**John Doering, Jr.**
Vice President
Peach Bottom Atomic Power Station

**PECO NUCLEAR**
A Unit of PECO Energy

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10 CFR 50.55a

January 31, 2000

Docket No. 50-278

License No. DPR-56

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Peach Bottom Atomic Power Station, Unit 3
Submittal of Inservice Inspection Summary Report

Dear Sir/Madam:

In accordance with the PECO Energy Company Third, Ten-Year Interval, Inservice Inspection (ISI) Program, inservice inspections were completed on Peach Bottom Atomic Power Station, Unit 3 during the November 2, 1997 through October 27, 1999, twelfth refueling outage period. As required by ASME Section XI, IWA-6230 ("Summary Report Submittal"), attached is the Inservice Inspection (ISI) Summary Report.

Also attached is an evaluation of the PBAPS, Unit 3 core shroud examination results. The Unit 3 core shroud H-3 and H-4 welds were examined during the twelfth refueling outage period and will have fluence levels which exceed $5X10^{20}$ n/cm$^2$ at the next scheduled inspection. The attached evaluation report is being submitted as required by Table 2-1 of "BWR Vessel and Internals Project BWR Core Shroud Inspection and Flaw Evaluation Guidelines," BWRVIP-76, dated November 1999.

If you have any questions, please contact us.

Very truly yours,

John Doering, Jr.
Vice President
Peach Bottom Atomic Power Station

A047

GLJ/ARP/CKG/RES

Enclosures

CCN: 00-14014

cc: H. J. Miller, Administrator, Region I, USNRC
A. C. McMurtray, USNRC Senior Resident Inspector, PBAPS

# PEACH BOTTOM ATOMIC POWER STATION

# UNIT 3

# INSERVICE INSPECTION

# SUMMARY REPORT

# FOR THE

# NOVEMBER 2, 1997 TO OCTOBER 27, 1999

# PERIODIC INSPECTION

# TABLE OF CONTENTS

FORM NIS-1
INSERVICE INSPECTION REPORT

PECO ENERGY COMPANY
965 Chesterbrook Blvd.
Wayne, Pa. 19087-5691

Date: January 24, 2000

Peach Bottom Atomic Power Station - Unit 3
1848 Lay Road
Delta, Pennsylvania 17314

Inspection Date:
November 2, 1997 to
October 27, 1999

Commercial Service Date: December 23, 1974

Gross Generating Capability: 1159 Mwe

Pennsylvania State Identification Number: B116764 (NB 3904)

Component Identification ASME Class 1, 2, and 3 Components, Primary Containment and other Augmented Components.

Abstract of Inspections Performed, Conditions Observed, Corrective Measures Recommended and Taken are Attached.

Section 1 - Summary of Inservice Inspection Results

Section 2 - Summary of Reportable Conditions Observed

Section 3 - Summary of ASME XI Repairs and Replacements

Name of Inspector: James J Fuhrman

Name of Mailing Address of Inspector's Employer:

The Hartford Steam Boiler Inspection & Insurance Company
610 Freedom Business Center Drive
Suite 300
King of Prussia, Pennsylvania 19406

I certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Section XI Code, or Generic Letter 88-01, or other augmented requirements as applicable.

Thomas C. Kinkle

PECOEnergy ISI Engineer - Nuclear Maintenance Division

1/24/00
Date

FORM NIS-1
INSERVICE INSPECTION REPORT
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CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and/or State or Province of Pennsylvania employed by Hartford Steam Boiler Inspection & Insurance Company of Hartford, Connecticut have inspected the components described in the Owner's Data Report during the period 11/02/97 to 10/27/99 and state that to the best of my knowledge and belief the Owner has performed examinations and taken corrective measures described in this Owner's Data Report in accordance with the requirements of the ASME Code, SectionXI.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kink arising from or connected with this inspection.

Date: 1/24/2000

Inspector's Signature

Commissions NB7592, PA-2163
National Board, State,
Province & No.
I, S, N, A, IS

# INTRODUCTION

During the period from November 2, 1997 through October 27, 1999, Inservice Inspections were performed at Peach Bottom Atomic Power Station Unit 3. Unit 3 was shutdown for a scheduled refuel outage during the period September 29, 1999 through October 27, 1999. The inspections performed during this period were credited towards the first period of the second ten year interval.

Examinations completed during this period were performed by PECO Energy Company and General Electric Company in accordance with the requirements of ASME Section XI: 1989 Edition for Class 1,2 and 3 Components; and 1992 Edition through 1992 Addenda for Primary Containment.

In addition to ASME Section XI, other examinations were performed to meet the augmented inspection requirements of the following:

| | |
|---|---|
| Generic Letter 88-01 | Intergranular Stress Corrosion Cracking |
| BWRVIP-01. | BWR Core Shroud Inspection and Flaw Evaluation Guideline |
| BWRVIP-07 | Guidelines for Reinspection of BWR Core Shrouds |
| BWRVIP-18 | Core Spray Internals Inspection and Flaw Evaluation Guidelines |
| BWRVIP-38 | BWR Shroud Support Inspection and Flaw Evaluation Guideline |
| BWRVIP-41 | Jet Pump Assembly Inspection and Flaw Evaluation Guidelines |
| BWRVIP-47 | BWR Lower Plenum Inspection and Flaw Evaluation Guideline |
| BWRVIP-48 | Vessel ID Attachment Weld Inspection and Flaw Evaluation Guideline |

# SECTION 1

# SUMMARY OF IN-SERVICE INSPECTION AND AUGMENTED INSPECTION RESULTS PRIOR TO AND DURING 12TH REFUEL OUTAGE PEACH BOTTOM ATOMIC POWER STATION UNIT 3 NOVEMBER 2, 1997 TO OCTOBER 27, 1999

# SUMMARY OF IN-SERVICE INSPECTION RESULTS

# PRIOR TO AND DURING 12TH REFUEL OUTAGE

# PEACH BOTTOM ATOMIC POWER STATION

# UNIT 3

# NOVEMBER 2, 1997 TO OCTOBER 27, 1999

**EXAM CATEGORY:** B-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| CH-C-2 | Head to Flange Weld | 1 |

**SYSTEM DESCRIPTION:** REACTOR PRESSURE VESSEL

**NDE METHOD:** UT-0/L,UT-45/S,UT-60/S,UT-70/RL,MT **NDE PROCEDURE:** GE-UT-300-R3 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Previously recorded indication was detected at an amplitude below recordable levels. There was no apparent change in the length and throughwall dimensions. | YES |

**TOTAL EXAMS FOR CATEGORY B-A** 1

**EXAM CATEGORY:** B-G-2

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-70A(PRB) | Safety Relief Valve Flange B | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-71B(PRB) | Relief Valve Flange Bolting | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

**EXAM CATEGORY:** B-G-2

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-71C(PRB) | Relief Valve Flange Bolting | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-71F(PRB) | Relief Valve Flange Bolting | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-71J(PRB) | Relief Valve Flange Bolting | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

**EXAM CATEGORY:** B-G-2

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-71K(PRB) | Relief Valve Flange Bolting | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-71L(PRB) | Relief Valve Flange Bolting | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| CRD Housing Bolting | Flange Bolting | 1 |

**SYSTEM DESCRIPTION:** REACTOR PRESSURE VESSEL

**NDE METHOD:** VT-1 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| RI | Recordable Indications. Examined Bolting From Cells: 06-31, 10-27, 14-51, 18-55, 22-27, 26-11, 30-19, 30-23, 30-27, 30-39, 34-31, 34-35, 38-07, 38-51, 38-55, 42-19, 42-59, 46-43, 54-23. Slight pitting and galling observed. | YES |

**TOTAL EXAMS FOR CATEGORY B-G-2** 8

**EXAM CATEGORY:** B-J

**EXAM CATEGORY:** **B-J**

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-A-7 | Elbow to Pipe | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-A-7/ASA | Pipe to Branch | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-A-7/ASG | Pipe to Branch | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Limited exam due to pipe to branch configuration. Code coverage was achieved. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** B-J

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-A-8 | Pipe to Pipe | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Added scope to supplement weld 1-A-9 less than Code minimum exam coverage. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-A-9 | Pipe to Elbow | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Limited exam due to pipe to elbow configuration. 49% Code Coverage was achieved. | NO - 49% |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-ASA-1 | Branch Conn to Pipe | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Limited exam due to branch to pipe configuration. Code Coverage was achieved. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** **B-J**

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-ASA-2 | Pipe to Flange | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Limited exam due to pipe to flange configuration. Code coverage was achieved. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-ASG-1 | Branch to Pipe | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1-ASG-2 | Pipe to Flange | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** B-J

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 4-RD-10 | Elbow to Pipe Bend | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 4-RD-11 | Pipe to Elbow | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 4-RD-12 | Elbow to Pipe | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**EXAM CATEGORY:** B-J

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 4-RD-13 | Pipe to Elbow | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 4-RD-14 | Coupling to Pipe Bend | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 4-RD-15 | Pipe Bend to Coupling | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** B-J

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 12-O-22/4-RD | Pipe to Coupling | 1 |

**SYSTEM DESCRIPTION:** REACTOR WATER CLEAN-UP

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY B-J** 16

**EXAM CATEGORY:** B-J-X

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 12-O-20A | Branch to Pipe | 9 |

**SYSTEM DESCRIPTION:** REACTOR WATER CLEAN-UP

**NDE METHOD:** UT-45/S **NDE PROCEDURE:** PDI-UT-2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY B-J-X** 1

**EXAM CATEGORY:** B-K

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** **B-K**

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| HA2(IA) | Integral Attachment | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** MT **NDE PROCEDURE:** GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 12DCN-H152(IA) | Spring Hanger | 1 |

**SYSTEM DESCRIPTION:** REACTOR WATER CLEAN-UP

**NDE METHOD:** PT **NDE PROCEDURE:** GE-PT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY B-K** 2

**EXAM CATEGORY:** **B-M-2**

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RV-3-1-71K | Relief Valve | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** Visual, VT3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** B-M-2

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| MO-3-12-68 | Gate Valve | 1 |

**SYSTEM DESCRIPTION:** REACTOR WATER CLEAN-UP

**NDE METHOD:** Visual, VT3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

**TOTAL EXAMS FOR CATEGORY B-M-2** 2

**EXAM CATEGORY:** B-P

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| Class 1 RPV Leakage Test | SYSTEM PRESSURE TEST | 1 |

**SYSTEM DESCRIPTION:** REACTOR PRESSURE VESSEL

**NDE METHOD:** VT-2 **NDE PROCEDURE:** ST-O-080-675-3

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| SAT | Completed Sat - 10/24/99 | YES |

**TOTAL EXAMS FOR CATEGORY B-P** 1

**EXAM CATEGORY:** C-C

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** C-C

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10HB-H14(IA) | Integral Attachment | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** MT **NDE PROCEDURE:** GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY C-C** 1

**EXAM CATEGORY:** C-F-2

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 14-2DA12-1 | Pump to Pipe | 2 |

**SYSTEM DESCRIPTION:** CORE SPRAY

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| RI | Recordable Indication. Observed indication was determined to be inside surface geometry. No other recordable indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 14-2DA12-8 | Elbow to Pipe | 2 |

**SYSTEM DESCRIPTION:** CORE SPRAY

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| RI | Recordable Indication. Observed indication was determined to be inside surface geometry. No other recordable indications. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** C-F-2

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 14-2TSA14-17 | Pipe to Tee | 2 |

**SYSTEM DESCRIPTION:** CORE SPRAY

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 14-2TSA16-16 | Pipe to Pump | 2 |

**SYSTEM DESCRIPTION:** CORE SPRAY

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10-2SCSA20-3 | Elbow to Pipe | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| RI | Recordable Indication. Observed indication was determined to be root geometry. No other recordable indications. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** **C-F-2**

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10-2SCSA20-5 | Elbow to Pipe | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10-2SCSC20-3 | Elbow to Pipe | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10-2SCSC20-5 | Elbow to Pipe | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** UT-0/L,UT-45/S,MT **NDE PROCEDURE:** GE-UT-106-R2 / GE-MT-100-R2

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY C-F-2** 8

**EXAM CATEGORY:** **C-H**

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** C-H

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| Core Spray Loop A Pressure Test | SYSTEM PRESSURE TEST | 2 |

**SYSTEM DESCRIPTION:** CORE SPRAY

**NDE METHOD:** VT-2 **NDE PROCEDURE:** ST-O-014-611-3

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| SAT | Completed Sat - 2/18/99 | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| Core Spray Loop B Pressure Test | SYSTEM PRESSURE TEST | 2 |

**SYSTEM DESCRIPTION:** CORE SPRAY

**NDE METHOD:** VT-2 **NDE PROCEDURE:** ST-O-014-616-3

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| SAT | Completed Sat - 4/7/99 | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| Main Steam Lines Pressure Test | SYSTEM PRESSURE TEST | 2 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** VT-2 **NDE PROCEDURE:** ST-O-001-635-3

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| SAT | Completed Sat - 9/29/99 | YES |

**EXAM CATEGORY:** C-H

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RHR Loop A Pressure Test | SYSTEM PRESSURE TEST | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** VT-2 **NDE PROCEDURE:** ST-O-010-611-3

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| SAT | Completed Sat - 6/27/99 | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RHR Loop B Pressure Test | SYSTEM PRESSURE TEST | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** VT-2 **NDE PROCEDURE:** ST-O-010-616-3

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| SAT | Completed Sat - 7/16/99 | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| Scram Discharge Volume Pressure Test | SYSTEM PRESSURE TEST | 2 |

**SYSTEM DESCRIPTION:** SCRAM DISCHARGE VOLUME

**NDE METHOD:** VT-2 **NDE PROCEDURE:** ST-O-003-635-3

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| SAT | Completed Sat - 9/29/99 | YES |

**TOTAL EXAMS FOR CATEGORY C-H** 6

**EXAM CATEGORY:** D-A

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** D-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 32GB-H65(IA) | Integral Attachment | 3 |

**SYSTEM DESCRIPTION:** HIGH PRESSURE SERVICE WATER

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1GG-H295(IA) | Integral Attachment | 3 |

**SYSTEM DESCRIPTION:** MAIN STEAM RELIEF VALVE

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1GG-S210K(IA) | Integral Attachment | 3 |

**SYSTEM DESCRIPTION:** MAIN STEAM RELIEF VALVE

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** D-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1GG-S51(IA) | Integral Attachment | 3 |

**SYSTEM DESCRIPTION:** MAIN STEAM RELIEF VALVE

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY D-A** 4

**EXAM CATEGORY:** F-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 33HB-H127 | Rigid Restraint | 3 |

**SYSTEM DESCRIPTION:** EMERGENCY SERVICE WATER

**NDE METHOD:** Visual, VT3 **NDE PROCEDURE:** MAG-CG-407-R5

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Examined per disposition of NCR# PB 97-01669. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 33HB-S63 | Rigid Restraint | 3 |

**SYSTEM DESCRIPTION:** EMERGENCY SERVICE WATER

**NDE METHOD:** Visual, VT3 **NDE PROCEDURE:** MAG-CG-407-R5

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. Examined per disposition of NCR# PB 97-01669. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** F-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 32GB-H65 | Spring Hanger | 3 |

**SYSTEM DESCRIPTION:** HIGH PRESSURE SERVICE WATER

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 32GB-S28 | Rigid Restraint | 3 |

**SYSTEM DESCRIPTION:** HIGH PRESSURE SERVICE WATER

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 32GB-S30 | Rigid Restraint | 3 |

**SYSTEM DESCRIPTION:** HIGH PRESSURE SERVICE WATER

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**EXAM CATEGORY:** F-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| H17B | Spring Hanger | 1 |

**SYSTEM DESCRIPTION:** MAIN RECIRCULATION

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| SS2B | Mechanical Snubber | 1 |

**SYSTEM DESCRIPTION:** MAIN RECIRCULATION

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| HA2 | Spring Hanger | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** F-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| HA4 | Spring Hanger | 1 |

**SYSTEM DESCRIPTION:** MAIN STEAM

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1GG-H295 | Spring Hanger | 3 |

**SYSTEM DESCRIPTION:** MAIN STEAM RELIEF VALVE

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1GG-S210K | Guide | 3 |

**SYSTEM DESCRIPTION:** MAIN STEAM RELIEF VALVE

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** F-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1GG-S210L | Guide | 3 |

**SYSTEM DESCRIPTION:** MAIN STEAM RELIEF VALVE

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 1GG-S51 | Hydraulic Snubber | 3 |

**SYSTEM DESCRIPTION:** MAIN STEAM RELIEF VALVE

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| PH-86 | Variable Spring | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indication. The support spring can has a defaced load scale per MAG-CG-407-1. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** F-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| PH-87 | Variable Spring | 1 |

**SYSTEM DESCRIPTION:** REACTOR DRAIN

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| RPV-SK(SC) | RPV Support Skirt | 1 |

**SYSTEM DESCRIPTION:** REACTOR PRESSURE VESSEL

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| SUPPORT-1 | Stabilizing Bar @ 0° | 1 |

**SYSTEM DESCRIPTION:** REACTOR PRESSURE VESSEL

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** **F-A**

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| SUPPORT-2 | Stabilizing Bar @ 45° | 1 |

**SYSTEM DESCRIPTION:** REACTOR PRESSURE VESSEL

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 12DCN-H152 | Spring Hanger | 1 |

**SYSTEM DESCRIPTION:** REACTOR WATER CLEAN-UP

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10HB-H14 | Spring Hanger | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indication. Slight bend on lower spring hanger rod. | YES |

# PBAPS ISI OUTAGE SUMMARY REPORT 3R12

**EXAM CATEGORY:** F-A

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10HB-H28 | Spring Hanger | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 10HB-H36 | Spring Hanger | 2 |

**SYSTEM DESCRIPTION:** RESIDUAL HEAT REMOVAL

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 3GE-H20 | Rigid Restraint | 2 |

**SYSTEM DESCRIPTION:** SCRAM DISCHARGE VOLUME

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**EXAM CATEGORY:** **F-A**

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 3GE-H40 | Rigid Restraint | 2 |

**SYSTEM DESCRIPTION:** SCRAM DISCHARGE VOLUME

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

| COMPONENT ID | COMPONENT DESCRIPTION | CODE CLASS |
|---|---|---|
| 3GE-H95 | Rigid Restraint | 2 |

**SYSTEM DESCRIPTION:** SCRAM DISCHARGE VOLUME

**NDE METHOD:** VT-3 **NDE PROCEDURE:** MAG-CG-407-R6

| RESULTS | RESULTS / COMMENTS | CODE COVERAGE MET ? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY F-A** 25

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** E-A **CODE CLASS** MC

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-DWELL-GV | Drywell | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of varying surface corrosion and staining were observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-DWELL-VT3 | Drywell | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of varying surface corrosion and staining were observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-ELUG-135-VT3 | Drywell exterior lug outside penetration N-110D at 135° | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indication. Light debris observed. | YES |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

| EXAM CATEGORY | E-A | CODE CLASS | MC |
|---|---|---|---|

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-ELUG-180-VT3 | Drywell exterior lug outside penetration N-110E at 180° | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indication. Light debris observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-TORUS-GV | Suppression Chamber | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable indications.Scattered areas of coating failure and resultant light surface corrosion were observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-TORUS-VT3 | Suppression Chamber | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Scattered areas of coating failure and resultant light surface corrosion were observed. | YES |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** E-A **CODE CLASS** MC

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-022-GV | Vent line A at 22° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-022-VT3 | Vent line A at 22° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-067-GV | Vent line B at 67° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** E-A **CODE CLASS** MC

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-067-VT3 | Vent line B at 67° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-112-GV | Vent line C at 112° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-112-VT3 | Vent line C at 112° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

| EXAM CATEGORY | E-A | CODE CLASS | MC |
|---|---|---|---|

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-157-GV | Vent line D at 157° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-157-VT3 | Vent line D at 157° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-202-GV | Vent line E at 202° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** E-A **CODE CLASS** MC

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-202-VT3 | Vent line E at 202° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |
| RESULTS | COMMENTS | | | CODE COVERAGE MET? |
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | | | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-247-GV | Vent line F at 247° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |
| RESULTS | COMMENTS | | | CODE COVERAGE MET? |
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | | | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-247-VT3 | Vent line F at 247° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |
| RESULTS | COMMENTS | | | CODE COVERAGE MET? |
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | | | YES |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** E-A **CODE CLASS** MC

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-292-GV | Vent line G at 292° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-292-VT3 | Vent line G at 292° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-337-GV | Vent line H at 337° 30' | E1.11 | | Gen. Visual* |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** E-A **CODE CLASS** MC

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENT-337-VT3 | Vent line H at 337° 30' | E1.12 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| RI | Recordable Indications. Areas of coating loss, staining, mechanical dings & coating peeling at water line observed. | YES |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-VENTSYS-VT3 | Vent system | E1.20 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

**TOTAL EXAMS FOR CATEGORY** E-A 23

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

| EXAM CATEGORY | E-D | CODE CLASS | MC |
|---|---|---|---|

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| 3-MBAR-INT | Drywell interior moisture barrier | E5.30 | | Visual, VT-3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | YES |

TOTAL EXAMS FOR CATEGORY E-D 1

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** NA **CODE CLASS** NA

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DA-135 | Drywell Airgap | NA | CB | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DA-180 | Drywell Airgap | NA | CB | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DA-DL-FT | Drywell Airgap Drain Line Functional Test | NA | CC | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** NA **CODE CLASS** NA

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DAD-VT-045 | Drywell Airgap Drain Line Visual Examination | NA | CC | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DAD-VT-135 | Drywell Airgap Drain Line Visual Examination | NA | CC | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DAD-VT-225 | Drywell Airgap Drain Line Visual Examination | NA | CC | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** NA **CODE CLASS** NA

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DAD-VT-315 | Drywell Airgap Drain Line Visual Examination | NA | CC | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DE-135 | Drywell Exterior | NA | CB | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DE-180 | Drywell Exterior | NA | CB | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| EXAM CATEGORY | NA | CODE CLASS | NA |
|---|---|---|---|

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DESS-135 | Drywell Exterior Stabilizer Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| DESS-180 | Drywell Exterior Stabilizer Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| TEQ-000 | Torus Earthquake Tie | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

| EXAM CATEGORY | NA | CODE CLASS | NA |
|---|---|---|---|

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| TES-BAY1-2 | Torus External Column Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| TES-BAY2-3 | Torus External Column Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| TES-BAY3-4 | Torus External Column Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

**EXAM CATEGORY** NA **CODE CLASS** NA

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| TES-BAY4-5 | Torus External Column Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| VHS-BAY1-2 | Vent Header Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| VHS-BAY2-3 | Vent Header Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

PEACH BOTTOM ATOMIC POWER STATION

CONTAINMENT INSPECTION PROGRAM - 3R12

| EXAM CATEGORY | NA | CODE CLASS | NA |
|---|---|---|---|

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| VHS-BAY3-4 | Vent Header Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| COMPONENT ID | DESCRIPTION | ITEM NO | AUG PROGRAM | EXAM METHOD |
|---|---|---|---|---|
| VHS-BAY4-5 | Vent Header Support | NA | CA | Visual, VT3 |
| | | NDE PROCEDURE | | MAG-CG-425-R0 |

| RESULTS | COMMENTS | CODE COVERAGE MET? |
|---|---|---|
| NRI | No Recordable Indications. | NA |

| TOTAL EXAMS FOR CATEGORY | NA | 20 |
|---|---|---|

# SUMMARY OF AUGMENTED INSPECTION RESULTS

# PRIOR TO AND DURING 12TH REFUEL OUTAGE

# PEACH BOTTOM ATOMIC POWER STATION

# UNIT 3

# NOVEMBER 2, 1997 TO OCTOBER 27, 1999

**AUG PROGRAM** 01 **GL 88-01, IGSCC**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| 12-O-20A | WELDOLET TO PIPE | UT and Surface | PDI-UT-2 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**TOTAL EXAMS FOR AUGMENTED PROGRAM** 01 1

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| A DNCOMER RPR CLAMP | DOWNCOMER REPAIR CLAMP | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| B DNCOMER RPR CLAMP | DOWNCOMER REPAIR CLAMP | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| C DNCOMER RPR CLAMP | DOWNCOMER REPAIR CLAMP | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| D DNCOMER RPR CLAMP | DOWNCOMER REPAIR CLAMP | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| HDR TBOX REPAIR 120AZ | REPAIR PLATES ATTACHMENT WELDS | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| HDR TBOX REPAIR 240AZ | REPAIR PLATES ATTACHMENT WELDS | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P1A | THRML SLV/JUNCTBX WELD 240 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P1B | THRML SLV/JUNCTBX WELD 120 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P2A | JUNCTBX COVER PLATE WELD 240 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P2B | JUNCTBX COVER PLATE WELD 120 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 03 CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P4aA | HDR PIPE TO ELBOW WELD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P4bA | ELBOW TO DWNCMR WELD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P4cA | DWNCMR TO ELBOW WELD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P4dA | ELBOW TO SHROUD WELD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P5A | SLDG SLV TO DWNCMR WLD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Examined upper HAZ only. Remainder of weld inaccessible due to clamp.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P5B | SLDG SLV TO DWNCMR WLD 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Examined upper HAZ only. Remainder of weld inaccessible due to clamp.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P5C | SLDG SLV TO DWNCMR WLD 187.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Examined upper HAZ only. Remainder of weld inaccessible due to clamp.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P5D | SLDG SLV TO DWNCMR WLD 172.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Examined upper HAZ only. Remainder of weld inaccessible due to clamp.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P6A | SLDG SLV TO OUTSLV WLD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P6B | SLDG SLV TO OUTSLV WLD 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 03 CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P6C | SLDG SLV TO OUTSLV WLD 187.5 A | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P7A | OUTSLV TO DWNCMR WLD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P7B | OUTSLV TO DWNCMR WLD 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P7C | OUTSLV TO DWNCMR WLD 187.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8aA | COLLAR TO SHROUD PIPE 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8aB | COLLAR TO SHROUD PIPE 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8aC | COLLAR TO SHROUD PIPE 187.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8aD | COLLAR TO SHROUD PIPE 172.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8bA | COLLAR TO SHROUD WELD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8bB | COLLAR TO SHROUD WELD 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 03 CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8bC | COLLAR TO SHROUD WELD 187.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| P8bD | COLLAR TO SHROUD WELD 172.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S1A | CVR PL TO SPGR TBX WLD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S1B | CVR PL TO SPGR TBX WLD 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S1C | CVR PL TO SPGR TBX WLD 187.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S1D | CVR PL TO SPGR TBX WLD 172.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2A1 | SPRGR PIPE TO TBX WLD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2A2 | SPRGR PIPE TO TBX WLD 352.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2B1 | SPRGR PIPE TO TBX WLD 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2B2 | SPRGR PIPE TO TBX WLD 7.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 03 CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2C1 | SPRGR PIPE TO TBX WLD 187.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2C2 | SPRGR PIPE TO TBX WLD 187.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2D1 | SPRGR PIPE TO TBX WLD 172.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S2D2 | SPRGR PIPE TO TBX WLD 172.5 AZ | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3aA | NZZL TO A SPRGR PIPE TYP OF 65 | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3aB | NZZL TO B SPRGR PIPE TYP OF 65 | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3aC | NZZL TO C SPRGR PIPE TYP OF 65 | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3aD | NZZL TO D SPRGR PIPE TYP OF 65 | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3bA | NZZL TO ORIFICE TYP OF 65 NOZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3bB | NZZL TO ORIFICE TYP OF 65 NOZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 03 CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3bC | NZZL TO ORIFICE TYP OF 65 NOZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3bD | NZZL TO ORIFICE TYP OF 65 NOZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3cB1 | B SPARGER DRAIN WELDS | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3cB2 | B SPARGER DRAIN WELDS | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3cD1 | D SPARGER DRAIN WELDS | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S3cD2 | D SPARGER DRAIN WELDS | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4A1 | END CAP TO A SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4A2 | END CAP TO A SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4B1 | END CAP TO B SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4B2 | END CAP TO B SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4C1 | END CAP TO C SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4C2 | END CAP TO C SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4D1 | END CAP TO D SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| S4D2 | END CAP TO D SPRGR PIPE WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB1 BRACKET 7.5AZ | SPRGR BRKTS AND WELDS 7.5 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB10 BRACKET 276AZ | SPRGR BRKTS AND WELDS 264 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB11 BRACKET 316AZ | SPRGR BRKTS AND WELDS 264 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB12 BRACKET 352.5AZ | SPRGR BRKTS AND WELDS 264 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB2 BRACKET 44AZ | SPRGR BRKTS AND WELDS 44 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB3 BRACKET 84AZ | SPRGR BRKTS AND WELDS 84 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 03 CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB4 BRACKET 96AZ | SPRGR BRKTS AND WELDS 96 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB5 BRACKET 136AZ | SPRGR BRKTS AND WELDS 136 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB6 BRACKET 172.5AZ | SPRGR BRKTS AND WELDS 172.5 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB7 BRACKET 187.5AZ | SPRGR BRKTS AND WELDS 187.5 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB8 BRACKET 224AZ | SPRGR BRKTS AND WELDS 224 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 03 **CORE SPRAY INTERNALS (BWRVIP-18)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| SB9 BRACKET 264AZ | SPRGR BRKTS AND WELDS 264 AZ | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**TOTAL EXAMS FOR AUGMENTED PROGRAM** 03 76

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP1 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP10 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP2 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP3 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP4 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP5 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP6 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP7 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP8 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-1 JP9 | Adapter Top to Adapter Bottom Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP1 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP10 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP2 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP3 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP4 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP5 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP6 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP7 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP8 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-2 JP9 | Adapter Bottom (or Lower Ring) to Shroud Support | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP1 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP10 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP2 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP3 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP4 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41).**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP5 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP6 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP7 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP8 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3a JP9 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP1 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP10 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** RI **COMMENTS** Reportable Indications. Observed linear indications approx. 1.2 & .4 inches long. BWRVIP-41 evaluation resulted in use-as-is dispostion. See NCR # PB 99-02244.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP11 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP12 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP13 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP14 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP15 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP16 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP17 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP18 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP19 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP2 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** RI **COMMENTS** Reportable Indication. Observed linear indication approx. 1.9 inches long. BWRVIP-41 evaluation resulted in use-as-is dispostion. See NCR # PB 99-02244.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP20 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Expanded scope as result of indications observed at Jet Pumps 2 & 10.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP3 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP4 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP5 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP6 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP7 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP8 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| AD-3b JP9 | Adapter Backing Ring Fillet Welds | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP1 | Diffuser Collar to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP10 | Diffuser Collar to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP2 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP3 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP4 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP5 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP6 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP7 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP8 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| DF-2 JP9 | Diffuser Shell to Tailpipe Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#01 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#01 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#02 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#02 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#03 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#03 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#04 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#04 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#05 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#05 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#06 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#06 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#07 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#07 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#08 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#08 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#09 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#09 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#10 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#10 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#11 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#11 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#12 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#12 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#13 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 04 **JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#13 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#14 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#14 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#15 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#15 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#16 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#16 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#17 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#17 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#18 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#18 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#19 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#19 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#20 HOLD DOWN BEAM/BB-1 | BEAM BOLT HOLE REGION | UT | GE-UT-504-V6 |

**RESULTS** RI **COMMENTS** Reportable Indications. Observed in beam ligament area. BEAM REPLACED (WO C0190949)

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| JP#20 HOLD DOWN BEAM/BB-2 | BEAM TRANSITION ARM REGION | UT | GE-UT-504-V6 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RISER CLAMP JP1/2 | Riser Clamp at 150° Azimuth Unit 3 Only | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RISER CLAMP JP13/14 | Riser Clamp at 300° Azimuth Unit 3 Only | VT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RS-2 (3/4) | Riser Pipe to Transition Piece Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RS-2 (5/6) | Riser Pipe to Transition Piece Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RS-2 (7/8) | Riser Pipe to Transition Piece Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM 04 JET PUMP ASSEMBLY (BWRVIP-41)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RS-3 (3/4) | Riser Pipe to Transition Piece Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RS-3 (5/6) | Riser Pipe to Transition Piece Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| RS-3 (7/8) | Riser Pipe to Transition Piece Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**TOTAL EXAMS FOR AUGMENTED PROGRAM 04 108**

**AUG PROGRAM 07 SHROUD SUPPORT (BWRVIP-38)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| H8 | Shroud Support-to-Shroud Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Examined 10% of weld length.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| H9 | Shroud Support-to-RPV Weld | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications. Examined 10% of weld length.

**TOTAL EXAMS FOR AUGMENTED PROGRAM** 07 2

**AUG PROGRAM 09 CORE SHROUD (BWRVIP-01)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| H-3 SHROUD | SHROUD H-3 WELD | VT-1 OR UT | GE-UT-504-V6 |

**RESULTS** RI

**COMMENTS** Reportable Indications. Total weld length examined 87.67% of which 37.9% was found flawed on lower side of weld. Reference NCR# 99-00041 for use-as-is dispostion & SIR-99-141.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| H-4 SHROUD | SHROUD H-4 WELD | VT-1 OR UT | GE-UT-504-V6 |

**RESULTS** RI

**COMMENTS** Reportable Indications. Total weld length scanned 87.99% of which 18.4% found flawed on upper side and 28.9% found flawed on lower side of weld. Reference NCR # 99-00041 for use-as-is disposition & SIR-99-141.

**TOTAL EXAMS FOR AUGMENTED PROGRAM** 09 2

**AUG PROGRAM 11 LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 14-15 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 14-31 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 14-47 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 18-19 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 18-27 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 11 **LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 18-35 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 18-43 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 26-11 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 34-35 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-1 42-19 | GUIDE TUBE TO ALIGNMENT LUG | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 11 **LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 14-15 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 14-31 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 14-47 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 18-19 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 18-27 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 11 **LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 18-35 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 18-43 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 26-11 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 34-35 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-2 42-19 | GUIDE TUBE BODY TO SLEEVE | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 11 **LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 14-15 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 14-31 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 14-47 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 18-19 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 18-27 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 11 **LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 18-35 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 18-43 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 26-11 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 34-35 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CRGT-3 42-19 | GUIDE TUBE BASE TO BODY | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 11 **LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 14-15 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 14-31 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 14-47 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 18-19 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 18-27 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 11 **LOWER PLENUM REGION (BWRVIP-47)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 18-35 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 18-43 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 26-11 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 34-35 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| FS/GT-ARPIN-1 42-19 | ALIGNMENT PIN | VT-3 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**TOTAL EXAMS FOR AUGMENTED PROGRAM** 11 40

**AUG PROGRAM 14 RPV ID ATTACHMENT WELDS (BWRVIP-48)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 117 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 123 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 15 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 165 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 195 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**AUG PROGRAM** 14 **RPV ID ATTACHMENT WELDS (BWRVIP-48)**

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 237 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 243 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

| COMPONENT ID | DESCRIPTION | EXAM METHOD | NDE PROCEDURE |
|---|---|---|---|
| CORE SPRAY BRACKET PAD AZ 345 | VESSEL ID ATTACHMENT WELD | EVT-1 | VT-PECO-204-V1 |

**RESULTS** NRI **COMMENTS** No Recordable Indications.

**TOTAL EXAMS FOR AUGMENTED PROGRAM** 14 8

## SECTION 2

# SUMMARY OF REPORTABLE CONDITIONS OBSERVED

# DURING IN-SERVICE INSPECTION

# PEACH BOTTOM ATOMIC POWER STATION

# UNIT 3

# NOVEMBER 2, 1997 TO OCTOBER 27, 1999

## SUMMARY OF REPORTABLE CONDITIONS OBSERVED

As a result of examinations performed prior to and during the Unit 3, 12th Refuel Outage, numerous conditions were noted. Subsequent examinations and/or evaluations determined most conditions to be either insignificant or geometric in nature. However, several reportable conditions were recorded and are summarized below:

H-3, H-4 Core Shroud Welds

On weld H-3, 8 - IGSCC/IASCC associated indications totaling 216.39 inches were reported in the 570.43 inches of weld length examined. The examinations were performed from the lower side of the weld.

Weld H-4 was examined from the upper and lower side for a total of 572.51 inches. On the upper side, 13 - IGSCC/IASCC associated indications totaling 101.72 inches were reported. On the lower side, 16 - IGSCC/IASCC associated indications totaling 165.62 inches were reported.

Details of these reportable indications can be found in the PB 3R12 ISI Summary Report. An engineering evaluation of these indications was made and concluded that there are substantial margins for the H-3 and H-4 welds, under conservative, bounding conditions, to allow for continued operation without reinspection for at least six years. Reference NCR # 99-00041, rev. 1. Subsequent to the disposition of this NCR, an additional engineering evaluation was performed by Structural Integrity Associates. Report SIR-99-141 dated 12/1/99 (copy attached) provides justification for a reinspection frequency of ten years.

AD-3b WELD Jet Pumps # 2 & 10

At Jet Pump #2 weld AD-3b, a crack-like indication measuring approximately 1.9 inches was observed. Similarly, Jet Pump #10 weld AD-3B was observed to contain two crack-like indications measuring approximately 1.2 and 0.4 inches.

## SUMMARY OF REPORTABLE CONDITIONS OBSERVED

Details of these reportable indications can be found in the PB 3R12 ISI Summary Report. An engineering evaluation of these indications was performed and concluded that structural integrity is demonstrated through the next two 24 month operating cycles. Reference NCR # 99-02244.

HOLD DOWN BEAM Jet Pump # 20

At Jet Pump # 20, the beam ligament area examination produced recordable responses that could be interpreted as being cracks. The beam was replaced, see Work Order # C0190949.

## SECTION 3

# SUMMARY OF ASME REPAIRS

# AND REPLACEMENTS COMPLETED

# PEACH BOTTOM ATOMIC POWER STATION

# UNIT 3

# NOVEMBER 2, 1997 TO OCTOBER 27, 1999

# SUMMARY OF ASME REPAIRS AND REPLACEMENTS COMPLETED FOR PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3 NOVEMBER 2, 1997 TO OCTOBER 27, 1999 ( END OF 3R12 REFUEL OUTAGE )

** Denotes that use of Code Case N-416-1 was employed in completing the repair / replacement activity

## SYSTEM 01: MAIN STEAM SYSTEM

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 1 | replacement | RV-3-02-071E | Installed a rebuilt safety relief valve | No | 11/29/1997 | 97-034, R0647295 |
| Class 1 | replacement | RV-3-02-071J | Installed a rebuilt safety relief valve | No | 10/15/1999 | 99-016, R0647296 |
| Class 1 | replacement | RV-3-02-070A | Installed a rebuilt safety relief valve | No | 10/12/1999 | 99-017, R0647936 |
| Class 1 | replacement | RV-3-02-071B | Installed a rebuilt safety relief valve | No | 10/13/1999 | 99-018, R0647939 |
| Class 1 | replacement | RV-3-02-071F | Installed a rebuilt safety relief valve | No | 10/11/1999 | 99-019, R0648058 |
| Class 1 | replacement | RV-3-02-071L | Installed a rebuilt safety relief valve | No | 10/12/1999 | 99-020, R0648064 |
| Class 3 | replacement | 1-GG-S-3 | Installed new pressurized reservoir snubber | No | 10/12/1999 | 99-042, R0471778 |
| Class 3 | replacement | 1-GG-S-6 | Installed new pressurized reservoir snubber | No | 10/08/1999 | 99-043, R0471782 |
| Class 3 | replacement | 1-GG-S-7 | Installed new pressurized reservoir snubber | No | 10/09/1999 | 99-044, R0471785 |
| Class 3 | replacement | 1-GG-S-16 | Installed new pressurized reservoir snubber | No | 10/08/1999 | 99-045, R0471797 |
| Class 3 | replacement | 1-GG-S-66 | Installed new pressurized reservoir snubber | No | 10/12/1999 | 99-046, R0508496 |
| Class 2 | replacement | 7-DB-S-11 | Installed new pressurized reservoir snubber | No | 10/08/1999 | 99-060, R0508500 |
| Class 1 | replacement | SS-B-3 | Installed new pressurized reservoir snubber | No | 10/12/1999 | 99-076, R0471775 |
| Class 1 | replacement | RV-3-02-071K | Installed a rebuilt safety relief valve | No | 10/15/1999 | 99-085, R0648063 |
| Class 1 | replacement | RV-3-02-071C | Installed a rebuilt safety relief valve | No | 10/23/1999 | 99-134, C0190996 |

## SYSTEM 02: REACTOR AND RECIRCULATION

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 1 | replacement | SS-1-A | Installed new pressurized reservoir snubber | No | 10/04/1999 | 99-075, R0471772 |
| Class 1 | replacement | SS-3-C | Installed new pressurized reservoir snubber | No | 10/06/1999 | 99-084, R0508163 |

# SUMMARY OF ASME REPAIRS AND REPLACEMENTS COMPLETED FOR PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3 NOVEMBER 2, 1997 TO OCTOBER 27, 1999 ( END OF 3R12 REFUEL OUTAGE )

** Denotes that use of Code Case N-416-1 was employed in completing the repair / replacement activity

## SYSTEM 03: CONTROL ROD DRIVE

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 1 | replacement | CRD-3-03-4247 | Replaced CRD during 3J12 mini-outage | No | 03/17/1998 | 98-016, R0749129 |
| Class 1 | replacement | CRD-3-03-4251 | Replaced CRD during 3J12 mini-outage | No | 03/17/1998 | 98-016, R0749129 |
| Class 1 | replacement | CRD-3-03-2643 | Replaced CRD during 3J12 mini-outage | No | 03/17/1998 | 98-097, C0181166 |
| Class 1 | replacement | CRD's 06-31 10-27, 14-51, 18-55, 22-27, 30-19, 30-23, 30-27, 30-39, 34-31, 38-07, 38-51, 38-55, 42-59, 46-43, 54-23, 26-11, 34-35, 42-19, | Exchanged CRD's with rebuilt CRD's during 3R12 outag | No | 10/10/1999 | 99-028, R0767661 |

## SYSTEM 04: REACTOR PRESSURE VESSEL AND INTERNALS

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 1 | replacement | PB-3-04-30S001 | Replaced a drywell head washer | No | 06/01/1998 | 98-014, R0746745 |

## SYSTEM 06: FEEDWATER SYSTEM

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 2 | replacement | MO-3-06D-3163A | Installed a new valve bonnet and plugged leakoff port | No | 03/02/1998 | 98-024, C0180112 |
| Class 2 | replacement | MO-3-06D-3163C | Installed a new valve bonnet and plugged leakoff port | No | 03/02/1998 | 98-025, C0179889 |
| Class 1 | replacement | 6-DDNL-S-8 | Installed new pressurized resevoir snubber | No | 10/04/1999 | 99-070, R0471995 |
| Class 1 | replacement | 6-DDNL-S-9 | Installed new pressurized reservoir snubber | No | 10/04/1999 | 99-073, R0471997 |
| Class 1 | replacement | 6-DDNL-S-13 | Installed new pressurized reservoir snubber | No | 10/03/1999 | 99-077, R0508497 |

# SUMMARY OF ASME REPAIRS AND REPLACEMENTS COMPLETED FOR PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3 NOVEMBER 2, 1997 TO OCTOBER 27, 1999 ( END OF 3R12 REFUEL OUTAGE )

** Denotes that use of Code Case N-416-1 was employed in completing the repair / replacement activity

## SYSTEM 07: PRIMARY CONTAINMENT

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class M | replacement | PB-3-07-N-002 | Replaced gaskets on primary containment equipment access hatch with personnel lock. | No | 03/27/1998 | 98-081, R0748968 |
| Class M | replacement | PB-3-07-N-200B | Replaced o-rings on suppression chamber access hatch | No | 03/19/1998 | 98-082, R0747871 |
| Class M | replacement | PB-3-07-N-006 | Replaced gaskets on the primary containment CRD removal hatch. | No | 03/20/1998 | 98-083, R0745410 |
| Class M | replacement | PB-3-04-30S001 | Replaced the drywell head o-rings | No | 03/26/1998 | 98-084, R0746753 |

## SYSTEM 10: RESIDUAL HEAT REMOVAL

| | Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|---|
| | Class 2 | replacement | 3-10HB-S10 | Installed new anchor bolt on wall support | Yes | 12/08/1997 | 97-077, C0178678 |
| | Class 2 | repair | 3-10HB-H33 | Rework support base plates per NCR PB98-00208 | No | 09/15/1998 | 98-124, C0182674 |
| ** | Class 2 | replacement | RV-3-10-33425 | Install new relief valve, 3/4" sockolet to 20" "DLA" pipe | No | 10/18/1999 | 99-087, C0188199 |
| | Class 2 | replacement | 10-GB-S-43-2 | Installed new pressurized reservoir snubber | No | 10/15/1999 | 99-068, R0471765 |
| | Class 2 | replacement | 10-HB-S-7 | Installed new pressurized reservoir snubber | No | 10/02/1999 | 99-069, R0471766 |

## SYSTEM 11: STANDBY LIQUID CONTROL SYSTEM

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 2 | replacement | RV-3-11-39A | Installed new relief valve | No | 10/12/1999 | 99-054, R0743870 |
| Class 2 | replacement | RV-3-11-39B | Installed new relief valve | No | 10/12/1999 | 99-055, R0743871 |

# SUMMARY OF ASME REPAIRS AND REPLACEMENTS COMPLETED FOR PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3 NOVEMBER 2, 1997 TO OCTOBER 27, 1999 ( END OF 3R12 REFUEL OUTAGE )

** Denotes that use of Code Case N-416-1 was employed in completing the repair / replacement activity

## SYSTEM 12: REACTOR WATER CLEANUP SYSTEM

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 1 | replacement | MO-3-12-068 | Incidental bonnet bolt replacement - not due to failure | No | 10/09/1999 | 99-128, C0190847 |

## SYSTEM 13: REACTOR CORE ISOLATION COOLING SYSTEM

| | Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|---|
| | Class 2 | replacement | VRV-3-13C-139A | Installed new 2" vacuum relief valve | No | 01/27/1998 | 98-005, R0627006 |
| | Class 2 | replacement | VRV-3-13C-139B | Installed new 2" vacuum relief valve | No | 01/27/1998 | 98-006, R0627007 |
| | Class 1 | replacement | MO-3-13-016 | Installed new bonnet on 3" - class 1 valve | No | 03/16/1998 | 98-010, C0179445 |
| ** | Class 2 | replacement | CHK-3-13C-133 | Installed new check valve, 2" - class 2 valve | No | 10/03/1999 | 98-119, C0181952 |
| ** | Class 2 | replacement | CHK-3-13C-38 | Installed new check valve, 2" - class 2 valve | No | 10/06/1999 | 99-066, C0187046 |

## SYSTEM 14: CORE SPRAY COOLING SYSTEM

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 1 | replacement | 14-DCN-S-27 | Installed new pressurized reservoir snubber | No | 10/12/1999 | 99-064, R0471600 |
| Class 1 | replacement | 14-DCN-S-26 | Installed new pressurized reservoir snubber | No | 10/12/1999 | 99-071, R0472003 |

# SUMMARY OF ASME REPAIRS AND REPLACEMENTS COMPLETED FOR PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3 NOVEMBER 2, 1997 TO OCTOBER 27, 1999 ( END OF 3R12 REFUEL OUTAGE )

** Denotes that use of Code Case N-416-1 was employed in completing the repair / replacement activity

## SYSTEM 19: FUEL POOL COOLING SYSTEM

| | Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|---|
| | Class 1 | replacement | Flange Spool Piece | Installed new studs & nuts, fuel pool skimmer cross tie | No | 09/03/1999 | 99-088, C0188510 |

## SYSTEM 23: HIGH PRESSURE COOLANT INJECTION SYSTEM

| | Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|---|
| | Class 2 | replacement | VRV-3-23C-140A,B,C,D | Installed new vacuum relief valves | No | 02/01/1999 | 99-003, C0185425 |
| | Class 1 | replacement | 23-DBN-S-22 | Installed new pressurized reservoir snubber | No | 10/03/1999 | 99-065, R0471762 |
| | Class 1 | replacement | 23-DBN-S-23 | Installed new pressurized reservoir snubber | No | 10/03/1999 | 99-067, R0471763 |
| | Class 2 | replacement | 23-DBN-S-1 | Installed new pressurized reservoir snubber | No | 09/30/1999 | 99-074, C0187683 |
| | Class 2 | replacement | 23-HB-S-1-A | Installed new pressurized reservoir snubber | No | 09/30/1999 | 99-078, R0472035 |
| | Class 2 | replacement | 23-DBN-S-6-1 | Installed new pressurized reservoir snubber & base plate | No | 09/30/1999 | 99-082, R0471770 |
| | Class 2 | replacement | 23-DBN-S-6-2 | Installed new pressurized reservoir snubber & base plate | No | 09/30/1999 | 99-083, R0471771 |
| | Class 2 | replacement | 3-23DDN-S32 | Add 3" x 3" x 1/4" angle to support | No | 10/28/1999 | 99-089, C0188342 |
| | Class 2 | replacement | 3-23DBN-S53 | Rework rigid restraint<br>Rework rigid restraint | No | 10/16/1999 | 99-112, C0189708 |

## SYSTEM 32: HIGH PRESSURE SERVICE WATER SYSTEM

| | Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|---|
| | Class 3 | repair | 3-32GB-S59, 3-32GB-H27 | Installed shims on rigid restraint | No | 02/10/1998 | 97-071, C0177815 |
| ** | Class 3 | replacement | RO-3789A and RO-3800A | Installed new 14" pipe, slip-on flanges, and elbow | No | 05/27/1999 | 98-171, C0185060 |

# SUMMARY OF ASME REPAIRS AND REPLACEMENTS COMPLETED FOR PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3 NOVEMBER 2, 1997 TO OCTOBER 27, 1999 ( END OF 3R12 REFUEL OUTAGE )

** Denotes that use of Code Case N-416-1 was employed in completing the repair / replacement activity

## SYSTEM 33: EMERGENCY SERVICE WATER SYSTEM

| | Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|---|
| | Class 3 | repair | 33HB-H127, 33HB-S63 | Installed shims to correct gap on pipe supports | No | 11/13/1997 | 97-072, C0178470 |
| ** | Class 3 | replacement | HV-3-33-502, FW#501 | Installed half coupling, pipe, cap on FW#501 | No | 10/18/1999 | 99-124, C0190598 |

## SYSTEM 60: PLANT PROTECTION INSTRUMENTATION

| Code Class | Repair, Replacement, or Corrective Measure | Item Description (component I.D.) | Description Of Work Performed | Flaw or Relevant Condition Found During Scheduled Section XI Exam Or Test | Date Complete | R&R Plan # and W/O # |
|---|---|---|---|---|---|---|
| Class 1 | replacement | LPRM 32-49 | Installed new bottom flange and bolts | No | 10/12/1999 | 99-131, R0747361 |

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SIR-99-141
RAM-99-091

Ms. Charlotte K. Geiger
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Peach Bottom Atomic Power Station
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Subject: Evaluation of Peach Bottom, Unit 3 Shroud Examination Results

Dear Charlotte:

Structural Integrity Associates (SI) has performed an evaluation of the ultrasonic examination results recorded during the 1999 inspection of shroud circumferential welds H3 and H4 at Peach Bottom, Unit 3, in order to determine maximum reinspection intervals. The evaluations performed and documented herein were designed to justify operation without reinspection of these welds for at least ten years of operation. The evaluations were performed following the approach used in the BWR Vessel and Internals Project (BWRVIP) shroud evaluation guidelines [3], based on limit load and linear elastic fracture mechanics (LEFM) techniques. The following sections of this report describe the methodology used to evaluate each weld, the resulting safety margins, and the recommended inspection intervals.

## INSPECTION AND EVALUATION METHODOLOGY

The inspection and evaluation approach employed at Peach Bottom, Unit 3 provides the necessary information for determination of the required amount of unflawed material to meet specified safety margins, including the appropriate amount for postulated crack growth and nondestructive examination detection and sizing uncertainties. Ultrasonic examination (UT) techniques were utilized which provided complete through-thickness interrogation of all welds. Due to accessibility limitations, the circumferential extent of examination of these welds varied. However, sufficient weld length was adequately interrogated to quantifiably demonstrate the condition, and hence, the structural integrity of all welds evaluated. Because both limit load and LEFM assessments have been performed, evaluation methodologies will be addressed separately with respect to structural integrity evaluation.

## ACCEPTANCE CRITERIA

The core shroud is a core support structure which provides lateral support for the fuel. The applicable codes, standards and classification for the core shroud are as follows:

- The core shroud is classified as a safety-related component.
- The core shroud is not an ASME Code, Section III component. However, the original design is in accordance with the intent of Section III of the ASME Code.
- The evaluation of the core shroud was performed in accordance with the requirements of the BWRVIP's shroud evaluation guidelines [3].

## FLAW EVALUATION RESULTS

Based upon the inspection data reported in 1999, flaw evaluations have been performed in accordance with the shroud evaluation guidelines [3], with the results documented herein. The analyses were performed using limit load as the failure criterion for each of the welds. The analyses performed take into account the distribution of good material at each weld around the circumference of the shroud. In addition, the H3 and H4 welds, which are the most highly irradiated, were evaluated using the LEFM methodology.

Substantial conservatisms were built into the evaluation to account for the weld area examined, the weld area which was not examined, evaluation guidelines' detection and sizing uncertainties, crack growth, and the evaluation guidelines' flaw proximity criteria as applied to adjacent flaws. The specific conservatisms utilized in this evaluation are as follows:

1. All areas not examined, or reported with flaws, were considered cracked through-wall for all evaluations.
2. A bounding crack growth rate ($5 \times 10^{-5}$ inches/hour) [3] in the length direction was applied to all identified flaws, as well as to all the uninspected regions.
3. UT inspection uncertainty factors were applied to all identified indications, as well as to uninspected regions.
4. Ten years of crack growth were included in the evaluation of all welds.
5. ASME Code, Section XI proximity criteria for adjacent flaws were applied, after accounting for crack growth and inspection uncertainties.
6. ASME Code, Section XI pressure boundary safety margins were applied to these evaluations even though the core shroud is not a primary pressure boundary.

7. Dead weight of the shroud and supported components was conservatively ignored.

The conservative assumptions described above were applied to each of the horizontal welds examined in this report. Table 1 documents the input data. Tables 2 and 3 present the results of the ultrasonic examination for each of the horizontal welds evaluated in this report, from the 1999 inspections. These are graphically depicted in Figures 1 and 2. A comparison of the examination results with the values used for the analyses (which include the previously described conservatisms) is shown in Figures 3 and 4. It should be noted that flaws are considered cracked through-wall when taking into account crack growth for the specified period.

The results of the limit load analyses for each of the horizontal welds examined are presented in Table 4, based upon the stresses reported in Table 1, and the examination results reported in Tables 2 and 3. Based upon the stresses reported in Table 1, the upset condition governs for weld H4, while the faulted condition governs for weld H3. One observes from Table 4 that the factor-of-safety for the upset condition is 28.0, and for the faulted condition is 24.5. This compares to ASME Code minimum factors-of-safety of 2.77 and 1.39, respectively, specified for pressure boundary components [3]. One should note that the conservatisms utilized in this study are as described previously in this section.

Finally, an evaluation of the H3 and H4 welds was performed using the LEFM methodology to determine the applied stress intensity factor resulting from the bounding loading conditions. The results of this analysis demonstrate that the 150 ksi$\sqrt{\text{inch}}$ material toughness which is presented in the evaluation guidelines [3] as the acceptable fracture toughness for this material under irradiation embrittled conditions is met. Table 5 illustrates that the evaluation guidelines [3] minimum required factors-of-safety have been met for welds H3 and H4.

## EVALUATION OF CRACK GROWTH RATE

For purposes of evaluating the Peach Bottom, Unit 3 shroud for continued service, a crack growth rate of $5 \times 10^{-5}$ inches/hour has been utilized. This rate has been generally accepted by the industry for growth in the length direction. Since successive inspections have been performed on the Peach Bottom, Unit 3 shroud welds H3 and H4, an "actual" crack growth rate can also be determined.

Appendix C documents an analysis performed using data from the 1995 inspection, and that recently obtained. One observes from a review of this data that a crack growth rate of $5 \times 10^{-5}$ inches/hour indeed bounds that determined from actual field data.

One should also note that Noble Metal Chemical Addition (NMCA) was installed in the Unit 3 reactor vessel prior to the 1999 outage. With this addition, it is expected that future crack growth rates will be reduced from those already observed.

**SUMMARY**

Based upon a review of the examination data for circumferential welds H3 and H4, there is substantial margin for each of these welds under conservative, bounding conditions to allow for continued operation without reinspection for at least ten years of operation. The analyses performed included limit load analyses under bounding design basis conditions, and LEFM evaluations for the postulated highest fluence welds. The evaluations were performed with the assumption that all regions uninspected, or reported with flaws, were cracked through-wall for all calculations. Additionally, all uninspected areas and areas with reported cracking were grown (at each end) at the bounding crack growth rate of $5 \times 10^{-5}$ inches/hour, and increased in length by UT uncertainty factors. Required safety margins were used, and were exceeded in all cases.

Using the methodology defined in the evaluation guidelines [3], a minimum of ten years of operation can be technically justified without reinspection. The reinspection interval has been developed on a plant-specific basis as required by the U.S. NRC's position on shroud reinspection.[10], as documented in Table 6 for Peach Bottom, Unit 3. Therefore, reinspection of the Peach Bottom, Unit 3 core shroud is not required sooner than ten years for welds H3 and H4.

Very truly yours,

Prepared by:

R. A. Mattson, P. E.

Reviewed by:

M. L. Herrera, P. E.

gsv
Attachments
cc: Rich Ciemiewicz

## REFERENCES


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2. GE Nuclear Energy, "Evaluation and Screening Criteria for the Peach Bottom Unit-3 Shroud Indications," Report No. GENE-523-141-1093, Revision 1, December 3, 1993, SI File No. PECO-09Q-202.

3. BWR Vessel and Internals Project, "BWR Core Shroud Inspection and Flaw Evaluation Guideline, Revision 2 (BWRVIP-01)," EPRI Report No. TR-107079, October 1996, SI File No. BWRVIP-01-201P.

4. GE Nuclear Energy, "Peach Bottom Atomic Power Station – Unit 3 Core Shroud Ultrasonic Examination," Report No. 1JFF2, Revision 0, October 13, 1999, SI File No. PECO-28Q-218P.

5. BWR Vessel and Internals Project, "Reactor Pressure Vessel and Internals Examination Guidelines (BWRVIP-03) Revision 1," EPRI Report No. TR-105696-R1, March 1999, SI File No. BWRVIP-01-203P.

6. Fax from Albert Piha (PECO) to Dick Mattson (SI), December 18, 1998, SI File No. PECO-28Q-205.

7. Structural Integrity Associates, Software User Manual, "ANSC for Determining Net Section Collapse of Arbitrarily Thinned Cylinder," Report No. SIR-94-035, Revision 0, April 29, 1994, SI File No. QA-1900.

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9. E-mail from Charlotte Geiger (PECO) to Dick Mattson (SI), "PBAPS 3 Shroud Indications," November 9, 1999, Received at 10:15 am, SI File No. PECO-28Q-218P.

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Table 1

Design Input [1]

| Weld Designation | Shroud Mean Radius [2] | Shroud Thickness [2] | Bending Moment Stresses [1] | | Pressure Differential Stresses [1] | |
|---|---|---|---|---|---|---|
| | | | Upset | Faulted | Upset | Faulted |
| H3 | 102.5625" | 2.0" | 0.19 ksi | 0.34 ksi | 0.36 ksi | 0.79 ksi |
| H4 | 102.5625" | 2.0" | 0.36 ksi | 0.61 ksi | 0.36 ksi | 0.79 ksi |

Note: 1. Other design input includes the following:

- The shroud material is Type 304 stainless steel, with $S_m$ equal to 16.9 ksi at 550°F [2].
- The crack growth rate to be used is $5 \times 10^{-5}$ inches/hour [3]. For purposes of this evaluation, it is assumed that Peach Bottom, Unit 3 is on twenty-four month fuel cycles, with 16,000 hours per cycle.
- The factors-of-safety to be considered are 2.77 for the upset condition, and 1.39 for the faulted condition [3].

Table 2

Weld Designation H3
Flaw Detection Results [4] [2]

| Flaw Number | Starting Azimuth (°) | Ending Azimuth (°) | Depth (inches) |
|---|---|---|---|
| 1 | 0.00[1] | 8.54[1] | 2.00 |
| 2 | 9.56[3] | 17.26[3] | 0.36 |
| 3 | 53.66[3] | 63.71[3] | 0.65 |
| 4 | 104.51[3] | 110.91[3] | 0.77 |
| 5 | 143.66[3] | 166.41[3] | 0.83 |
| 6 | 170.16[1] | 188.54[1] | 2.00 |
| 7 | 203.11[3] | 234.21[3] | 0.84 |
| 8 | 240.06[3] | 251.96[3] | 0.69 |
| 9 | 283.96 | 285.61 | 0.28 |
| 10 | 299.01[3] | 327.01[3] | 0.71 |
| 11 | 342.51[1] | 360.00[1] | 2.00 |

Notes:
1. Uninspected regions.
2. UT uncertainty factors for length are based upon the transducer which determines the length. For near side detection, the factor is 0.000" for 45° shear [4, 5]. The uncertainty factor is added to each end of the flaws.
3. Flaws which cross over lug sets are increased in length by 0.5° at each end [5, 6].

Table 3

Weld Designation H4
Flaw Detection Results [4] [2]

| Flaw Number | Starting Azimuth (°) | Ending Azimuth (°) | Depth (inches) |
|---|---|---|---|
| 1 | 0.00[1] | 8.54[1] | 2.00 |
| 2 | 22.06[3] | 30.06[3] | 0.52 |
| 3 | 32.61[3] | 36.51[3] | 0.00 |
| 4 | 42.31[3] | 54.76[3] | 0.24 |
| 5 | 55.11[3] | 58.96[3] | 0.40 |
| 6 | 61.01[3] | 68.71[3] | 0.43 |
| 7 | 71.81 | 74.01 | 0.18 |
| 8 | 97.01 | 99.21 | 0.31 |
| 9 | 110.96 | 115.36 | 0.48 |
| 10 | 122.11[3] | 126.51[3] | 0.35 |
| 11 | 134.51[3] | 153.36[3] | 1.39 |
| 12 | 166.88[1] | 188.54[1] | 2.00 |
| 13 | 199.31[3] | 206.29[3] | 0.41 |
| 14 | 210.14[3] | 213.99[3] | 0.20 |
| 15 | 229.82 | 230.92 | 0.00 |
| 16 | 233.51[3] | 236.81[3] | 0.34 |
| 17 | 244.26 | 248.71 | 0.48 |
| 18 | 263.16[3] | 266.46[3] | 0.26 |
| 19 | 290.36[3] | 303.36[3] | 0.32 |
| 20 | 307.01[3] | 311.41[3] | 0.35 |
| 21 | 319.26 | 322.01 | 0.09 |
| 22 | 324.81[3] | 326.46[3] | 0.38 |
| 23 | 326.76[3] | 345.26[3] | 0.51 |
| 24 | 346.88[1] | 360.00[1] | 2.00 |

Notes: see next page

Table 3 (concluded)

Notes:
1. Uninspected regions.
2. UT uncertainty factors for length are based upon the transducer which determines the length. For near side detection, the factor is 0.000" for 45° shear [4, 5]. The uncertainty factor is added to each end of the flaws.
3. Flaws which cross over lug sets are increased in length by 0.5° at each end [5, 6].

Table 4

Limit Load Factors-of-Safety[1, 2]

| Weld Designation | Factor-of-Safety[3,4,5] | |
|---|---|---|
| | Calculated | Allowable |
| H3 | 24.5 | 1.39 |
| H4 | 28.0 | 2.77 |

Notes:
1. Based upon five cycles (ten years) of crack growth for all welds.
2. See Appendix A for the detailed ANSC [7] output.
3. The allowable factors-of-safety are 2.77 for the upset condition, and 1.39 for the faulted condition.
4. The factors-of-safety are calculated as follows, with all stresses in ksi:

$$S.F. = \frac{P_b' + P_m}{P_b + P_m}$$

where: $P_b$ = bending moment stress from Table 1

$P_m$ = pressure differential stress from Table 1

$P_b'$ = minimum failure bending stress from Appendix A output

5. For weld H3, the faulted condition governs. For weld H4, the upset condition governs.

Table 5

Linear Elastic
Fracture Mechanics Factors-of-Safety[1,2]

| Weld Designation | $K_I$[3] | Factor-of-Safety[4] |
|---|---|---|
| H3 | 44 | 3.4 |
| H4 | 46 | 3.3 |

Notes:
1. Based upon five cycles (ten years) of crack growth.
2. See Appendix B for the detailed calculations.
3. Units are ksi $\sqrt{in}$.
4. The factor-of-safety equals the material toughness ($K_{Ic}$) divided by the applied stress intensity factor ($K_I$), where the material toughness is 150 ksi $\sqrt{in}$ [3]. The allowable factor-of-safety for upset conditions is 2.77 (weld H4), and for faulted conditions is 1.39 (weld H3).

Table 6

U.S. NRC [10] Reinspection Criteria

| Weld Designation | Maximum Stress[1] (ksi) | Cracking (%) | Reinspection Internal | |
|---|---|---|---|---|
| | | | Limit Load | LEFM |
| H3 | 1.13 | 37.9 | Note 2 | Note 2 |
| H4 | 1.40 | 41.4 | Note 2 | Note 2 |

Notes: 1. Equals the sum of the bending moment plus pressure differential stress for faulted conditions from Table 1.
2. A plant-specific analysis is required.

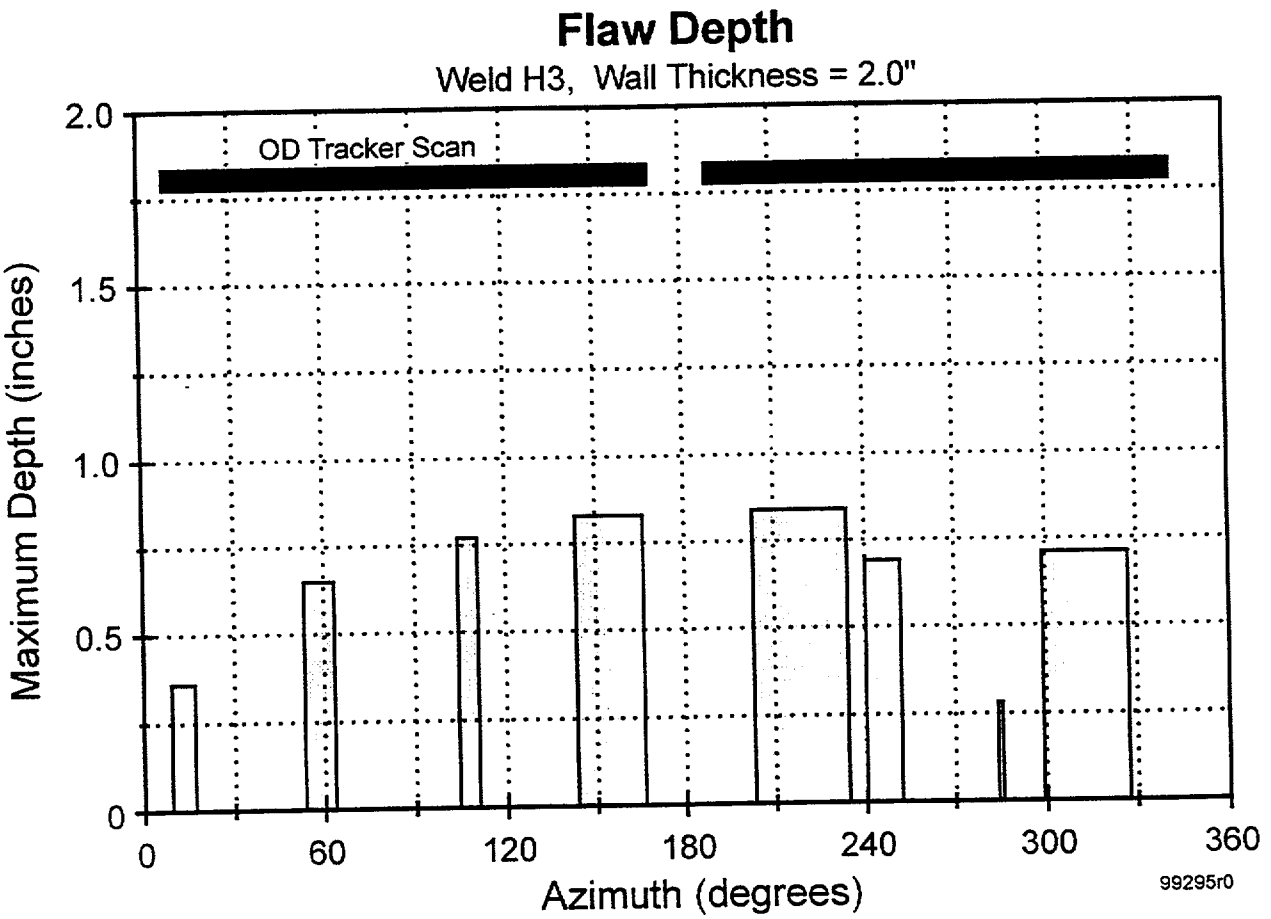


Figure 1. Weld Designation H3 – Flaw Detection Results

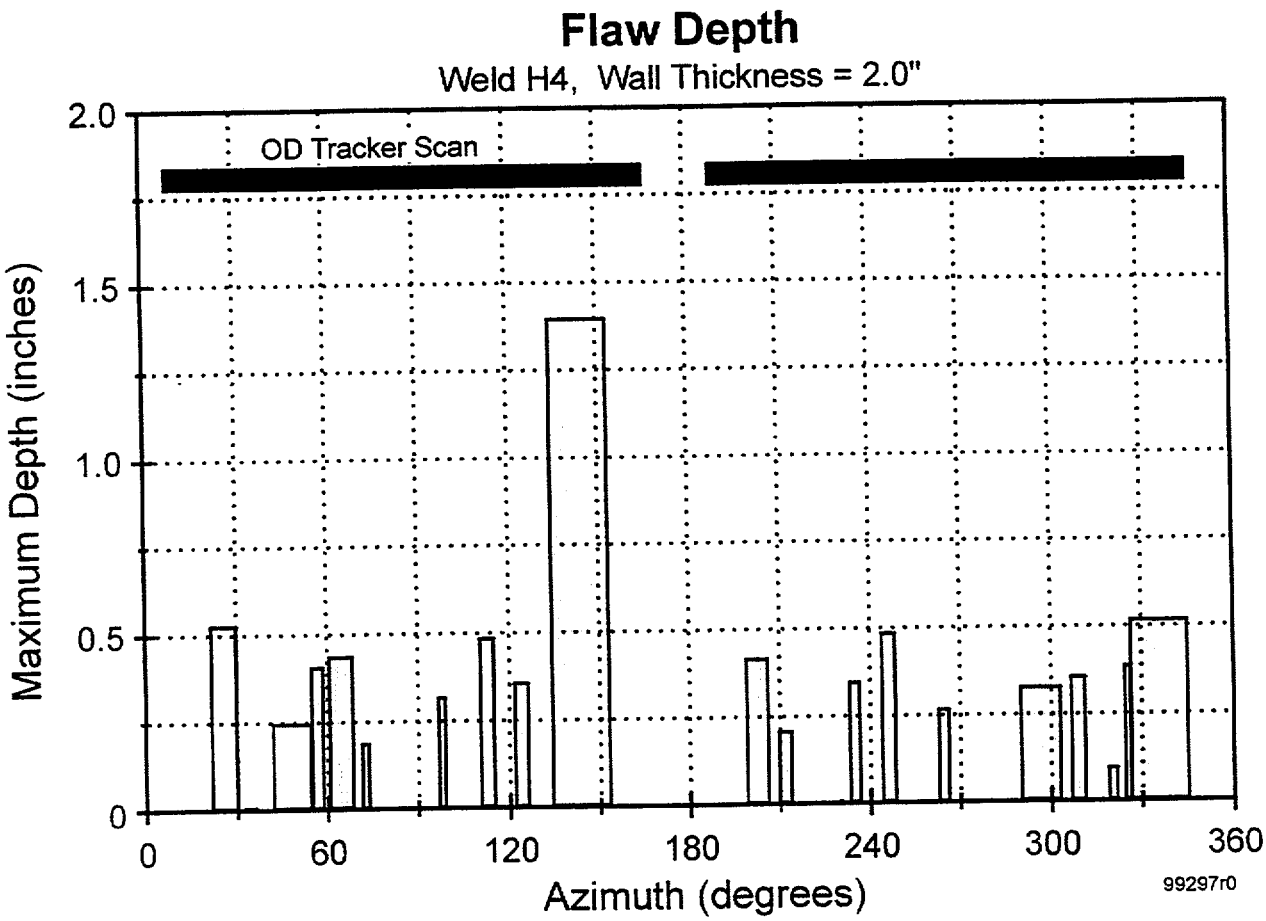


Figure 2. Weld Designation H4 – Flaw Detection Results

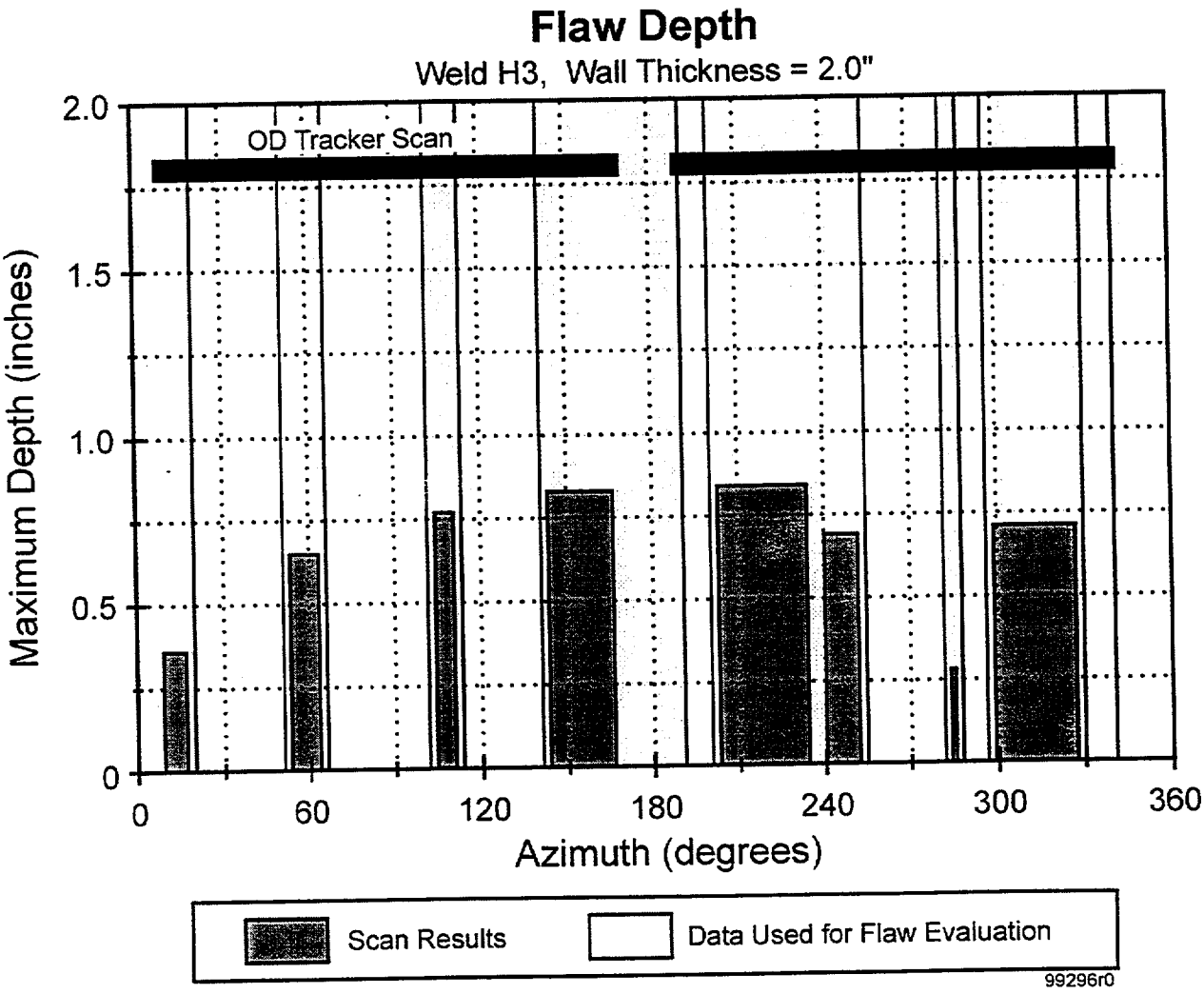


Figure 3. Comparison Between Weld Designation H3 Scan Results and Data Used for Analysis

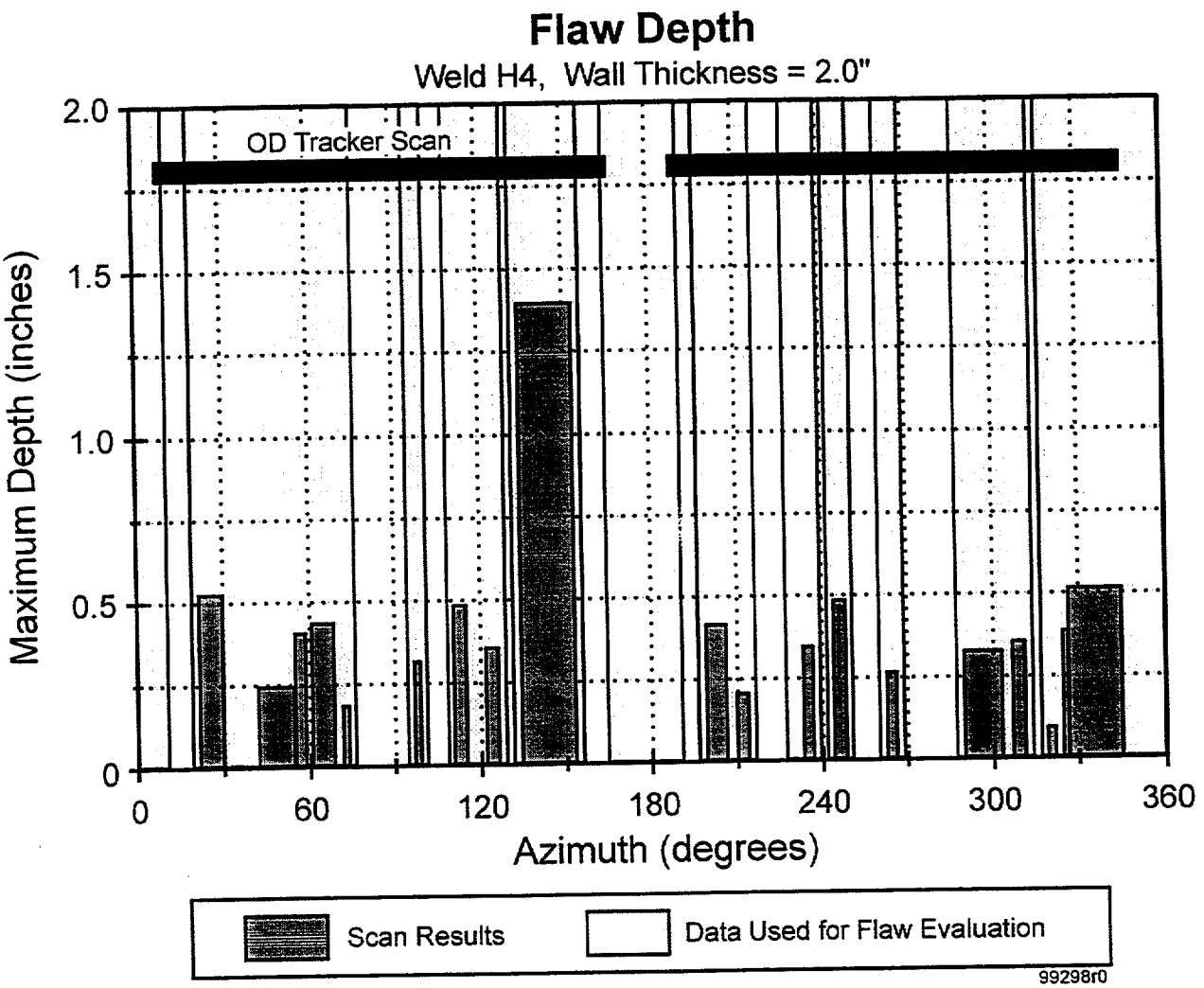


Figure 4. Comparison Between Weld Designation H4 Scan Results and Data Used for Analysis

## APPENDIX A

### Flaw Evaluation Results Using the ANSC Software [7]

Basis for Analyses:

1. All reported indications are increased in length at each end by five cycles of crack growth (4 inches), and by the UT length sizing uncertainty shown in Tables 2 and 3, as appropriate.

2. All areas not examined, or reported with flaws, are assumed to be flawed through-wall, and increased in length as stated above.

3. Flaws increased in length per Note 1 will be combined if closer than 4 inches (twice the shroud thickness) apart [3].

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DESCRIPTION:
Peach Bottom, Unit 3 1999 Inspection Results
Weld H3 -- 10 Years of Crack Growth -- Faulted Condition
Crack assumed to take compression across face

RADIUS (IN) = 102.5625 WALL THICKNESS (IN) = 2

TENSION STRESS = 0.790 KSI
MATERIAL FLOW STRESS = 50.700 KSI

ANGLE FOR MOMENT ITERATION = 1

FLAWS DEFINED = 8 (AS FOLLOWS)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 ANGLES: | 0.0000 | TO | 19.9900 | (DTHETA = | 19.990) | DEPTH (IN) = | 2.000 |
| 2 ANGLES: | 50.9300 | TO | 66.4400 | (DTHETA = | 15.510) | DEPTH (IN) = | 2.000 |
| 3 ANGLES: | 101.7800 | TO | 113.6400 | (DTHETA = | 11.860) | DEPTH (IN) = | 2.000 |
| 4 ANGLES: | 140.9300 | TO | 190.7700 | (DTHETA = | 49.840) | DEPTH (IN) = | 2.000 |
| 5 ANGLES: | 200.3800 | TO | 254.6900 | (DTHETA = | 54.310) | DEPTH (IN) = | 2.000 |
| 6 ANGLES: | 281.7300 | TO | 287.8400 | (DTHETA = | 6.110) | DEPTH (IN) = | 2.000 |
| 7 ANGLES: | 296.2800 | TO | 329.7700 | (DTHETA = | 33.490) | DEPTH (IN) = | 2.000 |
| 8 ANGLES: | 340.2800 | TO | 360.0000 | (DTHETA = | 19.720) | DEPTH (IN) = | 2.000 |

TOTAL AREA (IN2) = 1288.838
REMAINING DEGRADED SECTION AREA (IN2) = 534.0445
(APPROX. DEGRADED METAL AREA = 534.0411 )

Program Output:
Angle = Angle that tension-to-compression axis x' is rotated
t = Thickness in wall at position corresponding to angle
delta = Distance from center to tension-to-compression axis
Pb,x' = Bending stress due to moment about tension-to-compression axis
Pb,y' = Bending stress due to moment perpendicular to tens./comp. axis
Pb,max = Maximum bending stress due to total limit moment
Anglemax = Angle for total limit moment relative to original Y axis
Atension = Area of metal in tension for Case 2

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.000 | 54.844 | 37.481 | 5.929 | 37.947 | 8.99 | 433.04 |
| 1.00 | 0.000 | 54.339 | 37.584 | 5.847 | 38.036 | 9.84 | 435.42 |
| 2.00 | 0.000 | 53.832 | 37.687 | 5.860 | 38.140 | 10.84 | 437.81 |
| 3.00 | 0.000 | 53.324 | 37.789 | 5.874 | 38.243 | 11.83 | 440.20 |
| 4.00 | 0.000 | 52.813 | 37.891 | 5.792 | 38.331 | 12.69 | 442.58 |
| 5.00 | 0.000 | 52.301 | 37.993 | 5.807 | 38.434 | 13.69 | 444.97 |
| 6.00 | 0.000 | 51.786 | 38.094 | 5.822 | 38.536 | 14.69 | 447.36 |
| 7.00 | 0.000 | 51.271 | 38.195 | 5.741 | 38.624 | 15.55 | 449.74 |
| 8.00 | 0.000 | 50.753 | 38.296 | 5.757 | 38.726 | 16.55 | 452.13 |
| 9.00 | 0.000 | 50.234 | 38.396 | 5.775 | 38.828 | 17.55 | 454.52 |
| 10.00 | 0.000 | 49.712 | 38.497 | 5.694 | 38.915 | 18.41 | 456.90 |
| 11.00 | 0.000 | 49.190 | 38.597 | 5.712 | 39.017 | 19.42 | 459.29 |
| 12.00 | 0.000 | 48.665 | 38.696 | 5.731 | 39.118 | 20.42 | 461.68 |
| 13.00 | 0.000 | 48.264 | 38.796 | 5.750 | 39.220 | 21.43 | 463.50 |
| 14.00 | 0.000 | 48.264 | 38.900 | 6.066 | 39.370 | 22.86 | 463.50 |
| 15.00 | 0.000 | 48.264 | 39.009 | 6.380 | 39.527 | 24.29 | 463.50 |
| 16.00 | 0.000 | 48.264 | 39.123 | 6.693 | 39.691 | 25.71 | 463.50 |
| 17.00 | 0.000 | 48.264 | 39.243 | 7.003 | 39.863 | 27.12 | 463.50 |
| 18.00 | 0.000 | 48.264 | 39.368 | 7.311 | 40.041 | 28.52 | 463.50 |
| 19.00 | 0.000 | 48.264 | 39.499 | 7.617 | 40.227 | 29.91 | 463.50 |
| 20.00 | 2.000 | 48.264 | 39.635 | 7.920 | 40.419 | 31.30 | 463.50 |
| 21.00 | 2.000 | 48.264 | 39.776 | 8.221 | 40.617 | 32.68 | 463.50 |
| 22.00 | 2.000 | 48.264 | 39.923 | 8.520 | 40.822 | 34.05 | 463.50 |
| 23.00 | 2.000 | 48.339 | 40.074 | 8.831 | 41.036 | 35.43 | 463.16 |
| 24.00 | 2.000 | 48.865 | 40.227 | 8.775 | 41.173 | 36.31 | 460.77 |
| 25.00 | 2.000 | 49.388 | 40.380 | 8.714 | 41.309 | 37.18 | 458.39 |
| 26.00 | 2.000 | 49.911 | 40.531 | 8.698 | 41.454 | 38.11 | 456.00 |
| 27.00 | 2.000 | 50.431 | 40.682 | 8.628 | 41.587 | 38.97 | 453.61 |
| 28.00 | 2.000 | 50.950 | 40.832 | 8.553 | 41.718 | 39.83 | 451.22 |
| 29.00 | 2.000 | 51.467 | 40.980 | 8.523 | 41.857 | 40.75 | 448.84 |
| 30.00 | 2.000 | 51.982 | 41.128 | 8.438 | 41.984 | 41.59 | 446.45 |
| 31.00 | 2.000 | 52.496 | 41.274 | 8.349 | 42.110 | 42.44 | 444.06 |
| 32.00 | 2.000 | 53.008 | 41.419 | 8.304 | 42.243 | 43.34 | 441.68 |
| 33.00 | 2.000 | 53.517 | 41.562 | 8.206 | 42.365 | 44.17 | 439.29 |
| 34.00 | 2.000 | 54.026 | 41.704 | 8.103 | 42.484 | 44.99 | 436.90 |
| 35.00 | 2.000 | 54.532 | 41.845 | 8.043 | 42.611 | 45.88 | 434.52 |
| 36.00 | 2.000 | 55.036 | 41.984 | 7.930 | 42.726 | 46.70 | 432.13 |
| 37.00 | 2.000 | 55.539 | 42.121 | 7.813 | 42.839 | 47.51 | 429.74 |
| 38.00 | 2.000 | 56.040 | 42.256 | 7.738 | 42.959 | 48.38 | 427.35 |
| 39.00 | 2.000 | 56.539 | 42.390 | 7.611 | 43.068 | 49.18 | 424.97 |
| 40.00 | 2.000 | 57.035 | 42.521 | 7.480 | 43.174 | 49.98 | 422.58 |
| 41.00 | 2.000 | 57.530 | 42.650 | 7.391 | 43.286 | 50.83 | 420.19 |
| 42.00 | 2.000 | 58.023 | 42.778 | 7.251 | 43.388 | 51.62 | 417.81 |
| 43.00 | 2.000 | 58.514 | 42.903 | 7.106 | 43.487 | 52.40 | 415.42 |
| 44.00 | 2.000 | 59.003 | 43.026 | 7.002 | 43.592 | 53.24 | 413.04 |
| 45.00 | 2.000 | 59.490 | 43.146 | 6.848 | 43.686 | 54.02 | 410.65 |
| 46.00 | 2.000 | 59.975 | 43.264 | 6.689 | 43.778 | 54.79 | 408.26 |
| 47.00 | 2.000 | 60.458 | 43.379 | 6.571 | 43.874 | 55.61 | 405.88 |
| 48.00 | 2.000 | 60.939 | 43.492 | 6.403 | 43.961 | 56.38 | 403.49 |
| 49.00 | 2.000 | 61.071 | 43.601 | 6.141 | 44.032 | 57.02 | 402.83 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 50.00 | 2.000 | 61.071 | 43.705 | 5.832 | 44.093 | 57.60 | 402.83 |
| 51.00 | 0.000 | 61.071 | 43.804 | 5.521 | 44.151 | 58.18 | 402.83 |
| 52.00 | 0.000 | 61.071 | 43.897 | 5.208 | 44.205 | 58.77 | 402.83 |
| 53.00 | 0.000 | 61.071 | 43.985 | 4.894 | 44.256 | 59.35 | 402.83 |
| 54.00 | 0.000 | 61.071 | 44.067 | 4.578 | 44.304 | 59.93 | 402.83 |
| 55.00 | 0.000 | 61.365 | 44.144 | 4.350 | 44.358 | 60.63 | 401.37 |
| 56.00 | 0.000 | 61.843 | 44.218 | 4.165 | 44.414 | 61.38 | 398.98 |
| 57.00 | 0.000 | 62.318 | 44.289 | 4.020 | 44.471 | 62.19 | 396.59 |
| 58.00 | 0.000 | 62.791 | 44.357 | 3.827 | 44.522 | 62.93 | 394.20 |
| 59.00 | 0.000 | 63.261 | 44.422 | 3.630 | 44.570 | 63.67 | 391.82 |
| 60.00 | 0.000 | 63.730 | 44.484 | 3.473 | 44.619 | 64.46 | 389.43 |
| 61.00 | 0.000 | 64.196 | 44.542 | 3.268 | 44.662 | 65.20 | 387.04 |
| 62.00 | 0.000 | 64.552 | 44.597 | 3.161 | 44.709 | 66.05 | 385.22 |
| 63.00 | 0.000 | 64.552 | 44.652 | 3.258 | 44.771 | 67.17 | 385.22 |
| 64.00 | 0.000 | 64.552 | 44.709 | 3.353 | 44.835 | 68.29 | 385.22 |
| 65.00 | 0.000 | 64.552 | 44.768 | 3.448 | 44.901 | 69.40 | 385.22 |
| 66.00 | 0.000 | 64.220 | 44.827 | 3.280 | 44.947 | 70.18 | 386.92 |
| 67.00 | 2.000 | 63.753 | 44.883 | 3.113 | 44.991 | 70.97 | 389.31 |
| 68.00 | 2.000 | 63.285 | 44.935 | 2.949 | 45.032 | 71.75 | 391.70 |
| 69.00 | 2.000 | 62.814 | 44.984 | 2.697 | 45.065 | 72.43 | 394.08 |
| 70.00 | 2.000 | 62.342 | 45.030 | 2.536 | 45.101 | 73.22 | 396.47 |
| 71.00 | 2.000 | 61.867 | 45.072 | 2.378 | 45.135 | 74.02 | 398.86 |
| 72.00 | 2.000 | 61.390 | 45.111 | 2.131 | 45.162 | 74.71 | 401.24 |
| 73.00 | 2.000 | 60.911 | 45.147 | 1.977 | 45.191 | 75.51 | 403.63 |
| 74.00 | 2.000 | 60.430 | 45.180 | 1.825 | 45.217 | 76.31 | 406.02 |
| 75.00 | 2.000 | 60.227 | 45.209 | 1.528 | 45.235 | 76.94 | 407.02 |
| 76.00 | 2.000 | 60.227 | 45.232 | 1.195 | 45.248 | 77.51 | 407.02 |
| 77.00 | 2.000 | 60.227 | 45.250 | 0.861 | 45.258 | 78.09 | 407.02 |
| 78.00 | 2.000 | 60.227 | 45.262 | 0.527 | 45.265 | 78.67 | 407.02 |
| 79.00 | 2.000 | 60.227 | 45.268 | 0.193 | 45.268 | 79.24 | 407.02 |
| 80.00 | 2.000 | 60.227 | 45.268 | -0.141 | 45.268 | 79.82 | 407.02 |
| 81.00 | 2.000 | 60.227 | 45.262 | -0.475 | 45.265 | 80.40 | 407.02 |
| 82.00 | 2.000 | 60.227 | 45.251 | -0.809 | 45.258 | 80.97 | 407.02 |
| 83.00 | 2.000 | 60.226 | 45.233 | -1.142 | 45.248 | 81.55 | 407.02 |
| 84.00 | 2.000 | 60.226 | 45.210 | -1.476 | 45.234 | 82.13 | 407.02 |
| 85.00 | 2.000 | 60.226 | 45.181 | -1.808 | 45.218 | 82.71 | 407.02 |
| 86.00 | 2.000 | 60.226 | 45.147 | -2.141 | 45.197 | 83.28 | 407.02 |
| 87.00 | 2.000 | 60.226 | 45.106 | -2.472 | 45.174 | 83.86 | 407.02 |
| 88.00 | 2.000 | 60.227 | 45.060 | -2.803 | 45.147 | 84.44 | 407.02 |
| 89.00 | 2.000 | 60.227 | 45.007 | -3.133 | 45.116 | 85.02 | 407.02 |
| 90.00 | 2.000 | 60.227 | 44.949 | -3.462 | 45.083 | 85.59 | 407.02 |
| 91.00 | 2.000 | 60.227 | 44.886 | -3.790 | 45.046 | 86.17 | 407.02 |
| 92.00 | 2.000 | 60.227 | 44.816 | -4.117 | 45.005 | 86.75 | 407.02 |
| 93.00 | 2.000 | 60.227 | 44.741 | -4.443 | 44.962 | 87.33 | 407.02 |
| 94.00 | 2.000 | 60.227 | 44.661 | -4.767 | 44.915 | 87.91 | 407.02 |
| 95.00 | 2.000 | 60.227 | 44.574 | -5.090 | 44.864 | 88.48 | 407.02 |
| 96.00 | 2.000 | 60.357 | 44.483 | -5.366 | 44.805 | 89.12 | 406.38 |
| 97.00 | 2.000 | 60.839 | 44.387 | -5.550 | 44.733 | 89.87 | 403.99 |
| 98.00 | 2.000 | 61.318 | 44.289 | -5.691 | 44.653 | 90.68 | 401.60 |
| 99.00 | 2.000 | 61.795 | 44.187 | -5.877 | 44.576 | 91.42 | 399.22 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 100.00 | 2.000 | 62.270 | 44.083 | -6.064 | 44.498 | 92.17 | 396.83 |
| 101.00 | 2.000 | 62.744 | 43.975 | -6.208 | 44.411 | 92.96 | 394.44 |
| 102.00 | 0.000 | 63.214 | 43.865 | -6.396 | 44.329 | 93.70 | 392.05 |
| 103.00 | 0.000 | 63.683 | 43.751 | -6.586 | 44.244 | 94.44 | 389.67 |
| 104.00 | 0.000 | 64.150 | 43.635 | -6.732 | 44.151 | 95.23 | 387.28 |
| 105.00 | 0.000 | 64.614 | 43.515 | -6.922 | 44.062 | 95.96 | 384.89 |
| 106.00 | 0.000 | 65.077 | 43.392 | -7.113 | 43.971 | 96.69 | 382.51 |
| 107.00 | 0.000 | 65.537 | 43.266 | -7.261 | 43.871 | 97.47 | 380.12 |
| 108.00 | 0.000 | 65.994 | 43.138 | -7.453 | 43.777 | 98.20 | 377.74 |
| 109.00 | 0.000 | 66.450 | 43.006 | -7.646 | 43.680 | 98.92 | 375.35 |
| 110.00 | 0.000 | 66.903 | 42.870 | -7.796 | 43.574 | 99.69 | 372.96 |
| 111.00 | 0.000 | 67.354 | 42.732 | -7.990 | 43.473 | 100.41 | 370.58 |
| 112.00 | 0.000 | 67.576 | 42.591 | -8.225 | 43.378 | 101.07 | 369.40 |
| 113.00 | 0.000 | 67.576 | 42.444 | -8.544 | 43.295 | 101.62 | 369.40 |
| 114.00 | 2.000 | 67.576 | 42.291 | -8.859 | 43.209 | 102.17 | 369.40 |
| 115.00 | 2.000 | 67.576 | 42.133 | -9.172 | 43.120 | 102.72 | 369.40 |
| 116.00 | 2.000 | 67.576 | 41.970 | -9.483 | 43.028 | 103.27 | 369.40 |
| 117.00 | 2.000 | 67.576 | 41.801 | -9.790 | 42.932 | 103.82 | 369.40 |
| 118.00 | 2.000 | 67.576 | 41.627 | -10.094 | 42.833 | 104.37 | 369.40 |
| 119.00 | 2.000 | 67.577 | 41.447 | -10.395 | 42.731 | 104.92 | 369.40 |
| 120.00 | 2.000 | 67.577 | 41.262 | -10.693 | 42.626 | 105.47 | 369.40 |
| 121.00 | 2.000 | 67.577 | 41.073 | -10.988 | 42.517 | 106.02 | 369.40 |
| 122.00 | 2.000 | 67.577 | 40.878 | -11.280 | 42.405 | 106.57 | 369.40 |
| 123.00 | 2.000 | 67.577 | 40.678 | -11.568 | 42.290 | 107.12 | 369.40 |
| 124.00 | 2.000 | 67.341 | 40.473 | -11.805 | 42.159 | 107.74 | 370.65 |
| 125.00 | 2.000 | 66.890 | 40.266 | -11.913 | 41.991 | 108.52 | 373.03 |
| 126.00 | 2.000 | 66.436 | 40.056 | -12.100 | 41.844 | 109.19 | 375.42 |
| 127.00 | 2.000 | 65.981 | 39.844 | -12.195 | 41.668 | 109.98 | 377.81 |
| 128.00 | 2.000 | 65.523 | 39.630 | -12.283 | 41.490 | 110.78 | 380.19 |
| 129.00 | 2.000 | 65.063 | 39.414 | -12.452 | 41.334 | 111.47 | 382.58 |
| 130.00 | 2.000 | 64.600 | 39.196 | -12.527 | 41.149 | 112.27 | 384.97 |
| 131.00 | 2.000 | 64.136 | 38.976 | -12.595 | 40.961 | 113.09 | 387.35 |
| 132.00 | 2.000 | 63.669 | 38.755 | -12.744 | 40.797 | 113.80 | 389.74 |
| 133.00 | 2.000 | 63.200 | 38.532 | -12.799 | 40.602 | 114.62 | 392.13 |
| 134.00 | 2.000 | 62.729 | 38.308 | -12.847 | 40.405 | 115.46 | 394.51 |
| 135.00 | 2.000 | 62.256 | 38.082 | -12.978 | 40.233 | 116.18 | 396.90 |
| 136.00 | 2.000 | 61.781 | 37.856 | -13.012 | 40.030 | 117.03 | 399.29 |
| 137.00 | 2.000 | 61.304 | 37.628 | -13.040 | 39.823 | 117.88 | 401.67 |
| 138.00 | 2.000 | 60.824 | 37.399 | -13.152 | 39.644 | 118.62 | 404.06 |
| 139.00 | 2.000 | 60.343 | 37.170 | -13.166 | 39.432 | 119.49 | 406.45 |
| 140.00 | 2.000 | 59.859 | 36.939 | -13.173 | 39.218 | 120.37 | 408.83 |
| 141.00 | 0.000 | 59.374 | 36.708 | -13.266 | 39.032 | 121.13 | 411.22 |
| 142.00 | 0.000 | 58.886 | 36.477 | -13.260 | 38.813 | 122.02 | 413.61 |
| 143.00 | 0.000 | 58.396 | 36.245 | -13.248 | 38.591 | 122.92 | 416.00 |
| 144.00 | 0.000 | 57.905 | 36.013 | -13.321 | 38.398 | 123.70 | 418.38 |
| 145.00 | 0.000 | 57.770 | 35.783 | -13.110 | 38.109 | 124.88 | 419.03 |
| 146.00 | 0.000 | 57.770 | 35.557 | -12.802 | 37.791 | 126.20 | 419.03 |
| 147.00 | 0.000 | 57.770 | 35.337 | -12.489 | 37.479 | 127.53 | 419.03 |
| 148.00 | 0.000 | 57.770 | 35.122 | -12.173 | 37.172 | 128.88 | 419.03 |
| 149.00 | 0.000 | 57.770 | 34.913 | -11.854 | 36.870 | 130.25 | 419.03 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 150.00 | 0.000 | 57.770 | 34.710 | -11.530 | 36.574 | 131.62 | 419.03 |
| 151.00 | 0.000 | 57.770 | 34.512 | -11.203 | 36.285 | 133.01 | 419.03 |
| 152.00 | 0.000 | 57.770 | 34.320 | -10.873 | 36.001 | 134.42 | 419.03 |
| 153.00 | 0.000 | 57.770 | 34.133 | -10.539 | 35.723 | 135.84 | 419.03 |
| 154.00 | 0.000 | 57.770 | 33.953 | -10.203 | 35.452 | 137.27 | 419.03 |
| 155.00 | 0.000 | 57.770 | 33.778 | -9.863 | 35.189 | 138.72 | 419.03 |
| 156.00 | 0.000 | 57.770 | 33.609 | -9.520 | 34.932 | 140.18 | 419.03 |
| 157.00 | 0.000 | 57.770 | 33.447 | -9.174 | 34.682 | 141.66 | 419.03 |
| 158.00 | 0.000 | 58.042 | 33.289 | -8.952 | 34.472 | 142.95 | 417.72 |
| 159.00 | 0.000 | 58.533 | 33.133 | -8.929 | 34.315 | 143.92 | 415.33 |
| 160.00 | 0.000 | 59.022 | 32.978 | -8.859 | 34.147 | 144.96 | 412.94 |
| 161.00 | 0.000 | 59.509 | 32.823 | -8.836 | 33.991 | 145.93 | 410.56 |
| 162.00 | 0.000 | 59.994 | 32.669 | -8.812 | 33.836 | 146.90 | 408.17 |
| 163.00 | 0.000 | 60.009 | 32.518 | -8.440 | 33.595 | 148.45 | 408.10 |
| 164.00 | 0.000 | 60.009 | 32.373 | -8.093 | 33.369 | 149.96 | 408.10 |
| 165.00 | 0.000 | 60.009 | 32.234 | -7.743 | 33.151 | 151.49 | 408.10 |
| 166.00 | 0.000 | 60.009 | 32.101 | -7.391 | 32.941 | 153.03 | 408.10 |
| 167.00 | 0.000 | 60.009 | 31.975 | -7.036 | 32.740 | 154.59 | 408.10 |
| 168.00 | 0.000 | 60.009 | 31.854 | -6.679 | 32.547 | 156.16 | 408.10 |
| 169.00 | 0.000 | 60.009 | 31.740 | -6.321 | 32.364 | 157.74 | 408.10 |
| 170.00 | 0.000 | 60.009 | 31.633 | -5.960 | 32.189 | 159.33 | 408.10 |
| 171.00 | 0.000 | 60.265 | 31.530 | -5.790 | 32.057 | 160.59 | 406.83 |
| 172.00 | 0.000 | 60.747 | 31.430 | -5.703 | 31.943 | 161.71 | 404.44 |
| 173.00 | 0.000 | 61.227 | 31.330 | -5.662 | 31.837 | 162.76 | 402.06 |
| 174.00 | 0.000 | 61.704 | 31.231 | -5.621 | 31.733 | 163.80 | 399.67 |
| 175.00 | 0.000 | 62.180 | 31.133 | -5.537 | 31.622 | 164.91 | 397.28 |
| 176.00 | 0.000 | 62.653 | 31.037 | -5.499 | 31.520 | 165.95 | 394.90 |
| 177.00 | 0.000 | 63.125 | 30.941 | -5.461 | 31.419 | 166.99 | 392.51 |
| 178.00 | 0.000 | 63.594 | 30.846 | -5.380 | 31.311 | 168.10 | 390.12 |
| 179.00 | 0.000 | 64.061 | 30.752 | -5.345 | 31.213 | 169.14 | 387.74 |
| 180.00 | 0.000 | 64.468 | 30.658 | -5.310 | 31.115 | 170.17 | 385.65 |
| 181.00 | 0.000 | 64.468 | 30.565 | -5.406 | 31.039 | 170.97 | 385.65 |
| 182.00 | 0.000 | 64.468 | 30.469 | -5.501 | 30.961 | 171.77 | 385.65 |
| 183.00 | 0.000 | 64.468 | 30.372 | -5.593 | 30.882 | 172.56 | 385.65 |
| 184.00 | 0.000 | 64.468 | 30.273 | -5.684 | 30.802 | 173.36 | 385.65 |
| 185.00 | 0.000 | 64.468 | 30.172 | -5.774 | 30.720 | 174.17 | 385.65 |
| 186.00 | 0.000 | 64.468 | 30.070 | -5.861 | 30.636 | 174.97 | 385.65 |
| 187.00 | 0.000 | 64.468 | 29.967 | -5.947 | 30.551 | 175.77 | 385.65 |
| 188.00 | 0.000 | 64.468 | 29.862 | -6.031 | 30.465 | 176.58 | 385.65 |
| 189.00 | 0.000 | 64.468 | 29.756 | -6.113 | 30.377 | 177.39 | 385.65 |
| 190.00 | 0.000 | 64.468 | 29.648 | -6.194 | 30.288 | 178.20 | 385.65 |
| 191.00 | 2.000 | 64.468 | 29.539 | -6.272 | 30.197 | 179.01 | 385.65 |
| 192.00 | 2.000 | 64.468 | 29.428 | -6.348 | 30.105 | 179.82 | 385.65 |
| 193.00 | 2.000 | 64.468 | 29.316 | -6.423 | 30.011 | 180.64 | 385.65 |
| 194.00 | 2.000 | 64.468 | 29.203 | -6.496 | 29.917 | 181.46 | 385.65 |
| 195.00 | 2.000 | 64.468 | 29.088 | -6.566 | 29.820 | 182.28 | 385.65 |
| 196.00 | 2.000 | 64.753 | 28.973 | -6.548 | 29.704 | 183.26 | 384.18 |
| 197.00 | 2.000 | 65.215 | 28.859 | -6.486 | 29.579 | 184.33 | 381.79 |
| 198.00 | 2.000 | 65.674 | 28.747 | -6.381 | 29.446 | 185.48 | 379.41 |
| 199.00 | 2.000 | 66.131 | 28.635 | -6.321 | 29.325 | 186.55 | 377.02 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 200.00 | 2.000 | 66.343 | 28.526 | -6.077 | 29.166 | 187.97 | 375.91 |
| 201.00 | 0.000 | 66.343 | 28.422 | -5.714 | 28.991 | 189.63 | 375.91 |
| 202.00 | 0.000 | 66.343 | 28.325 | -5.350 | 28.826 | 191.30 | 375.91 |
| 203.00 | 0.000 | 66.343 | 28.234 | -4.985 | 28.671 | 192.99 | 375.91 |
| 204.00 | 0.000 | 66.343 | 28.150 | -4.617 | 28.526 | 194.68 | 375.91 |
| 205.00 | 0.000 | 66.343 | 28.072 | -4.249 | 28.392 | 196.39 | 375.91 |
| 206.00 | 0.000 | 66.343 | 28.000 | -3.879 | 28.268 | 198.11 | 375.91 |
| 207.00 | 0.000 | 66.343 | 27.935 | -3.508 | 28.154 | 199.84 | 375.91 |
| 208.00 | 0.000 | 66.343 | 27.876 | -3.136 | 28.052 | 201.58 | 375.91 |
| 209.00 | 0.000 | 66.343 | 27.824 | -2.762 | 27.961 | 203.33 | 375.91 |
| 210.00 | 0.000 | 66.354 | 27.779 | -2.397 | 27.882 | 205.07 | 375.85 |
| 211.00 | 0.000 | 66.808 | 27.737 | -2.325 | 27.834 | 206.21 | 373.46 |
| 212.00 | 0.000 | 67.260 | 27.697 | -2.254 | 27.788 | 207.35 | 371.08 |
| 213.00 | 0.000 | 67.709 | 27.658 | -2.143 | 27.741 | 208.57 | 368.69 |
| 214.00 | 0.000 | 68.156 | 27.621 | -2.077 | 27.699 | 209.70 | 366.30 |
| 215.00 | 0.000 | 68.601 | 27.585 | -2.013 | 27.658 | 210.82 | 363.92 |
| 216.00 | 0.000 | 69.043 | 27.550 | -1.910 | 27.616 | 212.03 | 361.53 |
| 217.00 | 0.000 | 69.483 | 27.517 | -1.850 | 27.579 | 213.15 | 359.14 |
| 218.00 | 0.000 | 69.921 | 27.485 | -1.793 | 27.543 | 214.27 | 356.76 |
| 219.00 | 0.000 | 70.356 | 27.454 | -1.697 | 27.506 | 215.46 | 354.37 |
| 220.00 | 0.000 | 70.789 | 27.424 | -1.645 | 27.473 | 216.57 | 351.98 |
| 221.00 | 0.000 | 71.220 | 27.396 | -1.595 | 27.442 | 217.67 | 349.60 |
| 222.00 | 0.000 | 71.648 | 27.368 | -1.507 | 27.410 | 218.85 | 347.21 |
| 223.00 | 0.000 | 72.074 | 27.342 | -1.462 | 27.381 | 219.94 | 344.82 |
| 224.00 | 0.000 | 72.497 | 27.316 | -1.420 | 27.353 | 221.02 | 342.44 |
| 225.00 | 0.000 | 72.918 | 27.292 | -1.340 | 27.325 | 222.19 | 340.05 |
| 226.00 | 0.000 | 73.336 | 27.268 | -1.303 | 27.300 | 223.26 | 337.66 |
| 227.00 | 0.000 | 73.752 | 27.246 | -1.268 | 27.275 | 224.33 | 335.28 |
| 228.00 | 0.000 | 74.166 | 27.224 | -1.198 | 27.250 | 225.48 | 332.89 |
| 229.00 | 0.000 | 74.576 | 27.203 | -1.168 | 27.228 | 226.54 | 330.50 |
| 230.00 | 0.000 | 74.985 | 27.182 | -1.142 | 27.206 | 227.59 | 328.12 |
| 231.00 | 0.000 | 75.391 | 27.163 | -1.080 | 27.184 | 228.72 | 325.73 |
| 232.00 | 0.000 | 75.794 | 27.143 | -1.059 | 27.164 | 229.76 | 323.34 |
| 233.00 | 0.000 | 76.195 | 27.125 | -1.041 | 27.145 | 230.80 | 320.95 |
| 234.00 | 0.000 | 76.593 | 27.107 | -0.988 | 27.125 | 231.91 | 318.57 |
| 235.00 | 0.000 | 76.988 | 27.089 | -0.976 | 27.107 | 232.94 | 316.18 |
| 236.00 | 0.000 | 77.381 | 27.072 | -0.966 | 27.089 | 233.95 | 313.79 |
| 237.00 | 0.000 | 77.772 | 27.055 | -0.923 | 27.071 | 235.05 | 311.41 |
| 238.00 | 0.000 | 78.159 | 27.039 | -0.919 | 27.054 | 236.05 | 309.02 |
| 239.00 | 0.000 | 78.544 | 27.022 | -0.918 | 27.038 | 237.05 | 306.64 |
| 240.00 | 0.000 | 78.834 | 27.007 | -0.845 | 27.020 | 238.21 | 304.83 |
| 241.00 | 0.000 | 78.834 | 26.994 | -0.595 | 27.000 | 239.73 | 304.83 |
| 242.00 | 0.000 | 78.830 | 26.985 | -0.346 | 26.987 | 241.26 | 304.85 |
| 243.00 | 0.000 | 78.456 | 26.979 | -0.310 | 26.981 | 242.34 | 307.18 |
| 244.00 | 0.000 | 78.070 | 26.973 | -0.344 | 26.975 | 243.27 | 309.57 |
| 245.00 | 0.000 | 77.682 | 26.968 | -0.302 | 26.969 | 244.36 | 311.96 |
| 246.00 | 0.000 | 77.291 | 26.962 | -0.256 | 26.964 | 245.46 | 314.34 |
| 247.00 | 0.000 | 76.898 | 26.958 | -0.280 | 26.959 | 246.40 | 316.73 |
| 248.00 | 0.000 | 76.501 | 26.953 | -0.227 | 26.954 | 247.52 | 319.12 |
| 249.00 | 0.000 | 76.103 | 26.949 | -0.170 | 26.950 | 248.64 | 321.51 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 250.00 | 0.000 | 75.701 | 26.946 | -0.186 | 26.947 | 249.60 | 323.89 |
| 251.00 | 0.000 | 75.335 | 26.943 | -0.122 | 26.944 | 250.74 | 326.06 |
| 252.00 | 0.000 | 75.335 | 26.944 | 0.172 | 26.945 | 252.37 | 326.06 |
| 253.00 | 0.000 | 75.335 | 26.950 | 0.466 | 26.954 | 253.99 | 326.06 |
| 254.00 | 0.000 | 75.335 | 26.961 | 0.760 | 26.972 | 255.62 | 326.06 |
| 255.00 | 2.000 | 75.335 | 26.977 | 1.054 | 26.998 | 257.24 | 326.06 |
| 256.00 | 2.000 | 75.335 | 26.998 | 1.348 | 27.032 | 258.86 | 326.06 |
| 257.00 | 2.000 | 75.335 | 27.024 | 1.641 | 27.074 | 260.47 | 326.06 |
| 258.00 | 2.000 | 75.335 | 27.056 | 1.933 | 27.125 | 262.09 | 326.06 |
| 259.00 | 2.000 | 75.335 | 27.092 | 2.225 | 27.184 | 263.70 | 326.06 |
| 260.00 | 2.000 | 75.335 | 27.134 | 2.517 | 27.250 | 265.30 | 326.06 |
| 261.00 | 2.000 | 75.335 | 27.181 | 2.807 | 27.325 | 266.90 | 326.06 |
| 262.00 | 2.000 | 75.335 | 27.232 | 3.097 | 27.408 | 268.49 | 326.06 |
| 263.00 | 2.000 | 75.335 | 27.289 | 3.386 | 27.498 | 270.07 | 326.06 |
| 264.00 | 2.000 | 75.335 | 27.351 | 3.673 | 27.597 | 271.65 | 326.06 |
| 265.00 | 2.000 | 75.335 | 27.418 | 3.960 | 27.702 | 273.22 | 326.06 |
| 266.00 | 2.000 | 75.335 | 27.490 | 4.245 | 27.816 | 274.78 | 326.06 |
| 267.00 | 2.000 | 75.335 | 27.567 | 4.529 | 27.936 | 276.33 | 326.06 |
| 268.00 | 2.000 | 75.335 | 27.648 | 4.812 | 28.064 | 277.87 | 326.06 |
| 269.00 | 2.000 | 75.335 | 27.735 | 5.093 | 28.199 | 279.41 | 326.06 |
| 270.00 | 2.000 | 75.335 | 27.827 | 5.373 | 28.341 | 280.93 | 326.06 |
| 271.00 | 2.000 | 75.335 | 27.923 | 5.651 | 28.489 | 282.44 | 326.06 |
| 272.00 | 2.000 | 75.335 | 28.024 | 5.927 | 28.644 | 283.94 | 326.06 |
| 273.00 | 2.000 | 75.335 | 28.130 | 6.202 | 28.806 | 285.43 | 326.06 |
| 274.00 | 2.000 | 75.471 | 28.241 | 6.409 | 28.959 | 286.79 | 325.25 |
| 275.00 | 2.000 | 75.874 | 28.353 | 6.448 | 29.077 | 287.81 | 322.87 |
| 276.00 | 2.000 | 76.274 | 28.465 | 6.443 | 29.185 | 288.75 | 320.48 |
| 277.00 | 2.000 | 76.672 | 28.577 | 6.433 | 29.292 | 289.69 | 318.09 |
| 278.00 | 2.000 | 77.067 | 28.689 | 6.455 | 29.406 | 290.68 | 315.71 |
| 279.00 | 2.000 | 77.459 | 28.801 | 6.435 | 29.511 | 291.59 | 313.32 |
| 280.00 | 2.000 | 77.849 | 28.913 | 6.410 | 29.615 | 292.50 | 310.93 |
| 281.00 | 2.000 | 78.029 | 29.024 | 6.343 | 29.709 | 293.33 | 309.82 |
| 282.00 | 0.000 | 78.029 | 29.133 | 6.201 | 29.786 | 294.02 | 309.82 |
| 283.00 | 0.000 | 78.029 | 29.240 | 6.057 | 29.861 | 294.70 | 309.82 |
| 284.00 | 0.000 | 78.029 | 29.344 | 5.912 | 29.933 | 295.39 | 309.82 |
| 285.00 | 0.000 | 78.029 | 29.445 | 5.764 | 30.004 | 296.08 | 309.82 |
| 286.00 | 0.000 | 78.029 | 29.544 | 5.615 | 30.073 | 296.76 | 309.82 |
| 287.00 | 0.000 | 77.993 | 29.640 | 5.486 | 30.144 | 297.49 | 310.05 |
| 288.00 | 2.000 | 77.604 | 29.735 | 5.408 | 30.223 | 298.31 | 312.43 |
| 289.00 | 2.000 | 77.213 | 29.830 | 5.406 | 30.316 | 299.27 | 314.82 |
| 290.00 | 2.000 | 76.819 | 29.924 | 5.405 | 30.408 | 300.24 | 317.21 |
| 291.00 | 2.000 | 76.422 | 30.017 | 5.332 | 30.487 | 301.07 | 319.59 |
| 292.00 | 2.000 | 76.023 | 30.110 | 5.335 | 30.579 | 302.05 | 321.98 |
| 293.00 | 2.000 | 75.621 | 30.203 | 5.340 | 30.671 | 303.03 | 324.37 |
| 294.00 | 2.000 | 75.217 | 30.295 | 5.270 | 30.750 | 303.87 | 326.75 |
| 295.00 | 2.000 | 74.810 | 30.387 | 5.278 | 30.842 | 304.85 | 329.14 |
| 296.00 | 2.000 | 74.400 | 30.479 | 5.288 | 30.935 | 305.84 | 331.53 |
| 297.00 | 0.000 | 73.988 | 30.571 | 5.222 | 31.014 | 306.69 | 333.92 |
| 298.00 | 0.000 | 73.574 | 30.662 | 5.236 | 31.106 | 307.69 | 336.30 |
| 299.00 | 0.000 | 73.157 | 30.753 | 5.251 | 31.198 | 308.69 | 338.69 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 300.00 | 0.000 | 72.737 | 30.844 | 5.189 | 31.278 | 309.55 | 341.08 |
| 301.00 | 0.000 | 72.315 | 30.935 | 5.207 | 31.370 | 310.56 | 343.46 |
| 302.00 | 0.000 | 71.891 | 31.026 | 5.228 | 31.463 | 311.56 | 345.85 |
| 303.00 | 0.000 | 71.464 | 31.116 | 5.169 | 31.543 | 312.43 | 348.24 |
| 304.00 | 0.000 | 71.035 | 31.207 | 5.192 | 31.636 | 313.45 | 350.62 |
| 305.00 | 0.000 | 70.603 | 31.297 | 5.217 | 31.729 | 314.46 | 353.01 |
| 306.00 | 0.000 | 70.170 | 31.387 | 5.162 | 31.809 | 315.34 | 355.40 |
| 307.00 | 0.000 | 69.733 | 31.478 | 5.190 | 31.903 | 316.36 | 357.78 |
| 308.00 | 0.000 | 69.294 | 31.568 | 5.220 | 31.997 | 317.39 | 360.17 |
| 309.00 | 0.000 | 68.853 | 31.659 | 5.168 | 32.078 | 318.27 | 362.56 |
| 310.00 | 0.000 | 68.410 | 31.749 | 5.201 | 32.172 | 319.30 | 364.94 |
| 311.00 | 0.000 | 67.964 | 31.840 | 5.235 | 32.267 | 320.34 | 367.33 |
| 312.00 | 0.000 | 67.516 | 31.931 | 5.186 | 32.349 | 321.23 | 369.72 |
| 313.00 | 0.000 | 67.066 | 32.022 | 5.224 | 32.445 | 322.26 | 372.10 |
| 314.00 | 0.000 | 66.613 | 32.113 | 5.262 | 32.541 | 323.31 | 374.49 |
| 315.00 | 0.000 | 66.158 | 32.204 | 5.216 | 32.624 | 324.20 | 376.88 |
| 316.00 | 0.000 | 65.701 | 32.295 | 5.258 | 32.720 | 325.25 | 379.27 |
| 317.00 | 0.000 | 65.242 | 32.387 | 5.300 | 32.818 | 326.29 | 381.65 |
| 318.00 | 0.000 | 64.780 | 32.479 | 5.257 | 32.902 | 327.19 | 384.04 |
| 319.00 | 0.000 | 64.317 | 32.571 | 5.302 | 33.000 | 328.25 | 386.42 |
| 320.00 | 0.000 | 64.105 | 32.664 | 5.436 | 33.114 | 329.45 | 387.51 |
| 321.00 | 0.000 | 64.105 | 32.762 | 5.745 | 33.262 | 330.95 | 387.51 |
| 322.00 | 0.000 | 64.105 | 32.866 | 6.051 | 33.418 | 332.43 | 387.51 |
| 323.00 | 0.000 | 64.105 | 32.975 | 6.356 | 33.582 | 333.91 | 387.51 |
| 324.00 | 0.000 | 64.105 | 33.089 | 6.659 | 33.752 | 335.38 | 387.51 |
| 325.00 | 0.000 | 64.106 | 33.208 | 6.960 | 33.930 | 336.84 | 387.51 |
| 326.00 | 0.000 | 64.106 | 33.333 | 7.259 | 34.114 | 338.29 | 387.51 |
| 327.00 | 0.000 | 64.106 | 33.462 | 7.556 | 34.305 | 339.72 | 387.51 |
| 328.00 | 0.000 | 64.106 | 33.597 | 7.850 | 34.502 | 341.15 | 387.51 |
| 329.00 | 0.000 | 64.105 | 33.738 | 8.142 | 34.706 | 342.57 | 387.51 |
| 330.00 | 2.000 | 63.669 | 33.880 | 8.168 | 34.851 | 343.55 | 389.74 |
| 331.00 | 2.000 | 63.200 | 34.023 | 8.195 | 34.996 | 344.54 | 392.13 |
| 332.00 | 2.000 | 62.729 | 34.166 | 8.223 | 35.142 | 345.53 | 394.51 |
| 333.00 | 2.000 | 62.256 | 34.309 | 8.161 | 35.266 | 346.38 | 396.90 |
| 334.00 | 2.000 | 61.781 | 34.452 | 8.190 | 35.412 | 347.37 | 399.29 |
| 335.00 | 2.000 | 61.305 | 34.595 | 8.218 | 35.557 | 348.36 | 401.67 |
| 336.00 | 2.000 | 61.251 | 34.736 | 8.056 | 35.658 | 349.06 | 401.93 |
| 337.00 | 2.000 | 61.251 | 34.875 | 7.900 | 35.759 | 349.76 | 401.93 |
| 338.00 | 2.000 | 61.251 | 35.012 | 7.742 | 35.857 | 350.47 | 401.93 |
| 339.00 | 2.000 | 61.251 | 35.145 | 7.582 | 35.954 | 351.17 | 401.93 |
| 340.00 | 2.000 | 61.251 | 35.276 | 7.419 | 36.047 | 351.88 | 401.93 |
| 341.00 | 0.000 | 61.251 | 35.404 | 7.254 | 36.139 | 352.58 | 401.94 |
| 342.00 | 0.000 | 61.251 | 35.529 | 7.087 | 36.229 | 353.28 | 401.94 |
| 343.00 | 0.000 | 61.251 | 35.651 | 6.918 | 36.316 | 353.98 | 401.94 |
| 344.00 | 0.000 | 61.251 | 35.770 | 6.746 | 36.400 | 354.68 | 401.94 |
| 345.00 | 0.000 | 61.251 | 35.886 | 6.573 | 36.483 | 355.38 | 401.94 |
| 346.00 | 0.000 | 61.251 | 35.999 | 6.397 | 36.563 | 356.08 | 401.94 |
| 347.00 | 0.000 | 61.227 | 36.108 | 6.220 | 36.640 | 356.77 | 402.05 |
| 348.00 | 0.000 | 60.757 | 36.217 | 6.205 | 36.744 | 357.72 | 404.40 |
| 349.00 | 0.000 | 60.275 | 36.324 | 6.118 | 36.836 | 358.56 | 406.78 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 350.00 | 0.000 | 59.791 | 36.432 | 6.122 | 36.942 | 359.54 | 409.17 |
| 351.00 | 0.000 | 59.305 | 36.538 | 6.127 | 37.049 | 0.52 | 411.56 |
| 352.00 | 0.000 | 58.817 | 36.645 | 6.041 | 37.139 | 1.36 | 413.94 |
| 353.00 | 0.000 | 58.327 | 36.751 | 6.048 | 37.245 | 2.35 | 416.33 |
| 354.00 | 0.000 | 57.836 | 36.856 | 6.056 | 37.350 | 3.33 | 418.72 |
| 355.00 | 0.000 | 57.342 | 36.961 | 5.971 | 37.441 | 4.18 | 421.10 |
| 356.00 | 0.000 | 56.846 | 37.066 | 5.980 | 37.545 | 5.17 | 423.49 |
| 357.00 | 0.000 | 56.348 | 37.170 | 5.990 | 37.650 | 6.15 | 425.88 |
| 358.00 | 0.000 | 55.849 | 37.274 | 5.906 | 37.739 | 7.00 | 428.27 |
| 359.00 | 0.000 | 55.348 | 37.378 | 5.918 | 37.844 | 8.00 | 430.65 |

MINIMUM STRESS (Pb,x') = 26.943 AT 251.00 DEGREES
MINIMUM TOTAL STRESS (Pb,max) = 26.944 AT 250.74 DEGREES

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DESCRIPTION:
Peach Bottom, Unit 3 1999 Inspection Results
Weld H4 -- 10 Years of Crack Growth -- Upset Condition
Crack assumed to take compression across face

RADIUS (IN) = 102.5625 WALL THICKNESS (IN) = 2

TENSION STRESS = 0.360 KSI
MATERIAL FLOW STRESS = 50.700 KSI

ANGLE FOR MOMENT ITERATION = 1

FLAWS DEFINED = 12 (AS FOLLOWS)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 ANGLES: | 0.0000 | TO | 10.7700 | (DTHETA = | 10.770) | DEPTH (IN) = | 2.000 |
| 2 ANGLES: | 19.3300 | TO | 76.2400 | (DTHETA = | 56.910) | DEPTH (IN) = | 2.000 |
| 3 ANGLES: | 94.7800 | TO | 101.4400 | (DTHETA = | 6.660) | DEPTH (IN) = | 2.000 |
| 4 ANGLES: | 108.7300 | TO | 129.2400 | (DTHETA = | 20.510) | DEPTH (IN) = | 2.000 |
| 5 ANGLES: | 131.7800 | TO | 156.0900 | (DTHETA = | 24.310) | DEPTH (IN) = | 2.000 |
| 6 ANGLES: | 164.6500 | TO | 190.7700 | (DTHETA = | 26.120) | DEPTH (IN) = | 2.000 |
| 7 ANGLES: | 196.5800 | TO | 216.7200 | (DTHETA = | 20.140) | DEPTH (IN) = | 2.000 |
| 8 ANGLES: | 227.5900 | TO | 239.5400 | (DTHETA = | 11.950) | DEPTH (IN) = | 2.000 |
| 9 ANGLES: | 242.0300 | TO | 250.9400 | (DTHETA = | 8.910) | DEPTH (IN) = | 2.000 |
| 10 ANGLES: | 260.4300 | TO | 269.1900 | (DTHETA = | 8.760) | DEPTH (IN) = | 2.000 |
| 11 ANGLES: | 287.6300 | TO | 314.1400 | (DTHETA = | 26.510) | DEPTH (IN) = | 2.000 |
| 12 ANGLES: | 317.0300 | TO | 360.0000 | (DTHETA = | 42.970) | DEPTH (IN) = | 2.000 |

TOTAL AREA (IN2) = 1288.838
REMAINING DEGRADED SECTION AREA (IN2) = 341.8284
(APPROX. DEGRADED METAL AREA = 341.8283 )

Program Output:
Angle = Angle that tension-to-compression axis x' is rotated
t = Thickness in wall at position corresponding to angle
delta = Distance from center to tension-to-compression axis
Pb,x' = Bending stress due to moment about tension-to-compression axis
Pb,y' = Bending stress due to moment perpendicular to tens./comp. axis
Pb,max = Maximum bending stress due to total limit moment
Anglemax = Angle for total limit moment relative to original Y axis
Atension = Area of metal in tension for Case 2

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.000 | 80.350 | 20.243 | -2.301 | 20.374 | 353.51 | 284.28 |
| 1.00 | 0.000 | 80.720 | 20.204 | -2.166 | 20.320 | 354.88 | 281.89 |
| 2.00 | 0.000 | 81.086 | 20.167 | -2.068 | 20.272 | 356.14 | 279.51 |
| 3.00 | 0.000 | 81.450 | 20.131 | -1.973 | 20.228 | 357.40 | 277.12 |
| 4.00 | 0.000 | 81.812 | 20.098 | -1.847 | 20.182 | 358.75 | 274.73 |
| 5.00 | 0.000 | 82.170 | 20.066 | -1.758 | 20.142 | 359.99 | 272.35 |
| 6.00 | 0.000 | 82.526 | 20.035 | -1.671 | 20.105 | 1.23 | 269.96 |
| 7.00 | 0.000 | 82.879 | 20.007 | -1.554 | 20.067 | 2.56 | 267.57 |
| 8.00 | 0.000 | 83.229 | 19.980 | -1.474 | 20.034 | 3.78 | 265.19 |
| 9.00 | 0.000 | 83.576 | 19.955 | -1.396 | 20.004 | 5.00 | 262.80 |
| 10.00 | 0.000 | 83.920 | 19.931 | -1.289 | 19.973 | 6.30 | 260.41 |
| 11.00 | 2.000 | 84.223 | 19.909 | -1.182 | 19.944 | 7.60 | 258.30 |
| 12.00 | 2.000 | 84.223 | 19.890 | -0.887 | 19.910 | 9.45 | 258.30 |
| 13.00 | 2.000 | 84.153 | 19.877 | -0.655 | 19.888 | 11.11 | 258.79 |
| 14.00 | 2.000 | 83.810 | 19.866 | -0.549 | 19.874 | 12.42 | 261.18 |
| 15.00 | 2.000 | 83.465 | 19.857 | -0.504 | 19.863 | 13.54 | 263.56 |
| 16.00 | 2.000 | 83.117 | 19.849 | -0.391 | 19.853 | 14.87 | 265.95 |
| 17.00 | 2.000 | 82.766 | 19.843 | -0.273 | 19.845 | 16.21 | 268.34 |
| 18.00 | 2.000 | 82.412 | 19.838 | -0.218 | 19.839 | 17.37 | 270.72 |
| 19.00 | 2.000 | 82.056 | 19.835 | -0.093 | 19.836 | 18.73 | 273.11 |
| 20.00 | 0.000 | 81.696 | 19.835 | 0.036 | 19.835 | 20.10 | 275.50 |
| 21.00 | 0.000 | 81.334 | 19.836 | 0.100 | 19.836 | 21.29 | 277.88 |
| 22.00 | 0.000 | 81.058 | 19.839 | 0.305 | 19.841 | 22.88 | 279.69 |
| 23.00 | 0.000 | 81.265 | 19.846 | 0.527 | 19.853 | 24.52 | 278.34 |
| 24.00 | 0.000 | 81.628 | 19.856 | 0.626 | 19.865 | 25.81 | 275.95 |
| 25.00 | 0.000 | 81.988 | 19.867 | 0.721 | 19.880 | 27.08 | 273.56 |
| 26.00 | 0.000 | 82.042 | 19.880 | 0.746 | 19.894 | 28.15 | 273.20 |
| 27.00 | 0.000 | 82.042 | 19.892 | 0.737 | 19.906 | 29.12 | 273.20 |
| 28.00 | 0.000 | 82.042 | 19.904 | 0.727 | 19.918 | 30.09 | 273.20 |
| 29.00 | 0.000 | 82.042 | 19.917 | 0.718 | 19.930 | 31.06 | 273.20 |
| 30.00 | 0.000 | 82.042 | 19.929 | 0.708 | 19.941 | 32.04 | 273.20 |
| 31.00 | 0.000 | 82.042 | 19.940 | 0.699 | 19.953 | 33.01 | 273.20 |
| 32.00 | 0.000 | 82.042 | 19.952 | 0.688 | 19.964 | 33.98 | 273.20 |
| 33.00 | 0.000 | 82.042 | 19.964 | 0.678 | 19.975 | 34.95 | 273.20 |
| 34.00 | 0.000 | 82.042 | 19.975 | 0.668 | 19.986 | 35.91 | 273.20 |
| 35.00 | 0.000 | 82.377 | 19.987 | 0.757 | 20.001 | 37.17 | 270.96 |
| 36.00 | 0.000 | 82.731 | 20.000 | 0.842 | 20.018 | 38.41 | 268.58 |
| 37.00 | 0.000 | 83.082 | 20.016 | 0.957 | 20.039 | 39.74 | 266.19 |
| 38.00 | 0.000 | 83.430 | 20.033 | 1.035 | 20.059 | 40.96 | 263.80 |
| 39.00 | 0.000 | 83.776 | 20.051 | 1.109 | 20.082 | 42.17 | 261.42 |
| 40.00 | 0.000 | 84.119 | 20.071 | 1.212 | 20.108 | 43.46 | 259.03 |
| 41.00 | 0.000 | 84.459 | 20.092 | 1.279 | 20.133 | 44.64 | 256.64 |
| 42.00 | 0.000 | 84.796 | 20.115 | 1.341 | 20.160 | 45.82 | 254.26 |
| 43.00 | 0.000 | 85.130 | 20.139 | 1.432 | 20.190 | 47.07 | 251.87 |
| 44.00 | 0.000 | 85.461 | 20.164 | 1.486 | 20.219 | 48.22 | 249.48 |
| 45.00 | 0.000 | 85.544 | 20.191 | 1.703 | 20.263 | 49.82 | 248.88 |
| 46.00 | 0.000 | 85.544 | 20.223 | 1.972 | 20.319 | 51.57 | 248.88 |
| 47.00 | 0.000 | 85.527 | 20.259 | 2.240 | 20.383 | 53.31 | 249.01 |
| 48.00 | 0.000 | 85.197 | 20.298 | 2.261 | 20.424 | 54.36 | 251.39 |
| 49.00 | 0.000 | 84.863 | 20.339 | 2.348 | 20.474 | 55.58 | 253.78 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 50.00 | 0.000 | 84.526 | 20.380 | 2.437 | 20.525 | 56.82 | 256.17 |
| 51.00 | 0.000 | 84.187 | 20.423 | 2.466 | 20.571 | 57.88 | 258.55 |
| 52.00 | 0.000 | 83.976 | 20.466 | 2.522 | 20.621 | 59.03 | 260.02 |
| 53.00 | 0.000 | 83.976 | 20.510 | 2.488 | 20.660 | 59.92 | 260.02 |
| 54.00 | 0.000 | 83.976 | 20.553 | 2.453 | 20.699 | 60.81 | 260.02 |
| 55.00 | 0.000 | 84.265 | 20.596 | 2.513 | 20.748 | 61.96 | 258.00 |
| 56.00 | 0.000 | 84.604 | 20.640 | 2.569 | 20.799 | 63.09 | 255.62 |
| 57.00 | 0.000 | 84.940 | 20.685 | 2.652 | 20.854 | 64.31 | 253.23 |
| 58.00 | 0.000 | 85.273 | 20.731 | 2.699 | 20.906 | 65.42 | 250.84 |
| 59.00 | 0.000 | 85.603 | 20.779 | 2.742 | 20.959 | 66.52 | 248.46 |
| 60.00 | 0.000 | 85.930 | 20.827 | 2.811 | 21.016 | 67.69 | 246.07 |
| 61.00 | 0.000 | 86.254 | 20.876 | 2.845 | 21.069 | 68.76 | 243.68 |
| 62.00 | 0.000 | 86.576 | 20.926 | 2.874 | 21.122 | 69.82 | 241.30 |
| 63.00 | 0.000 | 86.894 | 20.976 | 2.929 | 21.179 | 70.95 | 238.91 |
| 64.00 | 0.000 | 87.210 | 21.027 | 2.950 | 21.233 | 71.99 | 236.52 |
| 65.00 | 0.000 | 87.522 | 21.078 | 2.966 | 21.286 | 73.01 | 234.14 |
| 66.00 | 0.000 | 87.832 | 21.130 | 3.007 | 21.343 | 74.10 | 231.75 |
| 67.00 | 0.000 | 88.139 | 21.182 | 3.014 | 21.396 | 75.10 | 229.36 |
| 68.00 | 0.000 | 88.247 | 21.235 | 3.126 | 21.464 | 76.37 | 228.51 |
| 69.00 | 0.000 | 88.247 | 21.292 | 3.329 | 21.551 | 77.89 | 228.51 |
| 70.00 | 0.000 | 88.247 | 21.352 | 3.531 | 21.642 | 79.39 | 228.51 |
| 71.00 | 0.000 | 88.247 | 21.415 | 3.732 | 21.738 | 80.88 | 228.51 |
| 72.00 | 0.000 | 88.247 | 21.482 | 3.932 | 21.839 | 82.37 | 228.51 |
| 73.00 | 0.000 | 88.247 | 21.553 | 4.130 | 21.945 | 83.85 | 228.51 |
| 74.00 | 0.000 | 88.247 | 21.627 | 4.327 | 22.056 | 85.32 | 228.51 |
| 75.00 | 0.000 | 88.247 | 21.704 | 4.523 | 22.171 | 86.77 | 228.51 |
| 76.00 | 0.000 | 88.247 | 21.785 | 4.718 | 22.290 | 88.22 | 228.51 |
| 77.00 | 2.000 | 88.240 | 21.869 | 4.911 | 22.414 | 89.66 | 228.57 |
| 78.00 | 2.000 | 87.940 | 21.955 | 4.933 | 22.502 | 90.66 | 230.91 |
| 79.00 | 2.000 | 87.680 | 22.041 | 4.925 | 22.584 | 91.59 | 232.92 |
| 80.00 | 2.000 | 87.680 | 22.126 | 4.831 | 22.647 | 92.32 | 232.92 |
| 81.00 | 2.000 | 87.680 | 22.209 | 4.737 | 22.709 | 93.04 | 232.92 |
| 82.00 | 2.000 | 87.680 | 22.291 | 4.641 | 22.769 | 93.76 | 232.92 |
| 83.00 | 2.000 | 87.680 | 22.371 | 4.543 | 22.827 | 94.48 | 232.92 |
| 84.00 | 2.000 | 87.680 | 22.449 | 4.444 | 22.884 | 95.20 | 232.92 |
| 85.00 | 2.000 | 87.680 | 22.525 | 4.344 | 22.940 | 95.92 | 232.92 |
| 86.00 | 2.000 | 87.680 | 22.600 | 4.243 | 22.995 | 96.63 | 232.92 |
| 87.00 | 2.000 | 87.680 | 22.673 | 4.140 | 23.047 | 97.35 | 232.92 |
| 88.00 | 2.000 | 87.680 | 22.744 | 4.036 | 23.099 | 98.06 | 232.92 |
| 89.00 | 2.000 | 87.680 | 22.813 | 3.930 | 23.149 | 98.78 | 232.92 |
| 90.00 | 2.000 | 87.680 | 22.880 | 3.824 | 23.198 | 99.49 | 232.92 |
| 91.00 | 2.000 | 87.616 | 22.946 | 3.705 | 23.243 | 100.17 | 233.42 |
| 92.00 | 2.000 | 87.304 | 23.011 | 3.715 | 23.309 | 101.17 | 235.81 |
| 93.00 | 2.000 | 86.989 | 23.076 | 3.729 | 23.375 | 102.18 | 238.19 |
| 94.00 | 2.000 | 86.672 | 23.140 | 3.686 | 23.432 | 103.05 | 240.58 |
| 95.00 | 0.000 | 86.503 | 23.205 | 3.683 | 23.495 | 104.02 | 241.84 |
| 96.00 | 0.000 | 86.503 | 23.268 | 3.580 | 23.541 | 104.75 | 241.84 |
| 97.00 | 0.000 | 86.503 | 23.329 | 3.476 | 23.586 | 105.48 | 241.84 |
| 98.00 | 0.000 | 86.503 | 23.388 | 3.371 | 23.630 | 106.20 | 241.84 |
| 99.00 | 0.000 | 86.503 | 23.445 | 3.265 | 23.672 | 106.93 | 241.84 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 100.00 | 0.000 | 86.503 | 23.501 | 3.158 | 23.712 | 107.65 | 241.84 |
| 101.00 | 0.000 | 86.503 | 23.554 | 3.050 | 23.751 | 108.38 | 241.84 |
| 102.00 | 2.000 | 86.617 | 23.606 | 2.971 | 23.793 | 109.17 | 240.99 |
| 103.00 | 2.000 | 86.927 | 23.658 | 2.949 | 23.841 | 110.11 | 238.66 |
| 104.00 | 2.000 | 86.932 | 23.711 | 3.122 | 23.915 | 111.50 | 238.63 |
| 105.00 | 2.000 | 86.922 | 23.767 | 3.305 | 23.995 | 112.92 | 238.70 |
| 106.00 | 2.000 | 86.608 | 23.824 | 3.310 | 24.053 | 113.91 | 241.06 |
| 107.00 | 2.000 | 86.287 | 23.881 | 3.258 | 24.103 | 114.77 | 243.44 |
| 108.00 | 2.000 | 85.963 | 23.939 | 3.269 | 24.161 | 115.78 | 245.83 |
| 109.00 | 0.000 | 85.636 | 23.996 | 3.283 | 24.219 | 116.79 | 248.22 |
| 110.00 | 0.000 | 85.306 | 24.052 | 3.237 | 24.269 | 117.67 | 250.60 |
| 111.00 | 0.000 | 84.973 | 24.109 | 3.256 | 24.328 | 118.69 | 252.99 |
| 112.00 | 0.000 | 84.638 | 24.166 | 3.279 | 24.387 | 119.73 | 255.38 |
| 113.00 | 0.000 | 84.299 | 24.223 | 3.240 | 24.438 | 120.62 | 257.76 |
| 114.00 | 0.000 | 83.958 | 24.280 | 3.268 | 24.499 | 121.67 | 260.15 |
| 115.00 | 0.000 | 83.614 | 24.337 | 3.298 | 24.559 | 122.72 | 262.54 |
| 116.00 | 0.000 | 83.267 | 24.394 | 3.266 | 24.612 | 123.63 | 264.92 |
| 117.00 | 0.000 | 83.188 | 24.451 | 3.245 | 24.665 | 124.56 | 265.47 |
| 118.00 | 0.000 | 83.188 | 24.506 | 3.147 | 24.707 | 125.32 | 265.47 |
| 119.00 | 0.000 | 83.188 | 24.560 | 3.049 | 24.748 | 126.08 | 265.47 |
| 120.00 | 0.000 | 83.188 | 24.611 | 2.949 | 24.787 | 126.83 | 265.47 |
| 121.00 | 0.000 | 83.188 | 24.661 | 2.849 | 24.825 | 127.59 | 265.47 |
| 122.00 | 0.000 | 83.188 | 24.710 | 2.747 | 24.862 | 128.34 | 265.47 |
| 123.00 | 0.000 | 83.188 | 24.756 | 2.645 | 24.897 | 129.10 | 265.47 |
| 124.00 | 0.000 | 83.188 | 24.801 | 2.542 | 24.931 | 129.85 | 265.47 |
| 125.00 | 0.000 | 83.183 | 24.844 | 2.406 | 24.960 | 130.53 | 265.50 |
| 126.00 | 0.000 | 82.833 | 24.886 | 2.405 | 25.002 | 131.52 | 267.88 |
| 127.00 | 0.000 | 82.480 | 24.928 | 2.437 | 25.047 | 132.58 | 270.27 |
| 128.00 | 0.000 | 82.124 | 24.971 | 2.405 | 25.086 | 133.50 | 272.66 |
| 129.00 | 0.000 | 81.765 | 25.013 | 2.443 | 25.132 | 134.58 | 275.04 |
| 130.00 | 2.000 | 81.403 | 25.056 | 2.484 | 25.179 | 135.66 | 277.43 |
| 131.00 | 2.000 | 81.039 | 25.100 | 2.459 | 25.220 | 136.60 | 279.82 |
| 132.00 | 0.000 | 80.672 | 25.143 | 2.506 | 25.268 | 137.69 | 282.20 |
| 133.00 | 0.000 | 80.302 | 25.187 | 2.555 | 25.317 | 138.79 | 284.59 |
| 134.00 | 0.000 | 79.929 | 25.232 | 2.537 | 25.359 | 139.74 | 286.98 |
| 135.00 | 0.000 | 79.554 | 25.277 | 2.592 | 25.410 | 140.86 | 289.36 |
| 136.00 | 0.000 | 79.176 | 25.323 | 2.650 | 25.461 | 141.97 | 291.75 |
| 137.00 | 0.000 | 78.796 | 25.369 | 2.639 | 25.506 | 142.94 | 294.14 |
| 138.00 | 0.000 | 78.412 | 25.416 | 2.702 | 25.559 | 144.07 | 296.52 |
| 139.00 | 0.000 | 78.026 | 25.464 | 2.768 | 25.614 | 145.20 | 298.91 |
| 140.00 | 0.000 | 77.638 | 25.512 | 2.764 | 25.662 | 146.18 | 301.30 |
| 141.00 | 0.000 | 77.246 | 25.562 | 2.835 | 25.718 | 147.33 | 303.68 |
| 142.00 | 0.000 | 76.853 | 25.612 | 2.909 | 25.776 | 148.48 | 306.07 |
| 143.00 | 0.000 | 76.456 | 25.663 | 2.910 | 25.827 | 149.47 | 308.46 |
| 144.00 | 0.000 | 76.057 | 25.715 | 2.989 | 25.888 | 150.63 | 310.85 |
| 145.00 | 0.000 | 75.656 | 25.768 | 3.071 | 25.950 | 151.80 | 313.23 |
| 146.00 | 0.000 | 75.251 | 25.821 | 3.078 | 26.004 | 152.80 | 315.62 |
| 147.00 | 0.000 | 74.845 | 25.876 | 3.165 | 26.069 | 153.97 | 318.01 |
| 148.00 | 0.000 | 74.650 | 25.933 | 3.408 | 26.156 | 155.49 | 319.14 |
| 149.00 | 0.000 | 74.650 | 25.995 | 3.727 | 26.260 | 157.16 | 319.14 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 150.00 | 0.000 | 74.650 | 26.062 | 4.045 | 26.374 | 158.82 | 319.14 |
| 151.00 | 0.000 | 74.681 | 26.135 | 4.335 | 26.492 | 160.42 | 318.96 |
| 152.00 | 0.000 | 75.089 | 26.210 | 4.379 | 26.573 | 161.48 | 316.57 |
| 153.00 | 0.000 | 75.494 | 26.287 | 4.418 | 26.656 | 162.54 | 314.19 |
| 154.00 | 0.000 | 75.897 | 26.364 | 4.490 | 26.744 | 163.67 | 311.80 |
| 155.00 | 0.000 | 76.297 | 26.443 | 4.520 | 26.826 | 164.70 | 309.41 |
| 156.00 | 0.000 | 76.695 | 26.522 | 4.546 | 26.909 | 165.73 | 307.03 |
| 157.00 | 2.000 | 77.089 | 26.601 | 4.604 | 26.997 | 166.82 | 304.64 |
| 158.00 | 2.000 | 77.482 | 26.682 | 4.621 | 27.079 | 167.82 | 302.25 |
| 159.00 | 2.000 | 77.713 | 26.762 | 4.596 | 27.154 | 168.74 | 300.84 |
| 160.00 | 2.000 | 77.713 | 26.841 | 4.496 | 27.215 | 169.51 | 300.84 |
| 161.00 | 2.000 | 77.713 | 26.918 | 4.394 | 27.275 | 170.27 | 300.84 |
| 162.00 | 2.000 | 77.713 | 26.994 | 4.291 | 27.333 | 171.03 | 300.84 |
| 163.00 | 2.000 | 77.713 | 27.068 | 4.187 | 27.390 | 171.79 | 300.84 |
| 164.00 | 2.000 | 77.713 | 27.140 | 4.082 | 27.445 | 172.55 | 300.84 |
| 165.00 | 0.000 | 77.713 | 27.210 | 3.975 | 27.499 | 173.31 | 300.84 |
| 166.00 | 0.000 | 77.713 | 27.278 | 3.867 | 27.551 | 174.07 | 300.84 |
| 167.00 | 0.000 | 77.713 | 27.344 | 3.758 | 27.601 | 174.83 | 300.84 |
| 168.00 | 0.000 | 77.713 | 27.409 | 3.648 | 27.650 | 175.58 | 300.84 |
| 169.00 | 0.000 | 77.713 | 27.471 | 3.537 | 27.698 | 176.34 | 300.84 |
| 170.00 | 0.000 | 77.713 | 27.532 | 3.424 | 27.744 | 177.09 | 300.84 |
| 171.00 | 0.000 | 77.713 | 27.590 | 3.311 | 27.788 | 177.84 | 300.84 |
| 172.00 | 0.000 | 77.713 | 27.647 | 3.197 | 27.831 | 178.60 | 300.84 |
| 173.00 | 0.000 | 77.713 | 27.701 | 3.081 | 27.872 | 179.35 | 300.84 |
| 174.00 | 0.000 | 77.713 | 27.754 | 2.965 | 27.912 | 180.10 | 300.84 |
| 175.00 | 0.000 | 77.665 | 27.804 | 2.870 | 27.952 | 180.89 | 301.13 |
| 176.00 | 0.000 | 77.274 | 27.854 | 2.827 | 27.997 | 181.80 | 303.52 |
| 177.00 | 0.000 | 76.881 | 27.904 | 2.861 | 28.050 | 182.85 | 305.90 |
| 178.00 | 0.000 | 76.484 | 27.954 | 2.897 | 28.104 | 183.92 | 308.29 |
| 179.00 | 0.000 | 76.085 | 28.004 | 2.860 | 28.150 | 184.83 | 310.68 |
| 180.00 | 0.000 | 76.001 | 28.054 | 2.836 | 28.197 | 185.77 | 311.18 |
| 181.00 | 0.000 | 76.001 | 28.102 | 2.725 | 28.234 | 186.54 | 311.18 |
| 182.00 | 0.000 | 76.001 | 28.148 | 2.612 | 28.269 | 187.30 | 311.18 |
| 183.00 | 0.000 | 76.001 | 28.192 | 2.499 | 28.303 | 188.06 | 311.18 |
| 184.00 | 0.000 | 76.001 | 28.234 | 2.384 | 28.335 | 188.83 | 311.18 |
| 185.00 | 0.000 | 76.000 | 28.275 | 2.270 | 28.365 | 189.59 | 311.18 |
| 186.00 | 0.000 | 76.001 | 28.313 | 2.154 | 28.394 | 190.35 | 311.18 |
| 187.00 | 0.000 | 76.001 | 28.349 | 2.038 | 28.422 | 191.11 | 311.18 |
| 188.00 | 0.000 | 76.001 | 28.383 | 1.921 | 28.448 | 191.87 | 311.18 |
| 189.00 | 0.000 | 76.001 | 28.415 | 1.804 | 28.472 | 192.63 | 311.18 |
| 190.00 | 0.000 | 76.001 | 28.444 | 1.686 | 28.494 | 193.39 | 311.18 |
| 191.00 | 2.000 | 76.001 | 28.472 | 1.567 | 28.515 | 194.15 | 311.18 |
| 192.00 | 2.000 | 76.001 | 28.498 | 1.448 | 28.535 | 194.91 | 311.18 |
| 193.00 | 2.000 | 76.001 | 28.522 | 1.329 | 28.553 | 195.67 | 311.18 |
| 194.00 | 2.000 | 76.001 | 28.543 | 1.209 | 28.569 | 196.43 | 311.18 |
| 195.00 | 2.000 | 76.001 | 28.563 | 1.089 | 28.584 | 197.18 | 311.18 |
| 196.00 | 2.000 | 76.000 | 28.580 | 0.969 | 28.597 | 197.94 | 311.18 |
| 197.00 | 0.000 | 76.000 | 28.596 | 0.848 | 28.608 | 198.70 | 311.18 |
| 198.00 | 0.000 | 76.000 | 28.609 | 0.727 | 28.618 | 199.46 | 311.18 |
| 199.00 | 0.000 | 76.000 | 28.620 | 0.606 | 28.627 | 200.21 | 311.18 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 200.00 | 0.000 | 76.000 | 28.629 | 0.485 | 28.633 | 200.97 | 311.18 |
| 201.00 | 0.000 | 76.000 | 28.636 | 0.363 | 28.638 | 201.73 | 311.18 |
| 202.00 | 0.000 | 76.000 | 28.641 | 0.242 | 28.642 | 202.48 | 311.18 |
| 203.00 | 0.000 | 76.000 | 28.643 | 0.120 | 28.643 | 203.24 | 311.18 |
| 204.00 | 0.000 | 76.001 | 28.644 | -0.002 | 28.644 | 204.00 | 311.18 |
| 205.00 | 0.000 | 76.001 | 28.642 | -0.123 | 28.642 | 204.75 | 311.18 |
| 206.00 | 0.000 | 76.000 | 28.638 | -0.245 | 28.639 | 205.51 | 311.18 |
| 207.00 | 0.000 | 76.000 | 28.632 | -0.366 | 28.635 | 206.27 | 311.18 |
| 208.00 | 0.000 | 76.001 | 28.624 | -0.488 | 28.629 | 207.02 | 311.18 |
| 209.00 | 0.000 | 76.001 | 28.614 | -0.609 | 28.621 | 207.78 | 311.18 |
| 210.00 | 0.000 | 76.000 | 28.602 | -0.730 | 28.611 | 208.54 | 311.18 |
| 211.00 | 0.000 | 76.000 | 28.588 | -0.851 | 28.600 | 209.29 | 311.18 |
| 212.00 | 0.000 | 76.000 | 28.571 | -0.971 | 28.588 | 210.05 | 311.18 |
| 213.00 | 0.000 | 76.000 | 28.553 | -1.092 | 28.574 | 210.81 | 311.18 |
| 214.00 | 0.000 | 76.000 | 28.532 | -1.211 | 28.558 | 211.57 | 311.18 |
| 215.00 | 0.000 | 76.377 | 28.510 | -1.219 | 28.536 | 212.55 | 308.93 |
| 216.00 | 0.000 | 76.774 | 28.489 | -1.229 | 28.515 | 213.53 | 306.55 |
| 217.00 | 2.000 | 77.168 | 28.467 | -1.242 | 28.494 | 214.50 | 304.16 |
| 218.00 | 2.000 | 77.560 | 28.445 | -1.221 | 28.472 | 215.54 | 301.77 |
| 219.00 | 2.000 | 77.949 | 28.423 | -1.240 | 28.451 | 216.50 | 299.39 |
| 220.00 | 2.000 | 78.335 | 28.402 | -1.262 | 28.430 | 217.45 | 297.00 |
| 221.00 | 2.000 | 78.719 | 28.379 | -1.250 | 28.407 | 218.48 | 294.61 |
| 222.00 | 2.000 | 79.100 | 28.357 | -1.278 | 28.386 | 219.42 | 292.23 |
| 223.00 | 2.000 | 79.479 | 28.334 | -1.308 | 28.365 | 220.36 | 289.84 |
| 224.00 | 2.000 | 79.855 | 28.311 | -1.306 | 28.341 | 221.36 | 287.45 |
| 225.00 | 2.000 | 80.228 | 28.288 | -1.342 | 28.320 | 222.28 | 285.07 |
| 226.00 | 2.000 | 80.598 | 28.264 | -1.381 | 28.298 | 223.20 | 282.68 |
| 227.00 | 2.000 | 80.966 | 28.240 | -1.388 | 28.274 | 224.18 | 280.29 |
| 228.00 | 0.000 | 81.330 | 28.215 | -1.433 | 28.251 | 225.09 | 277.91 |
| 229.00 | 0.000 | 81.413 | 28.191 | -1.298 | 28.220 | 226.36 | 277.36 |
| 230.00 | 0.000 | 81.413 | 28.169 | -1.105 | 28.191 | 227.75 | 277.36 |
| 231.00 | 0.000 | 81.413 | 28.152 | -0.911 | 28.167 | 229.15 | 277.36 |
| 232.00 | 0.000 | 81.413 | 28.138 | -0.717 | 28.147 | 230.54 | 277.36 |
| 233.00 | 0.000 | 81.413 | 28.127 | -0.523 | 28.131 | 231.93 | 277.36 |
| 234.00 | 0.000 | 81.413 | 28.119 | -0.328 | 28.121 | 233.33 | 277.36 |
| 235.00 | 0.000 | 81.413 | 28.115 | -0.134 | 28.115 | 234.73 | 277.36 |
| 236.00 | 0.000 | 81.413 | 28.114 | 0.061 | 28.114 | 236.12 | 277.36 |
| 237.00 | 0.000 | 81.490 | 28.117 | 0.231 | 28.118 | 237.47 | 276.86 |
| 238.00 | 0.000 | 81.703 | 28.120 | 0.149 | 28.120 | 238.30 | 275.45 |
| 239.00 | 0.000 | 81.703 | 28.120 | -0.001 | 28.120 | 239.00 | 275.45 |
| 240.00 | 2.000 | 81.703 | 28.119 | -0.151 | 28.119 | 239.69 | 275.45 |
| 241.00 | 2.000 | 81.703 | 28.114 | -0.301 | 28.116 | 240.38 | 275.45 |
| 242.00 | 2.000 | 81.703 | 28.107 | -0.451 | 28.111 | 241.08 | 275.45 |
| 243.00 | 0.000 | 81.703 | 28.097 | -0.601 | 28.104 | 241.77 | 275.45 |
| 244.00 | 0.000 | 81.703 | 28.085 | -0.751 | 28.095 | 242.47 | 275.45 |
| 245.00 | 0.000 | 81.973 | 28.071 | -0.833 | 28.083 | 243.30 | 273.66 |
| 246.00 | 0.000 | 82.330 | 28.055 | -0.885 | 28.069 | 244.19 | 271.27 |
| 247.00 | 0.000 | 82.685 | 28.040 | -0.906 | 28.054 | 245.15 | 268.89 |
| 248.00 | 0.000 | 83.036 | 28.023 | -0.964 | 28.039 | 246.03 | 266.50 |
| 249.00 | 0.000 | 83.385 | 28.005 | -1.025 | 28.024 | 246.90 | 264.11 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 250.00 | 0.000 | 83.731 | 27.987 | -1.056 | 28.007 | 247.84 | 261.73 |
| 251.00 | 2.000 | 84.074 | 27.968 | -1.123 | 27.990 | 248.70 | 259.34 |
| 252.00 | 2.000 | 84.415 | 27.947 | -1.194 | 27.973 | 249.55 | 256.95 |
| 253.00 | 2.000 | 84.752 | 27.926 | -1.236 | 27.953 | 250.47 | 254.57 |
| 254.00 | 2.000 | 85.087 | 27.903 | -1.312 | 27.934 | 251.31 | 252.18 |
| 255.00 | 2.000 | 85.419 | 27.880 | -1.392 | 27.914 | 252.14 | 249.79 |
| 256.00 | 2.000 | 85.479 | 27.854 | -1.536 | 27.896 | 252.84 | 249.36 |
| 257.00 | 2.000 | 85.479 | 27.825 | -1.710 | 27.878 | 253.48 | 249.36 |
| 258.00 | 2.000 | 85.479 | 27.794 | -1.884 | 27.858 | 254.12 | 249.36 |
| 259.00 | 2.000 | 85.479 | 27.759 | -2.058 | 27.835 | 254.76 | 249.36 |
| 260.00 | 2.000 | 85.479 | 27.721 | -2.231 | 27.811 | 255.40 | 249.36 |
| 261.00 | 0.000 | 85.479 | 27.681 | -2.403 | 27.785 | 256.04 | 249.36 |
| 262.00 | 0.000 | 85.479 | 27.637 | -2.574 | 27.757 | 256.68 | 249.36 |
| 263.00 | 0.000 | 85.479 | 27.590 | -2.745 | 27.727 | 257.32 | 249.36 |
| 264.00 | 0.000 | 85.479 | 27.541 | -2.915 | 27.695 | 257.96 | 249.36 |
| 265.00 | 0.000 | 85.479 | 27.488 | -3.084 | 27.661 | 258.60 | 249.36 |
| 266.00 | 0.000 | 85.479 | 27.433 | -3.252 | 27.625 | 259.24 | 249.36 |
| 267.00 | 0.000 | 85.479 | 27.374 | -3.419 | 27.587 | 259.88 | 249.35 |
| 268.00 | 0.000 | 85.479 | 27.313 | -3.585 | 27.547 | 260.52 | 249.35 |
| 269.00 | 0.000 | 85.479 | 27.248 | -3.749 | 27.505 | 261.16 | 249.36 |
| 270.00 | 2.000 | 85.479 | 27.181 | -3.913 | 27.462 | 261.81 | 249.36 |
| 271.00 | 2.000 | 85.479 | 27.111 | -4.076 | 27.416 | 262.45 | 249.36 |
| 272.00 | 2.000 | 85.479 | 27.039 | -4.237 | 27.369 | 263.09 | 249.36 |
| 273.00 | 2.000 | 85.479 | 26.963 | -4.397 | 27.319 | 263.74 | 249.36 |
| 274.00 | 2.000 | 85.479 | 26.885 | -4.555 | 27.268 | 264.38 | 249.36 |
| 275.00 | 2.000 | 85.479 | 26.804 | -4.713 | 27.215 | 265.03 | 249.36 |
| 276.00 | 2.000 | 85.580 | 26.720 | -4.837 | 27.154 | 265.74 | 248.62 |
| 277.00 | 2.000 | 85.907 | 26.635 | -4.901 | 27.082 | 266.57 | 246.24 |
| 278.00 | 2.000 | 86.232 | 26.549 | -4.937 | 27.004 | 267.46 | 243.85 |
| 279.00 | 2.000 | 86.553 | 26.461 | -5.005 | 26.931 | 268.29 | 241.46 |
| 280.00 | 2.000 | 86.714 | 26.373 | -5.104 | 26.863 | 269.04 | 240.26 |
| 281.00 | 2.000 | 86.714 | 26.282 | -5.263 | 26.804 | 269.67 | 240.26 |
| 282.00 | 2.000 | 86.714 | 26.189 | -5.420 | 26.744 | 270.31 | 240.26 |
| 283.00 | 2.000 | 86.714 | 26.092 | -5.576 | 26.681 | 270.94 | 240.26 |
| 284.00 | 2.000 | 86.714 | 25.993 | -5.729 | 26.617 | 271.57 | 240.26 |
| 285.00 | 2.000 | 86.714 | 25.891 | -5.881 | 26.551 | 272.20 | 240.26 |
| 286.00 | 2.000 | 86.714 | 25.787 | -6.031 | 26.483 | 272.83 | 240.26 |
| 287.00 | 2.000 | 86.714 | 25.680 | -6.180 | 26.413 | 273.47 | 240.26 |
| 288.00 | 0.000 | 86.714 | 25.571 | -6.326 | 26.341 | 274.10 | 240.26 |
| 289.00 | 0.000 | 86.560 | 25.459 | -6.452 | 26.264 | 274.78 | 241.42 |
| 290.00 | 0.000 | 86.238 | 25.346 | -6.471 | 26.159 | 275.68 | 243.80 |
| 291.00 | 0.000 | 85.914 | 25.232 | -6.544 | 26.067 | 276.46 | 246.19 |
| 292.00 | 0.000 | 85.587 | 25.118 | -6.551 | 25.959 | 277.38 | 248.58 |
| 293.00 | 0.000 | 85.256 | 25.004 | -6.552 | 25.848 | 278.31 | 250.96 |
| 294.00 | 0.000 | 84.923 | 24.889 | -6.610 | 25.752 | 279.13 | 253.35 |
| 295.00 | 0.000 | 84.587 | 24.774 | -6.600 | 25.638 | 280.08 | 255.74 |
| 296.00 | 0.000 | 84.248 | 24.659 | -6.583 | 25.523 | 281.05 | 258.12 |
| 297.00 | 0.000 | 83.907 | 24.544 | -6.625 | 25.423 | 281.89 | 260.51 |
| 298.00 | 0.000 | 83.562 | 24.429 | -6.598 | 25.304 | 282.89 | 262.89 |
| 299.00 | 0.000 | 83.215 | 24.314 | -6.564 | 25.184 | 283.89 | 265.28 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 300.00 | 0.000 | 82.868 | 24.199 | -6.590 | 25.081 | 284.76 | 267.64 |
| 301.00 | 0.000 | 82.868 | 24.087 | -6.348 | 24.909 | 286.23 | 267.64 |
| 302.00 | 0.000 | 82.868 | 23.979 | -6.104 | 24.744 | 287.72 | 267.64 |
| 303.00 | 0.000 | 82.868 | 23.875 | -5.857 | 24.583 | 289.21 | 267.64 |
| 304.00 | 0.000 | 82.868 | 23.776 | -5.609 | 24.428 | 290.72 | 267.64 |
| 305.00 | 0.000 | 82.868 | 23.681 | -5.360 | 24.279 | 292.25 | 267.64 |
| 306.00 | 0.000 | 82.868 | 23.590 | -5.108 | 24.136 | 293.78 | 267.64 |
| 307.00 | 0.000 | 82.868 | 23.503 | -4.855 | 24.000 | 295.33 | 267.64 |
| 308.00 | 0.000 | 82.868 | 23.421 | -4.601 | 23.869 | 296.88 | 267.64 |
| 309.00 | 0.000 | 82.710 | 23.343 | -4.411 | 23.757 | 298.30 | 268.72 |
| 310.00 | 0.000 | 82.355 | 23.267 | -4.350 | 23.670 | 299.41 | 271.11 |
| 311.00 | 0.000 | 81.998 | 23.191 | -4.351 | 23.595 | 300.37 | 273.49 |
| 312.00 | 0.000 | 81.642 | 23.116 | -4.279 | 23.508 | 301.51 | 275.85 |
| 313.00 | 0.000 | 81.621 | 23.041 | -4.314 | 23.441 | 302.39 | 275.99 |
| 314.00 | 0.000 | 81.621 | 22.964 | -4.374 | 23.377 | 303.21 | 275.99 |
| 315.00 | 2.000 | 81.622 | 22.887 | -4.433 | 23.312 | 304.04 | 275.99 |
| 316.00 | 2.000 | 81.622 | 22.809 | -4.491 | 23.247 | 304.86 | 275.99 |
| 317.00 | 2.000 | 81.622 | 22.729 | -4.547 | 23.180 | 305.69 | 275.99 |
| 318.00 | 0.000 | 81.622 | 22.649 | -4.602 | 23.112 | 306.51 | 275.99 |
| 319.00 | 0.000 | 81.516 | 22.568 | -4.635 | 23.039 | 307.39 | 276.69 |
| 320.00 | 0.000 | 81.152 | 22.488 | -4.547 | 22.943 | 308.57 | 279.08 |
| 321.00 | 0.000 | 80.786 | 22.408 | -4.524 | 22.860 | 309.58 | 281.46 |
| 322.00 | 0.000 | 80.417 | 22.330 | -4.427 | 22.765 | 310.79 | 283.85 |
| 323.00 | 0.000 | 80.045 | 22.254 | -4.324 | 22.670 | 312.00 | 286.24 |
| 324.00 | 0.000 | 79.671 | 22.178 | -4.288 | 22.589 | 313.06 | 288.62 |
| 325.00 | 0.000 | 79.294 | 22.104 | -4.176 | 22.495 | 314.30 | 291.01 |
| 326.00 | 0.000 | 78.914 | 22.032 | -4.059 | 22.403 | 315.56 | 293.40 |
| 327.00 | 0.000 | 78.531 | 21.961 | -4.009 | 22.324 | 316.65 | 295.78 |
| 328.00 | 0.000 | 78.146 | 21.893 | -3.883 | 22.234 | 317.94 | 298.17 |
| 329.00 | 0.000 | 77.758 | 21.826 | -3.752 | 22.146 | 319.24 | 300.56 |
| 330.00 | 0.000 | 77.564 | 21.760 | -3.679 | 22.069 | 320.40 | 301.75 |
| 331.00 | 0.000 | 77.953 | 21.697 | -3.581 | 21.990 | 321.63 | 299.36 |
| 332.00 | 0.000 | 78.339 | 21.635 | -3.449 | 21.908 | 322.94 | 296.98 |
| 333.00 | 0.000 | 78.723 | 21.575 | -3.355 | 21.834 | 324.16 | 294.59 |
| 334.00 | 0.000 | 79.104 | 21.517 | -3.263 | 21.763 | 325.38 | 292.20 |
| 335.00 | 0.000 | 79.483 | 21.461 | -3.138 | 21.689 | 326.68 | 289.82 |
| 336.00 | 0.000 | 79.858 | 21.406 | -3.051 | 21.622 | 327.89 | 287.43 |
| 337.00 | 0.000 | 80.231 | 21.353 | -2.967 | 21.558 | 329.09 | 285.04 |
| 338.00 | 0.000 | 80.602 | 21.302 | -2.850 | 21.492 | 330.38 | 282.66 |
| 339.00 | 0.000 | 80.813 | 21.252 | -2.839 | 21.441 | 331.39 | 281.29 |
| 340.00 | 0.000 | 80.813 | 21.203 | -2.862 | 21.395 | 332.31 | 281.29 |
| 341.00 | 0.000 | 80.813 | 21.153 | -2.885 | 21.348 | 333.23 | 281.29 |
| 342.00 | 0.000 | 80.813 | 21.102 | -2.907 | 21.301 | 334.15 | 281.29 |
| 343.00 | 0.000 | 80.813 | 21.051 | -2.928 | 21.254 | 335.08 | 281.29 |
| 344.00 | 0.000 | 80.813 | 21.000 | -2.948 | 21.206 | 336.01 | 281.29 |
| 345.00 | 0.000 | 80.813 | 20.948 | -2.967 | 21.157 | 336.94 | 281.29 |
| 346.00 | 0.000 | 80.813 | 20.896 | -2.986 | 21.108 | 337.87 | 281.29 |
| 347.00 | 0.000 | 80.813 | 20.844 | -3.003 | 21.059 | 338.80 | 281.29 |
| 348.00 | 0.000 | 80.535 | 20.792 | -2.928 | 20.997 | 339.98 | 283.09 |
| 349.00 | 0.000 | 80.164 | 20.741 | -2.800 | 20.930 | 341.31 | 285.47 |

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| Angle | Wall t | Delta | Pb,x' | Pb,y' | Pb,max | AngleMax | A tension |
|---|---|---|---|---|---|---|---|
| 350.00 | 0.000 | 79.791 | 20.693 | -2.739 | 20.873 | 342.46 | 287.86 |
| 351.00 | 0.000 | 79.418 | 20.646 | -2.602 | 20.810 | 343.81 | 290.22 |
| 352.00 | 0.000 | 79.393 | 20.601 | -2.577 | 20.761 | 344.87 | 290.38 |
| 353.00 | 0.000 | 79.393 | 20.555 | -2.580 | 20.717 | 345.85 | 290.38 |
| 354.00 | 0.000 | 79.393 | 20.510 | -2.581 | 20.672 | 346.83 | 290.38 |
| 355.00 | 0.000 | 79.393 | 20.464 | -2.582 | 20.627 | 347.81 | 290.38 |
| 356.00 | 0.000 | 79.393 | 20.419 | -2.582 | 20.582 | 348.79 | 290.38 |
| 357.00 | 0.000 | 79.393 | 20.373 | -2.582 | 20.536 | 349.78 | 290.38 |
| 358.00 | 0.000 | 79.603 | 20.328 | -2.510 | 20.482 | 350.96 | 289.05 |
| 359.00 | 0.000 | 79.978 | 20.285 | -2.404 | 20.427 | 352.24 | 286.67 |

MINIMUM STRESS (Pb,x') = 19.835 AT 20.00 DEGREES
MINIMUM TOTAL STRESS (Pb,max) = 19.835 AT 20.10 DEGREES

# APPENDIX B

## Linear Elastic Fracture Mechanics Evaluation

In order to evaluate welds H3 and H4 utilizing linear elastic fracture mechanics techniques (LEFM), the procedures outlined in BWRVIP-01 [3] will be used. For an infinite number of equally spaced through-wall flaws, the applied stress intensity factor can be calculated from the following:

$$K = G_m \sigma \sqrt{W \tan(\pi a / W)}$$

where:

| | | | |
|---|---|---|---|
| | $K$ | = | applied stress intensity factor |
| | $\sigma$ | = | applied tension stress, i.e., the sum of the bending moment and pressure differential stresses from Table 1 |
| | $W$ | = | distance between mid-points of two adjacent ligaments |
| | $a$ | = | one-half the length of the through-wall flaw |
| | $G_m$ | = | curvature correction factor |

From Appendix A, the longest through-wall flaw for weld H3 is 54.31°, and the shortest adjacent ligament to this flaw is 9.61°. From Rooke [8], for a value of $a/\sqrt{Rt}$ equal to 3.39, $G_m$ equals 1.78. Therefore, the applied stress intensity factor for weld H3 for faulted conditions is:

$$K = (1.78)(1.13\,\text{ksi})\sqrt{(114.42'')\tan[(\pi)(27.155°)/63.92°]}$$
$$= 43.9\,\text{ksi}\sqrt{\text{in}}$$

For weld H4, the second longest through-wall flaw is 53.74°, and the shortest adjacent ligament to this flaw is 2.89°. For a value of $a/\sqrt{Rt}$ equal to 3.36, $G_m$ equals 1.78. Therefore, the applied stress intensity factor for weld H4 for upset conditions is:

$$K = (1.78)(0.72\,\text{ksi})\sqrt{(101.37'')\tan[(\pi)(26.87°)/56.63°]}$$
$$= 45.5\,\text{ksi}\sqrt{\text{in}}$$

For the longest through-wall flaw in weld H4 (56.91°), the shortest adjacent ligament to this flaw is 8.56°. For $a/\sqrt{Rt}$ equal to 3.56, $G_m$ equals 1.82. Therefore, the applied stress intensity factor for weld H4 for upset conditions is:

$$K = (1.82)(0.72\,\text{ksi})\sqrt{(117.19'')\tan[(\pi)(28.455°)/65.47°]}$$
$$= 31.1\,\text{ksi}\sqrt{\text{in}}$$

# APPENDIX C

## Evaluation of Crack Growth Rates

This appendix contains ultrasonic examination (UT) results from the 1995 outage (3R10) of Peach Bottom, Unit 3 and the 1999 outage (3R12). The purpose of this appendix is to evaluate the data from these two successive inspections, and determine an IGSCC growth rate in the length direction. However, some discussion is first needed relative to the 3R10 data, and why it is different than that reported earlier [1].

The UT data taken in 1995 was reanalyzed in 1999 utilizing an upgraded data analysis software package [9]. Comparing the original data analysis results with those determined in 1999, there were some differences noted. The following is a brief explanation for the differences observed.

Two primary factors, computer software and personnel, contributed to the changes which were observed. These factors are each discussed in more detail below.

**Computer Software** – During the time period between the 1995 3R10 outage and the 1999 data reanalysis, GE Nuclear Energy had upgraded their analysis software from the "SMART 2000" to the currently used "Tomo-View" program. This software enhances and refines the data presentation used by the data analyst in more accurately characterizing specific indications. The new software presentation permits the analyst to more easily separate closely spaced or overlapping indications, and to better differentiate between service-induced cracking and non-relevant, original fabrication indications.

**Personnel** – Different Level III UT data analysts performed the two data evaluations. It must be emphasized that UT data analysis is not a black and white issue. To some extent the process is subjective, and an individual's evaluation "style", as well as personal experiences and techniques, affect the evaluation. These human factors contribute to subtle, but distinct, variations in the final product.

In summary, the evaluations performed in 1995 and 1999, when taken as a whole, reveal a very close correlation. Considering the changes in computer software and personnel, even more significant changes than those observed would not have been unexpected.

With that explanation, Tables C-1 (H3) and C-2 (H4) document the 3R10 data determined utilizing the upgrade software system and that from 3R12. Based upon a comparison of the two data sets, an average crack growth rate for this four year period can be determined. Reviewing the data, one observes that the use of $5 \times 10^{-5}$ inches/hour for a crack growth rate bounds that based upon actual field data. Therefore, the use of this crack growth rate for evaluation of the Peach Bottom, Unit 3 shroud is acceptable.

Table C-1
Weld H3 Crack Growth Rate

| 3R10 Flaw Data [9] | | | | 3R12 Flaw Data [4] | | | Length[1] Increase (inches) | Length[2] CGR (in./hr.) |
|---|---|---|---|---|---|---|---|---|
| Indication Number | Starting Azimuth (degrees) | Ending Azimuth (degrees) | Length (degrees) | Starting Azimuth (degrees) | Ending Azimuth (degrees) | Length (degrees) | | |
| 1 | 9.20 | 13.00 | 3.80 | 9.56 | 17.26 | 7.70 | 7.05 | 1.10E-04 |
| 2 | 54.20 | 62.45 | 8.25 | 53.66 | 63.71 | 10.05 | 3.25 | 5.08E-05 |
| 3 | 104.70 | 106.35 | 1.65 | 104.51 | 110.91 | 6.40 | 1.63 | 2.55E-05 |
| 4 | 106.90 | 110.20 | 3.30 | | | | | |
| 5 | 144.20 | 172.95 | 28.75 | 143.66 | 166.41 | 22.75 | -10.85 | NONE |
| 6 | 203.21 | 232.65 | 29.44 | 203.11 | 234.21 | 31.10 | 3.00 | 4.69E-05 |
| 7 | 240.92 | 250.32 | 9.40 | 240.06 | 251.96 | 11.90 | 4.52 | 7.06E-05 |
| 8 | 283.68 | 284.80 | 1.12 | 283.96 | 285.61 | 1.65 | 0.96 | 1.50E-05 |
| 9 | 298.68 | 309.20 | 10.52 | 299.01 | 327.01 | 28.00 | 2.46 | 3.84E-05 |
| 10 | 310.88 | 325.32 | 14.44 | | | | | |
| 11 | 348.72 | 353.77 | 5.05 | Uninspected Region | | | Uninspected Region | |
| | | | | | | | Average[3] Crack Growth | 4.47E-05 |

Notes:
1. Conservatively based upon the shroud outside radius.
2. Based upon 32,000 hours.
3. The average crack growth rate equals the total length increase (negative growth is set to 0.00") divided by the number of entries and 64,000.

Table C-2
Weld H4 Crack Growth Rate

| 3R10 Flaw Data [9] | | | | 3R12 Flaw Data [4] | | | Length[2] Increase (inches) | Length[3] CGR (in./hr.) |
|---|---|---|---|---|---|---|---|---|
| Indication[1] Number | Starting Azimuth (degrees) | Ending Azimuth (degrees) | Length (degrees) | Starting Azimuth (degrees) | Ending Azimuth (degrees) | Length (degrees) | | |
| 1 (L) | 10.32 | 11.44 | 1.12 | | | | | |
| 2 (U) | 23.70 | 26.50 | 2.80 | 22.06 | 29.48 | 7.42 | 8.35 | 1.30E-04 |
| 3 (L) | 24.76 | 25.88 | 1.12 | 25.11 | 30.06 | 4.95 | 1.03 | 1.61E-05 |
| 4 (L) | 27.00 | 28.68 | 1.68 | | | | | |
| 5 (U) | 28.18 | 29.30 | 1.12 | | | | | |
| (L) | | | | 32.61 | 34.46 | 1.85 | - | - |
| 6 (U) | 36.02 | 37.14 | 1.12 | 34.31 | 36.51 | 2.20 | 1.95 | 3.05E-05 |
| 7 (L) | 42.00 | 45.36 | 3.36 | 42.31 | 46.71 | 4.40 | 1.88 | 2.94E-05 |
| 8 (U) | 47.66 | 51.58 | 3.92 | 46.01 | 51.51 | 5.50 | 2.86 | 4.47E-05 |
| 9 (L) | 49.28 | 54.32 | 5.04 | 48.71 | 54.76 | 6.05 | 1.83 | 2.86E-05 |
| 10 (L) | 55.32 | 57.56 | 2.24 | 55.11 | 58.96 | 3.85 | 2.91 | 4.55E-05 |
| 11 (U) | 62.10 | 67.70 | 5.60 | 61.01 | 68.71 | 7.70 | 3.80 | 5.94E-05 |
| 12 (L) | 63.16 | 64.28 | 1.12 | 62.61 | 65.36 | 2.75 | 2.95 | 4.61E-05 |
| 13 (U) | 72.06 | 73.18 | 1.12 | 71.81 | 74.01 | 2.20 | 1.95 | 3.05E-05 |
| 14 (U) | 83.70 | 84.82 | 1.12 | | | | | |
| 15 (L) | 96.52 | 99.32 | 2.80 | 97.01 | 99.21 | 2.20 | -1.08 | NONE |
| 16 (U) | 113.26 | 114.26 | 1.00 | 110.96 | 115.36 | 4.40 | 6.15 | 9.61E-05 |
| 17 (U) | 124.34 | 126.02 | 1.68 | 122.11 | 126.51 | 4.40 | 4.92 | 7.69E-05 |
| 18 (L) | 135.36 | 150.36 | 15.00 | 134.51 | 153.36 | 18.85 | 6.96 | 1.09E-04 |
| 19 (U) | 201.02 | 205.38 | 4.36 | 199.31 | 206.29 | 6.98 | 4.74 | 7.41E-05 |
| 20 (L) | 202.08 | 204.32 | 2.24 | 202.01 | 204.76 | 2.75 | 0.92 | 1.44E-05 |
| 21 (U) | 210.98 | 213.22 | 2.24 | 210.14 | 213.99 | 3.85 | 2.91 | 4.55E-05 |

Table C-2 (concluded)
Weld H4 Crack Growth Rate

| 3R10 Flaw Data [9] | | | | 3R12 Flaw Data [4] | | | Length[2] Increase (inches) | Length[3] CGR (in./hr.) |
|---|---|---|---|---|---|---|---|---|
| Indication[1] Number | Starting Azimuth (degrees) | Ending Azimuth (degrees) | Length (degrees) | Starting Azimuth (degrees) | Ending Azimuth (degrees) | Length (degrees) | | |
| 22 (U) | 216.02 | 218.82 | 2.80 | | | | | |
| 23 (L) | 230.40 | 232.08 | 1.68 | 229.82 | 230.92 | 1.10 | -1.05 | NONE |
| 24 (U) | 233.70 | 235.38 | 1.68 | 233.51 | 236.81 | 3.30 | 2.93 | 4.58E-05 |
| 25 (L) | 244.84 | 247.08 | 2.24 | 244.26 | 248.71 | 4.45 | 3.99 | 6.23E-05 |
| 26 (U) | 263.70 | 265.38 | 1.68 | 263.16 | 266.46 | 3.30 | 2.93 | 4.58E-05 |
| 27 (L) | 289.96 | 293.76 | 3.80 | 290.36 | 297.51 | 7.15 | -0.57 | NONE |
| 28 (L) | 294.32 | 295.44 | 1.12 | | | | | |
| 29 (L) | 296.50 | 297.68 | 1.18 | | | | | |
| 30 (U) | 296.50 | 297.62 | 1.12 | 295.16 | 298.46 | 3.30 | 3.94 | 6.16E-05 |
| 31 (L) | 298.24 | 301.60 | 3.36 | 297.86 | 303.36 | 5.50 | 3.87 | 6.05E-05 |
| 32 (L) | 306.08 | 308.76 | 2.68 | 307.01 | 311.41 | 4.40 | 3.11 | 4.86E-05 |
| 33 (L) | 318.28 | 319.40 | 1.12 | 319.26 | 322.01 | 2.75 | 2.95 | 4.61E-05 |
| 34 (L) | 325.44 | 326.56 | 1.12 | 326.76 | 345.26 | 18.50 | 1.96 | 3.06E-05 |
| 34a (L) | 327.12 | 329.36 | 2.24 | | | | | |
| 34b (L) | 329.36 | 339.18 | 9.82 | | | | | |
| 35 (L) | 340.30 | 341.98 | 1.68 | | | | | |
| 36 (U) | 325.38 | 327.06 | 1.68 | 324.81 | 326.46 | 1.65 | -0.05 | NONE |
| | | | | | | | Average[4] Crack Growth | 4.56E-05 |

Notes:
1. "U" is upper, and "L" is lower.
2. Conservatively based upon the shroud outside radius.
3. Based upon 32,000 hours.
4. The average crack growth rate equals the total length increase (negative growth is set to 0.00") divided by the number of entries and 64,000.