NUCLEAR SAFETY-RELATED
SPECIFICATION FOR
INSERVICE INSPECTION PROGRAM FOR THIRD INTERVAL
NOT INCLUDING CLASS MC, PRIMARY CONTAINMENT
AT
PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 and 3

System/Topic No. 080

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0	8/10/98	For Initial Use ECR 98-01837	RE Simpson 7.30.98	RC. 8/4/98	Albert J Pitcher 8/6/98	Thomas 8/4/98	8/6/98
C	7/17/98	For Independent Review	RE Simpson	NA	NA	NA	NA
B	6/18/98	Draft for Review	ISE RE Simpson	NA	NA	NA	NA
A	5/15/98	Initial Draft	ISE RE Simpson	NA	NA	NA	NA
			ORIGINATOR	REVIEWER	APPROVAL	APPROVAL	APPROVAL

REV NO.	DATE	REASON FOR ISSUE	LEAD	NON-LEAD

PECO NUCLEAR	SPECIFICATION FOR INSERVICE INSPECTION PROGRAM FOR THIRD INTERVAL, NOT INCLUDING CLASS MC, PRIMARY CONTAINMENT	NO. NE-290 REV. NO. 0 PAGE 1 OF 136

Summary Of Revisions

Revision 0

This is the initial issue of this document. It incorporates all applicable information from Specification M-733, Inservice Inspection Program, Second Ten Year Interval, Units 2 and 3, Peach Bottom Atomic Power Station, Revision 4. The following Engineering Change Requests (ECRs) are posted to M-733, and are fully incorporated into this document:

96-00776 U-3 HPCI Hangers
98-00330 Feedwater Nozzle issue
98-00123 U-3 Jet Pump Riser Clamps
98-01339 U-2 Shroud indications.

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SECTION 1.0

INTRODUCTION AND PROGRAM DESCRIPTION

1.1 Overview

1.1.1 This Inservice Inspection (ISI) Program, hereafter referred to as the Program, outlines the requirements for the ISI of the Class 1, 2, and 3 pressure-retaining components and their supports at Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3.

1.1.2 This Program will be effective from November 5, 1998, through and including November 4, 2008, for Unit 2, and from August 15, 1998, through and including August 14, 2008, for Unit 3. This represents the third ten-year ISI interval for PBAPS, Units 2 and 3, respectively.

1.1.3 The key features of this Program are the Introduction and Program Description, List of Applicable Drawings, Summary Tables, Requests for Alternatives, Relief Requests, and Appendices that describe Augmented Inspection Programs and the Specific Lists of Components. Associated documents include piping and instrument diagrams, piping isometric drawings, component drawings, and a database.

1.2 Basis Of Inservice Inspection Program

1.2.1 This Program was developed in accordance with the requirements outlined in the August 15, 1997, issue of 10CFR50.55a.

1.2.2 This Program was developed in accordance with the 1989 Edition of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code (B&PVC), Section XI, Subsections IWA, IWB, IWC, IWD, and IWF, for Inspection Program B. The definitions used in this Program are in accordance with Section XI.

1.2.3 The following Section XI Subsections, Articles, or Paragraphs are not included or addressed in this Program.

1.2.3.1 The pump and valve testing requirements of Subsections IWP and IWV are not included in this Program. Code Sections IWP and IWV are addressed by the IST Program, described by PECO Energy Procedure A-C-80.

1.2.3.2 Effective September 9, 1996, the NRC endorsed Subsections IWE and IWL of ASME Section XI, 1992 Edition, including 1992 Addenda. These subsections contain inservice inspection and repair and replacement rules for metal containment vessels and metallic liners of concrete containment vessels (Class MC) and for concrete containment vessels (Class CC), respectively. Since both PBAPS units use a free-standing structural steel containment vessel, only Subsection IWE is applicable at PBAPS. The implementation of Subsection IWE is addressed separately in PBAPS Specification No. NE-291.

1.2.3.3 The examination requirements, frequency, and acceptance standards for snubber assembly testing and examination will be in accordance with PBAPS Technical Requirements Manual, Section 3.16, as described in Augmented Inspection Program AUG-05. AUG-05 supersedes Code requirements for the examination of snubber assemblies from pin-connection to pin-connection. The criteria of AUG-05 and the Technical Requirements Manual demonstrate operational readiness and structural integrity of snubbers through testing and examination.

1.2.4 Alternative requirements to Section XI are set forth in Section 4.0 of this Program. Alternative requirements are in accordance with 10CFR50.55a and Section XI.

1.2.5 With the exception of examinations that may be deferred until the end of the inspection interval, as specified in Table IWB-2500-1, ISI shall be performed in accordance with Inspection Program B, as outlined in Section XI, Paragraph IWA-2432 and modified by Request RR-33. See section 6.0, Requests for alternatives and Relief Requests. The inspection schedule for the third interval is divided into three periods.

1.2.6 The commercial operating dates for PBAPS, Units 2 and 3, were July 1974 and December 1974, respectively. The second inspection interval for Unit 2 began on September 19, 1986, and extended to November 4, 1998, and the second interval for Unit 3 began on December 23, 1985, and extended to August 14, 1998.

1.2.7 Repairs, replacements, and modifications of Class 1, 2, and 3 components and additional components depicted on the Boundary Drawings listed in Table 2.2, will be performed in accordance with the PECO Energy Repair and Replacement Program, contained in Specification M-679.

1.3 System Classification

1.3.1 At the time Peach Bottom Atomic Power Station, Units 2 and 3, were constructed, the ASME B&PVC only covered nuclear vessels. Piping, pumps, and valves were built primarily to the rules of USAS B31.1.0 - 1967 Edition. Consequently, the Peach Bottom Atomic Power Station system boundaries are not defined by ASME, Section III.

1.3.2 The quality group classification system for water, steam, and radioactive waste containing components important to the safety of water-cooled power plants is established by NRC Regulatory Guide 1.26, "Quality Group Classification and Standards", Draft Revision 3, in conjunction with 10CFR50.55a. Regulatory Guide 1.26 defines the quality group classification system, which consists of four quality groups, A through D. The definition of Quality Group A is provided by 10CFR50.2 under "Reactor Coolant Pressure Boundary". The definitions of Quality Groups B, C, and D, which are Class 2, Class 3, and ISI non-classed, respectively, are provided by Regulatory Guide 1.26.

1.3.3 Piping and components subject to ISI are shown on the Inservice Inspection Boundary Diagrams listed in Section 2.2 of this Program. In accordance with 10CFR50.55a, the ISI requirements of Section XI have been assigned to those piping lines and components within the constraints of existing plant design.

1.3.4 Piping, components, and supports classified as exempt from examination requirements are defined in Section XI, IWB-1220, IWC-1220, IWD-1220, and IWF-1230. In accordance with Section XI, IWB-1220(a), piping may be exempted from the volumetric and surface examinations of Section XI, provided that they are connected to the reactor coolant pressure boundary and are of such a size and shape that, upon a postulated pressure boundary rupture, the resulting flow of coolant under normal operating conditions is within the make-up capacity of the plant. Per PECO Energy Calculation No. ME-34, the following Class 1 piping qualifies for the make-up capacity exemption of IWB-1220(a):

1.3.4.1 Steam system piping with an inside diameter less than 3.00".

1.3.4.2 Water system piping subject to recirculation pump discharge pressure with an inside diameter less than 1.49".

1.3.4.3 Water system piping not subject to recirculation pump discharge pressure with an inside diameter less than 1.55"

In addition to this piping, the welds in Control Rod Drive housings are exempted per the make-up capacity exemption criteria of IWB-1220(a). This exemption is verified in Stone and Webster Calculation No. PM-945.

1.4 Augmented Inservice Inspection Requirements

For the purposes of this ISI program, any examination other than one required by the 1989 Edition of ASME, Section XI, is considered to be augmented. These augmented examinations may be due to additional requirements from NRC Regulatory Guides, Generic Letters, Bulletins, or accelerated implementation of Code rules or regulations. Other reasons for augmented examinations are vendor recommendations, industry committee efforts or self-imposed inspections.

The PBAPS, Units 2 and 3, augmented inspection programs are explained in Appendices A and B. The detailed examinations are documented in tables identified with the augmented program designation.

The augmented programs are divided into mandatory and non-mandatory. The mandatory augmented programs, listed in Appendix A, use a numeric designation (e.g., AUG-01). The non-mandatory programs, listed in Appendix B, use an alpha designation (e.g., AUG-A).

The mandatory programs are those that PECO has committed to implement, that have been mandated by NRC, or that are other commitments that are considered to be mandatory because they were made to NRC through an industry organization, such as the BWRVIP, for implementation of an industry-generated generic program.

The non-mandatory programs are those that are included in the ISI program by PBAPS for reasons other than those given above for mandatory programs. Examinations may be added or deferred at PECO management discretion. A revision to this Program is not required to describe these additions or deferrals. The extent and frequency of examination for a non-mandatory augmented

program is at PECO's discretion. These inspections are outside the scope of Section XI and generally involve programs to enhance operation efficiency or protect PECO's investment and equipment.

1.5 PBAPS Commitments

The following reference documents contain commitments made to the NRC.

1.5.1 **CM-1,** PBAPS 2 and 3 response to NRC Generic Letter 88-01 dated August 2, 1988, March 31, 1989, June 4, 1990, and August 17, 1992 (T02791).

1.5.2 **CM-2,** PBAPS 2 and 3 Implementation Program for NUREG-0619, PECo letter of January 21, 1981, J. W. Gallagher to Darrell G. Eisenhut (NRC) (T03155).

1.5.3 **CM-3,** PBAPS 2 and 3 Response to IE Bulletin No. 80-13, PECo letter of June 13, 1980, S. L. Daltroff to Boyce H. Grier (NRC) (T03414).

1.5.4 **CM-4,** PBAPS Unit 2 Supplemental Response to Generic Letter 94-03, dated September 9, 1994, "Summary of Core Shroud Inspection Results" (T03415).

1.5.5 **CM-5,** PECO Letter, "PBAPS 2 & 3, Submittal of Revised Relief Request (RR) 22 to the Second Ten-Year Interval of the Inservice Inspection (ISI) Program", dated May 6, 1997. Scheduling Class 1 Hydrostatic Testing, as described by Table IWB-2500-1, Item No. B15.11, and second interval Relief Request RR-22.

1.6 Reference Documents

The following are reference documents that provide historical information on the ISI Program, or are applicable for the third interval ISI Program at PBAPS, Units 2 and 3.

1.6.1 Safety Evaluation Report for second 10-year interval ISI Program issued via an April 8, 1986, letter from Dr. Muller (NRC) to E. G. Bauer, Jr. (PECo).

1.6.2 Safety Evaluation report for Updated second 10-year interval ISI Program issued via a December 23, 1992 letter from C. L. Miller (NRC) to G.J. Beck (PECo).

1.6.3 Revised PBAPS Units 2 & 3 interval dates as documented in a August 17, 1988, letter from J.W. Gallagher (PECo) to W. T. Russel (NRC), and February 25, 1991 letter from G.J. Beck (PECo) to NRC.

1.6.4 Revised PBAPS, Unit 3, interval dates as documented in a March 27, 1995 letter from G. A. Hunger, Jr., to NRC.

1.6.5 Revised PBAPS, Unit 2, interval dates as documented in a June 12, 1996 letter from G. A. Hunger, Jr., to NRC.

1.6.6 Revised PBAPS, Unit 3, interval dates as documented in a January 30, 1997 letter from G. A. Hunger, Jr., to NRC.

1.6.7 Generic Letter 88-01, NRC position on IGSCC in BWR Austenitic Stainless Steel Piping, dated January 25, 1988; including Supplement 1, February 4, 1992 (T02791).

1.6.8 NUREG-0313, revision 2 - Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping, January, 1988.

1.6.9 NUREG-0619, BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking (November 1980) with Generic Letter 81-11 (February 20, 1981).

1.6.10 PBAPS 2 & 3 Implementation Report for NUREG-0619, PECo letter of September 29, 1983, J. W. Gallagher to Darrell G. Eisenhut (NRC).

1.6.11 IE Bulletin No. 80-13, Cracking in Core Spray Spargers, dated May 12, 1980.

1.6.12 General Electric Company SIL No. 289, Core Spray Visual Inspection Revision 0, dated February 1979 and including Revision 1, Supplement 1, dated February 23, 1989.

1.6.13 NUREG/CR-3052, Closeout of IE Bulletin 80-07: BWR Jet Pump Assembly Failure, November, 1984.

1.6.14 IE Bulletin No. 80-07, BWR Jet Pump Assembly Failure, dated April 4, 1980, and including Supplement No. 1 dated May 13, 1980.

1.6.15 General Electric Company, SIL No. 330, Jet Pump Beam Cracks, June 9, 1980.

1.6.16 PBAPS Unit 2 Response to IE Bulletin No. 80-07, PECo letter of May 2, 1980, S. L. Daltroff to Boyce W. Grier (NRC).

1.6.17 PBAPS Unit 3 Response to IE Bulletin No. 80-07, PECo letter of May 7, 1980, S. L. Daltroff to Boyce W. Grier (NRC).

1.6.18 A-C-80 - PECO Energy Corporate ASME Section XI Administrative Procedure.

1.6.19 PBAPS 2 & 3 Updated Final Safety Analysis Report.

1.6.20 PBAPS 2 & 3 Technical Specifications and Technical Requirements Manual.

1.6.21 NED Specification number M-710, PBAPS 2 & 3 Pump and Valve Inservice Testing Program, Second Ten Year Interval.

1.6.22 NED Specification M-679, General Requirements for the ASME Section XI Repair and Replacement Program.

1.6.23 Regulatory Guide 1.147, Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1.

1.6.24 General Electric Company, SIL No. 409, Incore Dry Tube Cracks, July 31, 1986.

1.6.25 General Electric Company, SIL No. 474, Steam Dryer Drain Channel Cracking, October 26, 1988.

1.6.26 Updated PBAPS 2 & 3 Second Interval ISI Program initial submittal and subsequent updates; PECo to NRC letters dated 11/15/90, 3/19/92, and 4/16/92.

1.6.27 General Electric Company, SIL No. 462, Shroud Support Access Hole Cracks, December 19, 1990.

1.6.28 PECO Energy calculation ME-34, Class 1 exemption sizes.

1.6.29 General Electric Company, SIL No. 551, Jet Pump Riser Brace Cracking, 2/26/93.

1.6.30 General Electric Company, SIL No. 554, Top Guide Cracking, 4/6/93.

1.6.31 Stone & Webster calculation PM-945, CRD Housing Weld Exclusion Evaluation.

1.6.32 Generic Letter 94-03, Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors.

1.6.33 PECO Energy response to Generic Letter 94-03, dated August 24, 1994.

1.6.34 General Electric Company Unit 3 Reactor Pressure Vessel Resource Document, dated March 1997.

1.6.35 Alternative to ASME Code Section XI Requirements Regarding the Use of Code Case N-516-1 for Underwater Welding via a July 18, 1997 letter from G. A. Hunger, Jr. (PECo) to J. F. Stolz (NRC).

1.6.36 Alternative to ASME Code Section XI Requirements Regarding the Use of Code Case N-516-1 for Underwater Welding via an October 3, 1997 letter from J. F. Stolz (NRC) to G. A. Hunger, Jr. (PECO).

1.6.37 May 6 1997 letter from G. A. Hunger (PECO) to J. F. Stolz (NRC).

1.6.38 July 23 1997 letter from J. F. Stolz (NRC) to G. A. Hunger (PECO).

1.6.39 Procedure AG-CG-28.1-10, "PBAPS Maintenance Rule Structural Monitoring Program", PEP I00067666, Evaluation 5.

1.6.40 PBAPS Specification NE-291, "Inservice Inspection Program for Third Interval, Class MC Primary Containment, at Peach Bottom Atomic Power Station, Units 2 and 3".

1.7 Abbreviations

The following abbreviations apply to the ISI Program at Peach Bottom Atomic Power Station, Units 2 and 3:

1.7.1 ALARA - As Low As Reasonably Achievable

1.7.2 ANS - American National Standard

1.7.3 ANSI - American National Standard Institute

1.7.4 ASME - American Society of Mechanical Engineers

1.7.5 ASNT - American Society for Nondestructive Testing

1.7.6 AUG - Augmented

1.7.7 BWR - Boiling Water Reactor

1.7.8 BWRVIP - Boiling Water Reactor Vessel and Internals Project

1.7.9 GL - Generic Letter

1.7.10 IGSCC - Intergranular Stress Corrosion Cracking

1.7.11 ISI - Inservice Inspection

1.7.12 ISO - Isometric

1.7.13 IST - Inservice Testing

1.7.14 MT - Magnetic Particle Testing

1.7.15 NDE - Nondestructive Examination

1.7.16 NPS - Nominal Pipe Size

1.7.17 NRC - Nuclear Regulatory Commission

1.7.18 NRR - Nuclear Reactor Regulation

1.7.19 PBAPS - Peach Bottom Atomic Power Station

1.7.20 PECo - PECO Energy

1.7.21 P&ID - Piping and Instrument Diagram

1.7.22 PT - Penetrant Examination

1.7.23 RPV - Reactor Pressure Vessel

1.7.24 R&R - Repair and Replacement

1.7.25 RR-XX - Request for Alternative No. XX, or Relief Request No. XX

1.7.26 RT - Radiographic Examination

1.7.27 SIL - Services Information Letter

1.7.28 USAS - United States of America Standard

1.7.29 UT - Ultrasonic Examination

1.7.30 1.7.30VT - Visual Examination

1.7.31 74S75 - 1974 Edition through and including the Summer 1975 Addenda

1.7.32 86A87 - 1986 Edition through and including 1987 Addenda

1.7.33 89 - 1989 Edition

1.7.34 92A92 - 1992 Edition through and including 1992 Addenda

1.8 Codes and Standards

1.8.1 Title 10, Code of Federal Regulations, Part 50 (10CFR50), Article 55a, "Codes and Standards"

1.8.2 American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section XI, Division 1: "Rules for Inservice Inspection of Nuclear Power Plant Components", 1989 Edition

1.8.3 Regulatory Guide 1.26 Rev. 3 (Draft, February 1976), "Quality Group Classifications and Standards for Water, Steam, and Radioactive Waste Containing Components of Nuclear Power Plants"

1.8.4 SNT-TC-1A, 1984 Edition, "Recommended Practice for Personnel Qualification in Non-destructive Testing"

1.8.5 ANSI N45.2.6, 1976, "Qualification of Inspection, Examination, and Testing Personnel for Nuclear Power Plants"

1.8.6 Regulatory Guide 1.58 Rev. 1 "Qualification of Nuclear Power Plant Inspection Examination and Testing Personnel" (endorses ANSI N45.2.6, 1978)

1.8.7 Regulatory Guide 1.65 Rev. 0 "Materials and Inspection for Reactor Vessel Closure Studs"

1.8.8 Regulatory Guide 1.147, latest revision, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division I"

1.8.9 Regulatory Guide 1.150 Rev. 1, "Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examination"

SECTION 2.0
INSERVICE INSPECTION PROGRAM DRAWINGS

This Section provides a listing of drawings applicable to the ISI Program at Peach Bottom Atomic Power Station, Units 2 and 3.

2.1 System Identification

Table 2.1 below lists the System Designations used for the piping systems and components that are subject to ISI at PBAPS, Units 2 and 3.

TABLE 2.1
SYSTEM DESIGNATORS

DESIGNATOR	SYSTEM
01	Main Steam
02	Reactor Recirculation
03	Control Rod Hydraulic
04	Nuclear Boiler Vessel Instrumentation
06	Feedwater
10	Residual Heat Removal
11	Standby Liquid Control
12	Reactor Water Cleanup
13	Reactor Core Isolation Cooling
14	Core Spray
23	High Pressure Coolant Injection
32	High Pressure Service Water
33	Emergency Service Water
48	Emergency Cooling Water

2.2 Inservice Inspection Boundary Diagrams

Table 2.2 provides a listing of the ISI boundary diagrams that depict the Class 1, 2, and 3 components subject to the requirements of ASME, Section XI, during the third interval at PBAPS, Units 2 and 3. These diagrams are derived from the station piping and instrumentation diagrams (P&IDs). For Class MC components and the interface of MC to Class 1, 2, and 3 components, refer to PBAPS Specification NE-291.

TABLE 2.2
INSERVICE INSPECTION BOUNDARY DIAGRAMS

DRAWING NUMBER	SHEET NUMBER	TITLE
ISI-303	1, 3	Main Steam, Bypass, and Crossaround
ISI-304	1, 2	Turbine and Extraction Steam
ISI-308	1, 2, 3, 4	Feedwater and Feed Pumps
ISI-309	1, 2	Condensate Storage
ISI-315	1, 2, 3, 4, 5	Emergency Service Water and High Pressure Service Water
ISI-330	1	Emergency Cooling System
ISI-331	1, 3	Off-Gas Recombiner System
ISI-351	1, 2, 3, 4	Nuclear Boiler
ISI-352	1, 2, 3, 4	Nuclear Boiler Vessel Instrumentation
ISI-353	1, 2, 3, 4	Reactor Recirculation Pump System
ISI-354	1, 2	Reactor Water Cleanup System
ISI-356	1, 2	Control Rod Drive (CRD) Hydraulic System Part A
ISI-357	1, 2	CRD Hydraulic System Part B
ISI-358	1, 2	Standby Liquid Control System
ISI-359	1, 2	Reactor Core Isolation Cooling (RCIC) System
ISI-360	1, 2	RCIC Pump Turbine Details
ISI-361	1, 2, 3, 4	Residual Heat Removal System
ISI-362	1, 2	Core Spray Cooling System
ISI-363	1, 2	Fuel Pool Cooling and Cleanup System
ISI-365	1, 2	High Pressure Coolant Injection (HPCI) System

TABLE 2.2
INSERVICE INSPECTION BOUNDARY DIAGRAMS (continued)

DRAWING NUMBER	SHEET NUMBER	TITLE
ISI-366	1, 4	HPCI Pump Turbine Details
ISI-367	1, 2	Containment Atmospheric Control System
ISI-372	1, 2	Containment Atmospheric Dilution System

2.3 Piping Isometric Drawings

Table 2.3 provides a listing of the piping isometric drawings for systems subject to ISI and Augmented Inspection Program AUG-01 during the third interval at PBAPS, Units 2 and 3. These drawings identify piping welds, valves, pumps, and supports that are within the non-exempt piping and AUG-01 boundaries. In addition, system identifications, pipe sizes, containment penetrations, and piping configurations are identified. Piping and components that are exempt from nondestructive examination in accordance with ASME, Section XI, Paragraphs IWB-1220, IWC-1220, and IWD-1220 are not normally depicted on these drawings. However, in some instances, Code exempt piping has been shown.

TABLE 2.3
PIPING ISOMETRIC DRAWINGS

System	Unit 2 and Common Isometric Drawings	Unit 3 Isometric Drawings
Core Spray	DCN-14-MI-203-5-A DCN-14-MI-203-5-B GB-14-MI-202-2-A GB-14-MI-202-2-B GB-14-MI-202-2-C GB-14-MI-202-2-D GB-14-MI-203-3-A GB-14-MI-203-3-B GB-14-MI-203-4-A GB-14-MI-203-4-B HB-14-MI-201-1-A HB-14-MI-201-1-B HB-14-MI-201-1-C HB-14-MI-201-1-D HC-27-MI-201-1	DCN-14-MI-303-4-A DCN-14-MI-303-4-B GB-14-MI-302-2-A GB-14-MI-302-2-B GB-14-MI-302-2-C GB-14-MI-302-2-D GB-14-MI-303-3-A GB-14-MI-303-3-B HB-14-MI-301-1-A HB-14-MI-301-1-B HB-14-MI-301-1-C HB-14-MI-301-1-D HCR-27-MI-301-1 HCR-27-MI-301-2

TABLE 2.3
PIPING ISOMETRIC DRAWINGS (con't)

System	Unit 2 and Common Isometric Drawings	Unit 3 Isometric Drawings
Emergency Cooling Water	GB-48-MI-001-2 GB-48-MI-001-3 HB-48-MI-001-1 HB-48-MI-001-3 HB-48-MI-001-4 HB-48-MI-001-5	GB-48-MI-001-2 GB-48-MI-001-3 HB-48-MI-001-1 HB-48-MI-001-3 HB-48-MI-001-4 HB-48-MI-001-5
Emergency Service Water	HB-33-MI-201-1 HB-33-MI-201-2 HB-33-MI-201-3 HB-33-MI-201-4 HB-33-MI-201-5 HB-33-MI-201-6 HB-33-MI-201-7 HB-33-MI-201-8 HB-33-MI-201-9 HB-33-MI-201-10 HB-33-MI-201-12 HBC-33-MI-201-13 HBC-33-MI-201-14 HBC-33-MI-201-15 HBC-33-MI-201-16 HBC-33-MI-201-17 HBC-33-MI-201-18 HBC-33-MI-201-19 HBC-33-MI-201-20 HBC-33-MI-201-21 HBC-33-MI-201-22 HBC-33-MI-201-23 HBC-33-MI-201-24 HBC-33-MI-201-25 HBC-33-MI-201-26 HBC-33-MI-201-27 HBC-33-MI-201-28 HBC-33-MI-201-29 HBC-33-MI-201-30 HBC-33-MI-201-31 HBC-33-MI-201-32	HB-33-MI-301-1 HB-33-MI-301-2 HB-33-MI-301-3 HB-33-MI-301-4 HB-33-MI-301-5 HB-33-MI-301-6 HB-33-MI-301-7 HBC-33-MI-301-8 HBC-33-MI-301-9 HBC-33-MI-301-10 HBC-33-MI-301-11 HBC-33-MI-301-12 HBC-33-MI-301-13 HBC-33-MI-301-14 HBC-33-MI-301-15 HBC-33-MI-302-16 HBC-33-MI-302-17 HBC-33-MI-302-18 HBC-33-MI-302-19 HBC-33-MI-302-20 HBC-33-MI-302-21 HBC-33-MI-302-22 HBC-33-MI-302-23 HBC-33-MI-302-24

TABLE 2.3
PIPING ISOMETRIC DRAWINGS (con't)

System	Unit 2 and Common Isometric Drawings	Unit 3 Isometric Drawings
Feedwater	DDN-06-MI-201-2-A DDN-06-MI-201-2-B DD-06-MI-201-1	DDN-06-MI-301-2-A DDN-06-MI-301-2-B DD-06-MI-301-1
High Pressure Coolant Injection	DBN-23-MI-203-6 BN-23-MI-203-7 DDN-23-MI-202-2 DDN-23-MI-202-3 DDN-23-MI-202-4 DDN-23-MI-202-5 HB-23-MI-201-1 HB-23-MI-204-8	DBN-23-MI-303-5 DBN-23-MI-303-6 DBN-23-MI-303-7 DDN-23-MI-302-2 DDN-23-MI-302-3 DDN-23-MI-302-4 HB-23-MI-301-1 HB-23-MI-304-8
High Pressure Service Water	GB-32-MI-201-1 GB-32-MI-201-2 GB-32-MI-201-3 GB-32-MI-201-4-A GB-32-MI-201-4-B GB-32-MI-201-5-A GB-32-MI-201-5-B GB-32-MI-202-6-A GB-32-MI-202-6-B GB-32-MI-202-7	GB-32-MI-301-1 GB-32-MI-301-2 GB-32-MI-301-3 GB-32-MI-301-4 GB-32-MI-301-5-A GB-32-MI-301-5-B GB-32-MI-301-6-A GB-32-MI-301-6-B GB-32-MI-302-7-A GB-32-MI-302-7-B GB-32-MI-302-8
Main Recirculation	RCS-02-MI-201-1-A RCS-02-MI-201-1-B	RCS-02-MI-301-1-A RCS-02-MI-301-1-B

TABLE 2.3
PIPING ISOMETRIC DRAWINGS (con't)

System	Unit 2 and Common Isometric Drawings	Unit 3 Isometric Drawings
Main Steam	DBN-01-MI-201-1-A DBN-01-MI-201-1-B DBN-01-MI-201-1-C DBN-01-MI-201-1-D DB-01-MI-201-2-A DB-01-MI-201-2-B DB-01-MI-201-2-C DB-01-MI-201-2-D DB-01-MI-221-3 DB-01-MI-221-4 DB-01-MI-222-5-A DB-01-MI-222-5-B	DBN-01-MI-301-1-A DBN-01-MI-301-1-B DBN-01-MI-301-1-C DBN-01-MI-301-1-D DB-01-MI-301-2-A DB-01-MI-301-2-B DB-01-MI-301-2-C DB-01-MI-301-2-D DB-01-MI-321-3 DB-01-MI-321-4 DB-01-MI-322-5-A DB-01-MI-322-5-B
Main Steam Relief Valve	GG-01-MI-271-A GG-01-MI-271-B GG-01-MI-271-C GG-01-MI-271-D GG-01-MI-271-E GG-01-MI-271-F GG-01-MI-271-G GG-01-MI-271-H GG-01-MI-271-J GG-01-MI-271-K GG-01-MI-271-L	GG-01-MI-371-A GG-01-MI-371-B GG-01-MI-371-C GG-01-MI-371-D GG-01-MI-371-E GG-01-MI-371-F GG-01-MI-371-G GG-01-MI-371-H GG-01-MI-371-J GG-01-MI-371-K GG-01-MI-371-L
Reactor Core Isolation Cooling	DDN-13-MI-201-1	DDN-13-MI-301-1
Reactor Drain	DCN-04-MI-201-2 DDN-04-MI-201-1	DCN-04-MI-301-2 DDN-04-MI-301-1
Reactor Pressure Vessel	RCS-02-MI-201-1-A RCS-02-MI-201-1-B	RCS-02-MI-301-1-A RCS-02-MI-301-1-B

TABLE 2.3
PIPING ISOMETRIC DRAWINGS (con't)

System	Unit 2 and Common Isometric Drawings	Unit 3 Isometric Drawings
Reactor Water Cleanup	DCA-12-MI-201-1 DCA-12-MI-203-3 DE-12-MI-202-2 DE-12-MI-203-4 DE-12-MI-203-5 DE-12-MI-203-6	DCA-12-MI-301-1 DCA-12-MI-303-3 DE-12-MI-302-2 DE-12-MI-303-4 DE-12-MI-303-5 DE-12-MI-303-6
Residual Heat Removal	DCN-10-MI-206-15 DCN-10-MI-207-16 DDN-10-MI-203-8-A DDN-10-MI-203-8-B DE-10-MI-203-9-A DE-10-MI-203-9-B GB-10-MI-202-3-A GB-10-MI-202-3-B GB-10-MI-202-3-C GB-10-MI-202-3-D GB-10-MI-202-4-A GB-10-MI-202-4-B GB-10-MI-202-4-C GB-10-MI-202-4-D GB-10-MI-203-5-B GB-10-MI-203-6-B GB-10-MI-203-7-A GB-10-MI-203-7-B GB-10-MI-204-10-A GB-10-MI-204-10-B GB-10-MI-204-11-A GB-10-MI-204-11-B GB-10-MI-205-12-A GB-10-MI-205-13-A GB-10-MI-205-13-B GB-10-MI-206-14	DCA-10-MI-303-9-A DCA-10-MI-303-9-B DCA-10-MI-306-13 DDN-10-MI-303-8-A DDN-10-MI-303-8-B GB-10-MI-302-3-A GB-10-MI-302-3-B GB-10-MI-302-3-C GB-10-MI-302-3-D GB-10-MI-302-4-A GB-10-MI-302-4-B GB-10-MI-302-4-C GB-10-MI-302-4-D GB-10-MI-303-5-A GB-10-MI-303-5-B GB-10-MI-303-6-A GB-10-MI-303-7-A GB-10-MI-303-7-B GB-10-MI-304-10-A GB-10-MI-304-10-B GB-10-MI-304-11-A GB-10-MI-304-11-B GB-10-MI-305-12-A GB-10-MI-305-12-B HB-10-MI-301-1-A HB-10-MI-301-1-B

TABLE 2.3
PIPING ISOMETRIC DRAWINGS (con't)

System	Unit 2 and Common Isometric Drawings	Unit 3 Isometric Drawings
Residual Heat Removal, continued	HB-10-MI-201-1-A HB-10-MI-201-1-B HB-10-MI-201-1-C HB-10-MI-201-1-D HB-10-MI-201-2-A HB-10-MI-201-2-C HB-10-MI-201-2-D HB-10-MI-207-17	HB-10-MI-301-1-C HB-10-MI-301-1-D HB-10-MI-301-2-A HB-10-MI-301-2-C HB-10-MI-301-1-D HB-10-MI-306-14
Scram Discharge Volume	CS-03-MI-201-1-A CS-03-MI-201-1-B CS-03-MI-201-2-A	CS-03-MI-301-1-A CS-03-MI-301-1-B

2.4 Component Drawings

Table 2.4 provides a listing of component drawings that depict items subject to ISI during the third interval at PBAPS, Units 2 and 3. These drawings may also depict items subject to examination per the Augmented Inspection Programs.

TABLE 2.4
COMPONENT DRAWINGS

Component	Unit 2 Component Drawings	Unit 3 Component Drawings
Main Recirculation Pumps	ISI-2-02-1 ISI-2-02-2	ISI-3-02-1 ISI-3-02-2
Reactor Pressure Vessel	ISI-2-RV-01 ISI-203-RV-02 ISI-203-RV-03 ISI-203-RV-04 ISI-2-RV-05	ISI-3-RV-01 ISI-203-RV-02 ISI-203-RV-03 ISI-203-RV-04 ISI-3-RV-05

TABLE 2.4
COMPONENT DRAWINGS (continued)

Component	Unit 2 Component Drawings	Unit 3 Component Drawings
Reactor Pressure Vessel	ISI-203-RV-06 ISI-203-RV-07 ISI-203-RV-08 ISI-203-RV-09 ISI-203-RV-10 ISI-203-RV-11 ISI-203-RV-12 ISI-203-RV-13 ISI-203-RV-14 ISI-203-RV-15 ISI-203-RV-16 ISI-203-RV-17 ISI-203-RV-18 ISI-203-RV-19 ISI-203-RV-20 ISI-203-RV-21 ISI-203-RV-22 ISI-203-RV-23 ISI-203-RV-24	ISI-203-RV-06 ISI-203-RV-07 ISI-203-RV-08 ISI-203-RV-09 ISI-203-RV-10 ISI-203-RV-11 ISI-203-RV-12 ISI-203-RV-13 ISI-203-RV-14 ISI-203-RV-15 ISI-203-RV-16 ISI-203-RV-17 ISI-203-RV-18 ISI-203-RV-19 ISI-203-RV-20 ISI-203-RV-21 ISI-203-RV-22 ISI-203-RV-23 ISI-203-RV-24 ISI-3-RV-50 ISI-3-RV-51 ISI-3-RV-52
Residual Heat Removal Heat Exchanger	ISI-2-10-1 ISI-2-10-2	ISI-3-10-1 ISI-3-10-2

2.5 ASME Section XI, ISI Calibration Block Drawings

Table 2.5 provides a listing of the ISI calibration block drawings that are applicable at PBAPS, Units 2 and 3.

TABLE 2.5
ASME SECTION XI,
ISI CALIBRATION BLOCK DRAWINGS

DRAWING NUMBER	TITLE
CBD-1	ASME, Section XI, UT Calibration Block for PBAPS Units No. 2 & 3
CBD-1A	ASME, Section XI, UT Calibration Block for 26" Main Steam
CBD-2A	ASME, Section XI, UT Calibration Block for 24" Pipe
CBD-3	ASME, Section XI, UT Calibration Block for 12" Feedwater Riser
CBD-4	ASME, Section XI, UT Calibration Block for 6" Head Spray
CBD-5A	ASME, Section XI, UT Calibration Block for 6" Reactor Water Cleanup
CBD-6A	ASME, Section XI, UT Calibration Block for 6" Main Steam Safety and Relief
CBD-7A	ASME, Section XI, UT Calibration Block for 10" High Pressure Coolant Injection
CBD-8	ASME, Section XI, UT Calibration Block for 14" High Pressure Coolant Injection
CBD-8A	ASME, Section XI, UT Calibration Block for 14" High Pressure Coolant Injection
CBD-9A	ASME, Section XI, UT Calibration Block for 28" Main Recirc. Suction & Discharge
CBD-10	ASME, Section XI, UT Calibration Block for 4" RWCU Main Recirculation Bypass, CRD
CBD-10A	ASME, Section XI, UT Calibration Block for 4" RWCU Main Recirculation Bypass, CRD
CBD-12	ASME, Section XI, UT Calibration Block for 12" Core Spray
CBD-13A	ASME, Section XI, UT Calibration Block for 20" Feedwater (block not used)
CBD-13C	ASME, Section XI, UT Calibration Block for 20" Feedwater

TABLE 2.5
ASME SECTION XI,
ISI CALIBRATION BLOCK DRAWINGS (con't)

DRAWING NUMBER	TITLE
CBD-14A	ASME, Section XI, UT Calibration Block for 22" Main Recirculation Manifold
CBD-15	ASME, Section XI, UT Calibration Block for 14" Feedwater Riser
CBD-16A	ASME, Section XI, UT Calibration Block for 12" Feedwater Riser
CBD-17	ASME, Section XI, UT Calibration Block for 4.5" Pipe
CBD-18A	ASME, Section XI, UT Calibration Block for 12" Main Recirc. Nozzle-To-Safe End
CBD-19A	ASME, Section XI, UT Calibration Block for 12" Main Recirc. Safe End-To-Nozzle
CBD-20A	ASME, Section XI, UT Calibration Block for 3P1-1/2" Flat Pipe
CBD-21	ASME, Section XI, UT Calibration Block for 5.125 CRD Safe End
CBD-22	ASME, Section XI, UT Calibration Block for RPV Nut
CBD-24	ASME, Section XI, UT Calibration Block for Closure Head Thickness
CBD-25	ASME, Section XI, UT Calibration Block for 6" Pipe
CBD-26	ASME, Section XI, UT Calibration Block for 12" Pipe
CBD-27	ASME, Section XI, UT Calibration Block for 4" Pipe
CBD-28	ASME, Section XI, UT Calibration Block for 26" Pipe
CBD-29	ASME, Section XI, UT Calibration Block for 20" Pipe
CBD-30	ASME, Section XI, UT Calibration Block for 24" Pipe
CBD-31	ASME, Section XI, UT Calibration Block for 24" Pipe
CBD-32	ASME, Section XI, UT Calibration Block for 24" Pipe
CBD-33A	ASME, Section XI, UT Calibration Block for 20" Pipe
CBD-34	ASME, Section XI, UT Calibration Block for 10" Pipe
CBD-35	ASME, Section XI, UT Calibration Block for 6" SS Pipe
CBD-36	ASME, Section XI, UT Calibration Block for 12" Pipe
CBD-38	ASME, Section XI, UT Calibration Block for OD Inner Radius
CBD-39	ASME, Section XI, UT Calibration Block for Clad Vessel

TABLE 2.5
ASME SECTION XI,
ISI CALIBRATION BLOCK DRAWINGS (con't)

DRAWING NUMBER	TITLE
CBD-41	ASME, Section XI, UT Calibration Block for Nozzle Cap
CBD-42	ASME, Section XI, UT Calibration Block for Pump Stud
CBD-43	ASME, Section XI, UT Calibration Block for Stabilizer Bracket
CBD-44	ASME, Section XI, UT Calibration Block for Pump Nut
CBD-45	ASME, Section XI, UT Calibration Block for Nut
CBD-46	ASME, Section XI, UT Calibration Block for Stud
CBD-47	ASME, Section XI, UT Calibration Block for RPV Closure Head
CBD-48	ASME, Section XI, UT Calibration Block for RPV Stud
CBD-49	ASME, Section XI, UT Calibration Block for 10" Pipe
CBD-50	ASME, Section XI, UT Calibration Block for 6" SS Pipe
CBD-51	ASME, Section XI, UT Calibration Block for 6" CS Pipe
CBD-52	ASME, Section XI, UT Calibration Block for 20" SS Pipe
CBD-53	ASME, Section XI, UT Calibration Block for 20" CS Pipe
CBD-54	ASME, Section XI, UT Calibration Block for 24" SS Pipe
CBD-55	ASME, Section XI, UT Calibration Block for 24" CS Pipe
CBD-56	ASME, Section XI, UT Calibration Block for 12" SCH 100 Pipe
CBD-57	ASME, Section XI, UT Calibration Block for 22" Pipe
CBD-58	ASME, Section XI, UT Calibration Block for 28" Pipe
CBD-59	ASME, Section XI, UT Calibration Block for 28" Pipe
CBD-60	ASME, Section XI, UT Calibration Block for 30" Pipe
CBD-61	ASME, Section XI, UT Calibration Block for 24" SCH 120 CS Pipe
CBD-62	ASME, Section XI, UT Calibration Block for ¾" CS Plate
CBD-62A	ASME, Section XI, UT Calibration Block for SS 12" Clad Overlay (02-19-60)
CBD-64	ASME, Section XI, UT Calibration Block for Jet Pump Seal
CBD-65	ASME, Section XI, UT Calibration Block for 20" Pipe

TABLE 2.5
ASME SECTION XI,
ISI CALIBRATION BLOCK DRAWINGS (con't)

DRAWING NUMBER	TITLE
CBD-65A	ASME, Section XI, UT Calibration Block for 4" Pipe
CBD-66	ASME, Section XI, UT Calibration Block for 4" RWCU Pipe
CBD-67	ASME, Section XI, UT Calibration Block for Clad Core Spray (3-453)
CBD-67A	ASME, Section XI, UT Calibration Block for Core Spray Nozzle-To- Safe End
CBD-68	ASME, Section XI, UT Calibration Block for Vessel (12-CS-5)
CBD-69	ASME, Section XI, UT Calibration Block for SS 22" Overlay (12-08-46) (block not used)
CBD-70	ASME, Section XI, UT Calibration Block for SS 20" Overlay (03-13-46) (block not used)
CBD-71	ASME, Section XI, UT Calibration Block for Jet Pump Overlay (09-08-47)

2.6 Limerick Generating Station ISI Calibration Blocks

Table 2.6 provides a partial listing of Limerick Generating Station ISI calibration blocks that are available for use at PBAPS, Units 2 and 3.

TABLE 2.6
LIMERICK GENERATING STATION
ISI CALIBRATION BLOCKS

CALIBRATION BLOCK NUMBER
LIM-4-.337-SS304
LIM-6-.432-CS
LIM-6-.432-SS
LIM-6-.432-SS316
LIM-10-.593-CS-R
LIM-12-.843-CS
LIM-12-.688-SS
LIM-12-.843-SS316
LIM-18-.938-CS
LIM-20-1.031-CS
LIM-22-1.009-SS
LIM-26-1.013-CS
LIM-28-1.285-SS316
RPV NUT B-61
RPV STUDS L/8
RPV STUDS L/4
RPV STUDS L/2
RPV STUDS 3L/4
RPV STUDS L

SECTION 3.0
INSERVICE INSPECTION SUMMARY TABLES

This Section provides a summary listing of all items subject to ISI during the Third Inspection Interval at PBAPS, Units 2 and 3. Itemized listings of all non-exempt components which are subject to examination (both selected and non-selected) under the rules of ASME, Section XI, are provided in Appendix "C" (Unit 2 and Common), and Appendix "D" (Unit 3).

3.1 Section XI Inservice Inspection

The Section XI Inservice Inspection Summary Table 3.1, for Unit 2 and common components, and Table 3.2 for Unit 3, provide the following information.

3.1.1 Examination Category

This column lists the examination category as identified in Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1, and Code Case N-491-1, Table -2500-1. Only those examination categories that are applicable to PBAPS, Units 2 and 3, are identified.

3.1.2 Item Number and Description of Components Examined

These columns list the item number and description as defined in Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1, and Code Case N-491-1, Table -2500-1. Only those item numbers that are applicable to PBAPS, Units 2 and 3, are identified.

3.1.3 Number of Components

This column lists the population of components potentially subject to examination. The number of components actually examined during the inspection interval will be based on the Section XI requirements for the subject item number.

The number of components for Unit 2 and common are conservative estimates based upon second interval final totals. Due to changes in some code item numbers, and the implementation of Code Cases, some number counts may change. These number counts shall be verified prior to the first Unit 2 refueling outage in the third interval.

The number of components for Unit 3 have been verified, except for integral attachments. The number of Unit 3 integral attachments shall be verified prior to the first Unit 3 refueling outage in the third interval.

3.1.4 Examination Method

This column lists the examination method(s) required by Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1, and Code Case N-491-1, Table -2500-1, or alternative examinations as described by notes within the Summary Table.

3.1.5 Request Number

This column lists applicable Requests for Alternatives or Relief Requests. If a request number is identified, see the corresponding Request for Alternative or Relief Request in Section 6.0 of this Program.

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-A Pressure Retaining Welds in Reactor Vessel		**Shell Welds**				
	B1.11	Circumferential	5	Volumetric		
	B1.12	Longitudinal	15	Volumetric		
		Head Welds				
	B1.21	Circumferential	3	Volumetric		
	B1.22	Meridional	16	Volumetric		
	B1.30	Shell-to-Flange Weld	1	Volumetric		
	B1.40	Head-to-Flange Weld	1	Volumetric and Surface		
		Repair Welds				
	B1.51	Beltline Region	1	Volumetric		
B-D Full Penetration Welds of Nozzles in Vessels, Program B		**Reactor Vessel**				
	B3.90	Nozzle to Vessel Welds	31	Volumetric		
	B3.100	Nozzle Inside Radius Section	31	Volumetric	RR-24	

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-E Pressure Retaining Partial Penetration Welds in Vessels		**Partial Penetration Welds**				
	B4.11	Vessel Nozzles	1 (56 nozzles)	VT-2 Visual		
	B4.12	Control Rod Drive Nozzles	1 (185 nozzles)	VT-2 Visual		
	B4.13	Instrumentation Nozzles	1 (6 nozzles)	VT-2 Visual		
B-F Pressure Retaining Dissimilar Metal Welds		**Reactor Vessel**				
	B5.10	NPS 4 or Larger Nozzle to Safe End Butt Welds	0 (See Note 1)	Volumetric and Surface		
	B5.20	Less than NPS 4 Nozzle to Safe End Butt Welds	7	Surface		
		Piping				
	B5.130	NPS 4 or Larger Dissimilar Metal Butt Welds	4 (See Note 1)	Volumetric and Surface		
	B5.140	Less than NPS 4 Dissimilar Metal Butt Welds	1	Surface		

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-G-1 Pressure Retaining Bolting Greater Than 2 in. In Diameter	B6.10	**Reactor Vessel** Closure Head Nuts	1 (92 nuts)	Volumetric (See Note 2)		
	B6.20	Closure studs, In Place	1 (92 studs)	Volumetric		
	B6.30	Closure studs, When Removed	1 (92 studs)	Volumetric and Surface		
	B6.40	Threads In Flange	1 (92 threads)	Volumetric		
	B6.50	Closure Washers, Bushings	3 (276 items)	VT-1 Visual		
	B6.180	**Pumps** Bolts and Studs	2 (pumps)	Volumetric		
	B6.190	Flange Surface	2 (pumps)	VT-1 Visual		
	B6.200	Nuts, Bushings, and Washers	2 (pumps)	VT-1 Visual		
B-G-2 Pressure Retaining Bolting, 2 in. and Less In Diameter	B7.50	**Piping** Bolts, Studs, and Nuts	15 (flanges)	VT-1 Visual		
	B7.70	**Valves** Bolts, Studs, and Nuts	38 (valves)	VT-1 Visual		
	B7.80	**CRD Housing** Bolts, Studs, and Nuts	1 (185 housings)	VT-1 Visual		

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-J Pressure Retaining Welds in Piping	B9.11	**NPS 4 or Larger** Circumferential Welds	278 (See Note 1)	Volumetric and Surface	RR-26 RR-28	
	B9.12	Longitudinal Welds	N/A (See Note 3)	N/A (See Note 3)		N-524
	B9.21	**Less Than NPS 4** Circumferential Welds	5	Surface	RR-26	
	B9.31	**Branch Pipe Connection Welds** NPS 4 or Larger	27 (See Note 1)	Volumetric and Surfaced	RR-26	
	B9.32	Less Than NPS 4	3	Surface	RR-26	
	B9.40	Socket Welds	64	Surface	RR-26	

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-K Integral Attachments for Class 1 Vessels, Piping, Pumps, and Valves (See Note 4)	B10.10	**Vessels** Integrally Welded Attachments	9	Surface		N-509
	B10.20	**Piping** Integrally Welded Attachments	75	Surface		N-509
	B10.30	**Pumps** Integrally Welded Attachments	7	Surface		N-509
B-L-2 Pump Casing	B12.20	Pump Casing, Internal Surfaces	2	VT-3 Visual		
B-M-2 Valve Body	B12.50	Valve Body, Internal Surfaces Exceeding NPS 4	60	VT-3 Visual		

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-N-1 Interior of Reactor Vessel	B13.10	**Reactor Vessel** Vessel Interior	1	VT-3 Visual		
B-N-2 Integrally Welded Core Support Structures and Interior Attachments to Reactor Vessels	B13.20	**Reactor Vessel** Interior Attachments Within Beltline Region	16	VT-1 Visual		
	B13.30	Interior Attachments Beyond Beltline Region	34	VT-3 Visual		
	B13.40	Core Support Structure	6	VT-3 Visual		
B-O Pressure Retaining Welds in Control Rod Housings	B14.10	**Reactor Vessel** Welds in CRD Housings	N/A (See Note 5)	N/A (See Note 5)		

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-P Pressure Retaining Components	B15.10	**Reactor Vessel** Pressure Retaining Boundary - leakage	(See Notes 6,7)	VT-2 Visual		
	B15.11	Pressure Retaining Boundary - hydro	(See Notes 6,7,8)	VT-2 Visual		N-498-1
	B15.50	**Piping** Pressure Retaining Boundary - leakage	(See Note 6)	VT-2 Visual		
	B15.51	Pressure Retaining Boundary - hydro	(See Notes 6,8)	VT-2 Visual		N-498-1
	B15.60	**Pumps** Pressure Retaining Boundary - leakage	(See Note 6)	VT-2 Visual		
	B15.61	Pressure Retaining Boundary - hydro	(See Notes 6,8)	VT-2 Visual		N-498-1
	B15.70	**Valves** Pressure Retaining Boundary - leakage	(See Note 6)	VT-2 Visual		
	B15.71	Pressure Retaining Boundary - hydro	(See Notes 6,8)	VT-2 Visual		N-498-1

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
C-A Pressure Retaining Welds in Pressure Vessels	C1.10	Shell Circumferential Welds	8	Volumetric	RR-08	
C-B Pressure Retaining Nozzle Welds in Vessels	C2.31	**Nozzles With Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness** Reinforcing Plate Welds to Nozzle and Vessel	8	Surface		
	C2.33	Nozzle to Shell (or Head) Welds When Inside of Vessel is Inaccessible	8	VT-2 Visual		

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
C-C Integral Attachments for Class 2 Vessels, Piping, Pumps, and Valves (See Note 4)	C3.10	**Pressure Vessels** Integrally Welded Attachments	12	Surface		N-509
	C3.20	**Piping** Integrally Welded Attachments	392	Surface		N-509
	C3.30	**Pumps** Integrally Welded Attachments	8	Surface		N-509
C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping	C5.51	**Piping Welds ≥ 3/8 in. Nominal Wall Thickness for Piping > NPS 4** Circumferential Weld	940 (See Note 9)	Volumetric and Surface	RR-27	
	C5.52	Longitudinal Weld	N/A (See Note 3)	N/A (See Note 3)		N-524
	C5.81	**Pipe Branch Connections of Branch Piping ≥ NPS 2** Circumferential Weld	19 (See Note 9)	Surface	RR-27	

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
C-H All Pressure Retaining Components	C7.10	**Pressure Vessels** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual		
	C7.20	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual		N-498-1
	C7.30	**Piping** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual	RR-25	
	C7.40	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual	RR-25	N-498-1
	C7.50	**Pumps** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual		
	C7.60	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual		N-498-1
	C7.70	**Valves** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual		
	C7.80	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual		N-498-1

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
D-A Integral Attachments for Class 3 Vessels, Piping, Pumps and Valves (See Note 4)	D1.20	**Piping** Integral Attachments	211	VT-1 Visual		N-509
D-B Systems in Support of Emergency Core Cooling, Containment Heat Removal, Atmosphere Cleanup, and Reactor Residual Heat Removal	D2.10	Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual	RR-17	
		Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual	RR-17	N-498-1

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
F-A Supports (See Notes 11,12)	F1.10	Class 1 Piping Supports	145	VT-3 Visual	RR-10	N-491-1
	F1.20	Class 2 Piping Supports	384	VT-3 Visual	RR-10	N-491-1
	F1.30	Class 3 Piping Supports	361	VT-3 Visual	RR-10	N-491-1
	F1.40	Supports Other Than Piping Supports	46	VT-3 Visual	RR-10	N-491-1

TABLE 3.1

UNIT 2 and COMMON
INSERVICE INSPECTION SUMMARY TABLE (Continued)

Notes:

1. The total population of Code Item No. B5.10, B5.130, B9.11, and B9.31 welds does not include those Class 1 welds addressed by NRC Generic Letter 88-01. See Augmented Inspection Program AUG-01 for details.
2. As allowed by IWA-2240, a volumetric examination will be performed on the RPV closure head nuts as an alternative to the surface examination listed in Table IWB-2500-1, Examination Category B-G-1. The volumetric examination will provide a more thorough examination of the closure head nuts than the surface examination.
3. Longitudinal pipe welds shall be examined in accordance with Code Case N-524.
4. The Examination Categories, Item Numbers, and Examination Methods used for the inservice inspection of integrally welded attachments are in accordance with Code Case N-509. A minimum 10% sample of integrally welded attachments for each Code Item Number shall be examined during the interval.
5. Per Calculation No. PM-945, welds in CRD housings are exempt due to meeting the make-up flow capacity exemption criteria of IWB-1220(a).
6. Pressure retaining components, e.g., pressure vessels, piping, pumps, and valves, that are subject to the system pressure tests or hydrostatic tests required by ASME Section XI are identified on the Inservice Inspection Boundary Diagrams that are listed in Section 2.2 of the Program.
7. In accordance with 10CFR50, Appendix G, Paragraph IV.2.D, RPV pressure testing shall be completed before the core is critical.
8. In lieu of the ten-year hydrostatic test, a pressure test will be performed as described by Code Case N-498-1. This test shall be conducted during the second period, in accordance with IWB-2420 and Reference 1.5.5 **(CM-5)**.
9. The number of components identified includes those welds in piping less than 3/8" nominal wall thickness, in accordance with Table IWC-2500-1, Examination Category C-F-2, Note 2.
10. In lieu of the ten-year hydrostatic test, a pressure test will be performed as described by Code Case N-498-1.
11. The Examination Category and Item Numbers used for the inservice inspection of supports are in accordance with Code Case N-491-1.
12. The examination of snubbers, from pin-connection to pin-connection, shall be performed in accordance with the Technical Requirements Manual, Section 3.16, as described in Augmented Inspection Program AUG-05.

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-A Pressure Retaining Welds in Reactor Vessel		**Shell Welds**				
	B1.11	Circumferential	5	Volumetric		
	B1.12	Longitudinal	15	Volumetric		
		Head Welds				
	B1.21	Circumferential	3	Volumetric		
	B1.22	Meridional	16	Volumetric		
	B1.30	Shell-to-Flange Weld	1	Volumetric		
	B1.40	Head-to-Flange Weld	1	Volumetric and Surface		
		Repair Welds				
	B1.51	Beltline Region	1	Volumetric		
B-D Full Penetration Welds of Nozzles in Vessels, Program B		**Reactor Vessel**				
	B3.90	Nozzle to Vessel Welds	31	Volumetric		
	B3.100	Nozzle Inside Radius Section	31	Volumetric	RR-24	

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-E Pressure Retaining Partial Penetration Welds in Vessels		**Partial Penetration Welds**				
	B4.11	Vessel Nozzles	1 (56 nozzles)	VT-2 Visual		
	B4.12	Control Rod Drive Nozzles	1 (185 nozzles)	VT-2 Visual		
	B4.13	Instrumentation Nozzles	1 (6 nozzles)	VT-2 Visual		
B-F Pressure Retaining Dissimilar Metal Welds		**Reactor Vessel**				
	B5.10	NPS 4 or Larger Nozzle to Safe End Butt Welds	0 (See Note 1)	Volumetric and Surface		
	B5.20	Less than NPS 4 Nozzle to Safe End Butt Welds	7	Surface		
		Piping				
	B5.130	NPS 4 or Larger Dissimilar Metal Butt Welds	4 (See Note 1)	Volumetric and Surface		
	B5.140	Less than NPS 4 Dissimilar Metal Butt Welds	1	Surface		

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-G-1 Pressure Retaining Bolting Greater Than 2 in. In Diameter	B6.10	**Reactor Vessel** Closure Head Nuts	1 (92 nuts)	Volumetric (See Note 2)		
	B6.20	Closure studs, In Place	1 (92 studs)	Volumetric		
	B6.30	Closure studs, When Removed	1 (92 studs)	Volumetric and Surface		
	B6.40	Threads In Flange	1 (92 threads)	Volumetric		
	B6.50	Closure Washers, Bushings	3 (276 items)	VT-1 Visual		
	B6.180	**Pumps** Bolts and Studs	2 (pumps)	Volumetric		
	B6.190	Flange Surface	2 (pumps)	VT-1 Visual		
	B6.200	Nuts, Bushings, and Washers	2 (pumps)	VT-1 Visual		
B-G-2 Pressure Retaining Bolting, 2 in. and Less In Diameter	B7.50	**Piping** Bolts, Studs, and Nuts	19 (flanges)	VT-1 Visual		
	B7.70	**Valves** Bolts, Studs, and Nuts	37 (valves)	VT-1 Visual		
	B7.80	**CRD Housing** Bolts, Studs, and Nuts	1 (185 housings)	VT-1 Visual		

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-J Pressure Retaining Welds in Piping	B9.11	**NPS 4 or Larger** Circumferential Welds	307 (See Note 1)	Volumetric and Surface	RR-26 RR-28	
	B9.12	Longitudinal Welds	N/A (See Note 3)	N/A (See Note 3)		N-524
	B9.21	**Less Than NPS 4** Circumferential Welds	4	Surface	RR-26	
	B9.31	**Branch Pipe Connection Welds** NPS 4 or Larger	27 (See Note 1)	Volumetric and Surface	RR-26	
	B9.32	Less Than NPS 4	3	Surface	RR-26	
	B9.40	Socket Welds	60	Surface	RR-26	

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-K Integral Attachments for Class 1 Vessels, Piping, Pumps, and Valves (See Note 4)	B10.10	**Vessels** Integrally Welded Attachments	9	Surface		N-509
	B10.20	**Piping** Integrally Welded Attachments	75	Surface		N-509
	B10.30	**Pumps** Integrally Welded Attachments	7	Surface		N-509
B-L-2 Pump Casing	B12.20	Pump Casing, Internal Surfaces	2	VT-3 Visual		
B-M-2 Valve Body	B12.50	Valve Body, Internal Surfaces Exceeding NPS 4	59	VT-3 Visual		

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-N-1 Interior of Reactor Vessel	B13.10	**Reactor Vessel** Vessel Interior	1	VT-3 Visual		
B-N-2 Integrally Welded Core Support Structures and Interior Attachments to Reactor Vessels	B13.20	**Reactor Vessel** Interior Attachments Within Beltline Region	16	VT-1 Visual		
	B13.30	Interior Attachments Beyond Beltline Region	34	VT-3 Visual		
	B13.40	Core Support Structure	6	VT-3 Visual		
B-O Pressure Retaining Welds in Control Rod Housings	B14.10	**Reactor Vessel** Welds in CRD Housings	N/A (See Note 5)	N/A (See Note 5)		

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
B-P Pressure Retaining Components	B15.10	**Reactor Vessel** Pressure Retaining Boundary - leakage	(See Notes 6,7)	VT-2 Visual		
	B15.11	Pressure Retaining Boundary - hydro	(See Notes 6,7,8)	VT-2 Visual		N-498-1
	B15.50	**Piping** Pressure Retaining Boundary - leakage	(See Note 6)	VT-2 Visual		
	B15.51	Pressure Retaining Boundary - hydro	(See Notes 6,8)	VT-2 Visual		N-498-1
	B15.60	**Pumps** Pressure Retaining Boundary - leakage	(See Note 6)	VT-2 Visual		
	B15.61	Pressure Retaining Boundary - hydro	(See Notes 6,8)	VT-2 Visual		N-498-1
	B15.70	**Valves** Pressure Retaining Boundary - leakage	(See Note 6)	VT-2 Visual		
	B15.71	Pressure Retaining Boundary - hydro	(See Notes 6,8)	VT-2 Visual		N-498-1

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
C-A Pressure Retaining Welds in Pressure Vessels	C1.10	Shell Circumferential Welds	8	Volumetric	RR-08	
C-B Pressure Retaining Nozzle Welds in Vessels	C2.31	**Nozzles With Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness** Reinforcing Plate Welds to Nozzle and Vessel	8	Surface		
	C2.33	Nozzle to Shell (or Head) Welds When Inside of Vessel is Inaccessible	8	VT-2 Visual		

TABLE 3.1

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
C-C Integral Attachments for Vessels, Piping, Pumps, and Valves (See Note 4)	C3.10	**Pressure Vessels** Integrally Welded Attachments	12	Surface		N-509
	C3.20	**Piping** Integrally Welded Attachments	327	Surface		N-509
	C3.30	**Pumps** Integrally Welded Attachments	8	Surface		N-509
C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping	C5.51	**Piping Welds ≥ 3/8 in. Nominal Wall Thickness for Piping > NPS 4** Circumferential Weld	929 (See Note 9)	Volumetric and Surface	RR-27	
	C5.52	Longitudinal Welds	N/A (See Note 3)	N/A (See Note 3)		N-524
	C5.81	**Pipe Branch Connections of Branch Piping ≥ NPS 2** Circumferential Weld	13 (See Note 9)	Surface	RR-27	

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
C-H All Pressure Retaining Components	C7.10	**Pressure Vessels** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual		
	C7.20	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual		N-498-1
	C7.30	**Piping** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual	RR-25	
	C7.40	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual	RR-25	N-498-1
	C7.50	**Pumps** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual		
	C7.60	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual		N-498-1
	C7.70	**Valves** Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual		
	C7.80	Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual		N-498-1

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
D-A Integral Attachments for Class 3 Vessels, Piping, Pumps and Valves (See Note 4)	D1.20	**Piping** Integral Attachments	181	VT-1 Visual		N-509
D-B Systems in Support of Emergency Core Cooling, Containment Heat Removal, Atmosphere Cleanup, and Reactor Residual Heat Removal	D2.10	Pressure Retaining Components - leakage	(See Note 6)	VT-2 Visual	RR-17	
		Pressure Retaining Components - hydro	(See Notes 6,10)	VT-2 Visual	RR-17	N-498-1

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

EXAMINATION CATEGORY	ITEM NUMBER	DESCRIPTION OF COMPONENT	NUMBER OF COMPONENTS	EXAMINATION METHOD	REQUEST NUMBER	CODE CASE NO.
F-A Supports (See Notes 11,12)	F1.10	Class 1 Piping Supports	145	VT-3 Visual	RR-10	N-491-1
	F1.20	Class 2 Piping Supports	390	VT-3 Visual	RR-10	N491-1
	F1.30	Class 3 Piping Supports	361	VT-3 Visual	RR-10	N491-1
	F1.40	Supports Other Than Piping Supports	50	VT-3 Visual	RR-10	N491-1

TABLE 3.2

UNIT 3
INSERVICE INSPECTION SUMMARY TABLE (Continued)

Notes:

1. The total population of Code Item No. B5.10, B5.130, B9.11, and B9.31 welds does not include those Class 1 welds addressed by NRC Generic Letter 88-01. See Augmented Inspection Program AUG-01 for details.
2. As allowed by IWA-2240, a volumetric examination will be performed on the RPV closure head nuts as an alternative to the surface examination listed in Table IWB-2500-1, Examination Category B-G-1. The volumetric examination will provide a more thorough examination of the closure head nuts than the surface examination.
3. Longitudinal pipe welds shall be examined in accordance with Code Case N-524.
4. The Examination Categories, Item Numbers, and Examination Methods used for the inservice inspection of integrally welded attachments are in accordance with Code Case N-509. A minimum 10% sample of integrally welded attachments for each Code Item Number shall be examined during the interval.
5. Per Calculation No. PM-945, welds in CRD housings are exempt due to meeting the make-up flow capacity exemption criteria of IWB-1220(a).
6. Pressure retaining components, e.g., pressure vessels, piping, pumps, and valves, that are subject to the system pressure tests or hydrostatic tests required by ASME Section XI are identified on the Inservice Inspection Boundary Diagrams that are listed in Section 2.2 of the Program.
7. In accordance with 10CFR50, Appendix G, Paragraph IV.2.D, RPV pressure testing shall be completed before the core is critical.
8. In lieu of the ten-year hydrostatic test, a pressure test will be performed as described by Code Case N-498-1. This test shall be conducted during the second period, in accordance with IWB-2420 and Reference 1.5.5 **(CM-5)**.
9. The number of components identified includes those welds in piping less than 3/8" nominal wall thickness, in accordance with Table IWC-2500-1, Examination Category C-F-2, Note 2.
10. In lieu of the ten-year hydrostatic test, a pressure test will be performed as described by Code Case N-498-1.
11. The Examination Category and Item Numbers used for the inservice inspection of supports are in accordance with Code Case N-491-1.
12. The examination of snubbers, from pin-connection to pin-connection, shall be performed in accordance with the Technical Requirements Manual, Section 3.16, as described in Augmented Inspection Program AUG-05.

SECTION 4.0

ALTERNATIVE REQUIREMENTS TO SECTION XI, 1989 EDITION

This Section lists the alternative requirements to Section XI being adopted for the Third Inspection Interval ISI program at PBAPS, Units 2 and 3. The alternative requirements presented are in accordance with Section XI and 10CFR50.55a, as applicable.

4.1 Adoption Of Code Cases

This Section addresses the adoption of Code Cases during the Third ISI Interval at PBAPS, Units 2 and 3. Code Cases adopted for use during the third interval will be listed in Table 4.1 of this Program. In all cases, the use and adoption of Code Cases will be in accordance with Section XI, IWA-2440, and 10CFR50.55a. The methodology for adopting Code Cases is divided into the four categories described below.

4.1.1 Adoption Of Code Cases Listed For Generic Use In Regulatory Guide 1.147

Code Cases that are listed for generic use in Regulatory Guide 1.147, Revision 12 (draft), will be adopted for use during the Third ISI Interval as described by Table 4.1 of this Program. These Code Cases are shown in Table 4.1 with a "Yes" under the column entitled "Approved by USNRC Reg. Guide 1.147". All conditions or limitations that are presented in Regulatory Guide 1.147, including Draft Revision 12, for a particular Code Case will apply.

NOTE: Draft Revision 12 of Regulatory Guide 1.147 has been used as a basis for addressing Code Cases because Revision 12 is scheduled to be published during the third quarter of 1998, which is also when this Program takes affect. If there are any differences between Draft Revision 12 of Regulatory Guide 1.147 and the final version of Revision 12, the final version requirements will be incorporated into this Program as applicable.

4.1.2 Adoption Of Code Cases Not Listed For Generic Use In Regulatory Guide 1.147

Adoption of Code Cases that have been approved by the Board of Nuclear Codes and Standards, but that have not been listed for generic use in Regulatory Guide 1.147, may be submitted in the form of a Request for Alternative in accordance with 10CFR 50.55a(a)(3). Once approved by the NRC, these Requests for Alternatives will be available for use at PBAPS, Units 2 and 3, until such time that the Code Cases are adopted into Regulatory Guide 1.147, at which time, PBAPS, Units 2 and 3, will comply with any limitations stated therein.

Code Cases for which PBAPS is submitting a Request for Alternative are those shown in Table 4.1 with a "No" in the column entitled "Approved by Reg. Guide 1.147". In addition, Table 4.1 references the corresponding Request Number for these Code Cases.

4.1.3 Adoption of Code Cases Listed for Generic Use in Regulatory Guide 1.147 But Subsequently Annulled by ASME

Under certain circumstances, it may be necessary to adopt a Code Case that has been listed for generic use in Regulatory Guide 1.147 but subsequently annulled by ASME. Therefore, PBAPS, Units 2 and 3, endorses all revisions of Regulatory Guide 1.147 from Revision 11 up to and including the most recent revision. Endorsement of these revisions of Regulatory Guide 1.147 does not commit PBAPS, Units 2 and 3, to all the Code Cases listed therein, but rather allows for the selection of a previously accepted Code Case. The purpose of this endorsement is to identify all Code Cases that could potentially be incorporated into this Program in accordance with Section XI, IWA-2441.

4.1.4 Adoption of Code Cases Issued Subsequent to Filing This Inservice Inspection Program

Code Cases issued by ASME subsequent to filing this Program will be proposed for use in updated revisions to this Program in accordance with Section XI, IWA-2441(d).

TABLE 4.1
CODE CASES APPLICABLE TO THE
THIRD INTERVAL ISI PROGRAM

Code Case Number	Title	Approved by USNRC Reg. Guide 1.147?	Latest Rev. of Reg. Guide 1.147 that Approves	Conditions Invoked by Reg. Guide 1.147	Request Number
N-198-1	Exemption from Examination for ASME Class 1 and 2 Piping Located at Containment Penetrations	No	N/A	N/A	RR-28
N-389-1	Alternative Rules for Repairs, Replacements or Modifications	Yes	12 (Draft)	None	None Required
N-416-1	Alternative Pressure Test Requirements for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2 and 3	Yes	12 (Draft)	Additional surface examinations should be performed on the root (pass) layer of butt and socket welds of the pressure retaining boundary of Class 3 components when the surface examination method is used in accordance with Section III	None Required

TABLE 4.1
CODE CASES APPLICABLE TO THE
THIRD INTERVAL ISI PROGRAM (con't)

Code Case Number	Title	Approved by USNRC Reg. Guide 1.147?	Latest Rev. of Reg. Guide 1.147 that Approves	Conditions Invoked by Reg. Guide 1.147	Request Number
N-435-1	Alternative Examination Requirements for Vessels with Wall Thickness of 2" or Less	Yes	12 (Draft)	None	None Required
N-460	Alternative Examination Coverage for Class 1 and 2 Welds	Yes	12 (Draft)	None	None Required
N-461	Alternative Rules for Piping Calibration Block Thickness	Yes	12 (Draft)	Thickness measurements and weld joint contour of the pipe/ component must be known and used by the inspector who conducts the UT examination	None Required
N-491-1	Alternative Rules for Examination of Class 1, 2, 3, and MC Component Supports of Light-Water Cooled Power Plants	Yes	12 (Draft)	None	None Required

TABLE 4.1
CODE CASES APPLICABLE TO THE
THIRD INTERVAL ISI PROGRAM (con't)

Code Case Number	Title	Approved by USNRC Reg. Guide 1.147?	Latest Rev. of Reg. Guide 1.147 that Approves	Conditions Invoked by Reg. Guide 1.147	Request Number
N-498-1	Alternative Requirements for 10-Year System Hydrostatic Testing for Class 1, 2 and 3 Systems	Yes	12 (Draft)	None	None Required
N-508-1	Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing	No	N/A	N/A	RR-29
N-509	Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments	Yes	12 (Draft)	A minimum 10% sample of integrally welded attachments for each item in each code class per interval should be examined	None Required
N-515	Class 1 Mechanical Joint Pressure Tests	Yes	12 (Draft)	None	None Required

TABLE 4.1
CODE CASES APPLICABLE TO THE
THIRD INTERVAL ISI PROGRAM (con't)

Code Case Number	Title	Approved by USNRC Reg. Guide 1.147?	Latest Rev. of Reg. Guide 1.147 that Approves	Conditions Invoked by Reg. Guide 1.147	Request Number
N-516-1	Underwater Welding	No	N/A	When welding is to be performed on high neutron fluence Class 1 material, then a mockup, using material with similar fluence levels, should be welded to verify that adequate crack prevention measures were used (See note 1)	RR-30
N-524	Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping	Yes	12 (Draft)	None	None Required
N-532	Alternative Requirements for Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission	No	N/A	N/A	RR-31

TABLE 4.1
CODE CASES APPLICABLE TO THE
THIRD INTERVAL ISI PROGRAM (con't)

Code Case Number	Title	Approved by USNRC Reg. Guide 1.147?	Latest Rev. of Reg. Guide 1.147 that Approves	Conditions Invoked by Reg. Guide 1.147	Request Number
N-546	Alternative Requirements for Qualification of VT-2 Examination Personnel	No	N/A	N/A	RR-23
N-566	Corrective Action for Leakage Identified at Bolted Connections	No	N/A	N/A	RR-32
N-598	Alternative Requirements to Required Percentages of Examinations	No	N/A	N/A	RR-33

NOTE: 1) Although Code Case N-516-1 is not endorsed in Regulatory Guide 1.147 yet, Code Case N-516 was endorsed in Draft Revision 12 of the Regulatory Guide. The conditions invoked on Code Case N-516 are those included in the table. These conditions will be incorporated into Request No. RR-30 for Code Case N-516-1.

4.2 Use of Subsequent Editions of Section XI

In accordance with 10CFR50.55a(g)(3)(v), components, including supports, may meet the requirements set forth in subsequent editions and addenda, or portions thereof, of Section XI, that are incorporated by reference in 10CFR50.55a(b), subject to the limitations and modifications listed therein. This Section of the Program is reserved for alternative requirements from approved subsequent Section XI editions and addenda that may be adopted during the third ISI interval. Should this occur, this Program will be amended for adoption of subsequent Section XI rules at that time.

4.3 Use of Requests for Alternatives and Relief Requests

4.3.1 Alternatives to examinations that are required by Section XI may be authorized by NRR, as allowed by 10CFR50.55a(a)(3), provided that testing or examinations performed in compliance with Section XI requirements would result in hardship without a compensating increase in the levels of quality and safety, or provided that the proposed alternative will assure an acceptable level of quality and safety. Specific exceptions shall be documented in the form of a Request for Alternative and included in Section 6.0 of this Program.

4.3.2 Section 6.0 of this Program shall also include Relief Requests written in accordance with 10CFR50.55a(g)(5)(iii) when specific Section XI inservice inspection requirements are determined to be impractical. If examination requirements are determined to be impractical during the course of the interval, then requests for relief shall be submitted in accordance with 10CFR50.55a(g)(5)(iii).

4.3.3 Relief Requests for limited coverage examinations shall be submitted in accordance with 10CFR50.55a(g)(5)(iv) throughout the interval as limitations are identified. Due to ongoing changes in nondestructive examination procedures, techniques, and requirements, PBAPS considers that submitting Relief Requests for incomplete examinations when they are evaluated will provide a more accurate representation of the limitations.

4.3.4 For this Program, the term "Request for Alternative" applies to those requests that are being submitted per 10CFR50.55a(a)(3)(i) or 10CFR50.55a(a)(3)(ii). These requests propose alternatives that provide an acceptable level of quality and safety, or address requirements that present a hardship without a compensating increase in the level of quality and safety. The term, "Relief Request" will be reserved for those requests submitted per 10CFR50.55a(g)(5), for review per 10CFR50.55a(g)(6)(i). The requests address those examinations that are impractical to implement due to factors such as physical restrictions.

SECTION 5.0

REQUEST FOR ALTERNATIVES AND RELIEF REQUEST INDEX

This Section of the Program is a table that includes a summary listing and revision status of the Requests for Alternatives and Relief Requests that are applicable for PBAPS, Units 2 and 3. Table 5.1 provides a list of the Requests, their revision number, status, description, and any stipulations required by the NRC. The actual Requests for Alternatives and Relief Requests are provided in Section 6.0 of this Program.

Those Requests listed as being "withdrawn" or "not submitted" are not applicable for the third interval at this time. Their inclusion in the table is for historical purposes. In addition, even though a Request is not resubmitted at the beginning of the third interval, a need may arise to resubmit it during the course of the interval. This especially applies for those Requests which address limited examination coverage. If a Request is needed during the course of the interval, it will be resubmitted to the NRC for their review and approval.

TABLE 5.1
REQUEST FOR ALTERNATIVES
AND RELIEF REQUEST INDEX

REQUEST NUMBER	REV.	STATUS	DESCRIPTION	NRC STIPULATIONS
RR-01	1	Rescinded During the Second Interval	Pressure Retaining Welds in Reactor Vessel	N/A
RR-02	0	Not Resubmitted for the Third Interval	Pump Casings	N/A
RR-03	0	Not Resubmitted for the Third Interval	Valve Bodies	N/A
RR-04	1	Not Resubmitted for the Third Interval	Pressure Testing of Pressure Retaining Components	N/A
RR-05	2	Not Resubmitted for the Third Interval	Limited Examination Coverage for Pressure Retaining Welds in Class 1 Piping	N/A
RR-06	2	Not Resubmitted for the Third Interval	Limited Examination Coverage for Integral Attachments on Class 1 Piping, Pumps, and Valves	N/A
RR-07	0	Withdrawn During the Second Interval	Limited Examination Coverage for Pressure Retaining Welds in Class 2 Piping	N/A

TABLE 5.1
REQUEST FOR ALTERNATIVES
AND RELIEF REQUEST INDEX (con't)

REQUEST NUMBER	REV.	STATUS	DESCRIPTION	NRC STIPULATIONS
RR-08	1	Resubmitted for the Third Interval as part of this Program, Rev. 0	Limited Examination Coverage for Pressure Retaining Welds in Class 2 Pressure Vessels	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-09	0	Not Resubmitted for the Third Interval	Pressure Testing of Systems in Support of Emergency Core Cooling, Containment Heat Removal, Atmosphere Cleanup, and Reactor Residual Heat Removal	N/A
RR-10	0	Resubmitted for the Third Interval as part of this Program, Rev. 0	Alternative Requirements for the Examination of Snubber Assemblies	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-11	0	Not Resubmitted for the Third Interval	ISI Class 2 Piping and Components Beyond the Last Shutoff Valve in Open-ended Portions of Systems	N/A
RR-12	0	Denied During the Second Interval	ISI Class 3 Piping and Components Beyond the Last Shutoff Valve in Open-ended Portions of Systems	N/A
RR-13	1	Not Resubmitted for the Third Interval	Limited Examination Coverage for Class 1 Full Penetration Welds of Nozzles in Vessels	N/A

TABLE 5.1
REQUEST FOR ALTERNATIVES
AND RELIEF REQUEST INDEX (con't)

REQUEST NUMBER	REV.	STATUS	DESCRIPTION	NRC STIPULATIONS
RR-14	5	Not Resubmitted for the Third Interval	ASME Code Cases Not Authorized by Regulatory Guide 1.147	N/A
RR-15	1	Not Resubmitted for the Third Interval	Limited Examination Coverage for Integral Attachments on Class 2 Vessels, Piping, Pumps, and Valves	N/A
RR-16	0	Not Resubmitted for the Third Interval	Pressure Testing of Pressure Retaining Components in Class 2 Pressure Vessels, Piping, Pumps, and Valves	N/A
RR-17	1	Resubmitted for the Third Interval as part of this Program, Rev. 0	Alternative Testing for Main Steam Safety and Relief Valve Discharge Piping	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-18	0	Not Resubmitted for the Third Interval	Limited Examination Coverage for Integral Attachments on Class 1 Vessels	N/A
RR-19	0	Withdrawn During the Second Interval	Pressure Testing of ISI Class 3 Pressure Retaining Components in Emergency Service Water System	N/A
RR-20	0	Withdrawn During the Second Interval	Hydrostatic Testing Following Repair/Replacements	N/A

TABLE 5.1
REQUEST FOR ALTERNATIVES
AND RELIEF REQUEST INDEX (con't)

REQUEST NUMBER	REV.	STATUS	DESCRIPTION	NRC STIPULATIONS
RR-21	0	Not Submitted for Second or Third Interval	HPCI System Hydrostatic Test	N/A
RR-22	0	Not Resubmitted for the Third Interval	RPV Hydrostatic Test Frequency	N/A
RR-23	0	Submitted for the Third Interval as part of this Program, Rev. 0	Alternative Requirements for Qualification of VT-2 Examination Personnel	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-24	0	Submitted for the Third Interval as part of this Program, Rev. 0	Examination of SLC Nozzle Inside Radius Section	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-25	0	Submitted for the Third Interval as part of this Program, Rev. 0	Alternative Pressure Testing Requirements for RPV Flange Leak-off Piping	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-26	0	Submitted for the Third Interval as part of this Program, Rev. 0	Alternative Criteria for the Selection of Examination Category B-J Piping Welds	Awaiting NRC Response to the Program, Rev. 0 Submittal

TABLE 5.1
REQUEST FOR ALTERNATIVES
AND RELIEF REQUEST INDEX (con't)

REQUEST NUMBER	REV.	STATUS	DESCRIPTION	NRC STIPULATIONS
RR-27	0	Submitted for the Third Interval as part of this Program, Rev. 0	Examination of Class 2 Welds in Piping Less Than 3/8" Nominal Wall Thickness	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-28	0	Submitted for the Third Interval as part of this Program, Rev. 0	Alternative Examinations for Inaccessible Welds Located in Containment Penetrations	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-29	0	Submitted for the Third Interval as part of this Program, Rev. 0	Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-30	0	Submitted for the Third Interval as part of this Program, Rev. 0	Underwater Welding	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-31	0	Submitted for the Third Interval as part of this Program, Rev. 0	Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation	Awaiting NRC Response to the Program, Rev. 0 Submittal

TABLE 5.1
REQUEST FOR ALTERNATIVES
AND RELIEF REQUEST INDEX (con't)

REQUEST NUMBER	REV.	STATUS	DESCRIPTION	NRC STIPULATIONS
RR-32	0	Submitted for the Third Interval as part of this Program, Rev. 0	Alternative Requirements for Corrective Measures if Leakage Occurs at a Bolted Connection	Awaiting NRC Response to the Program, Rev. 0 Submittal
RR-33	0	Submitted for the Third Interval as part of this Program, Rev. 0	Alternative Requirements to Required Percentages of Examinations	Awaiting NRC Response to the Program, Rev. 0 Submittal

SECTION 6.0

REQUEST FOR ALTERNATIVES AND RELIEF REQUESTS

This Section of the Program contains the Requests for Alternatives and Relief Requests submitted for the third ten-year inspection interval for the Peach Bottom Atomic Power Station, Units 2 and 3.

REQUEST NUMBER: RR-01
REVISION 1
(Page 1 of 1)

RESCINDED DURING THE SECOND INTERVAL

REQUEST NUMBER: RR-02
REVISION 0
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-03
REVISION 0
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-04
REVISION 1
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-05
REVISION 2
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-06
REVISION 2
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-07
REVISION 0
(Page 1 of 1)

WITHDRAWN DURING THE SECOND INTERVAL

REQUEST NUMBER: RR-08
REVISION 1
(Page 1 of 3)

COMPONENT IDENTIFICATION

Code Class:	2
References:	IWC-2500, Table IWC-2500-1
Examination Category:	C-A
Item Number:	C1.10
Description:	Limited Examination Coverage for Pressure Retaining Welds in Class 2 Pressure Vessels
Component Numbers:	Unit 2: Weld No. 10-2HXA-1 Unit 3: Weld No. 10-2HXA-1

CODE REQUIREMENT

Table IWC-2500-1, Examination Category C-A, Code Item No. C1.10, requires a volumetric examination to be performed on circumferential welds in Class 2 vessels. Per footnote (3) of the table, "In the case of multiple vessels of similar design, size, and service (such as steam generators, heat exchangers), the required examinations may be limited to one vessel or distributed among the vessels."

BASIS FOR RELIEF

Pursuant to 10CFR50.55a(g)(5), relief is requested on the basis that complete conformance with the Code requirements is impractical for the facility.

There are four Residual Heat Removal (RHR) heat exchangers in each unit at the Peach Bottom Atomic Power Station. All eight RHR heat exchangers have the same configuration, which is shown in Figure No. RR-08-1. In accordance with ASME, Section XI, Code requirements, examinations will be performed on shell-to-flange welds 10-2HXA-1 and 10-2HXA-2, which are the upper and lower circumferential shell welds in the "A" RHR heat exchanger in each unit. Upper shell-to-flange weld 10-2HXA-1 can only be examined from one side of the weld due to the configuration of the flange. In addition, access for a one-sided examination is limited due to the weld crown configuration. Approximately 15% of the required examination volume is inaccessible for examination due to the above conditions.

REQUEST NUMBER: RR-08
REVISION 1
(Page 2 of 3)

BASIS FOR RELIEF (con't)

Partial examination of weld 10-2HXA-1, coupled with the complete examination of weld 10-2HXA-2, will provide adequate assessment of the heat exchanger Class 2 welds. In addition, all welds in the heat exchangers are subject to VT-2 visual examination during routine system leakage testing.

PROPOSED ALTERNATIVE EXAMINATION

As an alternative examination, Peach Bottom Atomic Power Station, Units 2 and 3, will examine weld 10-2HXA-1 to the extent practical, which is expected to achieve approximately 85% coverage. Weld 10-2HXA-2 will be examined in its entirety.

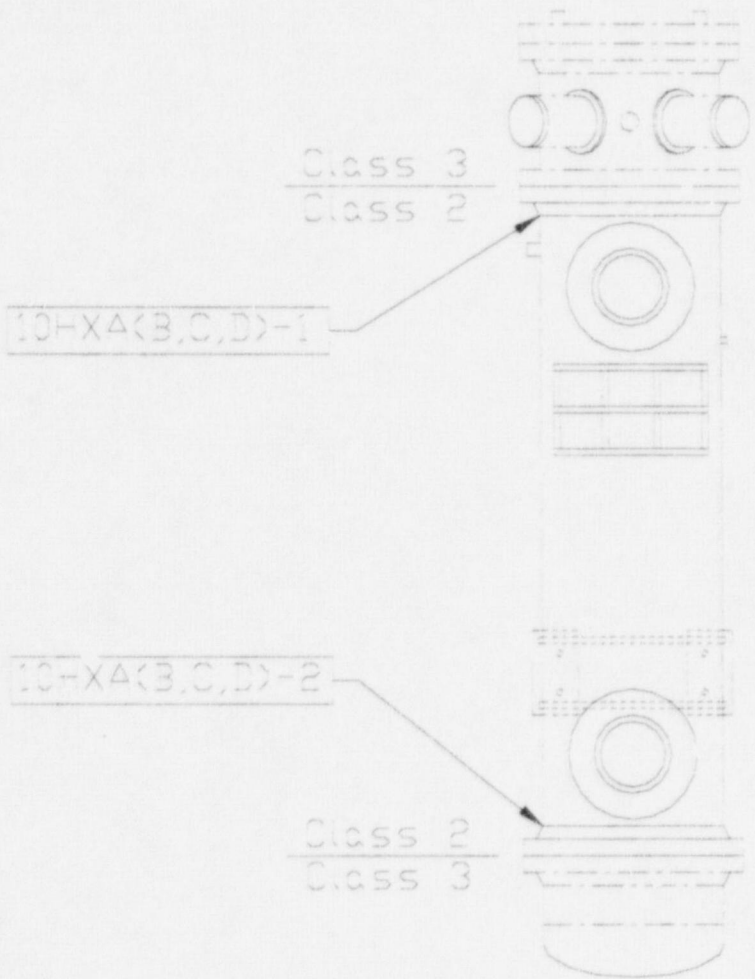
APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

REQUEST NUMBER: RR-08
REVISION 1
(Page 3 of 3)

FIGURE RR-08-1

RESIDUAL HEAT REMOVAL HEAT EXCHANGER



REQUEST NUMBER: RR-09
REVISION 0
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-10
REVISION 1
(Page 1 of 3)

COMPONENT IDENTIFICATION

Code Classes:	Class 1, 2, and 3
References:	Subsection IWF Table IWF-2500-1 IWF-5000 Code Case N-491-1 Technical Requirements Manual 3.16 for Units 2 and 3
Examination Category:	F-A
Item Numbers:	F1.10 through F1.40
Description:	Alternative Requirements for the Examination of Snubber Assemblies
Component Numbers:	All Snubber Assemblies

CODE REQUIREMENTS

The 1989 Edition of ASME, Section XI, Subsection IWF provides requirements for the inspection and testing of Class 1, 2, 3 and MC component supports. Article IWF-2000 provides the examination rules for component supports. They are summarized in Table IWF-2500, Examination Category F-A, which specifies VT-3 visual examination of supports each inspection interval.

Code Case N-491-1 provides for the sampling of a portion of the support population as an alternative selection criteria to IWF-2500. It will be implemented at Peach Bottom Atomic Power Station, Units 2 and 3, during the third ten-year interval.

Article IWF-5000 provides the inservice inspection requirements for snubbers. Paragraph IWF-5300(a) specifies that inservice examinations shall be performed in accordance with the first Addenda to ASME/ANSI OM-1987, Part 4 (published in 1988) using the VT-3 visual examination method in IWA-2213. IWF-5300(b) specifies that inservice tests shall be performed in accordance with the first Addenda to ASME/ANSI OM-1987, Part 4 (published in 1988).

REQUEST NUMBER: RR-10
REVISION 1
(Page 2 of 3)

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety. Also, pursuant to 10 CFR50.55a(a)(3)(ii), relief is requested on the basis that compliance with Section XI requirements will result in a hardship without a compensating increase in the levels of quality and safety.

Peach Bottom Atomic Power Station, Units 2 and 3, performs examinations and functional tests of all safety related snubber assemblies in accordance with Technical Requirements Manual (TRM) 3.16. This program was previously contained in the Technical Specifications and was implemented during the second ten-year interval. It must also be implemented during the third ten-year interval. The purpose of the TRM 3.16 program is to assure and demonstrate operational readiness and structural integrity of snubbers through testing and examination. The examination criteria for snubbers from pin-connection to pin-connection meet this objective. Therefore, performance of the ASME, Section XI, examinations on snubber assemblies would be redundant.

Peach Bottom Atomic Power Station, Units 2 and 3, has procedures in place to implement the TRM 3.16 program. The examinations are performed by qualified personnel and meet the intent of the inspections and tests of ASME Section XI. PECO Energy has determined that implementation of TRM 3.16 for both Units 2 and 3 will assure an acceptable level of quality and safety, and that compliance with the provisions of ASME, Section XI, for snubber assemblies would not result in a compensating increase in safety and quality.

PROPOSED ALTERNATIVE REQUIREMENTS

The examination and functional testing of snubber assemblies from pin-connection to pin-connection at Peach Bottom Atomic Power Station, Units 2 and 3, will be performed in accordance with TRM 3.16. These examinations will be performed in lieu of the inspection and testing requirements of IWF-2000 and IWF-5000.

The general requirements of Subsection IWA, such as examination methods, personnel qualifications, etc. still apply. Additionally, all repairs, replacements, records and reports will be in accordance with Section XI.

REQUEST NUMBER: RR-10
REVISION 1
(Page 3 of 3)

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

REQUEST NUMBER: RR-11
REVISION 0
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-12
REVISION 0
(Page 1 of 1)

DENIED DURING THE SECOND INTERVAL

REQUEST NUMBER: RR-13
REVISION 1
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-14
REVISION 5
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

NOTES: 1) During the second inservice inspection interval, Code Case N-546 was submitted under Request RR-14, Table RR-14-3. For the third inservice inspection interval, Code Case N-546 is submitted under Request for Alternative RR-23.

2) During the second inservice inspection interval, Code Case N-516-1 was submitted under Request RR-14, Table RR-14-4. For the third inservice inspection interval, Code Case N-516-1 is submitted under Request for Alternative RR-30.

REQUEST NUMBER: RR-15
REVISION 1
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-16
REVISION 0
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-17
REVISION 0
(Page 1 of 2)

COMPONENT IDENTIFICATION

Code Class:	3
References:	Table IWB-2500-1, IWD-5223(f), Code Case N-498-1
Examination Category:	D-B
Item Number:	D2.10
Description:	Alternative Testing for Main Steam Safety and Relief Valve Discharge Piping
Component Numbers:	All Main Steam Safety and Relief Valve Discharge Piping (11 Lines per Unit)

CODE REQUIREMENT

ASME, Section XI, 1989 Edition, Subparagraph IWD-5223(f), states that, "For safety or relief valve piping which discharges into the containment pressure suppression pool, a pneumatic test (at a pressure of 90% of the pipe submergence head of water) that demonstrates leakage integrity shall be performed in lieu of system hydrostatic test."

Code Case N-498-1 states that a system pressure test, as described therein, may be conducted in lieu of the 10-year system hydrostatic test.

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(ii), relief is requested on the basis that compliance with Section XI requirements would result in hardship without a compensating increase in the levels of quality and safety.

The application of Code Case N-498-1 provides an alternative to the performance of the 10-year system hydrostatic pressure test, and thereby eliminates the need to invoke subparagraph IWD-5223(f) of ASME, Section XI. However, the Code provides limited direction for performing the system pressure test which is the alternative resulting from the application of Code Case N-498-1. PECO Energy has considered using the criteria presented in IWD-5223(f) for guidance, but determined that it would represent a hardship without a compensating increase in the levels of quality and safety.

REQUEST NUMBER: RR-17
REVISION 0
(Page 2 of 2)

BASIS FOR ALTERNATIVE (con't)

For Peach Bottom Atomic Power Station, Units 2 and 3, meeting the requirements of IWD-5223(f) translates into performing a pneumatic test at a test pressure of 2 psig. The ability of a test to yield worthwhile results when performed at this low pressure is questionable because the leakage integrity of the piping would not be challenged. However, performance of the pneumatic test on eleven lines per unit would require the utilization of ISI manpower and resources. In addition, portions of these lines are located inside the suppression chamber in areas that are difficult to access. Therefore, performance of the test represents a hardship with no compensating increase in plant safety.

PROPOSED ALTERNATIVE EXAMINATION

Instrumentation (acoustic, temperature) on these lines provides indirect information relative to the integrity of these lines. This instrumentation is routinely monitored when the Main Steam Relief Valves are exercised.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

REQUEST NUMBER: RR-18
REVISION 0
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-19
REVISION 0
(Page 1 of 1)

WITHDRAWN DURING THE SECOND INTERVAL

REQUEST NUMBER: RR-20
REVISION 0
(Page 1 of 1)

WITHDRAWN DURING THE SECOND INTERVAL

REQUEST NUMBER: RR-21
REVISION 0
(Page 1 of 1)

NOT SUBMITTED
FOR THE SECOND
OR THIRD INTERVAL

REQUEST NUMBER: RR-22
REVISION 0
(Page 1 of 1)

NOT RESUBMITTED
FOR THE
THIRD INTERVAL

REQUEST NUMBER: RR-23
REVISION 0
(Page 1 of 2)

COMPONENT IDENTIFICATION

Code Classes:	1, 2, and 3
Reference:	IWA-2300
Examination Category:	Not Applicable
Item Number:	Not Applicable
Description:	Alternative Requirements for Qualification of VT-2 Examination Personnel.
Component Numbers:	Class 1, 2, and 3 Pressure Retaining Components.

CODE REQUIREMENTS

Section XI, Subarticle IWA-2300 and Paragraph IWA-2312, require personnel performing nondestructive examinations not listed in SNT-TC-1A to be qualified and certified to a comparable level of qualification as defined in SNT-TC-1A and the Employer's written practice.

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested on the basis the proposed alternatives would provide an acceptable level of quality and safety.

Section XI currently requires personnel conducting VT-2 inspections to be qualified and certified to comparable levels of qualification as defined in SNT-TC-1A and the Employer's written practice. However, unlike the nondestructive testing methods addressed within SNT-TC-1A, or VT-1 and VT-3 examination methods, VT-2 examinations do not require any special knowledge of underlying technical principles to perform the examination. It is only a straight forward examination to look for evidence of leakage or structural distress. No special skills or technical training are required in order to observe water dripping from a component or bubbles forming on a wetted joint. As such, VT-2 personnel should not be subject to the same qualification and certification requirements that were established for nondestructive testing personnel. Code Case N-546 provides more appropriate requirements for the qualification and certification of VT-2 examination personnel.

REQUEST NUMBER: RR-23
REVISION 0
(Page 2 of 2)

BASIS FOR ALTERNATIVE (cont.)

Code Case N-546 requires that personnel performing VT-2 visual inspections have at least forty (40) hours of plant walkdown experience, receive a minimum of four (4) hours of training on Section XI requirements, and pass the vision test requirements of IWA-2321, 1995 Edition. This alternative to the existing Code requirements reduces the administrative burden of maintaining a Section XI qualification and certification program for VT-2 examiners, and allows for the use of personnel most familiar with the walkdown of plant systems, such as licensed and non-licensed operators, local leak rate test personnel, system engineers and examination personnel. The quality of VT-2 visual examinations will be maintained by using the alternative qualification criteria of the Code Case.

Code Case N-546 was approved by the ASME Boiler and Pressure Vessel Code Committee on August 24, 1995, but is not yet included in the most recent listing of NRC approved code cases provided in Draft Revision 12 of Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability - ASME, Section XI, Division 1".

Note: During the second inservice inspection interval, Code Case N-546 was submitted under Relief Request RR-14, Table RR-14-3.

PROPOSED ALTERNATIVE CRITERIA

Peach Bottom Atomic Power Station, Units 2 and 3, will use the provisions of Code Case N-546 in its entirety as an alternative to the requirements of Section XI, IWA-2300 for qualifying VT-2 visual examiners.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

REQUEST NUMBER: RR-24
REVISION 0
(Page 1 of 3)

COMPONENT IDENTIFICATION

Code Class:	1
References:	IWB-2500, Table IWB-2500-1
Examination Category:	B-D
Item Number:	B3.100
Description:	Examination of Standby Liquid Control Nozzle Inside Radius Section
Component Numbers:	Unit 2: N10-IRS Unit 3: N10-IRS

CODE REQUIREMENT

Table IWB-2500-1, Examination Category B-D, Code Item No. B3.100, requires a volumetric examination to be performed on the inner radius section of all reactor vessel nozzles each inspection interval. Table IWB-2500-1, Examination Category B-D, Code Item No. B3.100 refers to the nozzle configurations shown in Figure No. IWB-2500-7.

BASIS FOR RELIEF

Pursuant to 10CFR50.55a(g)(5), relief is requested on the basis that conformance with the Code requirements is impractical for the facility.

The Standby Liquid Control (SLC) nozzle, as shown in Figure RR-24-1, is designed with an integral socket to which the boron injection piping is fillet welded. This design is different than any of the configurations shown in ASME, Section XI, Figure No. IWB-2500-7. The SLC nozzle is located in the bottom head of the vessel in an area that is inaccessible for ultrasonic examinations from the inside of the vessel. Therefore, ultrasonic examinations would need to be performed from the outside diameter of the vessel. As shown in Figure RR-24-1, the ultrasonic scan would need to travel through the full thickness of the vessel into a complex cladding/socket configuration. These geometric and material reflectors inherent in the design prevent a meaningful examination from being performed on the inner radius of the SLC nozzle.

REQUEST NUMBER: RR-24
REVISION 0
(Page 2 of 3)

BASIS FOR RELIEF (con't)

In addition, the inner radius socket attaches to piping that injects boron at locations far removed from the nozzle. Therefore, the SLC nozzle inner radius is not subjected to turbulent mixing conditions that are a concern at other nozzles.

PROPOSED ALTERNATIVE EXAMINATION

As an alternative examination, Peach Bottom Atomic Power Station, Units 2 and 3, will perform a VT-2 visual examination of the subject nozzles each refueling outage in conjunction with the Class 1 System Leakage Test.

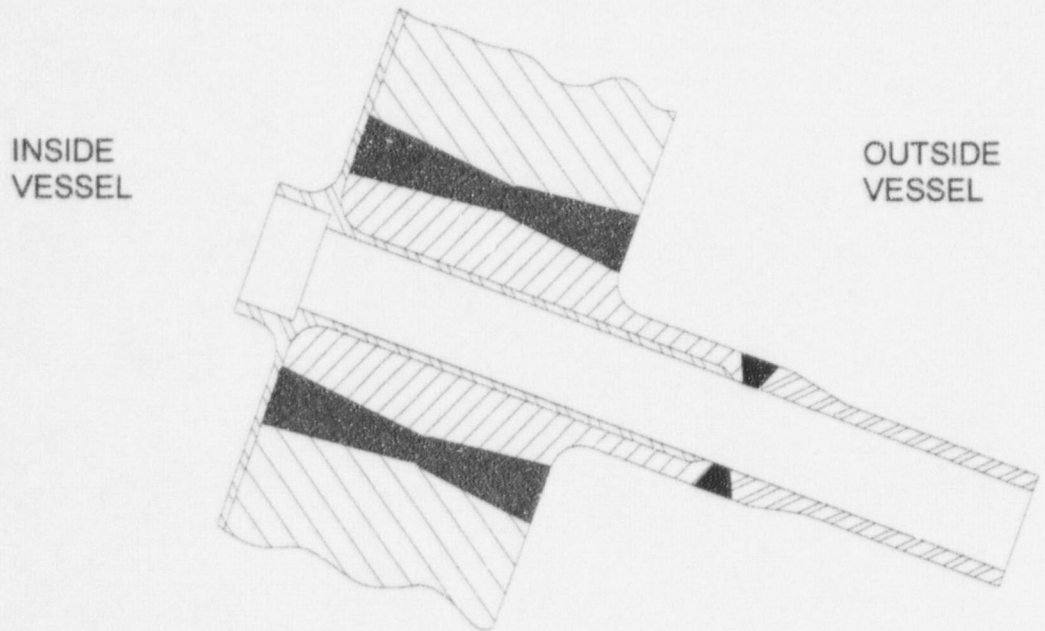
APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

REQUEST NUMBER: RR-24
REVISION 0
(Page 3 of 3)

FIGURE RR-24-1

2 INCH STANDBY LIQUID CONTROL NOZZLE



REQUEST NUMBER: RR-25
REVISION 0
(Page 1 of 5)

COMPONENT IDENTIFICATION

Code Class:	2
Reference:	IWC-2500, Table IWC-2500-1
Examination Category:	C-H
Item Numbers:	C7.30, C7.40
Description:	Alternative Pressure Testing Requirements for RPV Flange Leak-Off Piping
Component Numbers:	Unit 2: Line 4DCN-1" Unit 3: Line 4DCN-1"

CODE REQUIREMENTS

ASME, Section XI, Table IWC-2500-1, Examination Category C-H, Code Item No. C7.30, requires the performance of a system pressure test each inspection period on Class 2 piping up to the first normally closed valve, or valve capable of automatic closure.

ASME, Section XI, Table IWC-2500-1, Examination Category C-H, Code Item No. C7.40, requires the performance of a system hydrostatic test each inspection interval on Class 2 piping up to the first normally closed valve, or valve capable of automatic closure. With the application of Code Case N-498-1, a ten-year system pressure test will be performed in lieu of the ten-year hydrostatic test.

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(ii), relief is requested on the basis that compliance with Section XI requirements would result in hardship without a compensating increase in the levels of quality and safety.

The Reactor Vessel Head Flange Leak-Off Line 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 (See Figures RR-25-1 and RR-25-2). This line 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.

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BASIS FOR ALTERNATIVE (con't)

The configuration of this system precludes system testing while the vessel head is removed because the odd configuration of the vessel tap (See Figure RR-25-2) 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 only 3/16 of an inch in diameter and 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 line, which has no vent available. Additionally, a pneumatic test performed with the head installed is precluded due to the configuration of the top head. 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 were 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.

In addition to the problems associated with the O-ring design that preclude this testing, it is also questionable whether a pneumatic test is appropriate for this line. The use of a pneumatic test performed at RPV nominal operating pressure would represent an unnecessary safety risk to personnel in the unlikely event of a test failure, due to the large amount of stored energy contained in pressurized air.

Operational testing of this line is precluded because the line will only be pressurized in the event of a failure of the inner O-ring. It is extremely impractical to purposely fail the inner O-ring in order to perform a test.

Based on the above, Peach Bottom Atomic Power Station, Units 2 and 3, requests the following alternative examination be performed on the Reactor Vessel Head Flange Seal Leak-Off Lines.

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PROPOSED ALTERNATIVE EXAMINATION

A VT-2 visual examination will be performed on the line during vessel flood-up during a refueling outage. The hydrostatic head developed due to the water above the vessel flange during flood-up will allow for the detection of any gross indications in the line. This examination will be performed with the frequency specified by table IWC-2500-1 for an IWC-5221 test (once each inspection period).

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

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FIGURE RR-25-1

REACTOR PRESSURE VESSEL HEAD FLANGE LEAK-OFF LINE CONFIGURATION

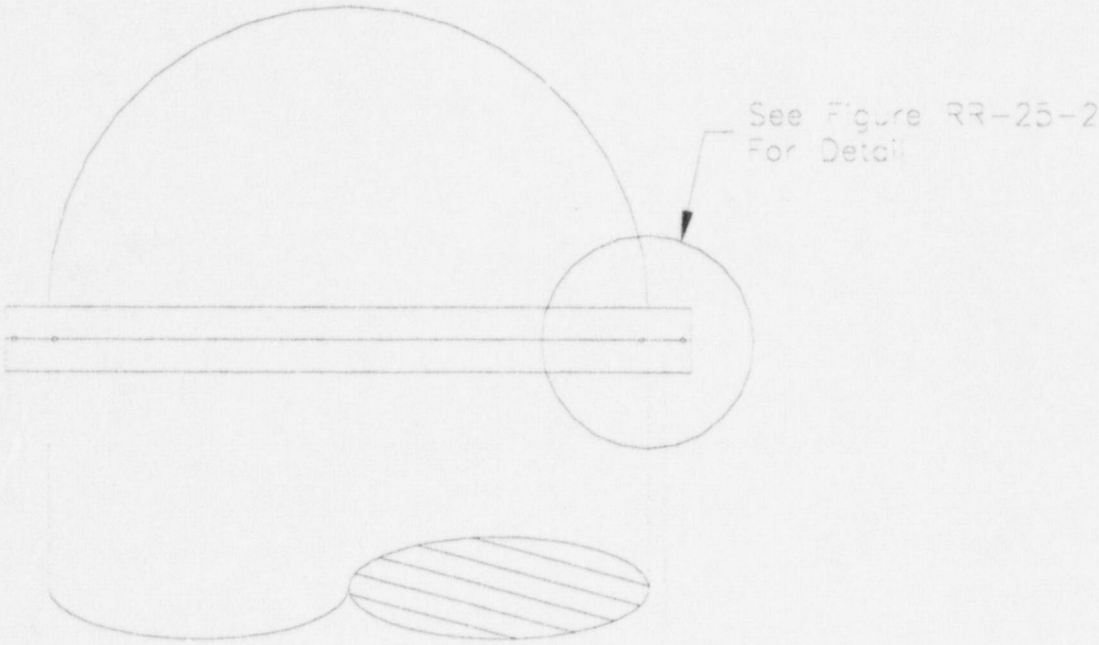

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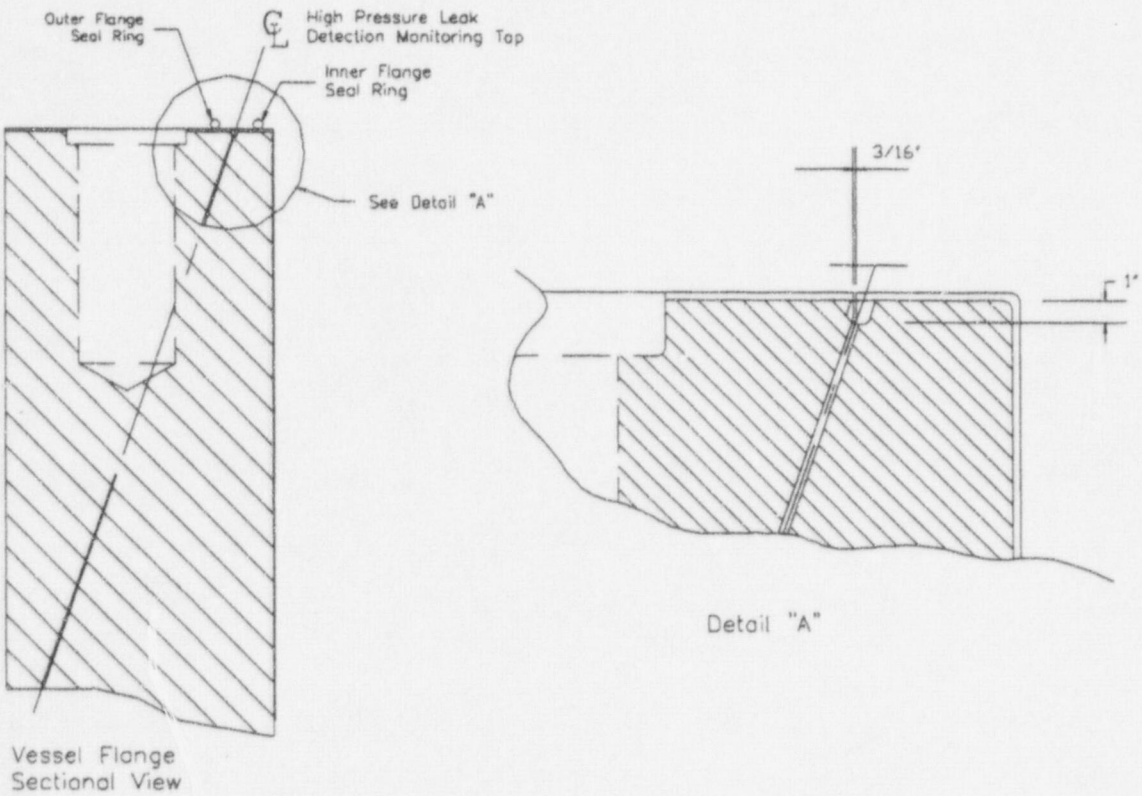
FIGURE RR-25-2

REACTOR PRESSURE VESSEL HEAD FLANGE LEAK-OFF LINE DETAILS



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COMPONENT IDENTIFICATION

Code Class:	1
References:	IWB-2500, Table IWB-2500-1, NRC Generic Letter 88-01
Examination Category:	B-J
Item Numbers:	B9.11, B9.21, B9.31, B9.32, B9.40
Description:	Alternative Criteria for the Selection of Category B-J Welds for Examination
Component Numbers:	All Class 1 Piping Welds

CODE REQUIREMENTS

ASME, Section XI, IWB-2500, states that components shall be examined and tested as specified in Table IWB-2500-1.

Table IWB-2500-1, Examination Category B-J, requires the extent and frequency of examinations to be determined using Notes 1 and 2, which state the following:

(1) Examinations shall include the following:

(a) All terminal ends in each pipe or branch run connected to vessels.

(b) All terminal ends and joints in each pipe or branch run connected to other components where the stress levels exceed either of the following limits under loads associated with specific seismic events and operational conditions:

(1) primary plus secondary stress intensity range of 2.4 S_m for ferritic steel and austenitic steel

(2) cumulative usage factor U of 0.4

(c) All dissimilar metal welds between combinations of:

(1) carbon or low alloy steels to high alloy steels

(2) carbon or low alloy steels to high nickel alloys

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CODE REQUIREMENTS (con't)

(3) high alloy steels to high nickel alloys

(d) Additional piping welds so that the total number of circumferential butt welds (or branch connection or socket welds) selected for examination equals 25% of the circumferential butt welds (or branch connection or socket welds) in the reactor coolant piping system. This total does not include welds excluded by IWB-1220. These additional welds may be located in one loop (one loop is defined for both PWR and BWR plants in the 1977 Edition).

(2) The initially selected welds shall be reexamined during each inspection interval.

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

There are two issues that will be addressed concerning the selection of Examination Category B-J welds for examination. The first issue is the effect that NRC Generic Letter 88-01 has on the examination of Class 1 welds subject to Intergranular Stress Corrosion Cracking (IGSCC). The second issue is the application of the stress-based selection criteria presented in ASME, Section XI, Table IWB-2500-1, Examination Category B-J, Note (1). Request No. RR-26 will address both of these issues.

The implementation of Generic Letter 88-01 has a direct effect on the population of Class 1 welds subject to examination. There is significant overlap in systems and portions of systems that are required to be inspected by both Generic Letter 88-01 and ASME, Section XI. In order to simplify record keeping and assure that the Peach Bottom Atomic Power Station meets its commitments regarding Generic Letter 88-01 and Code inspections, the Class 1 austenitic stainless steel piping subject to Generic Letter 88-01 will be kept separate from the ASME weld count. This means that the 25% sample population required for Class 1 piping will only include those welds that are not otherwise covered by the Generic Letter. This is appropriate for the following reasons:

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For all Examination Category B-J welds, where the Code and Generic Letter 88-01 are applicable, the required examination methods and frequency of Generic Letter 88-01 are more restrictive. The least restrictive Generic Letter 88-01 designation is Category A. The examination requirements and frequency for that Category is a 25% sample over ten years. This is the same criteria that the Code requires for Class 1 piping. All other Generic Letter 88-01 categories require inspections more frequently. Therefore, any piping within the scope of Generic Letter 88-01 will be inspected at a rate that meets or exceeds that specified by the Code.

- Per Generic Letter 88-01, surface examinations will be performed once per interval on each weld selected within the Class 1 boundaries. This meets the requirements of ASME, Section XI. The only exception to this are those Category E welds that have been repaired by a weld overlay. The inspections on these welds will be in accordance with criteria in Generic Letter 88-01. This is acceptable, since the Code does not address these welds.

- The examination personnel that perform inspections on piping subject to Generic Letter 88-01 meet special qualification requirements. The examiners performing Generic Letter 88-01 examinations are qualified in accordance with an NRC approved program that NRC and the BWR industry have established. Proficiency is demonstrated on test blocks with actual IGSCC flaws. This ensures the examination personnel are qualified to perform the examinations. This exceeds Code requirements.

- Flaw evaluations performed on piping subject to Generic Letter 88-01 (regardless of Class) must satisfy the Class 1 rules of the Code contained in IWB-3600 of the 1986 Edition of Section XI.

- The results of the examinations are provided to NRC. When flaws exceed the acceptance criteria, but are determined by evaluation to be acceptable for return to service, the NRC approval is obtained prior to operation. This meets or exceeds Code requirements.

The ANII will review the Class 1 piping examinations as specified by Section XI.

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Once the total population of welds subject to Examination Category B-J requirements has been determined, the Code stress-based selection criteria need to be addressed. At the time Peach Bottom Atomic Power Station, Units 2 and 3, were constructed, the ASME Boiler and Pressure Vessel Code only addressed nuclear vessels. Therefore, the designated code of record for nuclear piping was USAS B31.1.0 - 1967 Edition, rather than Section III of the ASME Boiler and Pressure Vessel Code. Because the stress intensity range and usage factor described in Table IWB-2500-1, Examination Category B-J, Note 1(b), are parameters associated with ASME, Section III piping designs, this information does not currently exist for all the ISI Class 1 piping at Peach Bottom Atomic Power Station, Units 2 and 3. Although USAS B31.1.0 - 1967 established design and stress criteria for ISI Class 1 piping at Peach Bottom, Units 2 and 3, it differs from that required by ASME, Section III, and does not correlate to specific weld locations.

As allowed by 10CFR50.55a(b)(2)(ii), the criteria used for the selection of Examination Category B-J welds during the first and second intervals at Peach Bottom Atomic Power Station, Units 2 and 3, were based on ASME, Section XI, 1974 Edition with Addenda through Summer 1975. This weld selection methodology required the examination of a different 25% of the piping welds each inspection interval, such that 100% of the welds will be examined by the end of the 40 year licensing period. To continue selecting welds in this manner will result in considerable man-rem exposure to prepare new welds for examination each interval. Additionally, this method does not ensure that potentially high stressed welds are reexamined over the course of plant life to monitor for service induced degradation.

Use of the proposed alternative weld selection methodology described herein will help to maintain the radiation expended for weld preparation "As Low As Reasonably Achievable". In addition, the selection methodology of this Request has been designed to choose those welds which have a greater probability of being subject to higher stress levels. Putting emphasis on the examination of potentially higher stressed welds will meet the intent of the Code and improve the overall quality and safety levels of the ISI Program.

Based on these reasons, Peach Bottom Atomic Power Station, Units 2 and 3, requests relief from the ASME, Section XI, Table IWB-2500-1, Notes 1 and 2 requirements, regarding the selection of Examination Category B-J welds for examination.

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PROPOSED ALTERNATIVE CRITERIA

When determining the total population of Class 1, Examination Category B-J welds subject to examination, those welds which are addressed by Generic Letter 88-01 will not be repeated in the Code weld count. Therefore, the 25% sample population required for Examination Category B-J will only include those welds that are not otherwise covered by Generic Letter 88-01. The 25% sample will be selected as follows:

Peach Bottom Atomic Power Station, Units 2 and 3, will select Examination Category B-J welds for examination such that 25% of the total non-exempt welds are examined during the interval. These welds will then be reexamined during subsequent intervals per Table IWB-2500-1, Note 2. The weld population selected for examination shall include the following:

(1) All terminal ends in each pipe or branch run connected to vessels.

(2) All terminal ends in each pipe or branch run connected to other components.

(3) All dissimilar metal welds between combinations of:

(a) carbon or low alloy steels to high alloy steels

(b) carbon or low alloy steels to high nickel alloys

(c) high alloy steels to high nickel alloys

(4) Additional piping welds so that the total number of circumferential butt welds (or branch connection or socket welds) selected for examination equals 25% of the total number of non-exempt circumferential butt welds (or branch connection or socket welds) in the reactor coolant piping system. These additional piping welds shall be distributed as follows:

(a) The examinations shall be distributed among the Class 1 systems prorated, to the degree practicable, on the number of non-exempt welds in each system (i.e., if a system contains 30% of the non-exempt welds, then 30% of the nondestructive examinations required by Examination Category B-J should be performed on that system);

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(b) Within a system, the examinations shall be distributed among structural discontinuities prorated, to the extent practicable, on the number of non-exempt structural discontinuities in that system, and;

(c)Within each system, examinations shall be distributed between line sizes prorated, to the degree practicable, on the number of non-exempt welds in each line size.

Note: Structural discontinuities include pipe weld joints to valve bodies, pump casings, and pipe fittings such as elbows, tees, reducers, and flanges. A pipe-to-pipe weld is not considered a structural discontinuity.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

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COMPONENT IDENTIFICATION

Code Class:	2
Reference:	IWC-1220, IWC-2500, Table IWC-2500-1
Examination Category:	C-F-2
Item Numbers:	C5.51, C5.81
Description:	Examination of Class 2 Welds in Piping Less than 3/8 in. Nominal Wall Thickness
Component Numbers:	All Class 2 Piping Welds

CODE REQUIREMENT

ASME, Section XI, Table IWC-2500, Examination Category C-F-2, Note (2), states the following.

The welds selected for examination shall include 7.5%, but not less than 28 welds, of all carbon and low alloy steel welds not exempted by IWC-1220. (Some welds not exempted by IWC-1220 are not required to be nondestructively examined per Examination Category C-F-2. These welds, however, shall be included in the total weld count to which the 7.5% sampling rate is applied.) The examinations shall be distributed as follows:

(a) the examinations shall be distributed among the Class 2 systems prorated, to the degree practicable, on the number of nonexempt carbon and low alloy steel welds in each system (i.e., if a system contains 30% of the nonexempt welds, then 30% of the nondestructive examinations required by Examination Category C-F-2 should be performed on that system);

(b) within a system, the examinations shall be distributed among terminal ends and structural discontinuities [See Note(3)] prorated, to the degree practicable, on the number of nonexempt terminal ends and structural discontinuities in that system; and

(c) within each system, examinations shall be distributed between line sizes prorated to the degree practicable.

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BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

Code rules require that a 7.5% sampling rate be applied to all Examination Category C-F-2 piping welds not exempted by IWC-1220. The total weld count to which the sampling rate is applied includes both those welds required to be examined (i.e., $\geq$ 3/8" nominal wall thickness) and those welds for which examination is not required (i.e., < 3/8" nominal wall thickness). The total number of welds required to be examined are then distributed, in a prorated manner, among those systems requiring examination. Those piping welds less than 3/8" nominal wall thickness, while not requiring examination, will have an impact on the number of examinations required in systems with piping equal to or greater than 3/8" nominal wall thickness.

At the Peach Bottom Atomic Power Station, Units 2 and 3, a number of the Class 2 systems have piping with nominal wall thickness less than 3/8". This includes portions of the Residual Heat Removal, Core Spray, and High Pressure Coolant Injection systems. In the past, the Nuclear Regulatory Commission has expressed concerns at a number of nuclear facilities about examinations not being performed on sections of piping because they were less than 3/8" nominal wall thickness. Applying a sampling rate of 7.5% to all Examination Category C-F-2 piping welds regardless of wall thickness will ensure that all Class 2 systems will undergo examinations. Based on this reason, the proposed alternative examinations will ensure that an acceptable level of quality and safety will be met.

PROPOSED ALTERNATIVE EXAMINATIONS

A uniform 7.5% sampling rate will be applied to all Examination Category C-F-2 piping welds regardless of nominal wall thickness. The examination requirements shall be as follows:

1) Welds in piping $\geq$ 3/8" thick will be subject to volumetric and surface examinations as stated in ASME, Section XI.

2) Welds in piping < 3/8" thick will be subject to a surface examination.

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The piping welds selected for examination will still be subject to the distribution requirements stated in ASME, Section XI, Table IWC-2500-1, Examination Category C-F-2, Note (2).

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

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COMPONENT IDENTIFICATION

Code Class:	1
References:	IWB-2500, Table IWB-2500-1
Examination Category:	B-J
Item Number:	B9.11
Description:	Alternative Examinations for Inaccessible Welds Located at Containment Penetrations
Component Numbers:	See Table RR-28-1

CODE REQUIREMENT

Table IWB-2500-1 requires volumetric and surface examinations to be performed on welds in piping NPS 4 and larger.

BASIS FOR RELIEF

Pursuant to 10CFR50.55a(g)(5), relief is requested on the basis that conformance with the Code requirements is impractical for the facility.

Each of the lines identified in Table RR-28-1 penetrates the primary containment by means of a penetration assembly similar in design to that shown in Figure RR-28-1. Each of these lines have at least one pressure retaining circumferential weld that is inaccessible for surface and volumetric examinations due to the design of the penetration assembly. See Table RR-28-1 for a listing of the applicable lines and associated inaccessible weld(s).

As stated in 10CFR50.55a(g)(1) and (g)(4), for plants whose construction permits were issued prior to January 1, 1971, components shall meet the requirements set forth in ASME, Section XI, to the extent practical within the limitations of design, geometry and materials of construction of the components. Since ASME, Section XI, examination requirements did not exist at the time the Peach Bottom Atomic Power Station, Units 2 and 3, were designed, examination accessibility was not a primary consideration. As Figure RR-28-1 clearly illustrates, the penetration design prohibits the performance of surface or volumetric examination on the weld inside the penetration.

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BASIS FOR RELIEF (con't)

Based on the information provided, PECO Energy requests relief from the ASME, Section XI, requirements to perform surface and volumetric examinations on the subject welds.

PROPOSED ALTERNATIVE EXAMINATIONS

Surface and volumetric examinations will be performed each interval on the first accessible pipe weld outside each penetration that has an inaccessible weld(s) inside the penetration.

In addition, the welds inside the penetrations are subject to periodic pressure testing in accordance with ASME, Section XI, Table IWB-2500-1, Examination Category B-P.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15. 1998, for Unit 3.

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TABLE RR-28-1

PENETRATIONS WITH INACCESSIBLE WELDS

SYSTEM	PENETRATION	LINE NO.	LINE SIZE	UNIT 2 WELD NOs.	UNIT 3 WELD Nos.
Main Steam	N-7A N-7B N-7C N-7D	1DBN-26"-A 1DBN-26"-B 1DBN-26"-C 1DBN-26"-D	26" 26" 26" 26"	1-A-13A 1-B-16A 1-C-16A 1-D-13A	1-A-13A 1-B-16A 1-C-16A 1-D-13A
Feedwater	N-9A N-9B	6DDNL-24" 6DDNL-24"	24" 24"	6-A-9A 6-B-8A	6-A-9A 6-B-8A
HPCI	N-11	23DBN-10"	10"	23-0-17A	23-0-17A
RHR (Pump Supply)	N-12	10DCN-20" (Unit 2) 10DCA-20" (Unit 3)	20"	10-0-16A 10-0-16B	None (See Note 1)
RHR (Pump Discharge)	N-13A	10DE-24" (Unit 2) 10DCA-24" (Unit 3)	24"	10-IA-2A	None (See Note 1)
	N-13B	10DE-24" (Unit 2) 10DCA-24" (Unit 3)	24"	10-IB-2A	None (See Note 1)
Core Spray	N-16A N-16B	14DCN-12" 14DCN-12"	12" 12"	14-A-3B 14-B-3B	14-A-3A 14-B-3A

NOTE:

1) Penetrations N-12, N-13A and N-13B in Unit 3 were replaced in 1988. The replacement assemblies do not have inaccessible welds.

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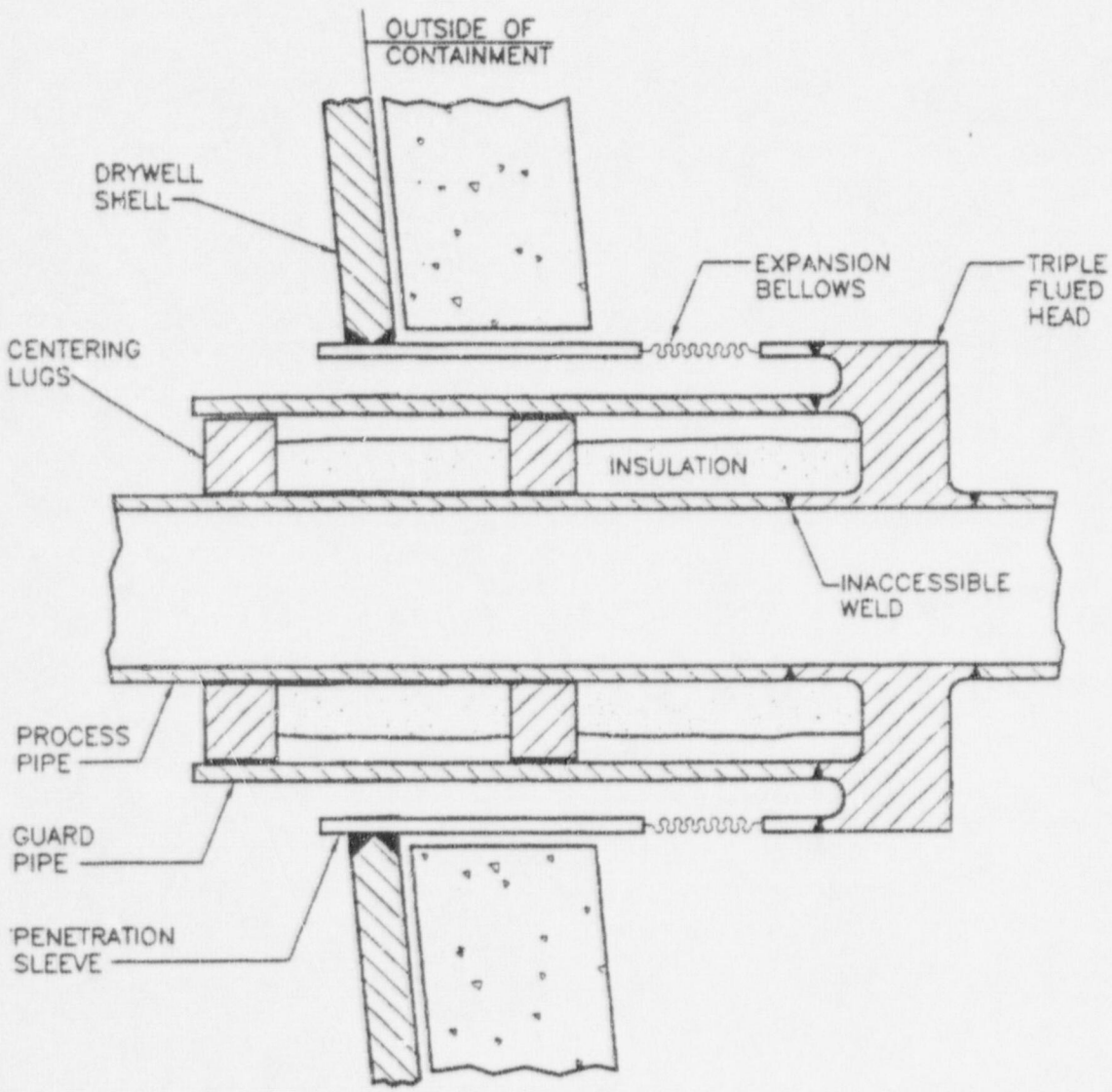
FIGURE RR-28-1

TYPICAL DESIGN OF PRIMARY CONTAINMENT PENETRATION



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COMPONENT IDENTIFICATION

Code Classes:	1, 2 and 3
References:	IWA-7000 Code Case N-508-1
Examination Categories:	Not Applicable
Item Numbers:	Not Applicable
Description:	Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing
Component Numbers:	All Class 1, 2 and 3 Snubbers and Relief Valves Subject to Testing

CODE REQUIREMENTS

ASME, Section XI, IWA-7000, provides the requirements that must be implemented whenever an item is replaced. IWA-7000 establishes both technical and administrative criteria.

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

Currently, when a snubber or relief valve is removed for the purposes of testing, the following two options are available:

1) Maintain the system or portion of the system in a degraded condition, while complying with Peach Bottom Technical Requirements Manual, until the removed item is tested, refurbished if required, and reistalled.

2) Replace the item being tested with a "like" item, and test the removed item at a later date.

Per ASME, Section XI, the rotation of snubbers and relief valves, as addressed in the second option, is required to be treated as a Code replacement that must meet the requirements of IWA-7000. This entails the use of Replacement Programs, Replacement Plans, suitability evaluations, review and concurrence by the ANII, and maintenance of NIS-2 forms or other Section XI documentation to record the

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BASIS FOR ALTERNATIVE (con't)

replacement. Such controls are appropriate when items are replaced for the purpose of design changes, failures, or expiration of component life, but are excessive for the removal and installation of snubbers and relief valves solely for the purpose of testing. ASME, Section XI, developed Code Case N-508-1 to address this inconsistency in the Code. Due to the nine provisions within the Code Case, the alternative criteria only eliminates the inappropriate administrative controls and documentation requirements associated with an ASME Section replacement. All other aspects of the replacement such as design, manufacture, ASME, Section XI, pressure testing requirements, operational limits and settings are still maintained. In addition, the implementation of Code Case N-508-1 does not change the testing requirements provided in the Peach Bottom Atomic Power Station Technical Requirements Manual.

Code Case N-508-1 does not alter any Section XI requirements if a removed item requires any repair or replacement of Code parts. As required by paragraph (i) of the Code Case, repair or replacement of the removed item, when required, shall be performed in accordance with IWA-4000 for repairs and IWA-7000 for replacements. Because of this requirement, if the removed item requires the repair or replacement of a Code item, then this activity will be treated as a Section XI repair or replacement, and the required Section XI documentation will be generated.

The use of ASME Code Case N-508-1 as an alternative to IWA-7000 for the rotation of snubbers and relief valves for the purpose of testing, provides a reduction in inappropriate administrative requirements and documentation. All technical requirements (e.g., design, fabrication, installation, testing, etc.) are still maintained in a manner that provides an acceptable level of quality and safety that is consistent with the criteria of ASME, Section XI.

PROPOSED ALTERNATIVE CRITERIA

Peach Bottom Atomic Power Station, Units 2 and 3, will use Code Case N-508-1 in its entirety.

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APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

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COMPONENT IDENTIFICATION

Code Classes:	1, 2 and 3
References:	IWA-4000, IWA-7000 Code Case N-516-1
Examination Categories:	Not Applicable
Item Numbers:	Not Applicable
Description:	Underwater Welding
Component Numbers:	All Class 1, 2 and 3 Components Subject to Underwater Repair or Replacement Activities

CODE REQUIREMENTS

ASME, Section XI, IWA-4000 and IWA-7000, provide the general requirements for performing repairs and replacements. Specific criteria on performing underwater welding are not addressed.

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

ASME, Section XI, IWA-4000 and IWA-7000, do not address the requirements for welded repair or installation of replacement items by welding on ASME Class 1, 2 and 3 pressure boundary components when welding is performed underwater. To address this issue, ASME, Section XI, has issued Code Case N-516-1, "Underwater Welding". Code Case N-516-1 provides welding methods and requirements that may be used when welding for a repair or replacement activity is performed underwater.

Code Case N-516-1 was approved by the ASME Boiler and Pressure Vessel Code Committee on December 31, 1996, but is not yet endorsed in the most recent listing of NRC approved code cases provided in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability - ASME, Section XI, Division 1". The previous version of the Code Case, N-516, was endorsed in Draft Revision 12 of Regulatory Guide 1.147, but this original version of the code case does not address underwater repairs and replacements made on P-1 carbon steel components. Due to the potential need to perform underwater repairs and replacements on carbon steel components, PECO Energy requests the implementation of Code Case N-516-1.

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BASIS FOR ALTERNATIVE (con't)

PECO Energy considers the requirements for performing underwater welding provided in Code Case N-516-1 to be an improvement over the existing requirements, and therefore regards these requirements as providing an acceptable level of quality and safety.

Note: During the second inservice inspection interval, Code Case N-516-1 was submitted under Relief Request No. RR-14, Table RR-14-4.

PROPOSED ALTERNATIVE CRITERIA

Peach Bottom Atomic Power Station, Units 2 and 3, will use Code Case N-516-1 in its entirety with the following added stipulation:

> When welding is to be performed on high neutron fluence Class 1 material, then a mockup, using material with similar fluence levels, should be welded to verify that adequate crack prevention measures were used.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

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COMPONENT IDENTIFICATION

Code Classes:	1, 2 and 3
References:	IWA-4800, IWA-6200, IWA-7500 Code Case N-532
Examination Categories:	Not Applicable
Item Numbers:	Not Applicable
Description:	Alternative Requirements to Repair and Replacement Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000, IWA-6000 and IWA-7000
Component Numbers:	All Class 1, 2 and 3 Components Subject to Inservice Inspection, Repair or Replacement

CODE REQUIREMENTS

ASME, Section XI, IWA-6200, requires the preparation of Inservice Inspection (ISI) Summary Reports, which contain completed Form NIS-1, "Owner's Report for Inservice Inspection" and Form NIS-2, "Owner's Report for Repair or Replacement". In accordance with IWA-6230, the ISI Summary Report is required to be submitted to the enforcement and regulatory authorities having jurisdiction at the plant within 90 days of the completion of the inservice inspections conducted each refueling outage.

ASME, Section XI, IWA-4800 and IWA-7500, reiterate the requirement of IWA-3000 to complete NIS-2 forms for repairs and replacements.

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

ASME, Section XI, has recently reevaluated the Code criteria for reporting inservice inspection results, repairs and replacements, and has concluded that the current requirements are no longer effective. To address this issue, ASME, Section XI, has issued Code Case N-532, "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and

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Submission as Required by IWA-4000 and IWA-6000". Code Case N-532 provides an alternative to the current ASME, Section XI, repair and replacement documentation requirements as well as regulatory reporting requirements relating to inservice inspection. This alternative is intended to reduce the resources required to prepare NIS-2 forms and prepare and submit the ISI Summary Report required by ASME, Section XI, 1989 Edition, after each refueling outage. This is a significant reduction in the administrative burden required by ASME, Section XI, IWA-6000. The use of Code Case N-532 only affects documentation and reporting requirements and does not affect the level of quality or safety provided by the Inservice Inspection Program.

Code Case N-532 was approved by the ASME Boiler and Pressure Vessel Code Committee on December 12, 1994, but is not yet endorsed in the most recent listing of NRC approved code cases provided in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability - ASME, Section XI, Division 1".

The NRC Staff has made recommendations supporting the development of Code Case N-532 in SECY-94-093, "NRC Staff Assessment of Reporting Requirements for Power Reactor Licensees". The use of Code Case N-532 is consistent with the recommendations of SECY-94-093 and provides more meaningful documentation to the regulatory and enforcement authorities having jurisdiction at the plant.

This request to use Code Case N-532 includes compliance with the Code Case with the following clarification regarding reporting of "corrective measures". ASME, Section XI, uses the term "corrective measures" in two different ways. One use of the term involves Code required activities such as repairs and replacements. The other use of the term, as found in IWX-3000, involves maintenance activities that do not involve repairs or replacements. With this clarification, PECO Energy proposes not to report corrective measures which only include routine maintenance activities such as tightening threaded fittings to eliminate leakage, torquing of fasteners to eliminate leakage at bolted connections, replacing valve packing due to unacceptable packing leakage, tightening loosened mechanical connections on supports, adjusting and realigning supports, cleaning up corrosion on components resulting from leakage, etc.

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Including these routine maintenance activities in the Owner's Activity Report Form OAR-1 required by Code Case N-532 would be a significant expansion of current requirements. In addition, it would be ar unnecessary reporting and review burden which provides little benefit. Reporting of these minor maintenance corrective measures has no safety significance and clutters the reporting of meaningful information on repairs, replacements, and evaluations performed to accept flaws and relevant conditions exceeding Section XI acceptance criteria. Corrective measures that refer to Code required activities, such as repairs and replacements, will be reported in compliance with Code Case N-532.

PECO Energy considers the alternative documentation and reporting requirements of Code Case N-532 to be a reasonable alternative and an improvement to existing requirements. Because the use of this alternative only affects documentation and reporting requirements, PECO Energy considers this alternative to provide an acceptable level of quality and safety.

PROPOSED ALTERNATIVE CRITERIA

Peach Bottom Atomic Power Station, Units 2 and 3, will use Code Case N-532 in its entirety with the clarification stated above regarding the provision in paragraph 2(c) of the Code Case for reporting corrective measures.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

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COMPONENT IDENTIFICATION

Code Classes:	1, 2, and 3
Reference:	IWA-5250(a)(2)
Examination Category:	Not Applicable
Item Number:	Not Applicable
Description:	Alternative Rules for Corrective Measures if Leakage Occurs at a Bolted Connection
Component Numbers:	Class 1, 2, and 3 Pressure-Retaining Bolted Connections

CODE REQUIREMENT

ASME, Section XI, 1989 Edition, Subparagraph IWA-5250(a)(2), states, "if leakage occurs at a bolted connection, the bolting shall be removed, VT-3 visually examined for corrosion, and evaluated in accordance with IWA-3100."

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(ii), relief is requested on the basis that compliance with Section XI requirements would result in hardship without a compensating increase in the levels of quality and safety.

The leaking environment at a bolted connection is one of many variables to consider when evaluating leakage at a bolted connection. Other variables to be considered are: bolting materials, leaking medium, duration of the leak, and orientation of the leak (not all the bolts may be wetted). These variables are important to consider before disassembling a bolted connection for a visual VT-3 examination. Removal of bolting at a mechanical connection may not be the most prudent decision and may cause undue hardship without a compensating increase in the level of quality or safety. PECO Energy proposes an alternative to the requirements of IWA-5250(a)(2) that will provide an equivalent level of quality and safety at Class 1, 2, and 3 bolted connections.

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PROPOSED ALTERNATIVE EXAMINATION

Leakage discovered at a bolted connection by visual VT-2 examination during system pressure test will be evaluated to determine the susceptibility of the bolting to corrosion and potential future failure. The evaluation will, as a minimum, consider the following variables:

1) Location of leakage
2) History of leakage
3) Bolted connection materials
4) Visual evidence of corrosion with the connection assembled
5) Corrosiveness of the process fluid
6) History and studies of similar bolted material in a similar environment
7) Other components in the vicinity that may be degraded due to the leakage
8) Leakage monitoring capabilities

When evaluation of the variables above indicates the need for further examination, the bolt closest to the source of leakage will be removed, receive a visual VT-3 examination, and be evaluated in accordance with IWA-3100(a). If the leakage were identified with the bolted connection in service and evaluation supports continued service, this VT-3 examination may be deferred to the next outage of sufficient duration. When the removed bolt has evidence of rejectable degradation, all remaining bolts shall be removed and subsequently receive a visual VT-3 examination and evaluated in accordance with IWA-3100(a).

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

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COMPONENT IDENTIFICATION

Code Classes:	1, 2 and 3
References:	Tables IWB-2412-1, IWC-2412-1, IWD-2412-1 and Code Case N-491-1 Table -2410-2 Code Case N-598
Examination Categories:	Not Applicable
Item Numbers:	Not Applicable
Description:	Alternative Requirements to Required Percentages of Examinations
Component Numbers:	All Class 1, 2 and 3 Components and Supports Subject to Inservice Inspection

CODE REQUIREMENTS

ASME, Section XI, Tables IWB-2412-1, IWC-2412-1, IWD-2412-1, and Code Case N-491-1, Table -2410-2, list the required percentages of examinations that must be performed per period in accordance with Inspection Program B. These tables do not apply to those examinations that may be deferred until the end of the inspection interval as allowed by the Code. Per these tables, the number of examinations to be completed during the first period shall be between 16% and 34%. For the second period, the total number of examinations to be completed shall be between 50% and 67%, and by the end of the third period, 100% of the examinations for the interval shall be completed.

Code Case N-491-1, Table -2410-2, is being referenced because this Code Case is being implemented during the third interval for the examination of supports. The percentages stated in Code Case N-491-1, Table -2410-2, are identical to those stated in Tables IWB-2412-1, IWC-2412-1, and IWD-2410-2.

BASIS FOR ALTERNATIVE

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

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The ASME Code and Code Case N-491-1 tables referenced above were originally established such that approximately one third of the non-deferred examinations would be performed each period. Over the past 20 years, it has become increasingly more difficult to meet these percentages. The emergence of longer fuel cycles increases the likelihood that one of the periods will only have one refueling outage in it. In addition, efforts to shorten refueling outages have limited the amount of time available to perform examinations. These factors have made it difficult to complete the Code required percentages of examinations in the allotted time.

Code Case N-598 was developed to address this issue. It expands the range of examination completion percentages to allow examinations to be distributed more evenly between outages. This minimizes the need to schedule an excessive number of examinations during one outage just to meet the percentages required by ASME, Section XI, Tables IWB-2412-1, IWC-2412-1, IWD-2412-1, and Code Case N-491-1, Table -2410-2. In addition, Code Case N-598 allows for a more uniform distribution between outages that is more conducive to performing quality examinations.

During the development of Code Case N-598, two additional factors were considered when evaluating the impact of the Code Case on plant safety. The first was that the existing tables allow up to 50% of the examinations to be performed in the second and third periods, but only 34% can be performed in the first period. Therefore, the Inspection Plan B schedule is biased towards delaying examinations until the end of the interval. The more flexible percentages stated in Code Case N-598 allow for more examinations to be performed earlier in the interval. This should improve safety because any problems, should they exist, would be detected earlier in the interval.

The second factor that was considered when developing Code Case N-598 was that some minimum amount of examinations should be required in each period. To address this consideration, the Code Case, including Note (1), is structured such that examinations will be required during all three periods.

Due to the factors documented above, PECO Energy considers that the alternative criteria of Code Case N-598 provide an acceptable, or improved, level of quality and safety.

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PROPOSED ALTERNATIVE CRITERIA

Peach Bottom Atomic Power Station, Units 2 and 3, will use Code Case N-598 for the required percentages of examinations for all Class 1, 2, and 3 components and supports. Although Code Case N-598 also addresses Class MC components, containment issues are being addressed in Specification NE-291, and therefore are not being requested in this Request for Alternative.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Peach Bottom Atomic Power Station Inservice Inspection Program, beginning November 5, 1998, for Unit 2, and August 15, 1998, for Unit 3.

APPENDIX A

MANDATORY AUGMENTED INSPECTION PROGRAMS

APPENDIX "A"
Mandatory Augmented Programs

APPENDIX	AUGMENTED PROGRAM		DESCRIPTION	AUG # From Second Interval
A-1	AUG-01	**CM-1**	GL 88-01 Inspection Program	B-1
A-2	AUG-02	**CM-2**	NUREG-0619, BWR Feedwater Nozzle and Control Rod Drive Return Line Cracking	B-2
A-3	AUG-03	**CM-3**	Core Spray Internals	B-3
A-4	AUG-04		Jet Pump Assembly	B-4 B-11 B-14
A-5	AUG-05		Snubber Examination and Test Program	B-5
A-6	AUG-06		Top Guide	B-10
A-7	AUG-07		Shroud Support	N/A
A-8	AUG-08		Shroud Access Hole Covers	B-8
A-9	AUG-09	**CM-4**	Core Shroud	B-9
A-10	AUG-10		Core Plate	B-10
A-11	AUG-11		Lower Plenum Region	N/A
A-12	AUG-12		10CFR50 Augmented Requirements for Reactor Pressure Vessel Shell Weld Examinations	B-12
A-13	AUG-13		Not Used	N/A
A-14	AUG-14		Vessel ID Attachment Welds	N/A
A-15	AUG-15		Standby Liquid Control Nozzle-to-Safe-End	B-15
A-16	AUG-16		RPV Instrument Nozzle Safe-End-to-Pipe Welds	B-16

Appendix A - Mandatory Augmented Programs

Introduction

For the purposes of this ISI program, any examination other than one required by the 1989 Edition of ASME, Section XI, is considered augmented. These augmented examinations may be due to additional requirements from NRC Regulatory Guides, Generic Letters, Bulletins or accelerated implementation of Code rules or regulations. Other reasons for augmented examinations are vendor recommendations, industry committee efforts or self-imposed inspections.

The augmented programs are divided into **mandatory** and **non-mandatory**. The mandatory augmented programs use a numeric designation (e.g., AUG-01) and are contained in Appendix A. The non-mandatory programs use an alpha designation (e.g., AUG-A) and are contained in Appendix B.

The mandatory programs are those that PECO has committed to implement, have been mandated by the NRC, or are other commitments that are considered mandatory because they were made through an industry organization, such as the BWRVIP, for implementation of an industry-generated generic program.

The non-mandatory programs that are in Appendix B are those that are included in the ISI program by PBAPS for reasons other than those given above for the mandatory programs. Examinations may be added or deferred at PECO management discretion. A revision to this Program is not required to describe these additions or deferrals. The extent and frequency of examination for a non-mandatory program is at PECO's discretion. These inspections are of components outside the scope of Section XI and generally involve programs to enhance operation efficiency and protect equipment.

BWRVIP

The BWR Vessel and Internals Project (BWRVIP) is an association of utilities focused exclusively on BWR vessel and internals issues. PECO is an actively participating member. Through the BWRVIP efforts, a series of Inspection and Flaw Evaluation (I&E) guidelines for safety related internals has been developed. The members of the BWRVIP have committed to the implementation of the I&E guidelines. As a part of this commitment, it was agreed that once the NRC issues a Safety Evaluation Report (SER) on an I&E guideline - as submitted by the BWRVIP - the **licensee** or the BWRVIP must inform the NRC of any decision made to **not** fully implement the guideline, as submitted and approved, within forty-five (45) days of the report approval. Otherwise, the I&E guideline shall be implemented in the fashion noted in the SER. If the NRC staff **conditionally** approves a BWRVIP document, (i.e. issues an SER that provides for

material changes to the submitted document), resolution of comments may be required, including potential resubmittal of the BWRVIP document. It is the intention of the BWRVIP that the **BWRVIP** will inform the NRC staff within forty-five (45) days of SER issuance, if such a situation exists.

In accordance with the BWRVIP commitment, PBAPS will fully implement BWRVIP I&E guidelines once approved/endorsed by the NRC, if the NRC approves the I&E as submitted. Alternatively, for guidelines that have SER's issued that provide for material changes to the as-submitted document, it is PBAPS intent to follow the guidelines - **as submitted** - until a final agreement is reached that reconciles the NRC/BWRVIP differences. Once endorsed, the guidelines will be instituted within the time frame of the PBAPS Outage Management process. That is, the guidelines will be incorporated into the next refueling outage for which the scope has not been frozen. It is expected that plant personnel will be aware of pending NRC endorsements, and that upon NRC approval, scope identification would be completed with little delay. BWRVIP documents that have a potential safety impact will be reviewed and may be implemented in an outage for which the scope has already been frozen.

PBAPS may implement BWRVIP guidelines once approved by the BWRVIP Executive Committee. The guidelines should be implemented in the next outage for which the scope has not been frozen. Deviations from the guidelines may be implemented with appropriate justification and will be identified in the reporting of outage inspection/repair activities. Results of implementation of the BWRVIP I&E guidelines will be provided to NRC with the submittal of ISI data and will be provided to the EPRI BWRVIP Project Manager for entry into an industry database.

Note: PBAPS endorses and will implement the BWRVIP position that examinations performed prior to the issuance or formal implementation of an I&E guideline can be considered a baseline examination, provided it meets the appropriate BWRVIP baseline criteria.

ANII

The ANII shall be involved with inspections of components within the scope of ASME Section XI. Inspection of components not in the scope of Section XI are not within the scope of ANII involvement.

Examination Methods

For the purposes of the examinations conducted as part of the augmented program, the following definitions apply:

UT — The use of ultrasonic techniques to perform volumetric examinations. The technique will meet the qualifications of ASME, BWRVIP or others identified by the cognizant Level III, as appropriate.

PT — The use of liquid penetrant to perform surface examinations. Unless otherwise specified, PT examinations will be conducted using methods employed for ASME, Section XI, examinations.

VT-3 — This is a visual examination conducted to assess the overall condition of a component as defined in ASME, Section XI.

VT-1 — This is a visual examination capable of resolving a 1/32" line as defined in ASME, Section XI. It is used to look for evidence of cracking.

MVT-1 — This is a more sensitive visual technique than the ASME VT-1. This VT is conducted in such a manner that a 1 mil wire can be resolved. This technique may require cleaning of the surface to be inspected. This is the same technique as the CS VT-1 of BWRVIP-18.

EVT-1 — This is an even more sensitive version of the Section XI VT-1. For this method, it must be possible to resolve a ½ mil wire and cleaning may be required.

AUGMENTED INSPECTION PROGRAM - 01 : GL 88-01 Inspection Program

I. SCOPE

This augmented inspection program (AUG - 01) applies to activities conducted at PBAPS 2 and 3 to meet its commitments to implement the requirements of Generic Letter 88-01 (GL88-01). These commitments are documented in reference II.A listed below.

A. Code versus GL 88-01

There is significant overlap in systems and portions of systems that are required to be inspected by both GL 88-01 and ASME, Section XI (Code). Much of the piping described in paragraph B below is Class 1. In order to simplify record keeping and assure that PBAPS meets its commitments regarding GL 88-01 and Code inspections, the Class 1 austenitic stainless steel piping subject to GL 88-01 will not be included in the ASME weld count. This means that the 25% sample population required for Class 1 piping will not include any welds in the AUG-01 program. This is acceptable for the following reasons:

- In all but one case, where the Code and GL 88-01 are applicable, the required inspection methods and frequency of GL 88-01 are more restrictive. The least restrictive GL 88-01 designation is Category A. The inspection requirements and frequency for that Category is a 25% sample over ten years. This is the same criteria that the Code requires for Class 1 Examination Category B-J piping. All other GL 88-01 categories require inspections more frequently. Therefore, any piping within the scope of GL 88-01 will be inspected at a rate that meets or exceeds that specified by the Code.

  The exception is when Examination Category B-F welds are subject to GL 88-01 criteria. Section XI requires 100% of the Examination Category B-F welds to be examined each interval. If the GL 88-01 criteria are less restrictive, then the Code frequency will be used. Otherwise, the GL 88-01 examination frequency will be used.

- Surface examinations will be performed once per interval on each weld selected for UT examination that is within the Class 1 boundaries. This meets the Code. The only exception to this are those Category E welds that have been repaired by a weld

overlay. The inspections on these welds will be in accordance with criteria in GL 88-01. This is acceptable since the Code does not address these welds.

- The examination personnel that perform inspections on piping subject to GL 88-01 meet special qualification requirements. The examiners performing GL 88-01 inspections are qualified in accordance with an NRC-approved program that NRC and the BWR industry have established. Proficiency is demonstrated on test blocks with actual Intergranular Stress Corrosion Cracking (IGSCC) flaws. This ensures the examination personnel are qualified to perform the examinations. This exceeds Code requirements.

- Flaw evaluations performed on piping subject to GL 88-01 (regardless of Class) must satisfy the Class 1 rules of the Code contained in IWB-3600 of the 1986 Edition of Section XI. This meets or exceeds Code requirements.

- The results of the examinations are provided to NRC. When flaws exceed the acceptance criteria, but are determined by evaluation to be acceptable for return to service, the NRC approval is obtained prior to operation.

- The ANII will review the Class 1 piping examinations as specified by Section XI. The remaining welds are non-Code, so ANII review is not required.

B. GL 88-01 Scope

1) GL 88-01 Scope Definition

GL 88-01 applies to piping that meets the following criteria:
- austenitic stainless steel, and
- four inches or larger in diameter, and
- contains reactor coolant above 200°F, during power operation.

2) PBAPS Applicability

The following piping systems have portions that meet those criteria and therefore are within the scope of AUG-01:
- Reactor Recirculation System
- Residual Heat Removal System
- Core Spray System
- Reactor Water Clean-up System
- Reactor Pressure Vessel System

The GL 88-01 also applies to reactor vessel attachments and appurtenances such as jet pump instrumentation assemblies, and head spray and vent components. The components that meet this criteria at PBAPS are:

- Reactor Vessel Stainless Steel Safe Ends > NPS 4.

A detailed description of the portions of systems within the scope of the GL 88-01 program is in Section III, System Description, below.

II. REFERENCES

A. PBAPS 2 and 3 response to NRC Generic Letter 88-01, August 2, 1988, March 31, 1989, June 4, 1990, and August 17, 1992 (T02791). **(CM-1)**

B. Generic Letter 88-01, NRC position on IGSCC in BWR Austenitic Stainless Piping, January 25, 1988; including Supplement 1, February 4 1992 (T02791).

C. NUREG-0313, revision 2 - Technical Report on Material selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping, January, 1988.

D. Recirculation P&IDs: M-353, sheets 1 - 4

E. Recirculation Isometrics:
- RCS-02-MI-201-1-A
- RCS-02-MI-201-1-B
- RCS-02-MI-301-1-A
- RCS-02-MI-301-1-B

F. Residual Heat Removal P&IDs: M-361, sheets 1 - 4

G. Residual Heat Removal Isometrics:
- DE-10-MI-203-9-A
- DE-10-MI-203-9-B
- DCN-10-MI-207-16
- DCA-10-MI-303-9-A
- DCA-10-MI-303-9-B
- DCA-10-MI-306-13

H. Core Spray P&IDs: M-362, sheet 1 and 2

I. Core Spray Isometrics:
- DCN-14-MI-203-5-A
- DCN-14-MI-203-5-B
- DCN-14-MI-303-4-A
- DCN-14-MI-303-4-B

J. Reactor Water Clean-up P&IDs: M-354, Sheet 1 and 2

K. Reactor Water Clean-up Isometrics:
- DCA-12-MI-201-1
- DE-12-MI-201-2
- DCA-12-MI-203-3
- DE-12-MI-203-4
- DE-12-MI-203-5
- DE-12-MI-203-6
- DCA-12-MI-301-1
- DE-12-MI-302-2
- DCA-12-MI-303-3
- DE-12-MI-303-4
- DE-12-MI-303-5
- DE-12-MI-303-6

L. RPV System P&IDs:
- M-351, sheets 1 and 3
- M-352, sheets 1 and 3

M. RPV System ISI drawings:
- ISI-RPV-01
- ISI-RPV-05

N. TRM 3.10, Structural Integrity

O. Letter from Joseph W. Shea (USNRC) to George A. Hunger (PECO Energy Company), dated September 15, 1995.

P Assessment of weld overlays:
- Calculation PM-570
- Committment T03812 **CM-6**
- ECR 95-05710

III. SYSTEM DESCRIPTIONS

The following describes the portions of systems addressed by AUG-01.

A. Reactor Recirculation System

NPS 28 Reactor Recirculation Pumps A and B suction piping, from the welds joining the RPV N1 nozzles to safe-ends, through and including the welds to the Recirculation Pumps suction nozzle.

NPS 28 Reactor Recirculation Pumps A and B discharge piping, from the weld to the Recirculation Pumps discharge nozzle, through the NPS 22 headers and including the five (5), NPS 12 piping segments per loop, from the headers, to the RPV N2 nozzles to safe-end welds.

The weld connecting the NPS 20 RHR piping to the A pump suction, and the welds connecting the NPS 24 RHR piping to the A and B pump discharge.

B. Residual Heat Removal System (RHR)

NPS 20 RHR supply piping, from the connection at the A loop Reactor Recirculation Pump suction line, up to normally closed inboard containment isolation valve MO-18. (Note: RHR piping beyond valve MO-18 is below 200°F during reactor power operation and is therefore not in scope.)

NPS 24 RHR return piping, from check valves AO-46A and B, to the Reactor Recirculation Pump A and B discharge piping. (Note: RHR piping beyond valves AO-46A and B is below 200°F during reactor power operation and is therefore not in scope.)

C. Core Spray System (CS)

NPS 12 Core Spray supply piping, from valves 14A and B to the 10" NPS Reactor Vessel N5 nozzle to safe-end welds. (NOTE: The Core Spray piping beyond valves 14A and B is below 200°F during reactor power operation and is therefore not in scope.)

D. Reactor Water Clean-up System (RWCU)

RWCU NPS 6 and NPS 4 piping, from the connection at the RHR Pump suction piping, through primary containment penetration N-14, and up to the RWCU pump suction connection.

RWCU NPS 4 piping, from the RWCU pump discharge, to the tube side inlet of the Regenerative heat exchanger.

RWCU NPS 4 piping from the tube side outlet of the Regenerative heat exchanger, to the tube side inlets of the Non-Regenerative heat exchangers.

RWCU NPS 4 return piping, from the shell side outlet of the Regenerative heat exchanger, to RWCU check valve 62 (just prior to returning to the Feedwater System).

E. Reactor Pressure Vessel System (Jet Pump Instrumentation)

Jet Pump Instrumentation Penetration seal to safe-end welds. These welds are associated with the N8 RPV nozzles for Unit 2. The Unit 3 safe-ends and penetration seals are one piece forgings that do not have a safe-end to penetration seal weld.

F. Reactor Pressure Vessel Stainless Steel Safe Ends

The stainless steel safe ends attached to RPV nozzles N8 and N9. Also applies to nozzles N1, N2, and N5 that were mentioned above.

IV. EXAMINATION PROGRAM

The examination program is designed to comply with the provisions of GL 88-01. Inspections are to be conducted at a frequency dependent on the relative susceptibility to IGSCC. This is identified by categories defined in GL 88-01. As required by the GL, every weld within the scope of GL 88-01 has been categorized.

Inspection Schedule Bases

The weld categories and inspection extent and frequencies are:

IGSCC Category	Inspection Extent and Schedule
A	25% every 10 years (at least 12% in 6 years)
B	50% every 10 years (at least 25% in 6 years)
C	All within next 2 refueling cycles and then all every 10 years (at least 50% in 6 years)
D	All every 2 refueling cycles
E	50% next refueling outage, then all every 2 refueling cycles
F	All every refueling cycle
G	All next refueling outage
S	2% sample per refueling cycle of outboard RWCU susceptible welds.
X	no inspection, non-susceptible RWCU piping outboard of isolation valves

Note: Welds in the RWCU piping outboard of the containment isolation valves has been assigned special categories. The "S" category represents those welds outside the outboard containment isolation valves that are made of material considered susceptible by GL 88-01. The "X" category is for welds outside the outboard containment isolation valves that are made of material considered not susceptible (Cat A) by GL 88-01. There are no Code requirements for piping classified as "S" or "X".

Weld Selection

Where the augmented program required examination of a sample of applicable welds, the size and content of the sample was determined from the total population of circumferential butt welds subject to the program requirements. When the sample size required by GL 88-01 was less than that required by the Code, (e.g. Cat. B-F welds, 100% per interval) the Code requirements were used.

The sample examinations performed on the RWCU System outside the outer containment isolation valves (i.e. 2% per refueling cycle), may be made up of the same welds repeatedly (e.g. reexamined each outage), or may include different welds each outage.

Augmented Program Tables (AUG-1) for PBAPS 2 & 3 list, by system, the total population of welds subject to examination under this augmented program. Specifically, these tables identify the weld by identification number, the drawing depicting the weld, the IGSCC Examination Category assigned to the weld, and the ASME equivalent classification where appropriate. Notes may also be provided as necessary.

Sample Expansion

If one or more Category A, B, C, or D welds are found to be cracked, or if additional cracks or significant crack growth is discovered in a Category E weld during the interval, a sample expansion plan will be invoked. The sample expansion plan utilized will be as put forth in the Staff Position on Sample Expansion of NRC Generic Letter 88-01, including Supplement 1. If one or more welds of the Reactor Water Cleanup System 2% sample population are found to contain IGSCC, then an additional sample of like size (e.g. 2%) will be examined. If one or more welds in the additional sample are found to contain IGSCC, then the NRC will be notified of any additional sample expansion plans.

NRC Notification

If any flaws are identified during the examination that do not meet the acceptance criteria for continued operation, referenced below under flaw evaluation, the NRC will be duly notified of the disposition of the affected flaws. NRC approval of the disposition for each flaw exceeding the criteria will be obtained before operation is resumed. All communication with the NRC will comply with the requirements of the PECO Energy ASME, Section XI, Programs Procedure, A-C-80, and Reportability Manual.

Flaw Evaluation

Flaws exceeding the acceptance criteria of IWB-3500 of ASME, Section XI, will be evaluated, then either repaired, replaced, or deemed acceptable for return to operation. Repairs or replacements will be documented in the Owners Report for Repairs and Replacements, or equivalent as required by ASME, Section XI. Evaluations performed to allow a flawed weld to be returned to service will be performed in accordance with the criteria in IWB-3600 of ASME, Section XI. For aspects of flaw evaluation that are not contained in IWB-3600, the requirements in NUREG-0313, Revision 2 will be used in conjunction with IWB-3600.

The above referenced criteria for acceptance and evaluation are found in the 1986 Edition of ASME, Section XI, as specified in GL 88-01.

PECO intends to follow the NRC Staff positions on repair and mitigation techniques, as may be applicable to the scope of this program. In addition to the guidance provided in the staff positions and the referenced ASME Code, PECO will assess the effect such repair or mitigation techniques will have on the overall system, as defined in Supplement 1 to NRC Generic Letter 88-01 (e.g. shrinkage, stiffness, increased dead weight, etc.: See reference P)

VI. REPORTS/RECORDS

Results of examinations, flaw evaluations and repair records shall be documented and maintained as required by ASME, Section XI, 1989 Edition, Specification NE-290 and plant procedures. These results will be forwarded to NRC with the code required submittal of ISI data.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-01 Inspection Tables. The tables follow this section and are part of Specification NE-290.

Examinations conducted during the second ten-year interval were performed in accordance with AUG-01 of Specification M-733.

Peach Bottom Atomic Power Station
Spec NE-290 Unit 2 AUG-1 Table
Sorted by System Number and Drawing Number

NE-290 U-2 AUG-1

SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
CORE SPRAY					
	DCN-14-MI-203-5-A				
		1	14-B-28	PIPE TO PIPE	A
		1	14-B-29	PIPE TO PIPE	A
		1	14-B-30	PIPE TO ELBOW	A
		1	14-B-31	ELBOW TO PIPE	A
		1	14-B-32	PIPE TO ELBOW	A
		1	14-B-33	ELBOW TO PIPE	A
		1	14-B-34	PIPE TO ELBOW	A
		1	14-B-35	ELBOW TO PIPE	A
		1	14-B-36	PIPE TO PIPE	A
		1	14-B-37	PIPE TO REDUCER	A
		1	14-B-38	REDUCER TO PIPE	A
		1	14-B-39	PIPE TO ELBOW	A
		1	14-B-40	ELBOW TO PIPE	A
		1	14-B-41	PIPE TO SAFE-END	D
	DCN-14-MI-203-5-B				
		1	14-A-28	PIPE TO PIPE	A
		1	14-A-29	PIPE TO PIPE	A
		1	14-A-30	PIPE TO ELBOW	A
		1	14-A-31	ELBOW TO PIPE	A
		1	14-A-32	PIPE TO ELBOW	A
		1	14-A-33	ELBOW TO PIPE	A
		1	14-A-34	PIPE TO PIPE	A
		1	14-A-35	PIPE TO ELBOW	A
		1	14-A-36	ELBOW TO PIPE	A
		1	14-A-37	PIPE TO PIPE	A
		1	14-A-38	PIPE TO PIPE	A
		1	14-A-39	PIPE TO REDUCER	A
		1	14-A-40	REDUCER TO PIPE	A
		1	14-A-41	PIPE TO ELBOW	A
		1	14-A-42	ELBOW TO PIPE	A

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SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
		1	14-A-43	PIPE TO SAFE-END	D

System Count: 30

SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
MAIN RECIRCULATION					
	RCS-02-MI-201-1-A				
		1	2-AD-29	PUMP TO PIPE	A
		1	2-AD-30	PIPE TO VALVE	A
		1	2-AD-31	VALVE TO ELBOW	A
		1	2-AD-32	ELBOW TO PIPE	A
		1	2-AD-33	PIPE TO TEE	A
		1	2-AHF-6	PIPE BND TO PIPE BND	A
		1	2-AHF-7	PIPE BEND TO SF-END	A
		1	2-AHG-6	RED TEE TO PIPE BND	A
		1	2-AHG-7	PIPE TO SAFE END	A
		1	2-AHH-6	RED TEE TO PIPE BND	A
		1	2-AHH-7	PIPE BEND TO SF-END	A
		1	2-AHJ-6	RED TEE TO PIPE BEND	A
		1	2-AHJ-7	PIPE BEND TO SF-END	A
		1	2-AHK-6	PIPE BND TO PIPE BND	A
		1	2-AHK-7	PIPE BEND TO SF-END	A
		1	2-AM-6	CROSS TO PIPE	A
		1	2-AM-7	REDUCER TO PIPE BND	A
		1	2-AM-8	CROSS TO PIPE	A
		1	2-AM-9	REDUCER TO PIPE BND	A
		1	2-AS-19	SAFE-END TO ELBOW	D
		1	2-AS-20	ELBOW TO PIPE	A
		1	2-AS-21	PIPE TO TEE	A
		1	2-AS-22	TEE TO PIPE	A
		1	2-AS-23	PIPE TO PIPE	A
		1	2-AS-24	PIPE TO ELBOW	A
		1	2-AS-25	ELBOW TO VALVE	A
		1	2-AS-26	VALVE TO PIPE	A
		1	2-AS-27	PIPE TO ELBOW	A
		1	2-AS-28	ELBOW TO PUMP	A
	RCS-02-MI-201-1-B				
		1	2-BD-26	PUMP TO PIPE	A
		1	2-BD-27	PIPE TO VALVE	A
		1	2-BD-28	VALVE TO ELBOW	A
		1	2-BD-29	ELBOW TO PIPE	A

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SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
		1	2-BD-30	PIPE TO TEE	A
		1	2-BHA-6	PIPE BND TO PIPE BND	A
		1	2-BHA-7	PIPE BEND TO SF-END	A
		1	2-BHB-6	BR CONN TO PIPE BND	A
		1	2-BHB-7	PIPE BEND TO SF-END	A
		1	2-BHC-6	RED TO PIPE BEND	A
		1	2-BHC-7	PIPE BEND TO SF-END	A
		1	2-BHD-6	BR CONN TO PIPE BEND	A
		1	2-BHD-7	PIPE BEND TO SF-END	A
		1	2-BHE-6	PIPE BND TO PIPE BND	A
		1	2-BHE-7	PIPE BND TO SF-END	A
		1	2-BM-6	CROSS TO PIPE	A
		1	2-BM-7	REDUCER TO PIPE BND	A
		1	2-BM-8	CROSS TO PIPE	A
		1	2-BM-9	RED TO PIPE BEND	A
		1	2-BS-18	SAFE-END TO ELBOW	D
		1	2-BS-19	ELBOW TO PIPE	A
		1	2-BS-20	PIPE TO PIPE	A
		1	2-BS-21	PIPE TO ELBOW	A
		1	2-BS-22	ELBOW TO VALVE	A
		1	2-BS-23	VALVE TO PIPE	A
		1	2-BS-24	PIPE TO ELBOW	A
		1	2-BS-25	ELBOW TO PUMP	A

System Count: 56

SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
REACTOR PRESSURE VESSEL					
	DCN-14-MI-203-5-A				
		1	14-B-27	SAFE-END TO NOZ N5B	D
	DCN-14-MI-203-5-B				
		1	14-A-27	SAFE-END TO NOZ N5A	D
	ISI-2-RV-05				
		1	3-I-19R	NOZZLE N9 TO CAP	D
		1	JP-A-6	N8A NOZ TO SF-END	A
		1	JP-A-7	SAFE-END TO PEN SEAL	A
		1	JP-B-6	N8B NOZ TO SF-END	A
		1	JP-B-7	SAFE-END TO PEN SEAL	A
	RCS-02-MI-201-1-A				
		1	2-AHF-8	SAFE-END TO NOZ N2F	A
		1	2-AHG-8	SAFE-END TO NOZ N2G	A
		1	2-AHH-8	SAFE-END TO NOZ N2H	A
		1	2-AHJ-8	SAFE-END TO NOZ N2J	A
		1	2-AHK-8	SAFE-END TO NOZ N2K	A
		1	2-AS-1	SAFE-END TO NOZ N1A	D
	RCS-02-MI-201-1-B				
		1	2-BHA-8	SAFE-END TO NOZ N2A	A
		1	2-BHB-8	SAFE-END TO NOZ N2B	A
		1	2-BHC-8	SAFE-END TO NOZ N2C	A
		1	2-BHD-8	SAFE-END TO NOZ N2D	A
		1	2-BHE-8	SAFE-END TO NOZ N2E	A
		1	2-BS-1	SAFE-END TO NOZ N1B	D
System Count:			19		

SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
REACTOR WATER CLEAN-UP					
	DCA-12-MI-201-1				
		1	12-O-20A	BRANCH CONN TO PIPE	A
		1	12-O-20B	PIPE TO PIPE	A
		1	12-O-21	PIPE TO VALVE	A
		1	12-O-22	VALVE TO PIPE	A
		1	12-O-23	PIPE TO VALVE	A
		1	12-O-24	VALVE TO ELBOW	A
		1	12-O-25	ELBOW TO PIPE	A
		1	12-O-26	PIPE TO ELBOW	A
		1	12-O-27	ELBOW TO PIPE	A
		1	12-O-28	PIPE TO ELBOW	A
		1	12-O-29	ELBOW TO PIPE	A
		1	12-O-30	PIPE TO ELBOW	A
		1	12-O-31	ELBOW TO PIPE	A
		1	12-O-32	PIPE TO ELBOW	A
		1	12-O-33A	PIPE TO PIPE	A
		1	12-O-33R	ELBOW TO PIPE	A
		1	12-O-34R	PIPE TO PENT N-14	A
		1	12-O-35	PENT N-14 TO PIPE	A
		1	12-O-36	PIPE TO VALVE	A
		1	12-O-801	PIPE TO VALVE	A
		1	12-O-802	VALVE TO PIPE	A
	DCA-12-MI-203-3				
			12-03-1	VALVE TO PIPE	A
			12-03-2	PIPE TO ELBOW	A
			12-03-3	ELBOW TO PIPE	A
			12-03-4	PIPE TO ELBOW	G
			12-04-1	ELBOW TO PIPE	G
			12-04-2	PIPE TO TEE	G
			12-04-3	TEE TO REDUCER	G
			12-04-4	TEE TO PIPE	G
		N	12-500	PIPE TO TEE	A
		N	12-501	TEE TO REDUCER	A
	DE-12-MI-202-2				
		1	12-I-1	VALVE TO PIPE	D

SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
		1	12-I-1A	PIPE TO ELBOW	D
		1	12-I-1B	ELBOW TO PIPE	D
		1	12-I-1C	PIPE TO VALVE	D
		1	12-I-1D	PIPE TO VALVE	E
		1	12-I-1E	VALVE TO PIPE	D
		1	12-I-2	VALVE TO ELBOW	D
	DE-12-MI-203-4				
			12-07-1	REDUCER TO TEE	G
			12-07-10	FLANGE TO PIPE	G
			12-07-11	PIPE TO ELBOW	G
			12-07-2	TEE TO PIPE	G
			12-07-3	PIPE TO TEE	G
			12-07-4	TEE TO PIPE	G
			12-07-5	PIPE TO ELBOW	G
			12-07-6	ELBOW TO PIPE	G
			12-07-7	PIPE TO FLANGE	G
			12-07-8	FLANGE TO PIPE	G
			12-07-9	PIPE TO FLANGE	G
			12-08-1	ELBOW TO PIPE	G
			12-08-2	PIPE TO ELBOW	G
			12-08-3	ELBOW TO ELBOW	G
			12-08-4	ELBOW TO HX	G
		N	12-08-4A	NOZZLE TO ELBOW, TUBE SIDE PIPE	G
		N	12-08-4B	ELBOW TO PIPE, TUBE SIDE PIPE	G
		N	12-08-4C	PIPE TO ELBOW, TUBE SIDE PIPE	G
		N	12-08-4D	ELBOW TO PIPE, TUBE SIDE PIPE	G
		N	12-08-4E	PIPE TO ELBOW, TUBE SIDE PIPE	G
		N	12-08-4F	ELBOW TO NOZZLE, TUBE SIDE PIPE	G
		N	12-08-4G	NOZZLE TO ELBOW, TUBE SIDE PIPE	G
		N	12-08-4H	ELBOW TO PIPE, TUBE SIDE PIPE	G
		N	12-08-4K	PIPE TO ELBOW, TUBE SIDE PIPE	G
		N	12-08-4M	ELBOW TO PIPE, TUBE SIDE PIPE	G
		N	12-08-4N	PIPE TO ELBOW, TUBE SIDE PIPE	G
		N	12-08-4P	ELBOW TO NOZZLE, TUBE SIDE PIPE	G
	DE-12-MI-203-5				
			12-08-10	ELBOW TO PIPE	G
			12-08-11	PIPE TO ELBOW	G

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SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
			12-08-12	ELBOW TO PIPE	G
			12-08-13	PIPE TO ELBOW	G
			12-08-14	ELBOW TO PIPE	G
			12-08-15	PIPE TO FLANGE	G
			12-08-16	FLANGE TO PIPE	G
			12-08-17	PIPE TO FLANGE	G
			12-08-18	FLANGE TO PIPE	G
			12-08-19	PIPE TO TEE	G
			12-08-20	TEE TO PIPE	G
			12-08-21	PIPE TO ELBOW	G
			12-08-22	ELBOW TO PIPE	G
			12-08-23	PIPE TO ELBOW	G
			12-08-24	ELBOW TO PIPE	G
			12-08-25	PIPE TO ELBOW	G
			12-08-26	ELBOW TO VALVE	G
			12-08-27	VALVE TO PIPE	G
			12-08-28	PIPE TO VALVE	G
			12-08-29	VALVE TO PIPE	G
		N	12-08-29A	PIPE TO ELBOW	G
			12-08-30	ELBOW TO PIPE	G
			12-08-31	PIPE TO HX	G
			12-08-32	TEE TO PIPE	G
			12-08-33	PIPE TO ELBOW	G
			12-08-34	ELBOW TO PIPE	G
			12-08-5	HX TO ELBOW	G
			12-08-6	ELBOW TO PIPE	G
			12-08-7	PIPE TO ELBOW	G
			12-08-8	ELBOW TO PIPE	G
			12-08-9	PIPE TO ELBOW	G
			12-10-1	PIPE TO ELBOW	G
			12-10-10	PIPE TO ELBOW	G
			12-10-11	ELBOW TO PIPE	G
			12-10-12	PIPE TO HX	G
			12-10-2	ELBOW TO PIPE	G
			12-10-3	PIPE TO ELBOW	G
			12-10-4	ELBOW TO PIPE	G
			12-10-5	PIPE TO ELBOW	G

SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
			12-10-6	ELBOW TO VALVE	G
			12-10-7	VALVE TO PIPE	G
			12-10-8	PIPE TO VALVE	G
			12-10-9	VALVE TO PIPE	G
	DE-12-MI-203-6				
			12-13-1	PIPE TO ELBOW	G
			12-13-2	ELBOW TO PIPE	G
			12-13-3	PIPE TO ELBOW	G
			12-13-4	ELBOW TO PIPE	G
		N	12-13-4A	PIPE TO PIPE	G
		N	12-13-4B	PIPE TO ELBOW	A
		N	12-13-4C	ELBOW TO PIPE	G
			12-13-5	ELBOW TO ELBOW	G
			12-13-6	ELBOW TO PIPE	G
			12-13-7	PIPE TO ELBOW	G
			12-13-8	ELBOW TO PIPE	G
			12-13-9	PIPE TO HX	G
		N	12-13-9A	PIPE TO ELBOW, SHELL SIDE PIPE	G
		N	12-13-9B	ELBOW TO PIPE, SHELL SIDE PIPE	G
		N	12-13-9C	PIPE TO ELBOW, SHELL SIDE PIPE	G
		N	12-13-9D	ELBOW TO PIPE, SHELL SIDE PIPE	G
		N	12-13-9E	PIPE TO PIPE, SHELL SIDE PIPE	G
			12-14-10	ELBOW TO PIPE	G
		N	12-14-10A	PIPE TO PIPE	G
			12-14-11	PIPE TO ELBOW	G
			12-14-12	ELBOW TO PIPE	G
			12-14-13	PIPE TO ELBOW	G
			12-14-14	ELBOW TO PIPE	G
			12-14-15	PIPE TO ELBOW	G
			12-14-16	ELBOW TO PIPE	G
			12-14-17	PIPE TO ELBOW	G
			12-14-18	ELBOW TO PIPE	G
			12-14-19	VALVE TO PIPE	G
			12-14-5	PIPE TO ELBOW	E
			12-14-6	ELBOW TO PIPE	G
			12-14-7	PIPE TO ELBOW	G
			12-14-8	ELBOW TO PIPE	G

SYS_DESC	ISO_NO	CLASS	COMP_ID:	COMP_DESC	CATEGORY
			12-14-9	PIPE TO ELBOW	G
System Count:			141		
RESIDUAL HEAT REMOVAL					
	DCN-10-MI-207-16				
		1	10-O-20	TEE TO PIPE	A
		1	10-O-20/12-O	6" BRANCH CONN	A
		1	10-O-21	PIPE TO ELBOW	A
		1	10-O-22	ELBOW TO PIPE	A
		1	10-O-23	PIPE TO ELBOW	A
		1	10-O-24	ELBOW TO PIPE	A
		1	10-O-25	PIPE TO ELBOW	A
		1	10-O-26	ELBOW TO PIPE	A
		1	10-O-29	PIPE TO ELBOW	A
		1	10-O-30	ELBOW TO PIPE	A
		1	10-O-31	PIPE TO PIPE	A
	DE-10-MI-203-9-A				
		1	10-IA-17	VALVE TO PIPE	A
		1	10-IA-18	PIPE TO ELBOW	A
		1	10-IA-19	ELBOW TO PIPE	A
		1	10-IA-20	PIPE TO ELBOW	A
		1	10-IA-21	ELBOW TO ELBOW	A
		1	10-IA-22	ELBOW TO PIPE	A
		1	10-IA-25	PIPE TO TEE	A
	DE-10-MI-203-9-B				
		1	10-IB-17	VALVE TO PIPE	A
		1	10-IB-18	PIPE TO ELBOW	A
		1	10-IB-19	ELBOW TO PIPE	A
		1	10-IB-20	PIPE TO ELBOW	A
		1	10-IB-21	ELBOW TO ELBOW	A
		1	10-IB-22	ELBOW TO PIPE	A
		1	10-IB-25	PIPE TO TEE	A
System Count:			25		
System Count All:			271		

Peach Bottom Automic Power Station
Spec NE-290 Unit 3 AUG-1 Table
Sorted by System Number and Drawing Number

NE-290 U-3 AUG-1

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
CORE SPRAY				
DCN-14-MI-303-4-A				
	1	14-B-28	PIPE TO PIPE	A
	1	14-B-29	PIPE TO PIPE	A
	1	14-B-30	PIPE TO ELBOW	A
	1	14-B-31	ELBOW TO PIPE	A
	1	14-B-32	PIPE TO ELBOW	A
	1	14-B-33	ELBOW TO PIPE	A
	1	14-B-34	PIPE TO PIPE	A
	1	14-B-35	PIPE TO ELBOW	A
	1	14-B-36	ELBOW TO PIPE	A
	1	14-B-37	PIPE TO PIPE	A
	1	14-B-38	PIPE TO REDUCER	A
	1	14-B-39	REDUCER TO PIPE	A
	1	14-B-43	PIPE TO PIPE BEND	A
	1	14-B-44	PIPE BEND TO SF-END	A

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
DCN-14-MI-303-4-B				
	1	14-A-28	PIPE TO PIPE	A
	1	14-A-29	PIPE TO PIPE	A
	1	14-A-30	PIPE TO ELBOW	A
	1	14-A-31	ELBOW TO PIPE	A
	1	14-A-32	PIPE TO ELBOW	A
	1	14-A-33	ELBOW TO PIPE	A
	1	14-A-34	PIPE TO PIPE	A
	1	14-A-35	PIPE TO PIPE	A
	1	14-A-36	PIPE TO ELBOW	A
	1	14-A-37	ELBOW TO PIPE	A
	1	14-A-38	PIPE TO PIPE	A
	1	14-A-39	PIPE TO PIPE	A
	1	14-A-40	PIPE TO REDUCER	A
	1	14-A-41	REDUCER TO PIPE	A
	1	14-A-44	PIPE TO PIPE BEND	A
	1	14-A-45	PIPE BND TO SAFE-END	A

SYSTEM COUNT: 30

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
MAIN RECIRCULATION				
RCS-02-MI-301-1-A				
	1	2-AD-28	PUMP TO PIPE	A
	1	2-AD-28/CO	PIPE TO WELDOLET	A
	1	2-AD-28/CO-1	WELDOLET TO PIPE	A
	1	2-AD-28/CO-2	PIPE TO FLANGE	A
	1	2-AD-29	PIPE TO VALVE	A
	1	2-AD-30	VALVE TO ELBOW	A
	1	2-AD-31	ELBOW TO PIPE	A
	1	2-AD-32	PIPE TO TEE	A
	1	2-AHF-6	PIPE BND TO PIPE BND	A
	1	2-AHF-7	PIPE BEND TO SF-END	A
	1	2-AHG-6	RED TEE TO PIPE BEND	A
	1	2-AHG-7	PIPE BEND TO SF-END	A
	1	2-AHH-6	CROSS TO PIPE BEND	A
	1	2-AHH-7	PIPE BEND TO SF-END	A
	1	2-AHJ-6	RED TEE TO PIPE BEND	A
	1	2-AHJ-7	PIPE BEND TO SF-END	A
	1	2-AHK-6	PIPE BND TO PIPE BND	A
	1	2-AHK-7	PIPE BEND TO SF-END	A
	1	2-AM-6	CROSS TO PIPE	A
	1	2-AM-7	RED TO PIPE BEND	A
	1	2-AM-8	CROSS TO PIPE	A
	1	2-AM-9	RED TO PIPE BEND	A
	1	2-AS-20	SF END TO PIPE BEND	A
	1	2-AS-21	PIPE BEND TO TEE	A
	1	2-AS-22	TEE TO PIPE	A
	1	2-AS-23	PIPE TO PIPE BEND	A
	1	2-AS-24	PIPE BEND TO VALVE	A
	1	2-AS-25	VALVE TO PIPE	A
	1	2-AS-25/CO	PIPE TO WELDOLET	A

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SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
	1	2-AS-25/CO-1	WELDOLET TO PIPE	A
	1	2-AS-25/CO-2	PIPE TO FLANGE	A
	1	2-AS-26	PIPE TO ELBOW	A
	1	2-AS-27	ELBOW TO PUMP	A

NE-290 U-3 AUG-1

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
RCS-02-MI-301-1-B				
	1	2-BD-26	PUMP TO PIPE	A
	1	2-BD-26/CO	PIPE TO WELDOLET	A
	1	2-BD-26/CO-1	WELDOLET TO PIPE	A
	1	2-BD-26/CO-2	PIPE TO FLANGE	A
	1	2-BD-27	PIPE TO VALVE	A
	1	2-BD-28	VALVE TO ELBOW	A
	1	2-BD-29	ELBOW TO PIPE	A
	1	2-BD-30	PIPE TO CROSS	A
	1	2-BHA-6	PIPE BND TO PIPE BND	A
	1	2-BHA-7	PIPE BEND TO SF-END	A
	1	2-BHB-6	RED TEE TO PIPE BEND	A
	1	2-BHB-7	PIPE BEND TO SF-END	A
	1	2-BHC-6	CROSS TO PIPE BEND	A
	1	2-BHC-7	PIPE BEND TO SF-END	A
	1	2-BHD-6	RED TEE TO PIPE BEND	A
	1	2-BHD-7	PIPE BEND TO SF-END	A
	1	2-BHE-6	PIPE BND TO PIPE BND	A
	1	2-BHE-7	PIPE BEND TO SF-END	A
	1	2-BM-6	CROSS TO RED TEE	A
	1	2-BM-7	RED TEE TO PIPE BEND	A
	1	2-BM-8	CROSS TO RED TEE	A
	1	2-BM-9	RED TO PIPE BEND	A
	1	2-BS-19	SF-END TO PIPE BEND	A
	1	2-BS-19A	PIPE BEND TO PIPE	A
	1	2-BS-20	PIPE TO PIPE	A
	1	2-BS-21	PIPE TO PIPE BEND	A
	1	2-BS-22	PIPE BEND TO VALVE	A
	1	2-BS-23	VALVE TO PIPE	A
	1	2-BS-23/CO	PIPE TO WELDOLET	A
	1	2-BS-23/CO-1	WELDOLET TO PIPE	A

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
	1	2-BS-23/CO-2	PIPE TO FLANGE	A
	1	2-BS-24	PIPE TO ELBOW	A
	1	2-BS-25	ELBOW TO PUMP	A
		SYSTEM COUNT:	66	

REACTOR PRESSURE VESSEL

DCN-14-MI-303-4-A

1	14-B-45	SAFE-END TO NOZ N5B	A

DCN-14-MI-303-4-B

1	14-A-46	SAFE-END TO NOZ N5A	A

ISI-3-RV-05

1	3-I-20	NOZZLE N9 TO CAP	A
1	JP-A-6	N8A NOZ TO PEN SEAL	A
1	JP-B-6	N8B NOZ TO PEN SEAL	A

RCS-02-MI-301-1-A

1	2-AHF-8	SAFE END TO NOZ N2F	A
1	2-AHG-8	SAFE END TO NOZ N2G	A
1	2-AHH-8	SAFE END TO NOZ N2H	A
1	2-AHJ-8	SAFE END TO NOZ N2J	A
1	2-AHK-8	SAFE END TO NOZ N2K	A
1	2-AS-19	SAFE END TO NOZ N1A	A

RCS-02-MI-301-1-B

1	2-BHA-8	SAFE END TO NOZ N2A	A
1	2-BHB-8	SAFE END TO NOZ N2B	A
1	2-BHC-8	SAFE END TO NOZ N2C	A
1	2-BHD-8	SAFE END TO NOZ N2D	A
1	2-BHE-8	SAFE END TO NOZ N2E	A
1	2-BS-18	SAFE END TO NOZ N1B	A

SYSTEM COUNT: 17

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
REACTOR WATER CLEAN-UP				
DCA-12-MI-301-1				
	1	12-O-20A	WELDOLET TO PIPE	A
	1	12-O-21	PIPE TO VALVE	A
	1	12-O-22	VALVE TO PIPE	A
	1	12-O-23	PIPE TO VALVE	A
	1	12-O-24	VALVE TO PIPE	A
	1	12-O-25	PIPE TO ELBOW	A
	1	12-O-26	ELBOW TO PIPE	A
	1	12-O-27	PIPE TO ELBOW	A
	1	12-O-28	ELBOW TO PIPE	A
	1	12-O-29	PIPE TO ELBOW	A
	1	12-O-30	ELBOW TO ELBOW	A
	1	12-O-31	ELBOW TO PIPE	A
	1	12-O-32	PIPE TO ELBOW	A
	1	12-O-33	ELBOW TO PIPE	A
	1	12-O-34	PIPE TO ELBOW	A
	1	12-O-35	ELBOW TO PIPE	A
	1	12-O-36A	PIPE TO ELBOW	A
	1	12-O-37A	ELBOW TO PENETRATION	A
	1	12-O-38	PENETRATION TO PIPE	A
	1	12-O-39	PIPE TO VALVE	A
DE-12-MI-302-2				
	1	12-I-1	VALVE TO PIPE	C
	1	12-I-1A	PIPE TO ELBOW	C
	1	12-I-1B	ELBOW TO PIPE	C
	1	12-I-1C	PIPE TO VALVE	E
	1	12-I-1D	PIPE TO PIPE	C
	1	12-I-2R	VALVE TO PIPE	C

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
DE-12-MI-303-4				
	N	12-13-1A	PIPE TO BEND SHELL PIPE	G
	N	12-13-1B	BEND TO PIPE SHELL PIPE	G
	N	12-13-1C	PIPE TO BEND SHELL PIPE	G
	N	12-13-1D	BEND TO PIPE SHELL PIPE	G

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
DE-12-MI-303-5				
	N	12-10-1	PIPE TO ELBOW	G
	N	12-10-10	VALVE TO PIPE	G
	N	12-10-10A	PIPE TO ELBOW	G
	N	12-10-11	ELBOW TO PIPE	G
	N	12-10-12	PIPE TO HX	G
	N	12-10-2	ELBOW TO PIPE	G
	N	12-10-3	PIPE TO ELBOW	G
	N	12-10-4	ELBOW TO PIPE	G
	N	12-10-5	PIPE TO ELBOW	G
	N	12-10-6	ELBOW TO PIPE	G
	N	12-10-7	PIPE TO VALVE	G
	N	12-10-8	VALVE TO PIPE	G
	N	12-10-9	PIPE TO VALVE	G
	N	12-8-10	ELBOW TO PIPE	G
	N	12-8-11	PIPE TO ELBOW	G
	N	12-8-12	ELBOW TO PIPE	G
	N	12-8-13	PIPE TO ELBOW	G
	N	12-8-14	ELBOW TO PIPE	G
	N	12-8-15	PIPE TO FLANGE	G
	N	12-8-16	FLANGE TO PIPE	G
	N	12-8-17	PIPE TO FLANGE	G
	N	12-8-18	FLANGE TO PIPE	G
	N	12-8-19	PIPE TO TEE	G
	N	12-8-20	TEE TO PIPE	G
	N	12-8-20A	PIPE TO PIPE	G
	N	12-8-21	PIPE TO ELBOW	G
	N	12-8-22	ELBOW TO PIPE	G
	N	12-8-23	PIPE TO ELBOW	G
	N	12-8-24	ELBOW TO PIPE	G
	N	12-8-25	PIPE TO ELBOW	G

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SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
	N	12-8-26	ELBOW TO VALVE	G
	N	12-8-27	VALVE TO PIPE	G
	N	12-8-28	PIPE TO VALVE	G
	N	12-8-29	VALVE TO PIPE	G
	N	12-8-30	PIPE TO ELBOW	G
	N	12-8-31	ELBOW TO PIPE	G
	N	12-8-32	PIPE TO HX	G
	N	12-8-33	TEE TO PIPE	G
	N	12-8-34	PIPE TO ELBOW	G
	N	12-8-35	ELBOW TO PIPE	G
	N	12-8-5	HX TO ELBOW	G
	N	12-8-6	ELBOW TO PIPE	G
	N	12-8-7	PIPE TO ELBOW	G
	N	12-8-8	ELBOW TO PIPE	G
	N	12-8-9	PIPE TO ELBOW	G

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
DF-12-MI-303-6				
	N	12-13-1	HX TO PIPE	G
	N	12-13-10	PIPE TO ELBOW	G
	N	12-13-11	ELBOW TO PIPE	G
	N	12-13-12	PIPE TO ELBOW	G
	N	12-13-13	ELBOW TO PIPE	G
	N	12-13-14	PIPE TO ELBOW	G
	N	12-13-2	PIPE TO ELBOW	G
	N	12-13-3	ELBOW TO PIPE	G
	N	12-13-3A	PIPE TO FLANGE	G
	N	12-13-3B	FLANGE TO PIPE	G
	N	12-13-3C	PIPE TO FLANGE	G
	N	12-13-3D	FLANGE TO PIPE	G
	N	12-13-4	PIPE TO ELBOW	G
	N	12-13-5	ELBOW TO PIPE	G
	N	12-13-6	PIPE TO ELBOW	G
	N	12-13-7	ELBOW TO PIPE	G
	N	12-13-8	PIPE TO PIPE	G
	N	12-13-9	PIPE TO PIPE	G
	N	12-14-1	ELBOW TO PIPE	G
	N	12-14-10	PIPE TO ELBOW	G
	N	12-14-11	ELBOW TO PIPE	G
	N	12-14-12	PIPE TO ELBOW	G
	N	12-14-13	ELBOW TO PIPE	G
	N	12-14-13A	PIPE TO FLANGE	G
	N	12-14-13B	FLANGE TO PIPE	G
	N	12-14-13C	PIPE TO FLANGE	G
	N	12-14-13D	FLANGE TO PIPE	G
	N	12-14-14	PIPE TO VALVE	G
	N	12-14-2	PIPE TO ELBOW	G
	N	12-14-3	ELBOW TO PIPE	G

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
	N	12-14-4	PIPE TO ELBOW	G
	N	12-14-5	ELBOW TO PIPE	G
	N	12-14-6	PIPE TO ELBOW	G
	N	12-14-7	ELBOW TO PIPE	G
	N	12-14-8	PIPE TO ELBOW	G
	N	12-14-9	ELBOW TO PIPE	G
DE-12-NI-303-4				
	N	12-236-40A	NOZZLE TO ELBOW, CROSSOVER PIPE	G
	N	12-236-40B	ELBOW TO CROSSOVER PIPE	G
	N	12-236-40C	PIPE TO BEND, CROSSOVER PIPE	G
	N	12-236-40D	BEND TO PIPE, CROSSOVER PIPE	G
	N	12-236-40E	PIPE TO ELBOW, CROSSOVER PIPE	G
	N	12-236-40F	ELBOW TO NOZZLE, CROSSOVER PIPE	G
	N	12-236-40G	NOZZLE TO ELBOW, CROSSOVER PIPE	G
	N	12-236-40H	ELBOW TO PIPE, CROSSOVER PIPE	G
	N	12-236-40K	PIPE TO BEND, CROSSOVER PIPE	G
	N	12-236-40M	BEND TO PIPE, CROSSOVER PIPE	G
	N	12-236-40N	PIPE TO ELBOW, CROSSOVER PIPE	G
	N	12-236-40P	ELBOW TO NOZZLE, CROSSOVER PIPE	G

SYSTEM COUNT: 123

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION	CAT
RESIDUAL HEAT REMOVAL				
DCA-10-MI-303-9-A				
	1	10-IA-18	VALVE TO PIPE BEND	A
	1	10-IA-19	PIPE BEND TO ELBOW	A
	1	10-IA-20	ELBOW TO ELBOW	A
	1	10-IA-21	ELBOW TO PIPE	A
	1	10-IA-24	PIPE TO CROSS	A
DCA-10-MI-303-9-B				
	1	10-IB-18	VALVE TO PIPE BEND	A
	1	10-IB-19	PIPE BEND TO ELBOW	A
	1	10-IB-20	ELBOW TO ELBOW	A
	1	10-IB-21	ELBOW TO PIPE	A
	1	10-IB-24	PIPE TO CROSS	A
DCA-10-MI-306-13				
	1	10-O-20	TEE TO PIPE BEND	A
	1	10-O-20/12-0	BRANCH CONNECTION	A
	1	10-O-21	PIPE BND TO PIPE BND	A
	1	10-O-22	PIPE BND TO PIPE BND	A
	1	10-O-23	PIPE BEND TO PIPE	A
	1	10-O-26	PIPE TO PIPE BEND	A
	1	10-O-27	PIPE BEND TO PIPE	A

SYSTEM COUNT: 17

SYSTEM COUNT ALL: 253

AUGMENTED INSPECTION PROGRAM - 02: **NUREG-0619, BWR Feedwater Nozzle and Control Rod Drive Return Line Cracking**

I. SCOPE

This augmented inspection program (AUG-02) defines the PBAPS program implemented to satisfy inspection requirements of NRC NUREG-0619 applicable to the PBAPS Units 2 & 3 Feedwater nozzles/spargers.

Augmented examinations per NUREG-0619 associated with the Control Rod Drive Return Line (CRDRL) nozzle (N9)/piping system are not required at PBAPS 2 & 3. The CRDRL nozzles (one per unit) have been cut and capped, and the CRDRL, eliminated.

Inspection requirements, as detailed in this document, meet or exceed those ASME, Section XI, inservice inspection requirements for the Feedwater nozzles/spargers and the CRDRL nozzle. In the case of the nozzle inner radius and the nozzle-to-safe-end weld, the individual examinations performed satisfies both Code and NUREG requirements.

II. REFERENCES

A. NUREG-0619, BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking (November 1980) with Generic Letter 81-11 (February 20, 1981).

B. PECO letter of January 21, 1981, J. W. Gallagher to Darrell G. Eisenhut (NRC) **(CM-2)**.

C. PECO letter of September 29, 1983, J. W. Gallagher to Darrell G. Eisenhut (NRC).

D. BWR Owners Group "Alternate BWR Feedwater Nozzle Inspection Requirements", GE-NE-523-A71-0594, October 1995 - Submitted to NRC via letter BWROG-95092, October 30, 1995.

E. Letter BWROG-98014, BWR Owners Group to NRC, April 1, 1998 - Submittal of Response to NRC Request for Additional Information on Proposed Alternative Feedwater Nozzle Inspection Requirements.

F. Structural Integrity Associates Report, SIR-98-001, Rev. 1, August, 1998, "Assessment of Feedwater Nozzle Sleeve Seal Refurbishment Intervals for Peach Bottom Units 2 and 3".

G. Structural Integrity Associates Report, SIR-98-053, Rev. 0, June 1998, "Updated Fracture Mechanics Evaluation for the Feedwater Nozzles at Peach Bottom Atomic Power Station Units 2 and 3".

H. Letter from T. Essig (USNRC) to Thomas Rausch (Chairman of BWROG) transmitting NRC Safety Evaluation of the BWROG Proposed Alternative to BWR Feedwater Nozzle Inspections, dated June 5, 1998.

I. ECR 98-00330, "Feedwater Nozzle Sleeve Seal Refurbishment".

III. GENERAL

NUREG-0619 was issued by the NRC via GL 81-11 in February, 1981. It was in response primarily to cracking detected at the feedwater nozzle inner radius in several BWRs. It also addressed cracking in the CRDRL nozzles. The NUREG gave inspection recommendations that were intended to detect any cracking prior to it becoming a safety issue. The NUREG also contained information concerning modifications that could be performed which the NRC deemed better designs. The better designs were intended to reduce the amount of bypass leakage that was suspected to be the cause of thermal fatigue cracking found in several BWRs. One other aspect of the new design called for the removal of the cladding in the area of the inner radius. The better designs had a corresponding longer inspection frequency.

The PBAPS 2 & 3 reactor pressure vessels have six (6) feedwater nozzles. In accordance with General Electric Company recommendations intended to minimize the probability of thermal fatigue crack initiation and growth, the PBAPS 2 & 3 feedwater nozzles have undergone modifications to remove the nozzle cladding and replace the original feedwater spargers with improved design "triple sleeve spargers" on all nozzles. These modifications (Mod 515) were accomplished in Spring 1980 for Unit 2 and Spring 1981 for Unit 3. The routine inspection program required by Table 2 of the NUREG (Reference A) for the PBAPS 2 & 3 specific nozzle configuration is as follows.

A. Perform UT examinations of the feedwater nozzle bore, nozzle inner radius, and the nozzle-to-safe-end weld every other refueling cycle;

B. Perform visual examination of the feedwater spargers every fourth refueling cycle;

C. Perform a liquid penetrant examination on the feedwater nozzle bore and inner radius every ninth refueling cycle or every 135 startup/shutdown cycles (A startup/shutdown cycle is defined in the NUREG as a reactor thermal power increase from nominally zero and subsequent return to zero, which produces both pressure and temperature changes and involves the flow of any amount of cold feedwater through the feedwater nozzles, including scrams to low-pressure hot standby and conventional startups/shutdowns).

PBAPS 2 and 3 followed that program through the 1994 outage for Unit 2 and 1995 outage for Unit 3.

After these outages, the BWR Owners Group (BWROG) submitted a program of alternate feedwater inspections (Reference D). The submittal was made in response to an NRC request of the BWROG that a generic version of a plant-specific program the NRC had evaluated be submitted so the NRC could reduce its reviews. This program had considered the feedwater nozzle cracking history, the improvements made in plant operation at the low flow conditions which created by-pass flow, the various plant feedwater sparger changes and improvements in ultrasonic inspection techniques since the NUREG had been issued. The conclusion was that cracking had virtually been eliminated due to the operational changes (plants that had original spargers had not cracked) and sparger modifications provided additional margin. It was also concluded that UT was now reliable enough to adequately detect and size flaws in the inner radius; therefore, the PT examinations required in the NUREG could be eliminated. Finally, the stress/fatigue evaluations performed by the BWROG showed that the inner radius region was limiting from a crack growth perspective and that inspection requirements of regions in the nozzle bore, zones 4 and 5 as defined in the NUREG, could be eliminated (the BWROG position has been implemented at various utilities.).

PBAPS 2 and 3 will implement this program for the third ten-year interval.

IV. EXAMINATION PROGRAM

Table 6-1 in the BWROG program (Reference D) provides inspection frequencies as a function of sparger type, UT technique, and inner radius fatigue life based on a plant-specific fracture mechanic evaluation as required by NUREG-0619. Inspection frequency is determined by using a multiplication factor, based on UT method, times the remaining life based on the fracture mechanics evaluation. The inspection frequency is capped at ten years, which matches Section XI rules.

Reference G contains the updated fracture mechanics evaluation for PBAPS 2 and 3. It shows that, if a crack is assumed to exist at 0.25" in depth in the inner radius, it will not exceed the critical flaw size within 60 years. Based on Table 6-1 of Reference D, the use of an acceptable automated UT system at PBAPS 2 and 3 would result in a reinspection frequency of 10 years for the nozzle inner radius. Since the inner radius is the limiting location, the nozzle bore and nozzle-to-safe-end weld inspections will also be performed at 10 years intervals.

The PBAPS 2 feedwater inspections performed in 1994 employed the General Electric GERIS system. This system has been demonstrated to be capable of detecting and sizing flaws of 0.25". This UT system used threshold recording and, per Table 6-1 of Reference D, would result in a UT inspection factor of 0.17. Reference G shows crack growth to be acceptable in excess of 60 years, and the reinspection frequency for Unit 2 is 10 years (60 x 0.17 = 10.2). Therefore, reinspection of Unit 2 feedwater nozzle inner radius and bore is due by 2004 (2R15).

The PBAPS 3 feedwater inspections performed in 1995 employed the General Electric GERIS 2000 system. This system has been demonstrated to be capable of detecting and sizing flaws of 0.25". This UT system used full RF recording with no threshold and, per Table 6-1 of Reference D, would result in a UT inspection factor of 0.33. Reference G shows crack growth to be acceptable in excess of 60 years, and the reinspection frequency for Unit 3 is 10 years (60 x 0.33 = 19.8). Therefore, reinspection of Unit 3 feedwater nozzle inner radius and bore is due by 2005 (3R15).

The UT examinations in 1994 for Unit 2 and 1995 for Unit 3 met the criteria set forth in the BWROG program. Therefore, PT examinations on NUREG-0619 are no longer required.

The examinations of the feedwater nozzle inner radii, nozzle bores and nozzle-to-safe-end welds conducted in accordance with this augmented program satisfy the Code requirements for UT examination.

The feedwater sparger design currently installed at PBAPS has performed well. In addition, no evidence of cracking has been reported in the industry. The sparger is not safety-related and is not required to be inspected per ASME, Section XI. PBAPS 2 and 3 spargers will be visually examined at a frequency of once every ten years.

V. EXAMINATION RESULTS

Examination results generated from this augmented inspection program shall be recorded and evaluated in accordance with the 1989 Edition of the Code and applicable plant procedures. Reference G shall also be considered in the performance of flaw evaluations for flaws that exceed the allowable sizes of IWB-3500 of Section XI.

VI. REPORTS/RECORDS

All reports and records associated with the examinations of this augmented program shall be prepared and maintained in accordance with ASME, 1989 Edition, of Section XI, Specification NE-290, and plant procedures. The results will be submitted to the NRC with the Code-required submittal of ISI data.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-02 Inspection Tables. They follow this section and are part of Specification NE-290.

Examinations conducted on these components during the second interval were performed in accordance with AUG-02 of Specification M-733.

Peach Bottom Atomic Power Station
Spec NE-290 Unit 2 AUG-02 Table
Listed by System and Drawing Number

NE-290 U-2 AUG-02

SYS_DESC	ISO_NO	SYS_ID	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
FEEDWATER						
	DDN-06-MI-201-2-A					
		12-INCH RISER-LEG A	6-AA-10	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination
		12-INCH RISER-LEG B	6-AB-6	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination
		12-INCH RISER-LEG C	6-AC-9	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination
	DDN-06-MI-201-2-B					
		12-INCH RISER-LEG D	6-BD-9	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination
		12-INCH RISER-LEG E	6-BE-6	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination
		12-INCH RISER-LEG F	6-BF-8	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination

System Count: 6

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SYS_DESC	ISO_NO	SYS_ID	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
REACTOR PRESSURE VESSEL						
	ISI-2-RV-01					
			N4B-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
			N4F-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
			N4E-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
			N4D-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
			N4C-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
			N4A-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
		NOZZLE INSIDE RAD. SECTION	N4A-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		NOZZLE INSIDE RAD. SECTION	N4B-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		NOZZLE INSIDE RAD. SECTION	N4C-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		NOZZLE INSIDE RAD. SECTION	N4D-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		NOZZLE INSIDE RAD. SECTION	N4E-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		NOZZLE INSIDE RAD. SECTION	N4F-IRS	FEEDWATER NOZZLE	UT once / 10 years	
	ISI-203-RV-11					

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SYS_DESC	ISO_NO	SYS_ID	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
		FEEDWATER SPARGER 150 AZ	FW SPARGER 150AZ	FW SPARGER	VT-3 once / 10 yr	
		FEEDWATER SPARGER 210 AZ	FW SPARGER 210AZ	FW SPARGER	VT-3 once / 10 yr	
		FEEDWATER SPARGER 270 AZ	FW SPARGER 270AZ	FW SPARGER	VT-3 once / 10 yr	
		FEEDWATER SPARGER 30 AZ	FW SPARGER 30AZ	FW SPARGER	VT-3 once / 10 yr	
		FEEDWATER SPARGER 330 AZ	FW SPARGER 330AZ	FW SPARGER	VT-3 once / 10 yr	
		FEEDWATER SPARGER 90 AZ	FW SPARGER 90AZ	FW SPARGER	VT-3 once / 10 yr	

System Count: 18

System Count All: 24

Peach Bottom Atomic Power Station
Spec NE-290 Unit 3 AUG-02 Table
Listed by System and Drawing Number

NE-290 U-3 AUG-02

SYS_DESC	ISO_NO	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
FEEDWATER					
	DDN-06-MI-301-2				
		6-AA-10	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination volume.
		6-AB-6	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination volume.
		6-AC-9	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination volume.
	DDN-06-MI-301-2				
		6-BD-9	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination volume.
		6-BE-6	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination volume.
		6-BF-8	TRANS PIECE TO NOZZ	UT once / 10 years	See AUG-2, reference D, for description of examination volume.
	System Count:		6		

SYS_DESC	ISO_NO	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
REACTOR PRESSURE VESSEL					
	ISI-203-RV-11				
		FW SPARGER 30AZ	FW SPARGER	VT-3 once / 10 yr	
		FW SPARGER 90AZ	FW SPARGER	VT-3 once / 10 yr	
		FW SPARGER 150AZ	FW SPARGER	VT-3 once / 10 yr	
		FW SPARGER 210AZ	FW SPARGER	VT-3 once / 10 yr	
		FW SPARGER 270AZ	FW SPARGER	VT-3 once / 10 yr	
		FW SPARGER 330AZ	FW SPARGER	VT-3 once / 10 yr	
	ISI-3-RV-01				
		N4A-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
		N4A-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		N4B-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
		N4B-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		N4C-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
		N4C-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		N4D-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	

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SYS_DESC	ISO_NO	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
		N4D-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		N4E-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
		N4E-IRS	FEEDWATER NOZZLE	UT once / 10 years	
		N4F-BORE	FEEDWATER NOZZLE BORE	UT once / 10 years	
		N4F-IRS	FEEDWATER NOZZLE	UT once / 10 years	

System Count: 18

System Count All: 24

AUGMENTED INSPECTION PROGRAM - 03 : Core Spray Internals

I. SCOPE

This augmented program (AUG-03) specifies the inspections to be conducted on Core Spray Piping and Spargers inside the reactor vessel at PBAPS 2 and 3 to meet the requirements of BWRVIP-18.

II. REFERENCES

A. BWRVIP-18: Core Spray Internals Inspection and Flaw Evaluation Guidelines, July 1996.

B. Drawing ISI-203-RV-07.

C. Drawing ISI-203-RV-08.

D. Drawing ISI-203-RV-23.

E. IE Bulletin No. 80-13, Cracking in Core Spray Spargers, dated May 12, 1980.

F. PECO letter of June 13, 1980, S. L. Daltroff to Boyce H. Grier (NRC). **(CM-3)**

G. General Electric Company SIL No. 289, Core Spray Visual Inspection Revision 0, dated February 1979 and including Revision 1, Supplement 1, Rev. 1 dated March 15, 1989; and Supplement 2, dated January 5, 1996.

H. PECO Energy NCR PB 93-00754, Core Spray Pipe in RPV with 3 inch Linear Indication, dated 10/25/93.

I. PECO Energy letter to NRC, dated August 6, 1996, Reactor Vessel Internals Examination Plans for the Core Shroud and Core Spray Piping.

J. PECO Energy letter to NRC, dated September 12, 1996, Implementation of the BWRVIP-18 during 2R11.

K. NEDE-30608P, Evaluation of the Need for Core Spray Cooling in BWRs, Class III, May 1984.

L. NEDC-32230P, Safer Gestr-LOCA Analysis, PBAPS, Units 2 and 3, January 1993.

M. USNRC letter to George A. Hunger (PECO Energy Company), dated November 15, 1996, Safety Evaluation to use BWRVIP-18 during 2R11.

N. PECO letter to NRC, PBAPS U-3 RPV Internals Examination Plans for Core Spray Pipe (3R11), 5/20/97.

O. PECO letter to NRC, PBAPS U-2 RPV Internals Examination Plans for Core Spray Pipe (2R12), 5/14/98.

III. GENERAL

BWRVIP-18 specifies inspection of core spray internals including piping, spargers, nozzles and brackets.

In developing BWRVIP-18 (Reference A), the BWRVIP considered existing SILs, RICSILs, NRC and other BWRVIP documents. All current inspection recommendations associated with safety function of the core spray internals are contained in BWRVIP-18. Other recommendations are considered superseded.

Implementation of BWRVIP-18 in the third ten-year interval takes the place of NRC IE Bulletin 80-13 examinations identified in AUG-03 of Specification M-733. With the issuance of the BWRVIP guidelines, the program was revised to meet the recommendations of BWRVIP-18. This augmented program continues implementation of the BWRVIP-18.

IV. EXAMINATION PROGRAM

There are no Section XI requirements for the Core Spray Internals. This examination program is designed to comply with the provisions of BWRVIP-18 and any plant-specific evaluations that are beyond the scope of BWRVIP-18. Welds that have been solution annealed are exempt from inspection. Detailed inspection requirements for each location are located in AUG-03 Tables for PBAPS 2 and 3.

A. Baseline Inspections

Baseline inspections are the first inspections that satisfy the BWRVIP-18 guidelines, even if they were performed prior to issuance of the guidelines. The piping baseline is to be performed on all circumferential piping welds. Visual or UT methods are acceptable. If the inspection method is visual, EVT-1 is required to be used. Supplemental UT may be needed if flaws are detected. The inspection method employed affects the reinspection requirements.

The sparger baseline is location dependent. PBAPS 2 and 3 is a "geometry-tolerant" plant as defined in BWRVIP-18. For this class of plant, the sparger baseline involves a MVT-1 (MVT-1 is the same as CSVT-1 in BWRVIP-18) of critical locations (S1, S2, and S4) and a VT-3 of the less critical nozzle welds (S3). (Note: NRC is evaluating the use of geometry tolerant as a basis for baseline and reinspection. If disallowed, the baseline would become an EVT-1 of everything except the nozzles, which would become MVT-1).

The baseline for the piping and sparger brackets is MVT-1 without cleaning, although the need for cleaning to assure a good inspection should be evaluated. If indications are noted, then EVT-1 and cleaning are to be used to evaluate the indication.

Welds with limited accessibility are to be inspected to the fullest extent. Hidden welds should be evaluated using the guidance in BWRVIP-18.

Repair baseline inspections should confirm the function of the repair. The repaired weld need only be inspected if it is depended on to provide integrity to the repair. Additional guidance is contained in BWRVIP-18.

B. Reinspection

The reinspection strategy involves the use of "target welds" for piping and the spargers. Reinspection frequency is dependent on the baseline inspection method. The method used for reinspection can be different than the baseline, provided that baseline requirements for the method chosen are satisfied.

Piping reinspection is to occur every other refueling outage if the baseline was accomplished using UT and every cycle if the baseline was performed visually. The reinspection sample includes all creviced and tee box-to-pipe welds, all welds with existing flaws and a rotating sample of 25% of the piping butt welds (P4a-P4d) such that 4 reinspections would cover all welds.

The reinspection for the sparger in a geometry-tolerant plant is performed using visual techniques used for the baseline. The scope includes any previously cracked locations and a rotating 25% sample of the sparger welds.

Reinspection of piping and sparger brackets should use the same method as the baseline. If there is no cracking, reinspection every four cycles (25% rotating sample) is sufficient. If cracking exists, reinspection frequency of the flawed location and other locations should be based on the flaw evaluation.

Hidden welds should be inspected to the extent practical at a frequency as if they are piping welds. Repairs should be examined as specified in reference A, as reflected in the AUG Tables.

C. Scope Expansion

If one or more flaws are found during the baseline, scope expansion is not needed since the baseline is a 100% inspection scope. If flaws are detected during the reinspection, all remaining similar locations are to be examined during that outage.

D. Flaw Evaluation

BWRVIP-18 contains loads information in Section 4 and flaw evaluation methodology in Section 5 and Appendix A. When flaws are detected, the flaw evaluation must consider the impact of the flawed location on another location. Realistic yet conservative assumptions about the condition of uninspected regions should be made. Adjustment to reinspection frequencies should be considered, based on the flaw.

V. EXAMINATION RESULTS

Examination results shall be documented in the same manner as Code-required examinations. Flaw evaluations shall be performed as described in paragraph IV.D above.

VI. REPORTS/RECORDS

There are no Code-required inspection or reporting requirements for the core spray internals. However, PBAPS and BWRVIP have committed to supply inspection, evaluation, and repair results to NRC and to EPRI. Therefore all reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290, and plant procedures. These results will be forwarded to NRC with the Code-required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-03 Inspection Table. It follows this section and is part of Specification NE-290.

Examinations conducted on the core spray internals during the second ten-year interval were performed in accordance with AUG-03 of Specification M-733.

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P1A	Thermal Sleeve to Junction Box, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11. Weld is partially hidden.
P1B	Thermal Sleeve to Junction Box, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11. Weld is partially hidden.
P2A	Junction Box Cover Plate Weld, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P2B	Junction Box Cover Plate Weld, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P3A1	Header Pipe to Junction Box Weld, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P3A2	Header Pipe to Junction Box Weld, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P3B1	Header Pipe To Junction Box Weld, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P3B2	Header Pipe to Junction Box Weld, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P4aA	Header Pipe to Elbow Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4aB	Header Pipe to Elbow Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4aC	Header Pipe to Elbow Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4aD	Header Pipe to Elbow Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4bA	Elbow to Downcomer Weld, 325.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4bB	Elbow to Downcomer Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P4bC	Elbow to Downcomer Weld 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4bD	Elbow to Downcomer Weld 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4cA	Downcomer to Elbow Weld 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4cB	Downcomer to Elbow Weld 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4cC	Downcomer to Elbow Weld 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4cD	Downcomer to Elbow Weld 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4dA	Elbow to Shroud Weld 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4dB	Elbow to Shroud Weld 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4dC	Elbow to Shroud Weld 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P4dD	Elbow to Shroud Weld 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 2R11
P5A	Downcomer to Sliding Sleeve Weld 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P5B	Downcomer to Sliding Sleeve Weld 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P5C	Downcomer to Sliding Sleeve Weld 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P5D	Downcomer to Sliding Sleeve Weld 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P6A	Sliding Sleeve to Outer Sleeve Weld 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P6B	Sliding Sleeve to Outer Sleeve Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P6C	Sliding Sleeve to Outer Sleeve Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P6D	Sliding Sleeve to Outer Sleeve Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P7A	Outer Sleeve to Downcomer Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P7B	Outer Sleeve to Downcomer Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P7C	Outer Sleeve to Downcomer Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P7D	Outer Sleeve to Downcomer Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P8aA	Collar to Shroud Pipe, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P8aB	Collar to Shroud Pipe, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P8aC	Collar to Shroud Pipe, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P8aD	Collar to Shroud Pipe, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P8bA	Collar to Shroud Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P8bB	Collar to Shroud Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P8bC	Collar to Shroud Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P8bD	Collar to Shroud Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 2R11
P9A	Shroud Pipe to Sparger T-Box, 352.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
P9B	Shroud Pipe to Sparger T-Box, 7.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
P9C	Shroud Pipe to Sparger T-Box, 187.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
P9D	Shroud Pipe to Sparger T-Box, 172.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
PB1 Bracket	Pipe Bracket and Weld, 15 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10
PB2 Bracket	Pipe Bracket and Weld, 117 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10
PB3 Bracket	Pipe Bracket and Weld, 123 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10
PB4 Bracket	Pipe Bracket and Weld, 165 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10
PB5 Bracket	Pipe Bracket and Weld, 195 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10
PB6 Bracket	Pipe Bracket and Weld, 237 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10
PB7 Bracket	Pipe Bracket and Weld, 243 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10
PB8 Bracket	Pipe Bracket and Weld, 345 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 2R10

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
S1A	Cover Plate to Sparger T-Box Weld, 352.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S1B	Cover Plate to Sparger T-Box Weld, 7.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S1C	Cover Plate to Sparger T-Box, 187.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S1D	Cover Plate to Sparger T-Box, 172.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S2A1	Sparger Pipe to T-Box Weld, 352.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S2A2	Sparger Pipe to T-Box Weld, 352.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S2B1	Sparger Pipe to T-Box Weld, 7.5 AZ	ISI-203-RV-08	N/A	N/A	Function replaced by bolted repair installed 1982.
S2B2	Sparger Pipe to T-Box Weld, 7.5 AZ	ISI-203-RV-08	N/A	N/A	Function replaced by bolted repair installed 1982.
B Sparger repair clamp	Bolted Repair Clamp, B Sparger T-box	ISI-203-RV-08	VT-1	Every Other Outage	Installed 1982
S2C1	Sparger Pipe to T-Box Weld, 187.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S2C2	Sparger Pipe to T-Box Weld, 187.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S2D1	Sparger Pipe to T-Box Weld, 172.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S2D2	Sparger Pipe to T-Box Weld, 172.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S3aA	Nozzle to A Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3aB	Nozzle to B Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
S3aC	Nozzle to C Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3aD	Nozzle to D Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3bA	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3bB	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3bC	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3bD	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3cB1	B Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3cB2	B Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3cD1	D Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S3cD2	D Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
S4A1	End Cap to A Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S4A2	End Cap to A Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S4B1	End Cap to B Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S4B2	End Cap to B Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S4C1	End Cap to C Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S4C2	End Cap to C Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
S4D1	End Cap to D Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
S4D2	End Cap to D Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 2R10
SB1 Bracket	Sparger Brackets and Welds, 7.5 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB2 Bracket	Sparger Brackets and Welds, 44 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB3 Bracket	Sparger Brackets and Welds, 84 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB4 Bracket	Sparger Brackets and Welds, 96 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB5 Bracket	Sparger Brackets and Welds, 136 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB6 Bracket	Sparger Brackets and Welds, 172.5 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB7 Bracket	Sparger Brackets and Welds, 187.5 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB8 Bracket	Sparger Brackets and Welds, 224 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB9 Bracket	Sparger Brackets and Welds, 264 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB10 Bracket	Sparger Brackets and Welds, 276 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB11 Bracket	Sparger Brackets and Welds, 316 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10
SB12 Bracket	Sparger Brackets and Welds, 352.5 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 2R10

AUG-03 Inspection Table
Unit 2
Core Spray Piping and Sparger

Notes:

1. This a "Target Weld", as defined in BWRVIP-18. Reexamination is required every other refueling outage, if the previous examination method were UT. It the previous examination were visual, then the reexamination is required each refueling outage.

2. This is not a Target Weld. Reexamine as part of a 25% "rotating sample", such that all non-target locatic s are reexamined within four (4) refueling outages.

3. Reexamination is required every four (4) refueling outages. These can be part of the 25% rotating sample or deferred to the fourth refueling outage.

4. PBAPS 2 and 3 are considered "geometry tolerant", per BWRVIP-18. Therefore, there are no target sparger welds. Reexamine as part of a 25% "rotating sample", such that all non-target locations are reexamined within four (4) refueling outages.

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
A Downcomer Repair Clamp	MAG-CG-408, 7.6.6	ISI-203-RV-07	VT-1	Every Other Outage	Repair Installed 3R10
B Downcomer Repair Clamp	MAG-CG-408, 7.6.6	ISI-203-RV-07	VT-1	Every Other Outage	Repair Installed 3R10
C Downcomer Repair Clamp	MAG-CG-408, 7.6.6	ISI-203-RV-07	VT-1	Every Other Outage	Repair Installed 3R10
D Downcomer Repair Clamp	MAG-CG-408, 7.6.6	ISI-203-RV-07	VT-1	Every Other Outage	Repair Installed 3R10
Header T-Box Repair 120 AZ	Repair Plates Attachment Welds	ISI-203-RV-07	EVT-1	Each Refueling Outage	Upper and Lower Plates, 3 Welds Each
Header T-Box Repair 240 AZ	Repair Plates Attachment Welds	ISI-203-RV-07	EVT-1	Each Refueling Outage	Upper and Lower Plates, 3 Welds Each
P1A	Thermal Sleeve to Junction Box, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11. Weld is partially hidden.
P1B	Thermal Sleeve to Junction Box, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11. Weld is partially hidden.
P2A	Junction Box Cover Plate Weld, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P2B	Junction Box Cover Plate Weld, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P3A1	Header Pipe to Junction Box Weld, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 5	Note5
P3A2	Header Pipe to Junction Box Weld, 240 AZ	ISI-203-RV-07	EVT-1 or UT	Note 5	Note 5
P3B1	Header Pipe To Junction Box Weld, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 5	Note 5

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P3B2	Header Pipe to Junction Box Weld, 120 AZ	ISI-203-RV-07	EVT-1 or UT	Note 5	Note 5
P4aA	Header Pipe to Elbow Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4aB	Header Pipe to Elbow Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4aC	Header Pipe to Elbow Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4aD	Header Pipe to Elbow Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4bA	Elbow to Downcomer Weld, 325.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4bB	Elbow to Downcomer Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4bC	Elbow to Downcomer Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4bD	Elbow to Downcomer Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4cA	Downcomer to Elbow Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4cB	Downcomer to Elbow Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4cC	Downcomer to Elbow Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4cD	Downcomer to Elbow Weld, 172.5 AZ	ISI-203-RV-07	N/A	None	No Examination required. Function was replaced by repair clamp 3R10.
P4dA	Elbow to Shroud Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P4dB	Elbow to Shroud Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4dC	Elbow to Shroud Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P4dD	Elbow to Shroud Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 2	Baseline Examination 3R11
P5A	Downcomer to Sliding Sleeve Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11. Examine upper weld toe only. Lower portion was replaced by clamp in 3R10.
P5B	Downcomer to Sliding Sleeve Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11. Examine upper weld toe only. Lower portion was replaced by clamp in 3R10.
P5C	Downcomer to Sliding Sleeve Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11. Examine upper weld toe only. Lower portion was replaced by clamp in 3R10.
P5D	Downcomer to Sliding Sleeve Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11. Examine upper weld toe only. Lower portion was replaced by clamp in 3R10.
P6A	Sliding Sleeve to Outer Sleeve Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P6B	Sliding Sleeve to Outer Sleeve Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P6C	Sliding Sleeve to Outer Sleeve Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P6D	Sliding Sleeve to Outer Sleeve Weld, 172.5 AZ	ISI-203-RV-07	N/A	None	No Examination required. Function was replaced by repair clamp 3R10.
P7A	Outer Sleeve to Downcomer Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P7B	Outer Sleeve to Downcomer Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P7C	Outer Sleeve to Downcomer Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P7D	Outer Sleeve to Downcomer Weld, 172.5 AZ	ISI-203-RV-07	N/A	None	No Examination required. Function was replaced by repair clamp in 3R10.
P8aA	Collar to Shroud Pipe, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P8aB	Collar to Shroud Pipe, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P8aC	Collar to Shroud Pipe, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P8aD	Collar to Shroud Pipe, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P8bA	Collar to Shroud Weld, 352.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P8bB	Collar to Shroud Weld, 7.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P8bC	Collar to Shroud Weld, 187.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
P8bD	Collar to Shroud Weld, 172.5 AZ	ISI-203-RV-07	EVT-1 or UT	Note 1	Baseline Examination 3R11
P9A	Shroud Pipe to Sparger T-Box, 352.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
P9B	Shroud Pipe to Sparger T-Box, 7.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
P9C	Shroud Pipe to Sparger T-Box, 187.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
P9D	Shroud Pipe to Sparger T-Box, 172.5 AZ	ISI-203-RV-07	Best Effort EVT-1	Note 1	Weld is inaccessible
PB1 Bracket	Pipe Bracket and Weld, 15 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
PB2 Bracket	Pipe Bracket and Weld, 117 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
PB3 Bracket	Pipe Bracket and Weld, 123 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
PB4 Bracket	Pipe Bracket and Weld, 165 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
PB5 Bracket	Pipe Bracket and Weld, 195 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
PB6 Bracket	Pipe Bracket and Weld, 237 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
PB7 Bracket	Pipe Bracket and Weld 243 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
PB8 Bracket	Pipe Bracket and Weld, 345 AZ	ISI-203-RV-07	MVT-1	Note 3	Baseline Examination 3R10
S1A	Cover Plate to Sparger T-Box Weld, 352.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
S1B	Cover Plate to Sparger T-Box Weld, 7.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S1C	Cover Plate to Sparger T-Box, 187.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S1D	Cover Plate to Sparger T-Box, 172.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2A1	Sparger Pipe to T-Box Weld, 352.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2A2	Sparger Pipe to T-Box Weld, 352.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2B1	Sparger Pipe to T-Box Weld, 7.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2B2	Sparger Pipe to T-Box Weld, 7.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2C1	Sparger Pipe to T-Box Weld, 187.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2C2	Sparger Pipe to T-Box Weld, 187.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2D1	Sparger Pipe to T-Box Weld, 172.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S2D2	Sparger Pipe to T-Box Weld, 172.5 AZ	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S3aA	Nozzle to A Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3aB	Nozzle to B Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3aC	Nozzle to C Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3aD	Nozzle to D Sparger Pipe. Typical of 65	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
S3bA	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3bB	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3bC	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3bD	Nozzle to Orifice. Typical of 65 Nozzle	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3cB1	B Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3cB2	B Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3cD1	D Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S3cD2	D Sparger Drain Welds	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
S4A1	End Cap to A Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S4A2	End Cap to A Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S4B1	End Cap to B Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S4B2	End Cap to B Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S4C1	End Cap to C Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S4C2	End Cap to C Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S4D1	End Cap to D Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
S4D2	End Cap to D Sparger Pipe Weld	ISI-203-RV-08	MVT-1	Note 4	Baseline Examination 3R10
SB1 Bracket	Sparger Brackets and Welds, 7.5 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10

AUG-03 Inspection Table
Unit 3
Core Spray Piping and Sparger

Weld Number	Component Description	Drawing Reference	Examination Method	Examination Frequency	Comments
SB2 Bracket	Sparger Brackets and Welds, 44 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
SB3 Bracket	Sparger Brackets and Welds, 84 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
SB4 Bracket	Sparger Brackets and Welds, 96 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
SB5 Bracket	Sparger Brackets and Welds, 136 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
SB6 Bracket	Sparger Brackets and Welds, 172.5 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
SB7 Bracket	Sparger Brackets and Welds, 187.5 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
SB8 Bracket	Sparger Brackets and Welds, 224 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10
SB9 Bracket	Sparger Brackets and Welds, 264 AZ	ISI-203-RV-08	VT-3	Note 3	Baseline Examination 3R10

Notes:

1. This a "Target Weld", as defined in BWRVIP-18. Reexamination is required every other refueling outage, if the previous examination method were UT. It the previous examination were visual, then the reexamination is required each refueling outage.

2. This is not a Target Weld. Reexamine as part of a 25% "rotating sample", such that all non-target locations are reexamined within four (4) refueling outages.

3. Reexamination is required every four (4) refueling outages. These can be part of the 25% rotating sample or deferred to the fourth refueling outage.

4. PBAPS 2 and 3 are considered "geometry tolerant", per BWRVIP-18. Therefore, there are no target welds. Reexamine as part of a 25% "rotating sample", such that all non-target locations are reexamined within four (4) refueling outages.

5. Weld was replaced by Header-Tbox repair. Inspect once per interval to assess crack growth or new crack initiation.

AUGMENTED INSPECTION PROGRAM - 04 : Jet Pump Assembly

I. SCOPE

This augmented program (AUG-04) specifies the inspections to be conducted on Jet Pump Assemblies at PBAPS 2 and 3 to meet the requirements of BWRVIP-41.

II. REFERENCES

A. BWRVIP-41: Jet Pump Assembly Inspection and Flaw Evaluation Guidelines, October 1997.

B. BWRVIF-28: Assessment of BWR Jet Pump Riser Elbow to Thermal Sleeve Weld Cracking, December 1996.

C. NUREG/CR-3052, Closeout of IE Bulletin 80-07: BWR Jet Pump Assembly Failure, November 1984.

D. IE Bulletin No. 80-07, BWR Jet Pump Assembly Failure, dated April 4, 1980, and including Supplement No. 1 dated May 13, 1980.

E. General Electric Company, SIL No. 330, Jet Pump Beam Cracks, June 9, 1980.

F. PECo letter of May 2, 1980, S. L. Daltroff to Boyce W. Grier (NRC).

G. PECo letter of May 7, 1980, S. L. Daltroff to Boyce W. Grier (NRC).

H. GE SIL No. 574, Jet Pump adjusting screw tack weld failures, October 5, 1993.

I. GE RICSIL No. 078, Jet Pump restrainer bracket set screw gaps, June 3, 1996.

J. NCR PB 94-00352, Unit 2 Jet Pump # 7 adjustment screw tack weld crack.

K. NCR PB 94-00355, Unit 2 Jet Pump # 3, 4, 6, 7 restrainer wedge misalignment.

L. A/R A0789829, Review of SIL 574, Adjusting Screw Tack Weld Failures.

M. ECR 96-03240, Contingency repair plan for jet pump # 7.

N. BWRVIP letter number 97-139, dated January 31, 1997.

O. GE SIL No. 605, revision 1, Jet Pump Riser Pipe Cracking.

P. NRC Information Notice 97-02, Cracks Found in Jet pump Riser Assembly Elbows at Boiling Water Reactors, dated February 6, 1997.

Q. Drawing ISI-203-RV-14

R. Drawing ISI-203-RV-15

III. GENERAL

BWRVIP-41 specifies inspection of selected jet pump assembly components. The inspection method, extent and frequency is a function of the relative safety significance of a given location. Each location was ranked as high (H), medium (M), or low (L). Additionally, the IGSCC susceptibility of the material at a given location was used as a factor.

In developing BWRVIP-41, the BWRVIP considered existing SILs, RICSILs, NRC and other BWRVIP documents. All current inspection recommendations associated with safety function of the jet pump assembly are contained in BWRVIP-41. Other recommendations are considered superseded.

Implementation of BWRVIP-41 in the third ten-tear interval takes the place of three (3) augmented programs from the second ten-year interval. Those are AUG-04, AUG-11, and AUG-14 of PBAPS 2 and 3 Specification M-733. The following is a brief history of those augmented programs and how they are addressed in third ten-year interval.

A. History of AUG-04 of Specification M-733

This augmented program dealt with the inspection of the jet pump hold-down beam assemblies for Units 2 and 3. IGSCC cracking had been detected in the industry and inspections were initiated in response to NRC IE Bulletin 80-07 (Reference D), NUREG/CR-3052 (Reference C), and GE SIL 330 (Reference E). The long term fix for the issue was to replace the beams with beams of a new material and a lower pre-load. Doing so resulted in an inspection recommendation to perform UT on each beam once per ten

years. PBAPS replaced the beams and adopted the once per ten year inspection recommendation. Unit 2 beams were replaced in August 1984. PBAPS 3 beams were replaced in August 1988 with the exception of Beam #6. Beam # 6 was replaced in spring, 1981. BWRVIP-41 has inspection recommendations for the beam assemblies that meet or exceed those of the previous AUG-04 program.

B. History of AUG-11 of Specification M-733

This augmented program addressed the issues of cracking in jet pump adjustment screw tack welds (Reference H) and jet pump restrainer bracket set screw gaps (Reference I). PBAPS performed visual inspections during each outage. Wedge misalignment was noted on Unit 2 jet pumps 3, 4, 6, and 7 (References J & K). BWRVIP-41 has inspection recommendations that address this location.

C. History of AUG-14 of Specification M-733

This augmented program was developed in response to jet pump riser cracking that was detected both overseas and domestically. The problem was identified in SIL 605 (Reference O) and NRC Information Notice 97-02 (Reference P). Initial inspection recommendations were provided by the BWRVIP in Reference N. A safety assessment of the cracking was documented in BWRVIP-28 (Reference B).

PBAPS 3 jet pump risers were inspected during 3R11. Two risers were repaired as a consequence of the inspections. PBAPS 2 was inspected during 2R12. This location will continue to be inspected per BWRVIP-41. Inspections of the repairs will continue as determined by the repair evaluation until revised based on inspection results. BWRVIP-41 does not address this repair.

IV. EXAMINATION PROGRAM

There are no Section XI requirements for the Jet Pump Assembly. This examination program is designed to comply with the provisions of BWRVIP-41 and plant-specific evaluations that are beyond the scope of BWRVIP-41.

BWRVIP-41 uses terminology not routinely used in inspection programs. Locations were assigned a priority of high, medium or low. Inspection recommendations are based on this priority and refer to a time period called an "Inspection Cycle". For the purposes of BWRVIP-41, an "inspection cycle" is equal to six (6) years.

A. Baseline Inspections

Baseline inspections are the first inspections that satisfy the BWRVIP-41 guidelines, even if they were performed prior to issuance of the guidelines. The baseline requirements are dependent on the priority classification (this does not apply to beam assemblies, because they have unique criteria).

High Priority - The baseline for these locations is to be completed within the first inspection cycle (6 years) from the time the inspections begin. At least 50% of these locations are to be inspected during the first outage of implementing BWRVIP-41.

Medium and Low Priority - The baseline for these locations is to be completed within two (2) inspection cycles (12 years). At least 50% of the baseline is to be inspected during the first inspection cycle.

B. Reinspection

Reinspections (except beam assemblies) are required for all locations that received a baseline, but at a less frequent interval.

High Priority - The reinspection is to be completed within two (2) inspection cycles, with 50% of the locations being inspected during each inspection cycle.

Medium and Low Priority - The reinspection is to be performed at a rate of 25% of the population each future inspection cycle.

C. Scope Expansion

If one or more flaws (e.g., cracks, wear, bolt loosening, etc.) are found during the baseline or the reinspection of a specific location, all of the remaining locations of the same type (i.e., all locations with the same number/ID) on all other jet pump assemblies should be inspected during the same refueling outage unless the flaw can be correlated to a specific event. Additionally, the effect that degradation of one location has on others should be considered when determining if scope expansion is warranted.

D. Flaw Evaluation

BWRVIP-41 contains loads information in Section 4 and flaw evaluation methodology in Section 5. When flaws are detected at a certain location, the evaluation must consider

the impact of one location on another. Realistic yet conservative assumptions about the condition of uninspected regions should be made. Adjustment to reinspection frequencies should be considered based on the flaw.

E. Repaired Locations

BWRVIP-41 does not have specific recommendations regarding repairs and their inspections. PBAPS will develop repairs in accordance with plant procedures. Inspection and reinspection criteria will be determined as part of the repair process.

AUG-04 Inspection tables contain the inspection criteria for each location. The detailed bases for both the need for inspection and the frequency is in BWRVIP-41.

V. EXAMINATION RESULTS

Examination results shall be documented in the same manner as Code-required examinations. Flaw evaluations shall be performed as described in paragraph IV.D, above.

VI. REPORTS/RECORDS

There are no Code-required inspection or reporting requirements for the jet pump assembly. However, PBAPS and BWRVIP have committed to supply inspection, evaluation, and repair results to NRC and to EPRI. Therefore, all reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290, and plant procedures. These results will be forwarded to NRC, with the Code required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-04 Inspection Table. It follows this section and is part of Specification NE-290.

Examinations conducted on some of the jet pump assembly components during the second ten-year interval were performed in accordance with AUG-01, AUG-11, and AUG-14 of Specification M-733.

AUG-04 Inspection Table PBAPS Units 2 & 3
Jet Pump Assembly

Component Description	BWRVIP-41 Location ID	BWRVIP-41 Figure #	Priority Rank	Examination Method	Examination Extent and Frequency	Comments
Riser Brace Leaf to RPV Pad Weld	RB-1a	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Riser Brace Leaf to RPV Pad Weld	RB-1b	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Riser Brace Leaf to RPV Pad Weld	RB-1c	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Riser Brace Leaf to RPV Pad Weld	RB-1d	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Riser Brace Leaf to Yoke Weld	RB-2a	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Riser Brace Leaf to Yoke Weld	RB-2b	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Riser Brace Leaf to Yoke Weld	RB-2c	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Riser Brace Leaf to Yoke Weld	RB-2d	2.3.1-2	M	MVT-1	100% of the weld HAZs Baseline - Note 1 Reinspection - Note 2	
Beam Bolt Hole Region	BB-1	2.3.2-2	H	UT	Baseline - Note 3 Reinspection - Note 4	Unit 2 beams were installed in August 1984. Unit 3 beams, except beam #6, were installed in August 1988. Beam#6 was installed in 1981.
Beam Transition Arm Region	BB-2	2.3.2-2	H	UT	Baseline - Note 3 Reinspection - Note 4	

AUG-04 Inspection Table PBAPS Units 2 & 3
Jet Pump Assembly

Component Description	BWRVIP-41 Location ID	BWRVIP-41 Figure #	Priority Rank	Examination Method	Examination Extent and Frequency	Comments
Thermal Sleeve to Safe End Weld	TS-2	2.3.3-1	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	Weld may not be accessible.
Riser Elbow to Thermal Sleeve Weld	RS-1	2.3.4-3	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	Cracking was detected during 3R11 in 3 locations (30°, 150°, and 300°). The 150° and 300° locations were repaired during a mid-cycle shutdown in 1998 (3J12), therefore the two welds do not require future inspections.
Riser Clamp at 150° Azimuth Unit 3 Only	N/A	N/A	N/A	VT-1	Every other outage, beginning with 3R12.	Installed 3J12 (1998)
Riser Clamp at 300° Azimuth Unit 3 Only	N/A	N/A	N/A	VT-1	Every other outage, Beginning with 3R12.	Installed 3J12 (1998)
Riser Elbow to Riser Pipe Weld	RS-2	2.3.4-2 2.3.4-3	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	
Riser Pipe to Transition Piece Weld	RS-3	2.3.4-2	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	East side of weld need not be inspected.
Riser Pipe to Restrainer Bracket Circ. Welds	RS-6	2.3.4-2	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	
Riser Pipe to Restrainer Bracket Circ. Welds	RS-7	2.3.4-2	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	
Riser Pipe to Riser Brace Circ. Welds	RS-8	N/A	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	

AUG-04 Inspection Table PBAPS Units 2 & 3
Jet Pump Assembly

Component Description	BWRVIP-41 Location ID	BWRVIP-41 Figure #	Priority Rank	Examination Method	Examination Extent and Frequency	Comments
Riser Pipe to Riser Brace Circ. Welds	RS-9	N/A	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	
Connection between Inlet and Mixer	IN-4	2.3.6-1	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	Examination required on Mixer side only. Inlet is cast material.
Barrel to Adapter Weld	MX-2	2.3.7-3	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	Examination required on Barrel side only. Adapter is cast material.
Wedge Bearing Surface	WD-1	2.3.8-3 2.3.8-6	M	VT-1	Baseline - Note 1 Reinspection - Note 2 Additional - Note 7	
Diffuser Collar to Diffuser Shell Weld	DF-1	2.3.9-3	M	MVT-1	Baseline - Note 1 Reinspection - Note 2	
Diffuser Shell to Tailpipe Weld	DF-2	2.3.9-3	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	
Diffuser Tailpipe to Adapter Weld	DF-3	2.3.9-3 2.3.11-1	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	If there is a backing ring, examination of the Adapter Backing Ring fillet welds (AD-3a, b) may be substituted.
Adapter Top to Adapter Bottom Weld	AD-1	2.3.11-1	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	
Adapter Bottom (or Lower Ring) to Shroud Support Plate	AD-2	2.3.11-1	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	

AUG-04 Inspection Table PBAPS Units 2 & 3
Jet Pump Assembly

Component Description	BWRVIP-41 Location ID	BWRVIP-41 Figure #	Priority Rank	Examination Method	Examination Extent and Frequency	Comments
Adapter Backing Ring Fillet Welds	AD-3a	2.3.11-1	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	If backing ring does not exist, examine Diffuser Tailpipe to Adapter Weld (DF-3) weld instead.
Adapter Backing Ring Fillet Welds	AD-3b	2.3.11-1	H	MVT-1	Baseline - Note 5 Reinspection - Note 6	If backing ring does not exist, examine Diffuser Tailpipe to Adapter Weld (DF-3) weld instead.

Notes:

1. The baseline requirement for medium and low priority components is to examine 100% of the components over the first two inspection cycles of BWRVIP-41 implementation. Fifty percent (50%) of the components are to be examined during the first inspection cycle. An inspection cycle is 6 years.

2. The reinspection requirement for medium and low priority components is to examine 25% of the components in each inspection cycle after the baseline is completed. An inspection cycle is 6 years.

3. Perform UT examination during the first inspection cycle following the first ten years of service (years 10-15). Fifty percent (50%) of the examinations are to be completed during the first outage following ten years of service. An inspection cycle is 6 years.

4. Reinspection is required of 50% of the beams during service years 16-21 (after the first inspection cycle) and 100% per inspection cycle beyond service year 21. An inspection cycle is 6 years.

5. The baseline requirement for high priority components (except jet pump beams) is to examine 100% of the components during the first inspection cycle with 50% to be examined the first outage of the inspection cycle. An inspection cycle is 6 years.

6. The reinspection requirement for high priority components is to examine 50% of the components each inspection cycle after the first inspection cycle. An inspection cycle is 6 years.

7. If movement/wear of the wedge is detected, then perform examination of the other restrainer components/locations, such as bracket weld locations (RK-1, RK-2, and RK-3), adjusting set screws (AS-1 and AS-2), wedge rod/nut tack welds (WD2a, b), etc., as applicable, during the same outage to assess the cause of the movement. Once the cause of movement is determined, analysis and/or repair can be implemented.

AUGMENTED INSPECTION PROGRAM - 05 : Snubber Examination and Test Program

I. SCOPE

This augmented inspection program (AUG - 05) applies to the snubber functional testing and snubber examinations, from pin connection to pin connection, conducted in accordance with Technical Requirements Manual, Section 3.16. This program includes all snubbers necessary to protect the primary coolant system and any other safety system or components (i.e., all safety-related snubbers).

II. REFERENCES

A. PBAPS Technical Requirements Manual (TRM), Section 3.16, for Units 2 and 3.

B. Relief Request RR-10, Revision 1.

III. GENERAL

The TRM specifies the functional testing and examination requirements for snubbers in Section 3.16. ASME, Section XI, also has inspection requirements for supports that apply to snubbers as well as to other supports. This AUG is in place to provide a link between the testing and examination of the snubbers performed in PBAPS 2 and 3 per TRM 3.16 and the Section XI visual inspection requirements that are satisfied by the TRM 3.16 program. Relief Request 10, Rev.1, provides the bases for TRM 3.16 being used in lieu of Section XI.

As noted in RR-10, Rev. 1, the general requirements of Subsection IWA, such as examination methods, personnel qualifications, etc., still apply. Additionally, all repairs, replacements, records and reports will be in accordance with Section XI.

IV. EXAMINATION PROGRAM

The visual examination of the snubber using TRM 3.16 is to verify: a) no indications of damage or impaired operability; b) attachments to foundations or supporting structure are functional, and c) fasteners for the snubber attachment to the component and to the anchorage are functional (requirement 3.16.2). Additionally, the functional testing of the snubber will be done in accordance with TRM 3.16.

V. EXAMINATION RESULTS

The results of the visual examinations and the functional tests will be evaluated using the criteria of TRM 3.16 and plant procedures. ASME, Section XI, provisions may be used for supplemental guidance.

VI. REPORTS/RECORDS

The examination and testing results will be recorded and kept in accordance with plant procedures. Repair and replacement records and reports will be in accordance with Section XI.

VII. AUGMENTED PROGRAM TABLES

A complete listing of all snubbers within the scope of the examination and testing requirements of the PBAPS Technical Requirements Manual is provided in the Augmented Program 5 (AUG-05) Tables. They follow this section and are part of Specification NE-290.

The requirements for snubber testing and examination for the second ten-year interval were addressed by AUG-5 of Specification M-733.

Peach Bottom Atomic Power Station
Spec NE-290 Unit 2 AUG-05
Listed by System and Drawing Number

NE-290 U-2 AUG-05

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
CONDENSATE SERVICE				
	HC-27-MI-201-1			
		2	27HC-S55	SNUBBER
	System Count:	1		
CONTROL ROD DRIVE				
	6280-M144-212-4			
		1	H-3LS-142-1	SNUBBER
		1	H-3LS-142-8	SNUBBER
		1	H-3LS-142-7	SNUBBER
		1	H-3LS-142-6	SNUBBER
		1	H-3LS-142-5	SNUBBER
		1	H-3LS-142-4	SNUBBER
		1	H-3LS-142-2	SNUBBER
		1	H-3LS-142-3	SNUBBER
	System Count:	8		
CORE SPRAY				
	DCN-14-MI-203-5-A			
		1	14DCN-S26	SNUBBER
		1	14DCN-S27	SNUBBER
	DCN-14-MI-203-5-B			
		1	14DCN-S23	SNUBBER
		1	14DCN-S24	SNUBBER
	GB-14-MI-203-3-B			
		2	14MO-H57	SNUBBER
		2	14MO-S26	SNUBBER
	System Count:	6		

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
ESW/RBCCW				
	HISO-3001			
			30-JBS-106	SNUBBER
			30-JBS-105	SNUBBER
	HISO-3002			
			30-JBS-102	SNUBBER
			30-JBS-101	SNUBBER
			30-JBS-103	SNUBBER
	System Count:	5		
FEEDWATER				
	DDN-06-MI-201-2-A			
		1	6DDNL-S13	SNUBBER
		1	6DDNL-S6	SNUBBER
		1	6DDNL-S9	SNUBBER
		1	6DDNL-S10	SNUBBER
		1	6DDNL-S14	SNUBBER
	DDN-06-MI-201-2-B			
		1	6DDNL-S5	SNUBBER
		1	6DDNL-S7	SNUBBER
		1	6DDNL-S8	SNUBBER
		1	6DDNL-S11	SNUBBER
		1	6DDNL-S12	SNUBBER
	System Count:	10		

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
HIGH PRESSURE COOLANT INJECTI				
	DBN-23-MI-203-6			
		1	23DBN-S23	SNUBBER
		1	23DBN-S22	SNUBBER
	DBN-23-MI-203-7			
		2	23DBN-S4	SNUBBER
		2	23DBN-S3	SNUBBER
		2	23DBN-S29	SNUBBER
		2	23DBN-S28	SNUBBER
		2	23DBN-S27	SNUBBER
		2	23DBN-S2	SNUBBER
		2	23DBN-S1	SNUBBER
	DDN-23-MI-202-2			
		2	23DDN-S25	SNUBBER
		2	23DDN-S9	SNUBBER
	HB-23-MI-201-1			
		2	23HB-S30	SNUBBER
	HB-23-MI-204-8			
		2	23HB-S19	SNUBBER
		2	23HB-S38	SNUBBER
	HISO-2304			
		2	23HB-S16	SNUBBER
		2	23HB-S37	SNUBBER
	System Count:	16		
INERTING				
	HISO-903			
		3	9HB-H51	SNUBBER
	System Count:	1		

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
MAIN RECIRCULATION				
	ISI-2-02-1			
		1	SS2A	SNUBBER
		1	SS3B	SNUBBER
		1	SS1A	SNUBBER
		1	SS6A	SNUBBER
		1	SS3A	SNUBBER
	ISI-2-02-2			
		1	SS2B	SNUBBER
		1	SS1B	SNUBBER
		1	SS3C	SNUBBER
		1	SS3D	SNUBBER
		1	SS6B	SNUBBER
	System Count:	10		
MAIN STEAM				
	DBN-01-MI-201-1-A			
		1	SSA3	SNUBBER
		1	SSA1	SNUBBER
	DBN-01-MI-201-1-B			
		1	SSB3	SNUBBER
		1	SSB4	SNUBBER
		1	SSB5	SNUBBER
		1	SSB6	SNUBBER
		1	SSB1	SNUBBER
	DBN-01-MI-201-1-C			
		1	SSC4	SNUBBER
		1	SSC5	SNUBBER
		1	SSC1	SNUBBER
		1	SSC6	SNUBBER
		1	SSC3	SNUBBER
	DBN-01-MI-201-1-D			
		1	SSD3	SNUBBER
		1	SSD1	SNUBBER
	System Count:	14		

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
MAIN STEAM RELIEF VALVE				
	GG-01-MI-271-A			
		3	1GG-S11	SNUBBER
		3	1GG-S24	SNUBBER
		3	1GG-S23	SNUBBER
		3	1GG-S202	SNUBBER
		3	1GG-S68	SNUBBER
		3	1GG-S12	SNUBBER
		3	1GG-S101-B	SNUBBER
		3	1GG-S101-A	SNUBBER
		3	1GG-S36	SNUBBER
	GG-01-MI-271-B			
		3	1GG-S75	SNUBBER
		3	1GG-S108-B	SNUBBER
		3	1GG-S108-A	SNUBBER
		3	1GG-S6	SNUBBER
		3	1GG-S5	SNUBBER
		3	1GG-S74	SNUBBER
	GG-01-MI-271-C			
		3	1GG-S102-B	SNUBBER
		3	1GG-S15	SNUBBER
		3	1GG-S102-A	SNUBBER
		3	1GG-S16	SNUBBER
		3	1GG-S28	SNUBBER
		3	1GG-S27	SNUBBER
		3	1GG-S66	SNUBBER
	GG-01-MI-271-D			
		3	1GG-S25	SNUBBER
		3	1GG-S103-B	SNUBBER
		3	1GG-S67	SNUBBER
		3	1GG-S103-A	SNUBBER
		3	1GG-S14	SNUBBER
		3	1GG-S13	SNUBBER
		3	1GG-S26	SNUBBER
	GG-01-MI-271-E			
		3	1GG-S109-B	SNUBBER
		3	1GG-S203-B	SNUBBER

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
		3	1GG-S203-A	SNUBBER
		3	1GG-S109-A	SNUBBER
		3	1GG-S76	SNUBBER
		3	1GG-S77	SNUBBER
		3	1GG-S2	SNUBBER
		3	1GG-S1	SNUBBER
	GG-01-MI-271-F			
		3	1GG-S10	SNUBBER
		3	1GG-S82	SNUBBER
		3	1GG-S69	SNUBBER
		3	1GG-S83	SNUBBER
		3	1GG-S9	SNUBBER
		3	1GG-S207-B	SNUBBER
		3	1GG-S207-A	SNUBBER
		3	1GG-S110-A	SNUBBER
		3	1GG-S110-B	SNUBBER
	GG-01-MI-271-G			
		3	1GG-S104-A	SNUBBER
		3	1GG-S104-B	SNUBBER
		3	1GG-S209-B	SNUBBER
		3	1GG-S21	SNUBBER
		3	1GG-S22	SNUBBER
		3	1GG-S63	SNUBBER
		3	1GG-S33	SNUBBER
		3	1GG-S34	SNUBBER
		3	1GG-S209-A	SNUBBER
	GG-01-MI-271-H			
		3	1GG-S105-A	SNUBBER
		3	1GG-S205-A	SNUBBER
		3	1GG-S32	SNUBBER
		3	1GG-S31	SNUBBER
		3	1GG-S64	SNUBBER
		3	1GG-S204-A	SNUBBER
		3	1GG-S205-B	SNUBBER
		3	1GG-S19	SNUBBER
		3	1GG-S105-B	SNUBBER
		3	1GG-S204-B	SNUBBER
		3	1GG-S20	SNUBBER

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
	GG-01-MI-271-J			
		3	1GG-S112-B	SNUBBER
		3	1GG-S112-A	SNUBBER
		3	1GG-S7	SNUBBER
		3	1GG-S206-B	SNUBBER
		3	1GG-S72	SNUBBER
		3	1GG-S80	SNUBBER
		3	1GG-S81	SNUBBER
		3	1GG-S8	SNUBBER
		3	1GG-S206-A	SNUBBER
	GG-01-MI-271-K			
		3	1GG-S29	SNUBBER
		3	1GG-S106-A	SNUBBER
		3	1GG-S35	SNUBBER
		3	1GG-S30	SNUBBER
		3	1GG-S106-B	SNUBBER
		3	1GG-S17	SNUBBER
		3	1GG-S18	SNUBBER
		3	1GG-S65	SNUBBER
		3	1GG-S201	SNUBBER
		3	1GG-S208-A	SNUBBER
		3	1GG-S208-B	SNUBBER
	GG-01-MI-271-L			
		3	1GG-S4	SNUBBER
		3	1GG-S79	SNUBBER
		3	1GG-S78	SNUBBER
		3	1GG-S111-B	SNUBBER
		3	1GG-S111-A	SNUBBER
		3	1GG-S3	SNUBBER
System Count:		92		

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
REACTOR CORE ISOLATION COOLI				
	HISO-1301			
		2	13DBN-S16	SNUBBER
		2	13DBN-S15	SNUBBER
	HISO-1306			
		2	13HB-S1	SNUBBER
	P-13-1; HISO-1304			
		2	13HB-S14	SNUBBER
	P-23-3; HISO-1303			
		2	13DDN-S13	SNUBBER
	System Count:	5		
REACTOR PRESSURE VESSEL				
	M-295 SHT 49			
		1	M-295-49-H2	SNUBBER
	M-295 SHT 55			
		1	M-295-55-H1	SNUBBER
	System Count:	2		
REACTOR WATER CLEAN-UP				
	DCA-12-MI-201-1			
		1	12DCN-S5	SNUBBER
		1	12DCN-S8A	SNUBBER
		1	12DCN-S7	SNUBBER
	DCA-12-MI-203-3			
		1	12DCN-S2	SNUBBER
	System Count:	4		

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
RESIDUAL HEAT REMOVAL				
	DCN-10-MI-206-15			
		1	10DCN-S73	SNUBBER
		1	10DCN-S74	SNUBBER
	GB-10-MI-202-3-A			
		2	10GB-S76	SNUBBER
		2	10GB-S77	SNUBBER
		2	10GB-S75	SNUBBER
	GB-10-MI-202-3-B			
		2	10GB-S58	SNUBBER
		2	10GB-S50	SNUBBER
	GB-10-MI-202-3-C			
		2	10GB-S12	SNUBBER
		2	10GB-S51	SNUBBER
	GB-10-MI-202-3-D			
		2	10GB-S80	SNUBBER
		2	10GB-S79	SNUBBER
		2	10GB-S78	SNUBBER
	GB-10-MI-203-5-B			
		2	10GB-S91	SNUBBER
		2	10GB-S49	SNUBBER
	GB-10-MI-203-7-A			
		2	10GB-S92	SNUBBER
		2	10GB-S53	SNUBBER
		2	10GB-S52	SNUBBER
	GB-10-MI-203-7-B			
		2	10GB-S48	SNUBBER
	GB-10-MI-204-10-B			
		2	10GB-S44	SNUBBER
		2	10GB-S43-1	SNUBBER
		2	10GB-S43-2	SNUBBER
	GB-10-MI-204-11-A			
		2	10GB-S55	SNUBBER
		2	10GB-S54	SNUBBER
	HB-10-MI-201-1-B			
		2	10HB-S8	SNUBBER

SYS_DESC	ISO_NO	Class	COMP_ID	COMP_DESC
		2	10HB-S7	SNUBBER
	HB-10-MI-201-1-C			
		2	10HB-S1	SNUBBER
	System Count:	26		
	Sytem Count All:			200

Peach Bottom Atomic Power Station
Spec NE-290 Unit 3 AUG-5 Table
Listed by System and Drawing Number

NE-290 U-3 AUG-5

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION
CONTROL ROD DRIVE			
6280-M144-232-3			
	2	H-3LS-142-1	SNUBBER
	2	H-3LS-142-2	SNUBBER
	2	H-3LS-142-3	SNUBBER
	2	H-3LS-142-4	SNUBBER
	2	H-3LS-142-5	SNUBBER
	2	H-3LS-142-6	SNUBBER
	2	H-3LS-142-7	SNUBBER
	2	H-3LS-142-8	SNUBBER
		SYSTEM COUNT: 8	
CORE SPRAY			
DCN-14-MI-303-4-A			
	1	14DCN-S26	SNUBBER
	1	14DCN-S27	SNUBBER
DCN-14-MI-303-4-B			
	1	14DCN-S23	SNUBBER
	1	14DCN-S24	SNUBBER
GB-14-MI-303-3-A			
	2	14GB-S33	SNUBBER
	2	14MO-H57	SNUBBER
GB-14-MI-303-3-B			
	2	14GB-S34	SNUBBER
	2	14MO-S42A	SNUBBER
	2	14MO-S42B	SNUBBER
HCR-27-MI-301-2			
	N	14HCR-S4	SNUBBER
		SYSTEM COUNT: 10	

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION
FEEDWATER			
DDN-06-MI-301-2-A			
	1	6DDNL-S11	SNUBBER
	1	6DDNL-S12	SNUBBER
	1	6DDNL-S5	SNUBBER
	1	6DDNL-S7	SNUBBER
	1	6DDNL-S8	SNUBBER
DDN-06-MI-301-2-B			
	1	6DDNL-S10	SNUBBER
	1	6DDNL-S13	SNUBBER
	1	6DDNL-S14	SNUBBER
	1	6DDNL-S6	SNUBBER
	1	6DDNL-S9	SNUBBER
		SYSTEM COUNT: 10	
HIGH PRESSURE COOLANT INJECTION			
DBN-23-MI-303-5			
	1	23DBN-S22	SNUBBER
	1	23DBN-S23	SNUBBER
DBN-23-MI-303-6			
	2	23DBN-S1	SNUBBER
DBN-23-MI-303-7			
	2	23DBN-S6-1	SNUBBER
	2	23DBN-S6-2	SNUBBER
DDN-23-MI-302-2			
	2	23DDN-S29	SNUBBER
	2	23DDN-S33	SNUBBER
	2	23DDNS-300A	SNUBBER
	2	23DDNS-300B	SNUBBER
HB-23-MI-304-8			
	2	23HB-S1A	SNUBBER
	2	23HB-S2A	SNUBBER
HCR-27-MI-301-2			
		27HCR-S187	SNUBBER
		27HCR-S188	SNUBBER
HISO-2356			
	2	23HB-S3A	SNUBBER
		SYSTEM COUNT: 14	

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION

INERTING

	3	9HB-H51	SNUBBER
	3	9HB-H53	SNUBBER

SYSTEM COUNT: 2

MAIN RECIRCULATION

ISI-3-02-1

	1	SS1A	SNUBBER
	1	SS2A	SNUBBER
	1	SS3A	SNUBBER
	1	SS3B	SNUBBER
	1	SS6A	SNUBBER

ISI-3-02-2

	1	SS1B	SNUBBER
	1	SS2B	SNUBBER
	1	SS3C	SNUBBER
	1	SS3D	SNUBBER
	1	SS6B	SNUBBER

SYSTEM COUNT: 10

MAIN STEAM

DBN-01-MI-301-1-A

	1	SSA1	SNUBBER
	1	SSA3	SNUBBER

DBN-01-MI-301-1-B

	1	SSB1	SNUBBER
	1	SSB3	SNUBBER
	1	SSB4	SNUBBER
	1	SSB5	SNUBBER
	1	SSB6	SNUBBER

DBN-01-MI-301-1-C

	1	SSC1	SNUBBER
	1	SSC3	SNUBBER
	1	SSC4	SNUBBER
	1	SSC5	SNUBBER
	1	SSC6	SNUBBER

DBN-01-MI-301-1-D

	1	SSD1	SNUBBER
	1	SSD3	SNUBBER

SYSTEM COUNT: 14

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION
MAIN STEAM RELIEF VALVE			
GG-01-MI-371-A			
	3	1GG-S101-A	SNUBBER
	3	1GG-S101-B	SNUBBER
	3	1GG-S11	SNUBBER
	3	1GG-S12	SNUBBER
	3	1GG-S202	SNUBBER
	3	1GG-S23	SNUBBER
	3	1GG-S24	SNUBBER
	3	1GG-S36	SNUBBER
	3	1GG-S54	SNUBBER
GG-01-MI-371-B			
	3	1GG-S108-A	SNUBBER
	3	1GG-S108-B	SNUBBER
	3	1GG-S5	SNUBBER
	3	1GG-S6	SNUBBER
GG-01-MI-371-C			
	3	1GG-S102-A	SNUBBER
	3	1GG-S102-B	SNUBBER
	3	1GG-S15	SNUBBER
	3	1GG-S16	SNUBBER
	3	1GG-S27	SNUBBER
	3	1GG-S28	SNUBBER
	3	1GG-S52	SNUBBER
GG-01-MI-371-D			
	3	1GG-S103-A	SNUBBER
	3	1GG-S103-B	SNUBBER
	3	1GG-S13	SNUBBER
	3	1GG-S14	SNUBBER
	3	1GG-S25	SNUBBER
	3	1GG-S26	SNUBBER
	3	1GG-S53	SNUBBER
GG-01-MI-371-E			
	3	1GG-S1	SNUBBER
	3	1GG-S109-A	SNUBBER
	3	1GG-S109-B	SNUBBER
	3	1GG-S2	SNUBBER
	3	1GG-S203-A	SNUBBER
	3	1GG-S203-B	SNUBBER
	3	1GG-S57	SNUBBER
	3	1GG-S62	SNUBBER
	3	1GG-S63	SNUBBER

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION
GG-01-MI-371-F			
	3	1GG-S10	SNUBBER
	3	1GG-S110-A	SNUBBER
	3	1GG-S110-B	SNUBBER
	3	1GG-S207-A	SNUBBER
	3	1GG-S207-B	SNUBBER
	3	1GG-S55	SNUBBER
	3	1GG-S9	SNUBBER
GG-01-MI-371-G			
	3	1GG-S104-A	SNUBBER
	3	1GG-S104-B	SNUBBER
	3	1GG-S209-A	SNUBBER
	3	1GG-S209-B	SNUBBER
	3	1GG-S21	SNUBBER
	3	1GG-S22	SNUBBER
	3	1GG-S33	SNUBBER
	3	1GG-S34	SNUBBER
	3	1GG-S49	SNUBBER
GG-01-MI-371-H			
	3	1GG-S105-A	SNUBBER
	3	1GG-S105-B	SNUBBER
	3	1GG-S19	SNUBBER
	3	1GG-S20	SNUBBER
	3	1GG-S204-A	SNUBBER
	3	1GG-S204-B	SNUBBER
	3	1GG-S205-A	SNUBBER
	3	1GG-S205-B	SNUBBER
	3	1GG-S31	SNUBBER
	3	1GG-S32	SNUBBER
	3	1GG-S50	SNUBBER
GG-01-MI-371-J			
	3	1GG-S112-A	SNUBBER
	3	1GG-S112-B	SNUBBER
	3	1GG-S206-A	SNUBBER
	3	1GG-S206-B	SNUBBER
	3	1GG-S59	SNUBBER
	3	1GG-S66	SNUBBER
	3	1GG-S67	SNUBBER
	3	1GG-S7	SNUBBER
	3	1GG-S8	SNUBBER

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION
GG-01-MI-371-K			
	3	1GG-S106-A	SNUBBER
	3	1GG-S106-B	SNUBBER
	3	1GG-S17	SNUBBER
	3	1GG-S18	SNUBBER
	3	1GG-S201	SNUBBER
	3	1GG-S208-A	SNUBBER
	3	1GG-S208-B	SNUBBER
	3	1GG-S29	SNUBBER
	3	1GG-S30	SNUBBER
	3	1GG-S35	SNUBBER
	3	1GG-S51	SNUBBER
GG-01-MI-371-L			
	3	1GG-S111-A	SNUBBER
	3	1GG-S111-B	SNUBBER
	3	1GG-S3	SNUBBER
	3	1GG-S4	SNUBBER
	3	1GG-S64	SNUBBER
	3	1GG-S65	SNUBBER
		SYSTEM COUNT: 89	

REACTOR CORE ISOLATION COOLING

HISO-1354			
	2	13HB-S23	SNUBBER
		SYSTEM COUNT: 1	

REACTOR WATER CLEAN-UP

DCA-12-MI-301-1			
	1	12DCN-S5	SNUBBER
	1	12DCN-S7	SNUBBER
	1	12DCN-S9	SNUBBER
DCA-12-MI-303-3			
	N	12DCN-S2	SNUBBER
		SYSTEM COUNT: 4	

SYSTEM DESC	CLASS	COMP ID	COMP DESCRIPTION
RESIDUAL HEAT REMOVAL			
GB-10-MI-302-3-A			
	2	10GB-S63	SNUBBER
	2	10GB-S64	SNUBBER
GB-10-MI-302-3-B			
	2	10GB-S50	SNUBBER
	2	10GB-S58	SNUBBER
GB-10-MI-302-3-C			
	2	10GB-S12	SNUBBER
	2	10GB-S51	SNUBBER
GB-10-MI-302-3-D			
	2	10GB-S65	SNUBBER
	2	10GB-S66	SNUBBER
	2	10GB-S67	SNUBBER
GB-10-MI-303-5-A			
	2	10GB-S53	SNUBBER
	2	10GB-S62	SNUBBER
GB-10-MI-303-5-B			
	2	10GB-S49	SNUBBER
	2	10GB-S81	SNUBBER
GB-10-MI-303-7-A			
	2	10GB-S52	SNUBBER
GB-10-MI-303-7-B			
	2	10GB-S48	SNUBBER
GB-10-MI-304-10-A			
	2	10GB-S43-1	SNUBBER
	2	10GB-S43-2	SNUBBER
	2	10GB-S44	SNUBBER
GB-10-MI-304-11-B			
	2	10GB-S54	SNUBBER
	2	10GB-S55	SNUBBER
HB-10-MI-301-1-B			
	2	10HB-S7	SNUBBER
	2	10HB-S8	SNUBBER
HB-10-MI-301-1-C			
	2	10HB-S1	SNUBBER

SYSTEM COUNT: 23

SYSTEM COUNT ALL: 185

AUGMENTED INSPECTION PROGRAM - 06 : Top Guide

I. SCOPE

This augmented inspection program (AUG - 06) applies to the Top Guide in PBAPS Units 2 and 3.

II. REFERENCES

A. BWRVIP-26: BWR Top Guide Inspection and Flaw Evaluation Guidelines, December 1996.

B. Structural Assessment of Top Guide and Core Plate at Peach Bottom Nuclear Power Station, Unit 3: GENE 523-A098-0995, dated 10/12/95.

C. Letter from D. B. Drendel (GE Nuclear Energy) to V. M. Nilekani (PECO Energy Company) dated, August 9, 1996.

D. Unit 3 Repair Assembly: M-1-B-269-1.

E. Top Guide Drawing: M-1-B-6-3, M-1-B-258-1

F. GE SIL 554, Top Guide Cracking, April 6, 1993.

G. GE RICSIL 059, Top Guide Crack Indications, May 31, 1991.

H. GE SIL 558, Rev. 1, Top Guide and Core Plate Cracking, May 18, 1995.

III. GENERAL

The BWRVIP-26 guideline recommends inspection of two locations applicable to PBAPS Units 2 and 3. They are the aligner pins and sockets (locations 2 and 3 in BWRVIP-26) in the top guide and shroud. These examinations are not necessary for plants that have wedges installed that can carry the lateral load in the event the aligner pins fail. PBAPS does not have such wedges.

BWRVIP-26 also has a provision that these locations are not required to be examined if less than 20% of the weld is needed for structural integrity. Reference B documents the results of an analysis that GE performed for PBAPS Unit 3. From Table 1 of Reference B, if the seismic load is divided by the allowable load, the result indicates the amount of weld needed to resist the seismic load. This number is less than 20%. Thus examination of locations 2 and 3 is not required for Unit 3. Reference C documents the GE conclusion that the analysis of Reference B is applicable to Unit 2. Therefore, there are no required inspections for the PBAPS 2 and 3 top guides.

Note: Unit 3 has additional pins and restraint blocks that were installed during construction. These are shown on drawing M-1-B-269-1 and are discussed in the GE analysis of Reference B. BWRVIP-26 has no inspection requirements for these locations.

IV. EXAMINATION PROGRAM

BWRVIP-26, for locations 2 and 3, requires a VT-1 examination of the welds in two adjacent aligner assemblies as a baseline. Reinspection of those aligner assemblies is required every other refueling outage. If cracking is found, expand inspection to all four aligner assemblies. However, as described in Section III above, based on References B and C, the welds in both units need less than 20% of the weld to resist the seismic loads. Therefore, per Table 3-2 in BWRVIP-26, the examinations need not be performed.

V. EXAMINATION RESULTS

If examinations are performed, the results should be documented in the same manner as Code-required examinations. Flaw evaluations should be performed using the guidance set forth in Section 4 of BWRVIP-26, and IWB-3000 of the 1989 Edition of ASME, Section XI.

VI. REPORTS/RECORDS

There are no Code reporting requirements. However, PBAPS and BWRVIP have committed to supply inspection, evaluation and repair results to NRC and to EPRI. Therefore, if examinations are performed on the top guide, all reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290,

and plant procedures. These results will be forwarded to NRC as an attachment to the Code-required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

There are no required examinations; therefore, there are no tables.

Examinations conducted during the second ten-year interval were performed in accordance with AUG-10 of Specification M-733.

AUGMENTED INSPECTION PROGRAM - 07 : Shroud Support

I. SCOPE

This augmented inspection program (AUG -07) applies to the Shroud Support in PBAPS Units 2 and 3. This is based on BWRVIP-38 and is in addition to the examinations required by ASME, Section XI.

II. REFERENCES

A. BWRVIP-38: BWR Shroud Support Inspection and Flaw Evaluation Guideline, September 1997.

B. Drawing ISI-203-RV-16.

C. Drawing M-1-A-363-1, Shroud Support.

D. Drawing M-1-B-303 rev. 1, Access Hole Cover.

III. GENERAL

The shroud support plate is inspected per Section XI, Examination Category B-N-2, F13.40, using VT-3. The requirements of BWRVIP-38 specify an inspection of the shroud support plate to shroud weld (H8) and the shroud support plate to RPV weld (H9) using either UT or EVT-1. The amount of inspection is dictated by operating loads and flaw tolerances, as described in Section 5 of BWRVIP-38. Examinations conducted prior to the issuance of the guidelines can be credited toward the baseline, if they meet the criteria set forth in BWRVIP-38.

Until such time that NRC approves BWRVIP-38 for use in lieu of Section XI, PBAPS will continue to perform VT-3 of the shroud support plate as well as implement the guidelines of BWRVIP-38.

IV. EXAMINATION PROGRAM

Using Table 5-1 of BWRVIP-38, the load multipliers for PBAPS 2 and 3 are 0.56 and 0.71, respectively. Using those values, and Figure 5-1 for weld H8 and Figure 5-2 for weld H9, the amount of inspection required for both Unit 2 and Unit 3 is 10% of the circumferential length. The inspection method to be employed is EVT-1. The reinspection frequency is 6 years (if UT is used, the reinspection frequency would be 10 years). These examinations are in addition to the VT-3 of 100% of the accessible portions of the shroud support plate over the 3rd ten-year interval.

Flaw evaluations of H8 and H9 should be performed using guidance from Section 5 and Appendix A of BWRVIP-38. Additionally, H9 flaw evaluations must satisfy IWB-3000 of the 1989 Edition of Section XI for at least the portion of the weld that is part of the Class 1 boundary.

BWRVIP-38 specifies that, if flaws are detected, an "effective flaw length" is to be determined and compared to the flaw tolerance value (i.e. 1%) for the weld in question using Section 5. If flaw tolerances are satisfied, the inspection is complete. If flaw tolerance is not satisfied, then scope expansion should continue until the flaw tolerance criteria are satisfied. If flaw tolerance criteria are not satisfied, a plant-specific evaluation must be performed. Section XI, IWB-3000, must be used in the flaw evaluation until NRC has approved use of BWRVIP-38 for use in lieu of the Code.

V. EXAMINATION RESULTS

Examination results shall be documented as Code-required examinations. H9 is a weld to the Class 1 pressure boundary and H8 is an integral weld of the welded core support structure.

VI. REPORTS/RECORDS

All reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290, and plant procedures. PBAPS and BWRVIP have committed to supply inspection, evaluation and repair results to NRC and to EPRI. These results will be forwarded to NRC as part the Code-required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-07 Inspection Table. It follows this section and is part of Specification NE-290.

This location was not addressed by an augmented program during the second ten-year interval.

AUG-07 INSPECTION TABLE PBAPS Units 2 & 3
Shroud Support Plate, H8 and H9

Component Identification	Location Number (BWRVIP-38)	Drawing Reference	Examination Method	Examination Extent & Frequency	Scope Expansion Criteria	Notes and Comments
Shroud Support Plate	N/A	ISI-203-RV-16	VT-3, per Section XI, Cat. B-N-2	All accessible areas once per 10 years.	IWB-2340	May be eliminated once NRC approves use of BWRVIP-38 in lieu of Code.
Shroud Support-to-RPV Weld	H9	ISI-203-RV-16	EVT-1 (See Note 1)	10% of the circumference. Reinspect at 6 year intervals (See Notes 1and 3)	Note 2	
Shroud Support-to-Shroud Weld	H8	ISI-203-RV-16	EVT-1 (See Note 1)	10% of the circumference. Reinspect at 6 year intervals (See Notes 1 and 3)	Note 2	

NOTES:

1. UT is an acceptable alternative to EVT-1. UT may be conducted from outside the vessel or in the annulus. If UT is used, the reinspection interval is 10 years.

2. BWRVIP-38 specifies that if flaws are detected an "effective flaw length" is to be determined and compared to the flaw tolerance value for the weld in question using Section 5. If flaw tolerances are satisfied, the inspection is complete. If flaw tolerance is not satisfied, then scope expansion should continue until the flaw tolerance criteria are satisfied. If flaw tolerance criteria are not satisfied, then a plant specific evaluation must be performed. Section XI, IWB-3000, must be used in the flaw evaluation until NRC has approved use of BWRVIP-38 in lieu of the Code.

3. Reinspection frequencies may need to be adjusted to occur more frequently, based on existence of flaws. This shall be documented as part of the flaw evaluation.

AUGMENTED INSPECTION PROGRAM - 08 : Shroud Support Access Hole Covers

I. SCOPE

This augmented inspection program (AUG - 08) applies to the Shroud Support Access Hole Covers in PBAPS Units 2 and 3. There are no BWRVIP guidelines; they are in development. This augmented inspection program is based on the specific examination recommendations of General Electric Company (GE) Nuclear Services Information Letter (SIL) No. 462, as applicable to PBAPS 2 and 3. This SIL addresses the intergranular stress corrosion cracking (IGSCC) of the shroud support access hole covers and the GE-recommended actions regarding susceptibility/routine examination.

II. REFERENCES

A. GE SIL No. 462, Shroud Support Access Hole Cover Cracks, Supplement 3.

B. Drawing ISI-203-RV-20.

C. Drawing M-1-B-302 rev. 1, Modification Reactor Unit 3 (MOD 2532).

D. Drawing M-1-B-303 rev. 1, Access Hole Cover.

E. NCR PB 93-00753, Rev 1, Unit 3 - Loose Latch Bolt on 0° Azimuth Access Hole Cover.

III. GENERAL

The shroud support plate is inspected per Section XI, Examination Category B-N-2, B13.40, using VT-3. This inspection includes the region of the Access Hole Covers (AHCs). In addition to this Code examination, PBAPS performs augmented examination of AHCs. These examinations are in response to IGSCC cracks detected in the creviced region of the alloy 600 AHCs in some BWRs. The inspections are based on SIL-462 for Unit 2 only. The original AHCs in Unit 3 were removed and replaced with covers employing a mechanical locking device (Ref. C). Unit 3 inspections are plant unique. (BWRVIP guidance is under development.)

IV. EXAMINATION PROGRAM

A. PBAPS Unit 2

The AHCs were visually inspected in refueling outages 2R09, 2R11 and 2R12. UT examinations were performed during 2R10; no indications were detected. Beginning with 2R13, UT examinations will be conducted and repeated every three (3) refueling outages. Visual inspections using MVT-1 will be conducted during the two (2) outages between those outages that UT is conducted. Inspections are performed to detect either circumferential or radial cracking in or around the welds. Flaws detected visually will require supplemental UT to characterize and size the flaw to support evaluation.

B. PBAPS Unit 3

The replaced AHCs were inspected in refueling outage 3R09, and a loose bolt was detected on the 0° azimuth AHC. This condition was evaluated and determined to be acceptable (Reference E). Additional emphasis is to be placed on bolt integrity and tightness. Visual examination using the VT-1 technique will be conducted every other outage. Additionally, the core plate area surrounding the access hole will be examined using VT-1. The examination is to detect flaws emanating from the weld site into the shroud support plate and to verify bolt integrity. Loose bolts will require additional evaluation. Indications in the core support plate may require supplemental UT to characterize and size the flaw for evaluation.

V. EXAMINATION RESULTS

Examination results should be documented in the same manner as Code-required examinations. The flaw evaluation of flaws found in the PBAPS Unit 2 AHCs and in the PBAPS Unit 3 shroud support plate should be performed in accordance with IWB-3000 of the 1989 Edition of Section XI. Flaws in the replacement covers themselves for PBAPS 3 should be performed with acceptable methodology, such as Section XI, with consideration given to the unique design.

VI. REPORTS/RECORDS

There are no Code-required reporting requirements, other than the results of the VT-3 examinations performed on all B-N-2 components. The remaining inspections are in addition to the Code. However, PBAPS and BWRVIP have committed to supply

inspection, evaluation and repair results to NRC and to EPRI. Therefore all reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290, and plant procedures. These results will be forwarded to NRC with the Code-required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-08 Inspection Table. It follows this section and is part of Specification NE-290.

Examinations conducted during the second ten-year interval were performed in accordance with AUG-8 of Specification M-733.

AUG-08 INSPECTION TABLE PBAPS Units 2 & 3
Shroud Support Access Hole Covers

Component Identification	Location Number	Drawing Reference	Examination Method	Examination Extent & Frequency	Scope Expansion Criteria	Notes and Comments
Unit 2 Access Hole Cover and Weld Heat Affected Zone	0°	ISI-203-RV-20	UT MVT-1	Every third refueling outage beginning with 2R13. Each refueling outage, except when UT is performed.	None	Flaws detected visually may require supplemental UT.
Unit 2 Access Hole Cover and Weld Heat Affected Zone	180°	ISI-203-RV-20	UT MVT-1	Every third refueling outage beginning with 2R13. Each refueling outage, except when UT is performed.	None	Flaws detected visually may require supplemental UT.
Unit 3 Access Hole Cover Plate and Bolting	0°	M-1-B-302, rev. 1 M-1-B-303, rev. 1	VT-1	Every other refueling outage to verify cover plate integrity and bolt tightness and integrity. See Note 1.	None	
Unit 3 Access Hole Cover Plate and Bolting	180°	M-1-B-302, rev. 1 M-1-B-303, rev. 1	VT-1	Every other refueling outage to verify cover plate integrity and bolt tightness and integrity. See Note 1.	None	

NOTES:

1. The VT-1 scope should include the base metal region of where the original cover plate was welded to the shroud support plate.

AUGMENTED INSPECTION PROGRAM - 09 : Core Shroud

I. SCOPE

This augmented inspection program (AUG-09) describes the inspection program for the core shroud welds in PBAPS Units 2 and 3. This program is based on the guidance developed by the BWRVIP in response to shroud cracking in multiple plants. Plant-specific evaluations provide additional bases for the inspection program.

II. REFERENCES

A. NRC Information Notice 93-79, Core Shroud Cracking at Beltline Region Welds in Boiling Water Reactors.

B. NRC Generic Letter 94-03, Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors, dated July 25, 1994.

C. BWRVIP-01: BWR Core Shroud Inspection and Flaw Evaluation Guideline, Revision 2, October 1996.

D. BWRVIP-07: Guidelines for Reinspection of Core Shrouds, February 1996.

E. Evaluation and Screening Criteria for the Peach Bottom Unit-3 Shroud Indications, GENE-523-141-1093. Rev. 1, dated December 3, 1993.

F. Evaluation and Screening Criteria for the Peach Bottom Unit-2 Shroud, GENE-523-176-1293, dated December 13, 1993.

G. NCR PB-93-00743, Rev. 1, Unit 3 core shroud indications, 3R09.

H. NCR PB-94-00374, Rev. 0, Unit 2 core shroud indications, 2R10.

J. Screening Criteria and Flaw Evaluation Methodology for the Peach Bottom Unit-3 Shroud, GENE-523-A076-0895, dated August 1995.

K. NCR PB-95-04346, Rev. 1, Unit 3 core shroud flaw indications, 3R10.

L. NCR PB-96-03492, Rev. 0, Unit 2 core shroud indications, 2R11.

M. BWRVIP Letter 97-909: Response to NRC Staff Safety Evaluation Report of the BWR Vessel and Internals Project BWRVIP-07 Report, November 26, 1997.

N. NCR PB 98-01339, Unit 2 Core Shroud Reinspection Intervals.

O. Letter from Gus Lainas (USNRC) to Carl Terry (BWRVIP Chairman), dated April 27, 1998, Final Supplement to the Safety Evaluation of the BWRVIP-07 Report.

P. Letter from USNRC to George A. Hunger, Core Shroud Inspection Deferral for Unit 3, dated October 27, 1997.

Q. PBAPS Unit 2 Supplemental Response to Generic Letter 94-03, dated September 9, 1994, "Summary of Core Shroud Inspection Results" (T03415) **(CM-4)**.

R. Letter from George A. Hunger (PECO Energy Company) to USNRC, Unit 3 Inspection Plan in Response to GL 94-03, dated June 16, 1995.

S. Letter from George A. Hunger (PECO Energy Company) to USNRC, Unit 3 Supplemental Response to GL 94-03, Summary of Inspection Results, dated November 3, 1995.

T. Letter from George A. Hunger (PECO Energy Company) to USNRC, Units 2 and 3 Examination Plans for the Core Shroud and Core Spray Piping, dated August 6, 1996.

U. Letter from George A. Hunger (PECO Energy Company) to USNRC, Evaluation of the Unit 3 Core Shroud, dated January 30, 1997.

III. GENERAL

Shroud cracking detected during 1992 and 1993 in various BWRs led to industry and NRC action. The BWR industry formed the BWR Vessel and Internals Project (BWRVIP) to focus industry resources. A series of assessments and evaluations was performed by the industry and evaluated by NRC. Finally, BWRVIP-01 (Reference C) was issued and ultimately approved by NRC. It addressed baseline inspections of shrouds based on a variety of factors, including age, water chemistry, and materials of construction. In the same time frame, NRC issued GL 94-03, requiring BWR licensees

to provide inspection information and assurance that shroud integrity was maintained. PBAPS performed inspections in accordance with BWRVIP-01 and responded to GL 94-03 with inspection results and other requested information.

The BWRVIP issued BWRVIP-07, which specified reinspection frequencies for shrouds based on the amount of cracking detected during the baseline inspection. This was submitted for NRC review and has been the source of much debate between industry and NRC. NRC, in a letter issued April 27, 1998 (Reference O), suggested that BWRVIP add additional conservatism to its reinspection frequencies contained in BWRVIP-07. PECO Energy has reviewed BWRVIP-07 and found it acceptable for use at PBAPS 2 and 3 (Reference N). Pending resolution of the differences between NRC and the BWRVIP, PBAPS 2 and 3 will use BWRVIP-07 or plant-specific flaw evaluations to establish shroud reinspection frequencies.

IV. EXAMINATION PROGRAM

PBAPS 2 and 3 shroud welds will be inspected at a frequency consistent with BWRVIP-07, or plant-specific evaluations. The reinspection frequency criteria must be applied to each weld and is based on the amount of cracking found during the previous inspection and the amount of weld inspected. The details of the criteria are summarized in Table 1 of BWRVIP-07. The inspection method will be UT.

Unit 3 was fully inspected using UT in accordance with BWRVIP-01 during refueling outage 3R10. The most significant cracking was detected in welds H3 (203.2 inches, 35 % of examined length) and H4 (186 inches, 32% of examined length). NRC agreed with PBAPS that Unit 3 did not require reinspection during outage 3R11 (Reference P). In Reference P, the NRC stated that "(T)he BWRVIP-07 document needs to be revised to incorporate the staff's comments. For the reinspection of the core shroud in future refueling outages, you should follow the revised BWRVIP-07 guidelines, which have incorporated the staff's comments." This could lead to inspection of at least some welds during 3R12. The final decision will be made after resolution of BWRVIP-07 issues.

Unit 2 was fully inspected using UT in accordance with BWRVIP-01 over two outages, 2R10 and 2R11. The amount of cracking was less than that of Unit 3. Several evaluations of the cracking have been performed to determine the appropriate reinspection frequency. The latest (Reference N) concludes that BWRVIP-07 is conservative and provides an acceptable reinspection frequency. Using BWRVIP-07, the next inspection for some welds is due 2R14. The same is true using the plant-specific

analysis. However, the NRC proposed modification to BWRVIP-07 would have resulted in reinspection during 2R12. PBAPS intends to follow BWRVIP-07 or the plant-specific evaluation (Reference N). The final inspection basis depends on resolution of BWRVIP-07 issues by the BWRVIP with the NRC.

The BWRVIP has not developed inspection requirements for shroud vertical welds. Until those requirements are in place, PBAPS does not plan to perform vertical weld examinations.

V. EXAMINATION RESULTS

The shroud is a core support component and is therefore to be inspected per ASME, Section XI. The BWRVIP program has replaced the Code VT-3 with much more stringent requirements that meet and exceed Code requirements. However, all shroud inspection results shall be recorded and evaluated as Code-required examinations. Additional evaluation criteria developed by the BWRVIP using Code margins is documented in BWRVIP-01 and shall be considered in flaw evaluation.

VI. REPORTS/RECORDS

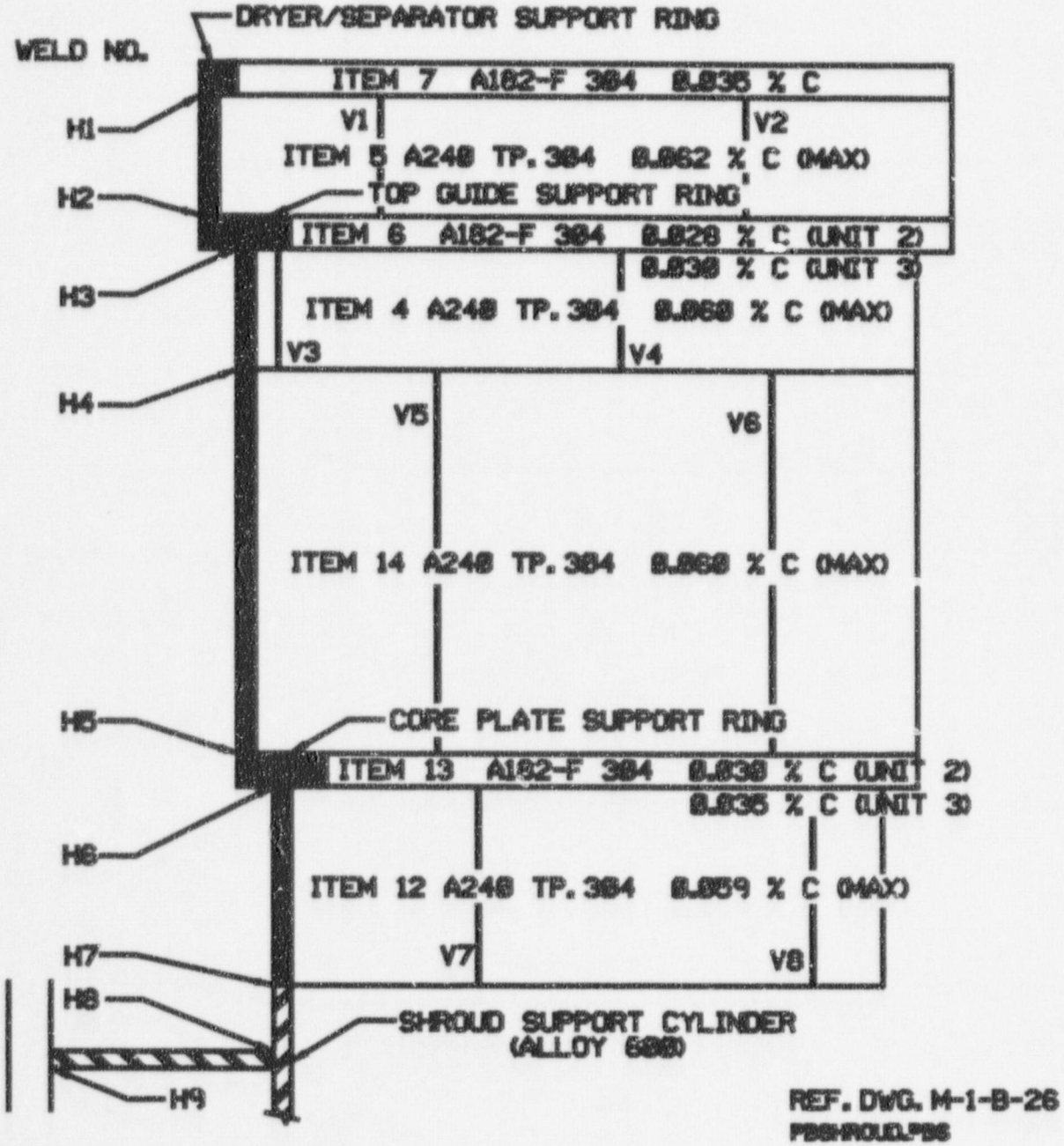
All reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290 and plant procedures. PBAPS and BWRVIP have committed to supply inspection, evaluation and repair results to NRC and to EPRI. These results will be forwarded to NRC as part the code required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-09 Inspection Table. It follows this section and is part of Specification NE-290.

Examinations conducted during the second ten-year interval were performed in accordance with AUG-09 of Specification M-733.

REACTOR PRESSURE VESSEL - SHROUD
PEACH BOTTOM ATOMIC POWER STATION
UNIT 2 & 3



AUG-09 Inspection Table
Unit 2
Core Shroud Welds

Weld Number	Drawing	Examination Method	Examination Frequency	Comments
H1	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H2	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H3	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H4	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H5	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H6	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H7	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
V1	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V2	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V3	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V4	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V5	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V6	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V7	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V8	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP

AUG-09 Inspection Table
Unit 3
Core Shroud Welds

Weld Number	Drawing	Examination Method	Examination Frequency	Comments
H1	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H2	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H3	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H4	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H5	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H6	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
H7	Figure 9-1	UT or EVT-1	Examination frequency is based on BWRVIP-07 or PBAPS specific evaluation. See AUG-09	Visual examination requires access to shroud ID and OD surfaces
V1	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V2	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V3	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V4	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V5	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V6	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V7	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP
V8	Figure 9-1	UT or EVT-1	None required	Rules not yet developed by BWRVIP

AUGMENTED INSPECTION PROGRAM - 10 : Core Plate

I. SCOPE

This augmented inspection program (AUG - 10) applies to the Core Plate in PBAPS Units 2 and 3.

II. REFERENCES

A. BWRVIP-25: BWR Core Plate Inspection and Flaw Evaluation Guidelines, December 1996.

B. Core Support Drawing: M-1-B-5-5.

C. Drawing ISI-203-RV-24.

D. Structural Assessment of Top Guide and Core Plate at Peach Bottom Nuclear Power Station, Unit 3: GENE 523-A098-0995, dated 10/12/95.

E. Letter from D. B. Drendel (GE Nuclear Energy) to V. M. Nilekani (PECO Energy Company) dated, August 9, 1996.

F. GE SIL 558, Rev. 1, Top Guide and Core Plate Cracking, May 18, 1995.

III. GENERAL

The BWRVIP-25 guideline recommends examination of one location applicable to PBAPS 2 and 3. It is the core plate rim hold-down bolts in PBAPS Units 2 and 3. There are 34 rim hold-down bolts in each unit at PBAPS.

Examination of the rim hold-down bolts is not necessary for plants with wedges that can carry the lateral load in the event the bolts fail. PBAPS does not have such wedges. However, should wedges be installed, either alone or as part of a shroud repair (if ever implemented), the bolt examination could be eliminated.

IV. EXAMINATION PROGRAM

There are two examination options in BWRVIP-25. The first option is a UT examination of the rim hold-down bolts performed from the top of the bolts. The second option is to perform an EVT-1 visual examination from the bottom side of the core plate. The visual examination would involve dismantling RPV internals in some manner to gain access.

For both techniques, the initial sample size is 50% (17) hold-down bolts. Should cracking be detected, the sample size should be increased to 100%.

The BWRVIP-25 document does not have specific reinspection criteria nor a requirement to examine the second 50%, except when cracking is detected in the initial baseline. Rather, it states: "..a reinspection schedule should be developed, based on plant-specific analyses that consider plant geometry, number of bolts, loading conditions and inspection experience. Note that good inspection results combined with good operating experience of BWR bolts and the degree of redundancy of the hold-down bolts may justify elimination of any reinspection."

It should be noted that the preferred inspection method at PBAPS is the UT. However, the UT technique has not yet been developed and qualified by the BWRVIP. UT inspections will not be implemented until the technique is available.

Visual examination of the bottom of the bolting from below the core plate is not planned. The risks associated with dismantling RPV components to perform such a visual examination of the bolts are not warranted. This is especially true since there is no evidence to date of a problem in the BWR fleet.

If examinations are conducted prior to the UT technique being developed, they will be performed using the EVT-1 method and will be performed on the top of the bolts. These examinations are at PBAPS discretion.

V. EXAMINATION RESULTS

Examination results should be documented in the same manner as Code-required examinations. Flaw evaluations should be performed using the guidance set forth in Section 4 of BWRVIP-25, IWB-3000 of the 1989 Edition of Section XI, and References D and E.

VI. REPORTS/RECORDS

There are no Code reporting requirements. However, PBAPS and BWRVIP have committed to supply inspection, evaluation, and repair results to NRC and to EPRI. Therefore, all reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290, and plant procedures. These results will be forwarded to NRC as an attachment to the Code-required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-10 Inspection Table. It follows this section and is part of Specification NE-290.

Examinations conducted on the core plate components during the second ten-year interval were performed in accordance with AUG-10 of M-733.

AUG-10 INSPECTION TABLE PBAPS Units 2 & 3
Core Plate

Component Identification	Location Number (BWRVIP-25)	Drawing Reference	Examination Method	Examination Extent & Frequency	Scope Expansion Criteria	Notes and Comments
Core Plate Rim Hold-Down Bolts	10	ISI-203-RV-24	UT or EVT-1	A one time 50% sample (17 of 34). UT to be done from the top of the bolt. EVT-1 requires access from bottom of core plate. UT is the preferred method.	If cracks are detected, expand scope to inspect all bolts that outage	Reinspection is to be determined after initial inspection and is plant-specific. See AUG-10 and BWRVIP-25.

AUGMENTED INSPECTION PROGRAM - 11: Lower Plenum Region

I. SCOPE

This augmented inspection program (AUG - 11) applies to the Lower Plenum region in PBAPS Units 2 and 3.

II. REFERENCES

A. BWRVIP-47: BWR Lower Plenum Inspection and Flaw Evaluation Guidelines, December 1997.

B. Drawing ISI-203-RV-24.

C. Drawing M-1-B-52-4, Control Rod Guide Tube.

III. GENERAL

The BWRVIP-47 guideline documents the evaluation of all the lower plenum safety-related components. The evaluation included the control rod drive (CRD) housings, control guide tubes, stub tubes, fuel supports, in-core housing and guide tubes, and dry tubes. BWRVIP-47 recommends a sample inspection of the three welded locations on the control rod guide tubes and guide tube/fuel support alignment pin-to-core plate weld and pin itself. All other locations are adequately addressed with Code pressure tests or do not warrant inspection.

IV. EXAMINATION PROGRAM

A 10% sample of the CRD guide tube sleeve-to-alignment lug welds (CRGT-1) population is to be examined within 12 years, with 5% (1/2 of the sample) to be examined within six years. The examination technique is VT-3. Alternatively, if the activity of reinstalling/realigning the orificed fuel support verifies the pin and lug integrity, the inspection is not required. This may be the preferred option, since the examination of the other two (2) CRD guide tube locations will require removal and reinstallation of the fuel support and involves the same sample size.

The CRD Guide Tube Body-to-Sleeve weld (CRGT-2) and CRD Guide Tube Base-to Body weld (CRGT-3) also require a 10% sample of the guide tube population, with 5% (1/2 of the sample) to be examined within six years. The examination technique is MVT-1.

The Guide Tube and Fuel Support Alignment Pin-to-Core Plate weld and the Pin itself (FS/GT-ARPIN-1) are to be examined using the same sample criteria. A 10% sample of the population is to be examined within 12 years, with 5% (1/2 of the sample) to be examined within six years. The examination technique is VT-3. As is the case with CRGT-1, verification of the pin and lug integrity as part of the reinstallation of the orificed fuel support is an acceptable alternative to the VT-3 examination.

The scope expansion criteria are the same for each inspection location. They are:

a) If one or more flaws are found, similar locations in an additional 5% of the total population of guide tubes or pins must be examined. These additional inspection locations must be from the immediately surrounding area of the flawed component and must be previously unexamined.

b) If flaws are found during the additional examinations defined in a) above, then the expansion criteria given in a) is repeated until no new flaws are found.

There are no reinspection criteria at this time. BWRVIP-47 states that "Baseline inspection results will be reviewed by the BWRVIP and, if deemed necessary, reinspection recommendations will be developed later."

V. EXAMINATION RESULTS

Examination results should be documented in the same manner as Code-required examinations. Flaw evaluations should be performed using acceptable methodology. The guidance set forth in IWB-3000 of the 1989 Edition of Section XI is acceptable.

VI. REPORTS/RECORDS

There are no Code reporting requirements. However, PBAPS and BWRVIP have committed to supply inspection, evaluation, and repair results to NRC and to EPRI. Therefore all reports and records shall be prepared and maintained per the 1989

Edition of Section XI, Specification NE-290, and plant procedures. These results will be forwarded to NRC with the Code-required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-11 Inspection Table. It follows this section and is part of Specification NE-290.

Examination of these locations was not required in the second ten-year interval.

AUG-11 INSPECTION TABLE PBAPB Units 2 & 3 Sheet 1 of 2.

Lower Plenum

See notes next page.

Component Identification	Location Number (BWRVIP-47)	Drawing Reference	Examination Method	Examination Extent & Frequency	Scope Expansion Criteria	Notes and Comments
Guide Tube and Fuel Support Alignment Pin-to-Core Plate Weld, and the Pin	FS/GT-ARPIN-1	ISI-203-RV-24	VT-3	A 10% sample of the total population within 12 years. One-half (5%) is to be completed within six years. Alternatively, verification of pin and weld integrity as part of the reinstallation/realignment of the orificed fuel support is acceptable in lieu of the VT-3 examination.	See Note 1	See Note 2
CRD Guide Tube Sleeve-to-Alignment Lug Weld	CRGT-1	None	VT-3	A 10% sample of the total population within 12 years. One-half (5%) is to be completed within six years. Alternatively, verification of pin and weld integrity as part of the reinstallation/realignment of the orificed fuel support is acceptable in lieu of the VT-3 examination.	See Note 1	See Note 2
CRD Guide Tube Body-to-Sleeve Weld	CRGT-2	None	MVT-1	A 10% sample of the total population within 12 years. One-half (5%) is to be completed within six years.	See Note 1	See Note 2
CRD Guide tube Base-to-Body Weld	CRGT-3	None	MVT-1	A 10% sample of the total population within 12 years. One-half (5%) is to be completed within six years.	See Note 1	See Note 2

NOTES:

1. If cracks are detected, then expand scope to a sample of 5% of the total population. The expanded sample is to be in the immediate area and previously uninspected. This process continues until a sample is inspected in which no flaws are found.

2. Reinspection is to be determined by BWRVIP after baseline inspection results from the BWR fleet are evaluated.

AUGMENTED INSPECTION PROGRAM - 12: 10CFR50 Augmented Requirements for Reactor Pressure Vessel Shell Weld Examinations

I. SCOPE

This augmented inspection program (AUG-12) addresses the specific steps taken by PBAPS 2 and 3 to satisfy the NRC augmented examination requirements mandated by the Code of Federal Regulations, Title 10, Part 50, paragraph 50.55a(g)(6)(ii)(A), including alternatives agreed to by NRC and PECO Energy Company.

II. REFERENCES

A. Code of Federal Regulations Title 10 Part 50.55a.

B. ASME Boiler and Pressure Vessel (B&PV) Code, Section XI, 1989 Edition, no Addenda.

C. BWRVIP-05: BWR Reactor Pressure Vessel Shell Weld Inspection Recommendations, EPRI TR-105697, September 1995.

D. Letter from G. A. Hunger, Jr. (PECO Energy Company) to USNRC, dated September 4, 1997.

E. Letter from G. A. Hunger, Jr. (PECO Energy Company) to USNRC, dated September 22, 1997.

F. Letter from J. F. Stolz (USNRC) to G. A. Hunger, Jr. (PECO Energy Company), dated October 7, 1997.

G. Letter from J. F. Stolz (USNRC) to G. A. Hunger, Jr. (PECO Energy Company),dated July 2, 1997.

H. Letter from G. A. Hunger, Jr. (PECO Energy Company) to USNRC, dated January 30, 1997.

I. Letter from G. A. Hunger, Jr. (PECO Energy Company) to USNRC, dated April 29, 1997.

J. NRC Information Notice 97-63, Status of NRC Staff's Review of BWRVIP-05, rev. 0 dated August 7, 1997 and rev 1 dated May 17, 1998.

K. Letter from Garrett D. Edwards (PECO Energy Company) to USNRC, dated April 2, 1998.

L. Letter from NRC to PECO Energy in response to request for alternative for Unit 3 dated -LATER

III. GENERAL

The ASME, Section XI, ISI Program requirements for PBAPS Units 2 and 3 for the second inspection interval were those of the 1980 Edition of ASME, Section XI (Code), including all addenda through the Winter 1981 Addendum (80W81). The 80W81 Code required examination of one circumferential and one longitudinal weld during the inspection interval. A rule change to 10CFR50.55a regulation promulgated in 1992, required examination of all reactor pressure vessel (RPV) shell welds by the end of the inspection interval in effect at the time the regulation was promulgated. This rule became effective during the second ten-year interval for PBAPS 2 and 3. Accordingly, PBAPS Units 2 and 3 were required to satisfy this rule by the end of the second inspection interval or to propose an alternative examination program for NRC approval. The rule required examination of "essentially 100%" of all vessel shell welds by the end of the current (second) inspection interval.

Subsequent to the issuance of the regulation, technical bases provided by the BWRVIP and NRC reviews of those bases led the NRC to allow deferral of the circumferential weld inspections required by 10CFR50.55a(g)(6)(ii)(A). In September 1995, the Boiling Water Reactor Vessel and Internals Project (BWRVIP) submitted a set of recommendations for RPV shell weld examinations to the NRC. These recommendations, contained in report BWRVIP-05, eliminated the inspection of reactor vessel circumferential welds.

The NRC and the BWRVIP are currently engaged in the process of revising the regulatory requirement in consideration of the BWRVIP recommendations. As part of this process, the NRC performed an independent assessment of the technical bases provided by the BWRVIP. The initial conclusions of this assessment led the NRC to issue Information Notice 97-63 (Reference J). The information contained in IN97-63 and supplemental information provided by the NRC to the BWRVIP in an August 8, 1997, meeting gave the criteria necessary to justify a deferral of the RPV circumferential weld examinations for 40 months or 2 fuel cycles, whichever is greater. Based on this

information and confirmation of its applicability to PBAPS Unit 3, PECO Energy Company submitted a request for technical alternative pursuant to the provisions of 10CFR50.55a(a)(3)(i) as documented in references D and E. NRC acceptance of the technical alternative was provided in reference F. Therefore, the requirement to examine essentially 100%, i.e., at least 90%, of each RPV shell weld, Examination Category B-A, Item Number B1.10, at PBAPS Unit 3, before the end of the current inspection interval was modified. The requirement for Unit 3 became that essentially 100%, i.e., at least 90%, of the RPV longitudinal welds, Examination Category B-A, Item Number B1.12, must be performed by the end of the second ten-year interval scheduled to end on 8/14/98. RPV circumferential weld examinations, Examination Category B-A, Item Number B1.11, were deferred and must be completed within 40 months or two (2) fuel cycles, whichever is greater.

On May 7, 1998, NRC issued Supplement 1 to Information Notice 97-63. In it, the NRC stated that they would not conclude their evaluation of BWRVIP-05 before the fall 1998 outage season, and that they would consider requests for deferral of circumferential weld examinations for licensees with examinations due in the fall of 1998, or the spring of 1999. Therefore, a request for technical alternative was submitted for PBAPS Unit 2 on April 2, 1998, as documented in Reference K. Therefore, the requirement to examine essentially 100%, i.e., at least 90%, of each RPV shell weld, Examination Category B-A, Item Number B1.10, at PBAPS Unit 2, before the end of the second, ten-year inspection interval was modified. The requirement for Unit 2 became that essentially 100%, i.e., at least 90%, of the RPV longitudinal welds, Examination Category B-A, Item Number B1.12, must be performed by the end of the second ten-year interval scheduled to end on 11/4/98. RPV circumferential weld examinations, Examination Category B-A, Item Number B1.11, were deferred and must be completed within 40 months or two (2) fuel cycles, whichever is greater.

The second interval examinations for PBAPS 2 and 3 were conducted in accordance with the technical alternatives approved by NRC. However, the permanent resolution of the elimination of circumferential weld examinations required in the augmented rule will occur during the third ten-year interval.

IV. EXAMINATION PROGRAM

There are two sets of overlapping requirements for reactor vessel inspection in place for the third interval. The first is the examination of the circumferential welds on PBAPS 2 and 3 that were deferred from the second interval. These are currently required to be completed by the end of the 2R14 refueling outage for Unit 2 and 3R13 for Unit 3. The

second set of rules are those contained in the 1989 Edition of Section XI. These requirements must be met by the end of the third ten-year interval and are exactly the same scope as those required by the NRC augmented rule of 1992.

As noted above, the NRC and BWRVIP are working toward final resolution of the elimination of circumferential weld inspections. The NRC has indicated in public meetings that it agrees the circumferential weld inspections are not warranted. Additionally, there are efforts in progress within the Code process to develop a Code Case that would eliminate the requirement of performing circumferential weld inspections from ASME, Section XI.

PBAPS will continue to work with BWRVIP to reach resolution of the reactor vessel inspection issue. It is anticipated that the circumferential weld inspections will be permanently eliminated. At the point in time that resolution is reached, PBAPS will submit the appropriate requests for alternatives (or relief) to resolve this issue. The requests will address both the deferred inspections from the second interval and the Code-required circumferential weld inspections for the third interval.

Since access to the outside surface of the PBAPS vessels is limited by the close proximity of the vessel insulation and the bioshield wall, examination from this surface is not practical. Alternatively, access to the inside surface of the vessel shell can be achieved using a specially designed robotic inspection device. Such a device was used during the second interval. It is expected that a similar device will be used during the third inspection interval.

Access studies indicate that not all welds will be completely accessible to this method of examination. Current examination plans are to complete examination of all accessible lengths of each vertical shell weld. Any limitations that result in examination coverage being below that required by the regulation will be identified and justified in a submittal to the NRC after completion of the "best effort" examinations. The planned alternative program to the 90% coverage of each weld will utilize the BWRVIP recommendations (BWRVIP-05) as a basis for doing no additional examinations beyond the described "best effort" ID approach. NRC approval of this approach for Unit 3 during the second interval was documented in Reference G.

V. EXAMINATION RESULTS

Examination results generated from this augmented inspection program shall be recorded and evaluated in accordance with the 1989 Edition of the Code and applicable plant procedures.

VI. REPORTS/RECORDS

All reports and records associated with the examinations of this augmented program shall be prepared and maintained in accordance with ASME, 1989 Edition of Section XI, Specification NE-290, and plant procedures. They will be submitted to the NRC as part of the Code-required ISI submittal. The results will also be provided to the EPRI project manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-12 Inspection Table. It follows this section and is part of Specification NE-290.

The examinations of these components during the second ten-year interval were performed in accordance with AUG-12 of Specification M-733.

Peach Bottom Atomic Power Station
Spec NE-290 Unit 2 Aug 12 Table
Listed by System and Drawing Number

NE-290 U-2 AUG-12

SYS_DESC	ISO_NO	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
REACTOR PRESSURE VESSEL					
	ISI-2-RV-01				
		RPV-C1	BH TO SHL CRS NO. 1	UT	Examination or Deferral Required by 2R14
		RPV-C2	SHL CRS NO. 1 TO 2	UT	Examination or Deferral Required by 2R14
		RPV-C3	SHL CRS NO. 2 TO 3	UT	Examination or Deferral Required by 2R14
		RPV-C4	SHL CRS NO. 3 TO 4	UT	Examination or Deferral Required by 2R14
		RPV-C5	SHL CRS NO. 4 TO 5	UT	Examination or Deferral Required by 2R14
		RPV-V1A	ON SHL CRS NO. 1	UT	Examination Completed 2R12
		RPV-V1B	ON SHL CRS NO. 1	UT	Examination Completed 2R12
		RPV-V1C	ON SHL CRS NO. 1	UT	Examination Completed 2R12
		RPV-V2A	ON SHL CRS NO. 2	UT	Examination Completed 2R12
		RPV-V2B	ON SHL CRS NO. 2	UT	Examination Completed 2R12
		RPV-V2C	ON SHL CRS NO. 2	UT	Examination Completed 2R12
		RPV-V3A	ON SHL CRS NO. 3	UT	Examination Completed 2R12
		RPV-V3B	ON SHL CRS NO. 3	UT	Examination Completed 2R12
		RPV-V3C	ON SHL CRS NO. 3	UT	Examination Completed 2R12
		RPV-V4A	ON SHL CRS NO. 4	UT	Examination Completed 2R12
		RPV-V4B	ON SHL CRS NO. 4	UT	Examination Completed 2R12

NE-290 U-2 AUG-12

SYS_DESC	ISO_NO	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
		RPV-V4C	ON SHL CRS NO. 4	UT	Examination Completed 2R12
		RPV-V5A	ON SHL CRS NO. 5	UT	Examination Completed 2R12
		RPV-V5B	ON SHL CRS NO. 5	UT	Examination Completed 2R12
		RPV-V5C	ON SHL CRS NO. 5	UT	Examination Completed 2R12

System Count: 20

System Count All: 20

Peach Bottom Atomic Power Station
Spec NE-290 Unit 3 AUG-12 Table
Listed by System and Drawing Number

NE-290 U-3 AUG-12

SYS_DESC	ISO_NO	COMP_ID	COMP_DESC	AUG_NDE_METHOD	AUG_NOTES
REACTOR PRESSURE VESSEL					
	ISI-3-RV-01				
		RPV-C1	BH TO SHL CRS NO. 1	UT	Examination or deferral required by 3R13.
		RPV-C2	SHL CRS NO. 1 TO 2	UT	Examination or deferral required by 3R13.
		RPV-C3	SHL CRS NO. 2 TO 3	UT	Examination or deferral required by 3R13.
		RPV-C4	SHL CRS NO. 3 TO 4	UT	Examination or deferral required by 3R13.
		RPV-C5	SHL CRS NO. 4 TO 5	UT	Examination or deferral required by 3R13.
		RPV-V1A	ON SHL CRS NO. 1	UT	Examinations completed 3R11.
		RPV-V1B	ON SHL CRS NO. 1	UT	Examinations completed 3R11.
		RPV-V1C	ON SHL CRS NO. 1	UT	Examinations completed 3R11.
		RPV-V2A	ON SHL CRS NO. 2	UT	Examinations completed 3R11.
		RPV-V2B	ON SHL CRS NO. 2	UT	Examinations completed 3R11.
		RPV-V2C	ON SHL CRS NO. 2	UT	Examinations completed 3R11.
		RPV-V3A	ON SHL CRS NO. 3	UT	Examinations completed 3R11.
		RPV-V3B	ON SHL CRS NO. 3	UT	Examinations completed 3R11.
		RPV-V3C	ON SHL CRS NO. 3	UT	Examinations completed 3R11.
		RPV-V4A	ON SHL CRS NO. 4	UT	Examinations completed 3R11.
		RPV-V4B	ON SHL CRS NO. 4	UT	Examinations completed 3R11.

SYS_DESC	ISO_NO	COMP_ID	COMP_DESC	AUG_NDE_METH	AUG_NOTES
		RPV-V4C	ON SHL CRS NO. 4	UT	Examinations completed 3R11.
		RPV-V5A	ON SHL CRS NO. 5	UT	Examinations completed 3R11.
		RPV-V5B	ON SHL CRS NO. 5	UT	Examinations completed 3R11.
		RPV-V5C	ON SHL CRS NO. 5	UT	Examinations completed 3R11.
		System Count:		20	
		System Count All:		20	

AUGMENTED INSPECTION PROGRAM - 13: RESERVED

This Augmented Program number has been reserved for future use if needed. There are no requirements or tables for AUG-13.

AUGMENTED INSPECTION PROGRAM - 14 : Vessel ID Attachment Welds

I. SCOPE

This augmented inspection program (AUG - 14) applies to the RPV ID attachment welds in PBAPS Units 2 and 3.

II. REFERENCES

A. BWRVIP-48: BWR Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines, February 1998.

B. Drawing ISI-203-RV-10.

C. Drawing ISI-203-RV-23.

D. Drawing M-1-A-352-1, Vessel Attachment Details.

III. GENERAL

The BWRVIP-48 guideline documents the evaluation of all the reactor vessel ID attachments. The result of the evaluation is that most attachments require no additional inspections beyond those required by ASME, Section XI. BWRVIP-48 does recommend more sensitive examinations of four (4) sets of attachments. These are the attachments for the jet pump riser braces, the core spray piping brackets, the feedwater brackets and the steam dryer support brackets. The latter two were selected due to high loads and material susceptibility to IGSCC. UT is to be used to characterize flaws.

IV. EXAMINATION PROGRAM

A. Jet Pump Riser Brace Brackets

BWRVIP-48 recommends that jet pump riser brace pad welds and heat-affected zones (HAZ) be examined within 12 years with 50% of the welds to be examined within the next six years. This coincides with the inspection frequency of the jet pump riser brace weld to weld pad described in AUG-4 and BWRVIP-41. The examination method to be used is MVT-1.

The MVT-1 examination method is simply a more sensitive version of the Code-required VT-1 examination specified by Section XI. The MVT-1 meets the requirements of VT-1 and will satisfy all provisions of the Code. Thus, it is an acceptable means to satisfy Section XI requirements.

Performing the examinations over 12 years instead of the Code ten-year interval would require relief request approval by the NRC. Therefore, the examinations will be completed at PBAPS within the 3rd ten-year interval in accordance with Section XI rules. If the NRC approves BWRVIP-48 and allows the 12 year interval as an alternative to Section XI, this AUG may be revised at that time.

Reinspection guidance for the jet pump riser braces weld pads is beyond the scope of this AUG. The Code presently requires reinspection each ten-year interval. BWRVIP recommends a 25% sample during each subsequent six year period following the initial 12 year period. Either way, the reinspection will occur in the fourth ten-year interval and will be addressed in that update of the ISI program.

B. Core Spray Piping Brackets

BWRVIP-48 requires a baseline of the bracket weld pads and weld HAZ during the next (1st outage of implementing the criteria) outage. The examination method specified is MVT-1. As discussed above, this satisfies Section XI regarding examination method.

The BWRVIP-48 reinspection frequency is 100% every four refueling cycles. These reinspections may be scheduled with core spray examinations of AUG-03. Section XI requires reinspection once each ten-year interval and allows the examinations to be spread over time or to be deferred to the end of the interval. Therefore, meeting the BWRVIP-48 criteria will exceed the reinspection requirements of Section XI.

C. Feedwater Brackets

BWRVIP-48 specifies that the feedwater bracket weld pads be examined at the frequency required by Section XI: once per 10 years. However, BWRVIP-48 requires that the examination be performed using the more sensitive MVT-1 in lieu of the VT-1 of Section XI. This is due to the potential for IGSCC.

Reinspection frequency is that of Section XI: once per 10 years.

D. Steam Dryer Support Brackets

BWRVIP-48 specifies that the steam dryer support brackets be examined at the frequency required by Section XI: once per 10 years. However, BWRVIP-48 requires that the examination be performed using the more sensitive MVT-1 in lieu of the VT-1 of Section XI. This is due to the potential for IGSCC.

Reinspection frequency is that of Section XI: once per 10 years.

E. Scope Expansion Criteria

All flaws detected by visual methods are to be characterized using UT to assess the size of the flaw and to determine whether the flaw propagates into the reactor base material. The scope expansion criteria of BWRVIP-48 requires the examination of all remaining locations of the same type (e.g., core spray bracket attachment welds) during the same outage, unless the flaw can be correlated to a specific event that would not affect other locations. Use of this criteria will be evaluated on a case-by-case basis and, if employed, will require relief request approval by NRC. Otherwise, the standard scope expansion criteria of Section XI, IWB-2430, will be used.

V. EXAMINATION RESULTS

Examination results shall be documented in the same manner as Code-required examinations. Flaw evaluations must be performed using IWB-3000 of the 1989 Edition of Section XI. Alternative methodology may be used with NRC approval.

VI. REPORTS/RECORDS

Each of the locations described in this AUG is required to be examined in accordance with ASME, Section XI. The examination results will be recorded and maintained according to the rules of 1989 Edition of Section XI, Specification NE-290, and plant procedures. The results will be supplied to NRC as part of the Code-required ISI data submittal. Additionally, PBAPS and BWRVIP have committed to supply inspection, evaluation, and repair results to EPRI. Therefore, these results will be forwarded to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-14 Inspection Table. It follows this section and is part of Specification NE-290.

Examination of these components during the second ten-year interval were performed in accordance with ASME, Section XI, per Specification M-733.

AUG-14 INSPECTION TABLE PBAPS Units 2 & 3
RPV Attachments

Component Identification	Location Number (BWRVIP-48)	Drawing Reference	Examination Method	Examination Extent & Frequency	Scope Expansion Criteria	Notes and Comments
Jet Pump Riser Brace Weld	N/A	TBD	MVT-1	MVT-1 of all welds in 10 years. Fifty per cent of the welds to be examined within the first six years of the interval.	Per ASME, Section XI, IWB-2430. See Note 1	See note 2.
Core Spray Piping Bracket Weld	N/A	ISI-203-RV-23	MVT-1	Perform baseline during 1st outage implementing BWRVIP-48. Reinspect 100% every four cycles.	Per ASME, Section XI, IWB-2430. See Note 1	See note 2.
Feedwater Bracket Weld	N/A	TBD	MVT-1	Per ASME, Section XI, once per 10 years.	Per ASME, Section XI, IWB-2430. See Note 1	See note 2.
Steam Dryer Support Bracket Weld	N/A	ISI-203-RV-10	MVT-1	Per ASME, Section XI, once per 10 years.	Per ASME, Section XI, IWB-2430. See Note 1	See note 2.

NOTES:

1. BWRVIP-48 specifies that expansion should encompass all welds on the same type of weld (e.g., core spray bracket weld), but can be limited, if flaws can be attributed to an event that would not affect other locations. This will be evaluated on a case-by-case basis. Use of this criteria will require NRC approval.

2. Reinspection is to be determined by BWRVIP after baseline inspection results from the BWR fleet are evaluated.

AUGMENTED INSPECTION PROGRAM - 15 : Standby Liquid Control Nozzle-to-Safe-End Weld

I. SCOPE

This augmented inspection program (AUG - 15) applies to the standby liquid control (SLC) nozzle-to-safe-end weld in PBAPS Units 2 and 3. The weld ID number, which is the same for both units, is 4-N10-1.

II. REFERENCES

A. BWRVIP-27: BWR Standby Liquid Control System Core Plate ΔP Inspection and Flaw Evaluation Guidelines, April 1997.

B. Unit 2 drawing, ISI-2-RV-05.

C. Unit 3 drawing, ISI-3-RV-05.

III. GENERAL

The BWRVIP-27 recommended that a volumetric examination of the subject weld, 4-N10-1, be performed at the next outage when inspection tooling is available and appropriate pre-outage planning can be done. The weld is classified as a Category B-F, Item Number B5.20. This volumetric examination is in addition to the Code-required surface examination. This BWRVIP examination was accomplished in 2R12 and 3R11.

Further, BWRVIP-27 recommends a successive examination frequency of once per 10 years, i.e., once per ISI inspection interval. This is the same as Section XI reinspection frequency for the surface examination. To satisfy the BWRVIP criteria, the volumetric examination requirement has been added to the Code-required surface examination in the standard ISI tables.

IV. EXAMINATION PROGRAM

Perform volumetric examination of the subject weld. If a qualified examination cannot be performed, then refer to paragraph 3.3 of BWRVIP-27 document for alternatives.

V. EXAMINATION RESULTS

Examination results should be documented in the same manner as Code-required examinations. Flaw evaluations must be performed in accordance with IWB-3000 of the 1989 Edition of Section XI. This weld is within the Class 1 boundary.

VI. REPORTS/RECORDS

There are no Code-required reporting requirements for the UT examination. However, PBAPS and BWRVIP have committed to supply inspection, evaluation, and repair results to NRC and to EPRI. Therefore all reports and records shall be prepared and maintained per the 1989 Edition of Section XI, Specification NE-290, and plant procedures. These results will be forwarded to NRC as an attachment to the Code-required submittal of ISI data. The data will also be provided to the EPRI Project Manager for BWRVIP activities.

VII. AUGMENTED PROGRAM TABLES

The component examinations for this augmented program are shown in the AUG-15 Inspection Table. It follows this section and is part of Specification NE-290.

Examinations of this location conducted during the second ten-year interval were performed in accordance with AUG-15 of Specification M-733.

AUG-15 INSPECTION TABLE
PBAPS UNIT 2 & 3
Stand-by Liquid Control Nozzle-to-Safe-End

Component Identification	Location Number (BWRVIP-27)	Drawing Reference	Examination Method	Examination Extent & Frequency	Scope Expansion Criteria	Notes and Comments
SLC nozzle to safe-end weld 4-N10-1	N/A	ISI-2-RV-05 ISI-3-RV-05	UT	Volumetric Examination once per 10 years. Can be performed at the same time as the Section XI surface examination.	none	

AUGMENTED INSPECTION PROGRAM - 16 : RPV Instrument Nozzle Safe-End-to Pipe Welds

Note: THIS AUG IS INACTIVE. It was a one-time inspection performed in response to a possible generic condition found at Limerick Generating Station and was part of Specification M-733. It has been retained in this Third Ten-year Interval Specification for historical purposes.

I. SCOPE

This augmented inspection program (AUG - 16) applies to the RPV instrument nozzle safe-end- to-pipe welds in PBAPS Unit 3. These safe-end to pipe welds are actually 2-inch socket welds at the joint between the safe-end (inconel material) and a stainless steel (304) reducing coupling.

II. REFERENCES

A. LGS LER 2-97-02, Instrument Nozzle Safe End Leakage.

B. Drawing M-1-A-349, B&W 131865E, "2-inch Inst. And 4-inch CRD Hyd. Sys. Return Nozzle".

C. M-296, sheet 49, Small Pipe at N-12A.

D. M-296, sheet 55, Small Pipe at N-12B.

E. A1076710, Field walkdown.

F. A1121052, ECR for drawing clarification.

III. GENERAL

The reference A document describes a leak identified at Limerick Generating Station (LGS) Unit 2 in February 1997 (2R04). For reasons of prudence, PECO decided to examine similar welds at PBAPS, Unit 3.

IV. EXAMINATION PROGRAM

Perform surface examinations of the following welds (the welds are Category B-J, Item Number 9.40, and are shown on drawing ISI-3-RV-05), which will be accessible in 3R11:

4-N12A-2
4-N12B-2

If recordable indications are found, then perform additional examinations of other, similar instrument nozzle welds, similar to the scope expansion performed at Limerick.

V. EXAMINATION RESULTS

Record and evaluate per ASME, Section XI, 80W81. The exams have been completed. No recordable indications were found. This one-time inspection program is complete.

VI. REPORTS/RECORDS

There are no mandated reporting requirements. However, if additional examinations are performed, all reports/records shall be prepared and maintained per ASME, Section XI, Specification NE-290, and plant procedures.

VII. AUGMENTED PROGRAM TABLES

There are no examinations required by this AUG. Therefore, there are no tables.

Examinations of these components were conducted during the second ten-year interval in accordance with AUG-16 of Specification M-733.