated August 4, 2008, the licensee provided drawing 6280-S-188, Revision 3 (hereafter referred to as drawing S-188) that shows the as-constructed structural configuration of the PBAPS, Units 2 and 3 drywells, including their concrete components and concrete pour sequences. The NRC staff finds that the drawing submitted by the licensee provided the information that was requested and, therefore, the response to the request is acceptable. However, during review of the drawing S-188 provided in response to RAI 1, the NRC staff identified an apparent discrepancy between the information in relief request CRR-13 and drawing S-188. Specifically, the note next to the seal weld on Figure CRR-13-2 (Detail E dwg S-53) in the relief request states, "SEAL WELD AFTER CONCRETE HAS BEEN POURED OUTSIDE THE DRYWELL (WELDS BY OTHERS)". However, Note 1 with regard to "Sequence of Concrete Pours Under Drywell Shell," shown in Section A on drawing S-188 states, "AFTER COMPLETION OF PNEUMATIC TESTS ON THE DRYWELL, SEAL WELD THE MANHOLE IN THE BOTTOM OF THE DRYWELL, INSTALL REBARS AND PLACE CONCRETE POUR #1 INSIDE THE DRYWELL UP TO EL 116'-0."

Per a similar Note 2 on drawing S-188, Concrete Pour # 2 under (Outside) the drywell is made after Pour #1.

The NRC staff pointed out that drawing S-53 indicates that the seal weld was performed after concrete was poured outside the drywell and drawing S-188 indicates that the seal weld was performed before any concrete was poured and noting that drawing S-53 is referenced in Section 1 of the relief request CRR-13 for the manway component, but drawing S-188 is not. Therefore, in a follow-up RAI 1, the NRC staff requested the licensee to explain the discrepancy described above with regard to the seal weld information contained in Figure CRR-13-2 (extract of Detail E from drawing S-53) in relief request CRR-13 and that on drawing S-188.

In the supplement dated October 9, 2008, the licensee stated that a review of the Specification for Reactor Drywell and Suppression Chamber Containment Vessels (6280-C-2) was completed and Section 8.2.1.1 indicates that the note on the drawing S-53 is incorrect. The licensee stated that Specification 6280-C-2, Section 8.2.1.1 states that the leak and pressure testing for tightness is completed before concrete fill is placed under the drywell, which supports the note on S-188. The licensee further stated that drawing S-188 is considered the final as-built drawing for the drywell.

In the above supplement, the licensee clarified that the information with regard to sequence of the seal weld on drawing S-53 was incorrect and confirmed that the information on the as-built drawing S-188 was the correct information which is consistent with the construction specification. The licensee, thus, clarified the discrepancy in the two drawings which the NRC staff finds acceptable. The NRC staff also requested that the licensee confirm if the seal weld for the manway penetration was radiographed and tested for leak-tightness (indicating method used) prior to being covered with concrete. In its supplement dated August 4, 2008, the licensee stated that relief request CRR-13 is based on the drawings and the specification for Reactor Drywell and Suppression Chamber Containment Vessels. The licensee pointed out that Note 1 on drawing S-188 stated that a pneumatic test was completed and the manhole seal welded prior to the concrete pours inside and outside the bottom of the drywell. The licensee stated that a search of construction records could not confirm that radiograph was performed on the seal weld for the manway path. The licensee provided results of the pneumatic test performed on the drywell shell prior to the concrete pours as discussed below. On December 24, 1968, an initial overload and leak rate test was completed satisfactorily on the Unit 2 Containment Vessel. The highest pressure recorded was 71.3 psig and the leakage was determined to be .0072% per 24 hours. On May 23, 1970, an initial leakage rate test was completed satisfactorily on the Unit 3 Containment Vessel. The highest pressure recorded was 74.3 psig and the leakage was determined to be 0.078% per 24 hours. The allowable leakage rate for both these tests, per Bechtel Specification 6280-C-2, paragraph 8.2.4.3, is 0.2% per 24 hours. It is also indicated in Specification 6280-C-2, that the tests were to be performed prior to the concrete pour.

Based on the supplement dated August 4, 2008, the NRC staff finds that the PBAPS, Unit 2 and Unit 3, drywell were subjected to successful pneumatic leakage tests after completion of construction of the drywell steel shell and prior to seal welding the manhole and prior to concrete pours inside and outside the drywell shell. This also indicates that radiograph of the seal weld would not provide any additional information on leaktightness of the manhole and therefore was not necessary. These tests were conducted at maximum pressures (over 70 psig) that were well above the peak calculated internal pressure under the design-basis loss-of-coolant accident

pressure of 49.1 psig (Ref. TS 5.5.12) used for the primary containment leakage rate testing program. The allowable leakage acceptance criteria used of 0.2 percent air weight per day were also more stringent than that used (0.375 percent air weight per day – see response to RAI 3 in supplement dated August 4, 2008) for the primary containment leakage rate testing program. These tests demonstrated satisfactory structural integrity and leaktightness of the drywell, including the manhole, without the seal weld and before it was embedded in concrete.

Further, based on review of the drawing S-188 submitted by the licensee, the NRC staff finds that the manhole is embedded between approximately 6 feet of concrete above it on the inside of the drywell shell and another 4 feet of concrete below it on the outside the drywell shell but above the top of the basemat. Since the manhole cover is bolted and is sandwiched between only a few feet of concrete above and below it, there will be little or no stresses/strains induced on the non-structural seal weld under design basis loading conditions. The NRC staff also notes that when the drywell is pressurized under a design-basis accident condition, the internal pressure would push the concrete against the bolted and seal welded manhole cover, as opposed to pulling away from it, thereby contributing further to its leaktightness.

Since the proposed alternative in the relief request submittal is the Appendix J Integrated Leak Rate Testing, the NRC staff requested the licensee to provide the results, with dates and acceptance criteria, of the most recent two Type A tests performed on the Primary Containment at PBAPS, Unit 2 and Unit 3.

In its supplement dated August 4, 2008, the licensee provided results from the last two Integrated Leak Rate Tests (ILRTs) at Units 2 and 3, which are as follows. The total leakage measured for the Unit 2 containment for the Type A tests conducted in March 1991 and October 2000 were, respectively, 0.2135 and 0.3365 percent air weight per day. The total leakage measured for the Unit 3 containment for the Type A tests conducted in December 1991 and October 2005 were, respectively, 0.1386 and 0.2781 percent air weight per day. The acceptance criteria for these tests were 0.375 percent air weight per day. Based on this information, the NRC staff finds that the results of the most recent two Type A tests demonstrates that the structural integrity and leaktightness of the Unit 2 and Unit 3 primary containments with the embedded manholes has been maintained within the acceptance criteria. These test results also demonstrate that there is no indication of any significant leakage taking place through the embedded manhole through 25-30 years of operation. The 10 CFR 50, Appendix J, Containment Leakage Rate Testing Program would continue to monitor and ensure the structural integrity and leaktightness of the primary containment at PBAPS, Unit 2 and Unit 3, with the embedded manhole.

Based on the above evaluation of the licensee's relief request and considering the supplements submitted by the licensee in response to the NRC staff's questions, the NRC staff finds that the licensee's proposed alternative to performing IWE examination of the embedded manhole provides reasonable assurance of structural integrity and leaktighness of the primary containment at PBAPS, Unit 2 and Unit 3, without imposing any additional requirements.

The NRC staff concludes that granting the requested relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. Therefore, relief request CRR-

13 is granted, pursuant to 10 CFR 50.55a(g)(6)(i), for the first and second CISI intervals at PBAPS, Units 2 and 3.

3.7.6 Conclusion

Based on the information provided in the licensee's submittal and supplemental information in response to NRC staff's requests for additional information and the NRC staff evaluation above, relief request CRR-13 is granted, pursuant to 10 CFR 50.55a(g)(6)(i), for Units 2 and 3 for the first and second CISI intervals. The NRC staff has determined that conformance with the specified code requirements is impractical and granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. The NRC staff also finds that the proposed testing provides reasonable assurance of structural integrity. The first CISI interval ends on November 4, 2008, for Unit 2 and November 4, 2009, for Unit 3. The second CISI interval begins on November 5, 2008, and ends on November 4, 2018, for both units.

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Date: February 26, 2009

The NRC staff's Safety Evaluation regarding relief requests I3R-45, I4R-25, I4R-44, I4R-46, I4R-47, CRR-12 and CRR-13 is enclosed. This completes the NRC staff's efforts on TAC Nos. MD8294, MD8295, MD8296, MD8297, MD8298, MD8299, MD8300, MD8301, MD8302, MD8303, MD8304, MD8305, MD8306, MD8307, MD8308 and MD8309.

If you have any questions, please contact the PBAPS Project Manager, Mr. John Hughey, at 301-415-3204.

Sincerely,

/ra/

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

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