ORGANIZATION: BABCOCK & WILCOX, A MCDERMOTT CO.
UTILITY POWER GENERATION DIVISION
LYNCHBURG, VIRGINIA

REPORT NO.: 99900400/85-01	INSPECTION DATE(S): 2/4-8/85	INSPECTION ON-SITE HOURS: 210

CORRESPONDENCE ADDRESS: Babcock & Wilcox, A McDermott Co.
Utility Power Generation Division
ATTN: Mr. D. E. Guilbert, Vice President and General Manager
Post Office Box 1260
Lynchburg, Virginia 24505

ORGANIZATIONAL CONTACT: Mr. T. Stevens, Nuclear QA Manager
TELEPHONE NUMBER: (804) 385-3138

PRINCIPAL PRODUCT: Nuclear steam supply systems and nuclear cores.

NUCLEAR INDUSTRY ACTIVITY: The total effort committed to providing domestic nuclear steam systems and nuclear cores is approximately half of the Utility Power Generation Division. Principal activities include the design and procurement of these projects: Bellefonte, Units 1 and 2; and Washington Public Power Supply System, Unit 1, and providing engineering services under contracts and fuel reload contracts.

ASSIGNED INSPECTOR: Robert Pettis Jr 6-24-85
for P. M. Sears, Special Projects Inspection Section (SPIS) Date

OTHER INSPECTOR(S): W. Bannister (EG&G), W. Shier (BNL), B. Tollman (EG&G), J. Cozzual (EG&G), R. Harris (EG&G)

APPROVED BY: R. P. McIntyre 6/24/85
for J. W. Craig, Chief, SPIS, Vendor Program Branch Date

INSPECTION BASES AND SCOPE:

A. BASES: 10 CFR 50 Appendix B and Topical Report BAW-10096A.

B. SCOPE: (1) Ascertain the status of previous inspection findings; and (2) Inspect the implementation of B&W's QA program.

PLANT SITE APPLICABILITY: Bellefonte (50-438, 50-439) and WNP (50-460)

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REPORT NO.: 99900400/85-01	INSPECTION RESULTS:	PAGE 2 of 12

A. VIOLATIONS:

None.

B. NONCONFORMANCES:

1. Contrary to Criterion XVI of 10 CFR 50 Appendix B, and B&W QA Topical Report BAW-10096A, Section 16, B&W does not have in place procedures requiring prompt evaluation of Potential Safety Concerns (PSC). For example, PSC 5-83, concerning the operability of the safety-related high pressure injection pumps during transient conditions, not included in the equipment specification, has not been evaluated in a timely manner such that corrective action, if necessary, could be implemented.

2. Contrary to Criterion VII of Appendix B to 10 CFR 50, B&W failed to ensure that adequate control measures over subcontractors were in place, resulting in certain components (Lambda Power Supplies) not being of adequate configuration or quality to assure (a) the function of the sub-supplier's product or (b) the proper output voltage characteristics for a certain range of input power and environmental conditions that are important to the B&W system function.

3. Contrary to the B&W Quality Assurance Program NPG-0402-01, the calculation of reactor protection system setpoints, as demonstrated in calculation number 32-1150653-00, Oconee 1, Cycle 9, RPS Set Point Calculations, do not contain information to demonstrate the accuracy of the noncertified setpoint calculations (personal computer computations). Thus, the calculations are found to be in nonconformance with the above requirements regarding the use and verification of safety-related, noncertified computer calculations.

4. Contrary to Paragraph VII.I. of B&W Administrative Manual Procedure NPG-0902-06, Rev. 9, B&W did not perform sufficient testing of the T3PIPE computer code to give reasonable assurance that the stress indices used in the ASME code Section III piping equations and, therefore, the results of these equations are correct.

C. UNRESOLVED ITEMS:

Potential Safety Concern PSC 17-83, "Overcooling Events at Low Reactor Power," identified a class of steam generator secondary side transients that, when initiated from low power levels, could produce a relatively high peak power without a reactor trip and thus, lead to violation of technical specifications. These transients, including excessive feed-

water addition during spurious turbine bypass or governor valve opening, are considered "moderate frequency events" by B&W. This PSC is applicable to all operating plants of the 177 fuel assembly (FA) design.

This PSC was entered into the PSC file on June 30, 1983. An analysis performed in August 1983 and included in the PSC file, indicated that a slow overfeed transient to both steam generators "can produce unacceptable minimum (departure from nucleate boiling ratio) DNBR results" and thus violate the technical specification for the 177 FA plants.

B&W stated that additional analyses have indicated that the overfeed transient is not as severe as the original analysis indicated. However, this assessment is based on results obtained from a training simulator and may have included reactor trip functions that are not safety grade and not normally included in safety analyses. B&W also stated that a mechanism to produce an overfeed transient of the type that could exceed technical specification limits has not been identified. However, no documentation of analyses supporting this statement was available.

The inspector stated that the analyses performed with the training simulator are considered "best estimate" calculations and not appropriate for the evaluation of technical specification limits. Furthermore, the use of a non-safety grade trip function is also inappropriate. It was also noted that this PSC has remained open for a considerable time period (approximately 18 months) and dealt with a serious concern that could be considered reportable under 10 CFR 21. This item relates to Nonconformance B.1.

This item and the associated analyses will be subject to a detailed review during a future inspection.

D. STATUS OF PREVIOUS INSPECTION FINDINGS:

1. (Closed) Nonconformance (83-03): PSC 24-83 identified a concern that could have affected the technical specifications for all plants with B&W Model 177 fuel assemblies. This PSC involved the analyses of the potential for fuel damage during accident situations.

   B&W has completed the required analysis and the results indicate that, using a new methodology, the current operational and safety limits provide adequate margin to the fuel damage criteria and technical specification changes are not required. This PSC was closed in January 1983. The nonconformance is considered closed.

2. (Open) Nonconformance (83-03): This nonconformance concerned three computer code certification files for the CRAFT2 code that were reviewed by the supervisor of the originator.

B&W QA procedure NPG 0403-11, "Technical Document Signatures," is being revised (Rev. 12) to require that Unit Managers document that the reviewer was properly independent. The Unit Manager will also be required to document the justification for reviewers who are not sufficiently independent. During this inspection a draft revised procedure was reviewed; however, it will not be issued until March 1, 1985. Thus, this item will be reviewed during a future inspection.

3. (Open) Nonconformance (84-03): This nonconformance was concerned with an uncertified computer code (the CORE code) that was used in a safety-related analysis.

The documentation required for the certification of the CORE computer code has been completed and is currently under review.

As part of the preventive actions associated with this nonconformance, B&W has prepared a list of uncertified computer codes used for safety-related calculations in the Engineering Department. In addition, QA Procedure NPG-0902-06, "Computer Program Development and Certification" has been revised to preclude the certification exemption for any computer code that performs safety-related calculations. This procedure is scheduled to be issued on March 1, 1985. This item will be reviewed during the next inspection.

4. (Closed) Nonconformance (84-03): Two modeling additions to the small break version of the CRAFT2 code (i.e., non-equilibrium pressurizer and primary metal heat structure model) were not properly verified.

A review of the CRAFT2 certification file indicated that the two models have been properly verified against hand calculations independent of the CRAFT2 code and then tested for operability with the CRAFT2 code structure. In addition, a training session was held for all computer code responsible engineers to emphasize the need for a clear description of test cases and verification records in code certification files. This nonconformance is considered closed.

5. (Closed) Nonconformance (84-03): This nonconformance was concerned with the incomplete explanation of the adequacy of agreement with experimental data for a test problem associated with a steam generator modification in the CRAFT2 computer code.

The certification file for CRAFT2 computer code was reviewed and an adequate explanation of the comparison of CRAFT2 calculation with Alliance Research Center (ARC) Test 13 for a once-through steam generator was observed. As part of the preventive actions B&W has implemented conceving this nonconformance, a training session was held for all computer code responsible engineers to emphasize the need for clear identification and explanation of verification calculations.

This nonconformance is considered closed.

6. (Open) Nonconformance (84-03): This item concerned the description of computer code limitations in computer program manuals.

   B&W QA procedure NPG 903-03, "Development and Control of Computer Program Manuals" is being revised to reflect changes in the computer code limitation description. This revision (Rev. 10) is scheduled to be issued on March 1, 1985 and this item will be reviewed during a future inspection.

E. OTHER FINDINGS OR COMMENTS:

1. Potential Safety Concerns

   B&W QA Procedure NPG-1707-01, "Processing Safety Concerns," requires that records be established that document any concern which has been discovered during design, analysis, fabrication, installation, testing, inspection, training and operations activities of a nuclear power plant and which has or may have safety implications. These records are identified as PSCs prior to the completion of the evaluation of the need to report the item to the NRC per 10 CFR 21. As part of this inspection, the PSC files were reviewed for the period of January 1983 through January 1985 and the findings are described below.

   a. PSC 9-83, TACO Code Error: This PSC concerns a computer code error that was identified in the TACO2 computer code. The TACO2 code is used to calculate the fuel rod internal pressure that is used in loss of coolant accident analyses. This item was entered into the PSC file in April 1983 and closed on September 20, 1983.

   b. PSC 3-83, Effect of Non-condensibles During Small Break Loss of Coolant Accident (SBLOCA): This PSC concerns the possibility that noncondensible gases generated in the primary system following SBLOCA could cause erroneous instrumentation readings and indicate a higher than actual degree of primary subcooling, thus

delaying actuation of various safety systems (i.e., high pressure injection and auxiliary feedwater). This PSC was more significant for plants with the 205 fuel assembly (FA) design (Bellefonte 1 and 2) than the 177 FA plants due to higher subcooled margin available in the 177 FA designs. This item was entered into PSC the file in January 1983 and closed in November 1983.

c. PSC 5-83, HPI Pump Thermal Shock/Thermal Stress: This PSC concerns a potential thermal stress problem with high pressure injection (HPI) and makeup (MU) water systems following activation of the HPI pumps. The concern is applicable to all B&W plants. This item was entered into the PSC file in January 1984 and has not been closed.

d. PSC 1-84, Excessive OTSG Steam Velocities: This PSC concerns the potential for excessive steam exit velocities from the steam generator during transient conditions and the possibility of flow induced vibrations (FIV) resulting in steam generator tube ruptures. The item was entered into the PSC file in January 1984 and has not been closed.

e. PSC 17-83, Overcooling Events at Low Reactor Power: This PSC concerns certain secondary side steam generator transients (e.g., excessive feedwater addition and spurions turbine bypass or governor valve opening) that can lead to high reactor power levels without reactor trip when initiated from low power levels. This situation could result in exceeding departure from nucleate boiling ratio (DNBR) safety limits and thus, violate the technical specification for operating B&W plants. This PSC is applicable to all operating plants with the 177 FA design.

This item was entered into the file on June 30, 1983 and has not been closed. A preliminary analysis was documented which indicated that a slow overfeed transient to both steam generators would not generate a reactor trip and possibly exceed DNBR safety limits. During this inspection, B&W stated that additional analyses have indicated that the overfeed transient was not as severe as originally indicated. However, the inspector stated that the documentation of the additional analyses was not sufficient to support this conclusion. For example, the additional analyses were performed using a training simulator that may have taken credit for a non-safety grade trip function. The training simulator is considered a "best estimate" analytical method and is not normally considered applicable safety analyses supporting

technical specification limits. Furthermore, non-safety grade protective functions are not included in safety analyses unless they affect the calculation in an adverse manner.

B&W also stated that a mechanism to produce an overfeed event that exceeded technical specification limits has not been identified. However, documentation of analysis to support this statement was not available.

One nonconformance (see Section B.3 above) was identified in this part of the inspection.

f. PSC 18-83, Unanswered Questions and Problems Identified as Part of a Design Review Board (DRB) Meeting on TVA-Bellefonte in August 1983: This PSC concerned questions raised during a DRB meeting held in August 1983. A PSC was received by B&W Licensing on September 9, 1983. In December of 1984, B&W determined that the PSC did not represent a reportable item based on the fact that all of the questions and problem areas were identified as part of the normal design process, which includes a DRB review of the design. A major hardware redesign and rework program was scheduled and implemented to resolve this PSC.

g. PSC 22-83, Potential Safety Concern Relating to Certification of Computer Programs: This PSC concerns procurement of computer programs from vendors without certification for nuclear use, and subsequent use by B&W customers as commerical-grade items (i.e., not certified for safety-related application). During the period of January 1982 through October 1983, GPU Nuclear (GPU) made use of a number of computer programs in the B&W Computer Sciences Library under the impression that these programs were certified for nuclear use when, in actuality, the programs were not so certified. This condition was discovered by GPU during an audit of B&W Computer Services on October 19, 1983.

B&W issued a preliminary report of safety concern on October 25, 1983. Subsequently, however, in January 1985, B&W concluded that the concern did not constitute a substantial safety hazard or reportable condition under 10 CFR 21. Corrective actions by B&W included adding several of the programs in question (ANSYS, GT STRUD, and ADL PIPE) to B&W's Quality Assured Library, thus qualifying their use for safety-related work. Also, error notices have been sent to GPU so that they can determine the extent to which program errors may have affected the results of calculations

which were performed. This item was entered into the PSC file in October 1983 and closed in January 1985.

h. PSC 23-83, Lambda Power Supplies: This PSC concerns numerous failures the power supplies manufactured by Lambda Power Supplies which have been reported using B&W site Problem Reports (SRPs). B&W's investigation of the Lambda Power Supplies problems revealed a generic quality problem of varying configuration and poor workmanship. B&W's failure to ensure that adequate controls and checks were placed on the subcontractor of procured materials resulted in Nonconformance B.2.

Hardware problems were identified in October 1983 in site Problem Report SPR 13-16-337. System reliability, functional ability, and/or performance characteristics have been shown to be affected by the lack of capacitor "C26" or diode "CR6" or both. The fact that the Lambda Power Supplies components are a continuing problem is evidenced by Bellefonte Unit 1 Site Problem Reports SPR-13-15-0683, dated November 9, 1984, and SPR 13-15-700, dated December 20, 1984. This problem is also evident in Bellefonte Unit 2 Site Problem Report SPR 13-16-33, Revision 5, dated October 26, 1984.

Lambda stated on November 4, 1983, that the power supplies should have both the capacitor and the diode to ensure proper operation. However, specific problems being identified a year later include: C26 capacitor missing; C26 capacitor polarity reversed; CR6 diode missing; corroded transformer.

B&W's emphasis has been primarily on hardware correction since the PSC was opened on November 11, 1983, A "front end" meeting was held on August 22, 1984, after timeliness was addressed by the NRC (NRC Inspection Report 99900400/84-03). On October 26, 1984, B&W determined that this PSC was not reportable based on an analysis that determined that the Bellefonte reactors will be shut down upon failure of the power supplies. However, these shutdowns also will cause thermal transients which are not desirable. A B&W Site Instruction is being sent to TVA Bellefonte sites to correct Lambda power supplies that do not have the capacitor and the diode properly installed.

i. PSC 7-78 Nonconservative Analysis of Neutron Flux as it Relates to Bellefonte Nuclear Plant Units 1 and 2: On February 2, 1978, this PSC was issued concerning significant differences between

excore indicated power and heat balance observed during a power calibration measurement at one of the Oconee plants. Stemming from this concern, B&W identified (in October 1980) a potential problem with assumed measurement errors used in determining reactor protection system (RPS) setpoints that may be nonconservative under specific plant conditions for Bellefonte Nuclear Plant Units 1 and 2.

As of January 1985, B&W had completed their analysis program of this condition and have determined that no changes to plant hardware or setpoints are necessary, although initial condition normal operating limits on rod position and axial offset were revised. B&W has also determined that no further actions are required to prevent a reoccurrence of this problem at BLN.

Auditing of this concern included a review of the Summary Report for B&W's program to resolve the flux measurement error concern.

j. PSC 28-79 and PSC 40-80, Attached Piping: This PSC concerns an inconsistency between the assumptions relative to pipe breaks in the loss-of-coolant accident (LOCA) analysis and the structural analysis of certain connecting pipes in the affected or broken loop.

This item was reported to B&W by TVA on July 31, 1979. PSC 28-79 was written on August 6, 1979 licensing evaluation was begun, and the final evaluation report was distributed on January 10, 1980. This report states that the surge line must not fail during a LOCA event. B&W customers were notified on January 27, 1981, that B&W was not going to perform additional work on this problem B&W supplied displacement values for the pipes affected by a LOCA to the utilities for use in the analysis for other lines attached to these pipes.

Another PSC, (40-80) concerning large seismic displacements and normal operating vibration of in-core piping was written on June 6, 1980. All customers with 177 and 205 plants were notified on December 19, 1980, that B&W was not going to perform any additional work on this problem. However, B&W is still active in the solution of these two problems under funding from TVA. Nine interim reports have been submitted by TVA to the NRC Region II office. The in-core piping problem is still not resolved. B&W is in the process of analyzing the affects of a surge line break during a LOCA event.

k. PSC 21-82, Water Hammer in External Auxiliary Feedwater (AFW) Headers: This PSC concerns a postulated water hammer problem in AFW headers in B&W plants. Two scenarios were postulated which could produce water hammer conditions: The first is leakage in the lines or valves of the system might permit steam to replace the water held stagnant in the system when not in use. The second is boiling of the stagnant water as a result of heat transfer from the operating generators to the headers. After analyzing the problem, B&W concluded that it was not reportable under the requirements of 10 CFR 21 or 10 CFR 50.55(e).

2. T3PIPE Computer Code:

T3PIPE is a computer code that performs analyses in accordance with the ASME Nuclear Power Piping Code, Section III, NB-3600. Piping stresses are calculated beforehand using a finite element code and then used as input to T3PIPE. A new version of T3PIPE, Version 7.0 (the ninth version), is in the process of being certified. All earlier versions were removed from certification on January 11, 1985, because an error was found in Version 6.0. Five of the eight versions of the code were developed, partially or completely, as a result of errors found in the calculations for butt welded fittings and branch connections. Some of these errors caused the program to stop. However, on three separate occasions the program did not stop and the execution gave erroneous results. Users are contacted after each error is identified to determine whether these options of the code had been used in safety-related analyses. The users are being contacted a third time to determine whether the most recently identified errors involve options of the code which had been used in safety-related analyses. The prior two errors did not affect safety-related analyses. This sequence of events indicates improper verification of these joint types from Version 1.0.

A second item involving T3PIPE code verification was identified. In the 1981 winter addendum to the ASME Code, Section III, several stress indices were changed for various piping products. Verification was performed for Version 4.0, showing that the revised stress indices given by the T3PIPE program was correct. It was stated that the unchanged indices were visually checked and noted to be correct, but no record was made of this check. In addition, no general check of stress indices was made before Version 4.0 to show that the program was using the correct indices.

One nonconformance, discussed in Section B.4, resulted from this part of the inspection.

3. NULIF Code Certification File Review: The NULIF code is a proprietary B&W code for calculating spectrum weighted cross-sections for input into the spatial neutronic codes.

   The certification file was reviewed for compliance with the QA procedure NPG-0902-06. The latest version of the code was checked for proper documentation and verification. No nonconformances or violations were found in this part of the inspection.

4. PDQTHF Code Certification File Review:

   The PDQTHF code is a proprietary B&W code for calculating the two-dimensional, neutron diffusion/depletion for reactor cores.

   The certification file was reviewed for compliance with the QA procedure NPG-0902-06. The latest version of the code was checked for proper documentation and verification analysis. No nonconformances or violations were found in this part of the inspection.

5. TACO 2.0 Code Certification File Review: The TACO 2.0 code is a fuel behavior code for steady state, burnup-dependent fuel parameters (fuel temperature profiles, fuel stored energy, fuel densification, fuel rod swelling, cladding creep and fission gas release, fuel rod internal pressure). The code is used in licensing analysis for initializing LOCA transients.

   The certification file was reviewed for compliance with the QA procedure NPG-0902-6. No nonconformances or violations were found in this part of the inspection.

6. Review of the Thermal-Hydraulic Analysis File for Oconee 1 Cycle 9 Reload: The file containing the calculation and transmittal documentation for the thermal-hydraulic analyses performed for the Cycle 9 reload of Oconee-1 was audited. Verification of the calculation results was reviewed as per B&W Administrative Manual Procedure NPG-0402-01, Rev. 17 (Preparing and Processing UPGD Calculations). No violations or nonconformances were found in this part of the investigation.

7. REDBL5 Computer Code

   The REDBL5 code is being developed from the RELAP5/MOD1 computer code that was obtained from the Idaho National Engineering Laboratory (INEL) for use in various safety-related analyses. The code has been

conditionally certified and is available on the B&W computer for licensing calculations. The modification and verification of REDBL5 were reviewed during this inspection. No violations or nonconformances were found in this part of the investigation.

PERSONS CONTACTED

Company B&W Dates 1/4/85

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ENTRANCE MEETING Page 1 of 1

NAME(Please Print)	TITLE(Please Print)	ORGANIZATION(Please Print)
Rob Harris	NRC Consultant	EG&G Idaho, Inc.
Bill Shier	Engineer	Brookhaven National Lab
Wyndell Banister	NRC Consultant	NRC/EG&G ID
James Cozzuol	NRC Consultant	NRC/EG&G Idaho
Bert Tolman	NRC Consultant	NRC / EG&G, Idaho
Emily A. Mayhew	Quality Specialist	Babcock & Wilcox - NPD
Barclay Andrews	Manager, Nuclear Engineering	Babcock & Wilcox - NPD
David Mars	Product Mgr, Nuclear Eng Serv	Babcock & Wilcox
Joe Cudlin	Mgr, Analysis Tech'y	Babcock & Wilcox
Charlie Pryor	Gen Mgr, B&W, Nuclear Power Div.	Babcock & Wilcox
R.L. Bruce	Mgr. - Nuclear Operations/A...	B&W
Gary Quale	Bellefont Project Engineer	B&W
H. Brock Barkley	Mgr - 205 Plant Prog Svcs	B&W
R.W. Ganthner	MGR-Owners Group Eng. SVCS	B&W
T.R. Stevens	Mgr - QA	B&W
R.H. Ihde	Mgr NFS	B&W
Sub DasGupta	Mgr- P&QCS	B&W

PERSONS CONTACTED

Company: B&W Dates 2/8/85

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EXIT MEETING Page ___ of ___

NAME(Please Print)	TITLE(Please Print)	ORGANIZATION(Please Print)
James Cozzuol	Consultant	EG&G, Id for NRC
Bert Tolman	NRC Consultant	NRC / EGG, Idaho
Bob Harris	NRC Consultant	EG+G Idaho
Lyndell Banister	NRC Consultant	EG+G Idaho
Robert Ihde	Mgr. NFS	B+W
RW GANTHNER	MGR, OGES	B+W
RW Dorman	Sr Prod. Mgr, OGES	B&W
D. MARS	PROD. MGR. OGES	B&W
D. GUZA	Attorney, Law Dept	B+W
JOHN BOHART	MGR, NUCLEAR ENGR'G SVC	B&W
W.T. Brunson	Advisory Eng., Fuel Eng.	B+W
[illegible]	Mgr. Fuel Eng.	B&W
[illegible]	[illegible]	[illegible]
GARETH D. QUALE	Boiler [illegible] Project Engineer	B&W
R.L. Bruce	Mgr.-Nuclear Ops & Adm	B&W
J.B. ANDREWS	MGR- Nuclear ENGR	B&W.
J.H. TAYLOR	MGR LIC. SERVICES	B&W
T.R. Stevens	Mgr, QA	B&W
JJ Cudlin	Mgr. Analysis Technology	B&W
JD CARLTON	Mgr. Operational Analysis	B+W
[illegible] Das Gupta	Mgr PE QCS	B&W
Bill Shier	Engineer	BNL

PERSONS CONTACTED

Company: B & W

Dates 2/4-9/85

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NAME(Please Print)	TITLE(Please Print)	ORGANIZATION(Please Print)
ROBERT A WALLIN	PROJECT ENGINEER	B&W
Sub Doe Green	MANAGER PE GCS	B&W
Ken Stucky	Engineer	B&W
L. S. Elvin	SERVICE ENGINEER	B&W
JOHN J. HAFFEL	PRINCIPAL ENGINEER	B&W
A. D. McKim	Unit Manager	B&W
J D CARLTON	Unit Mgr	B+W
R. W. GANTHNER	MGR, OWNER GROUP ENG SVCS	B+W
R. W. CRAIG	PROJECT ENGINEER	B&W
J. R. Burris	Operational Anal, Supv.	B&W
E. R. KANE	MGR PERFORMANCE ANAL	B+W
D. MARS	PROD. MGR, OWNERS GROUP ENG SERV.	B+W
TJ Cudlin	Mgr, Analysis Technology	B&W

INSPECTOR [illegible]

SCOPE

DOCUMENTS EXAMINED

DOCKET NO. [illegible]

REPORT NO. 85 - 01

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ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
1	INM			3/7/83	HPI NOZZLE/HEAT SHIELD FIX
2	LTR			7/12/83	TVA HPI NOZZLE/THERMAL SHIELD EXPANSION
3	PRO	51-1146744-00		8/29/83	HPI NOZZLE/THERMAL SLEEVE COLLAR FLOW HOLE PEENING
4	INM	51-1149338-00		1/23/84	HPI NOZZLE/THERMAL SLEEVE AS BUILTS
5	LTR			1/21/85	TVA TO B&W HPI NOZZLE THERMAL SLEEVES
6	LTR			3/7/82	TOLEDO EDISON TO NRC CONCERNING THERMAL SLEEVES & CRACKING OF NOZZLES.
7	PRO	NPG-0503-04	17	10/3/83	SITE PROBLEMS REPORTS (SPR) & FIELD FEEDBACK REPORTS (FFR).
8	RPT	77-1140611-00			B&W 177 FUEL ASSEMBLY OWNER'S GROUP SAFE END TASK FORCE REPORT ON GENERIC INVESTIGATION OF HPI/MU NOZZLE COMPONENT CRACKING
9	PSC	21-82		10/6/83	WATER HAMMER IN EXTERNAL AFW HEADER
10	PSC	19-84		11/30/84	CIRCUIT BOARD RETAINER CLIPS
11	LTR			10/12/84	B&W OWNERS GROUP TO NRC CONCERNING REACTOR INTERNALS BOLTING

TYPE OF DOC:

DWG - DRAWING
SPEC - SPECIFICATION
PRO - PROCEDURE
QAM - QA MANUAL
QCD - QC DOCUMENT
P.O. - PURCHASE ORDER
INM - INTERNAL MEMO

LTR - LETTER
RPT - REPORT
PSC - POTENTIAL SAFETY CONCERN

PERSONS CONTACTED

pany B+W   Dates Feb 4-6 1985

ket/Report No. 99900400 /85-01   Inspector ~~[illegible]~~ Bill Shier

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(Please Print)	TITLE(Please Print)	ORGANIZATION(Please Print)
e Cudlin	Mgr, Analysis Technology	Babcock & Wilcox
D. CARLTON	UM Operational Analysis	B+W
. MARS	PROD. MGR, Owners Group Eng'g Serv.	B&W
[illegible]	MANAGER. PE&CS	B&W
UDY (EB) CAMPER	SUPV ENGR - MECHANICAL EQUIP	B&W
[illegible]	Sup Engr - Analysis Tech	B&W
T. Willse	Sup. Eng - Thermal-Hydraulic Eng.	B&W
.R. KANE	MANAGER, PERFORMANCE ANAL	B&W
R. Burris	Supv. Operational Anal	B&W
H. Shah	Supv. Analysis Technology	B&W
.K. Nithianandan	Senior Engineer Analysis Technology	B&W
.R. Stevens	Mgr., QA	B&W
R. Ganthner	Mgr., Owners Group Eng. Services.	B&W
ob Block	Product Mgr. Owners Group Eng Ser.	B&W
arclay Andrews	MGR NUCLEAR ENGR.	B&W
ALPH ROSSER	SIMULATOR MODELLING	POWER SAFETY INTERNATIO
ichard A Kochendarfer	~~[illegible]~~ Supv. Engr Nuclear Gp Anal	B&W
ob Burris 2/7/85	Supv. Engr. Operational Analysis	B&W
andy Ellison	Engineer III Operational Anal	B&W

DOCUMENTS EXAMINED

INSPECTOR: Bill Shier

SCOPE: B+W

DOCKET NO. 99900400

REPORT NO. 85-01

ITEM NO.	*TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	DOCUMENT TITLE/SUBJECT
1	LOG	—	—	—	Preliminary Report of Safety Concerns Log
2	File	PSC 5-83	–	3/83	HPI Pump Thermal Shock/Thermal STRESS
3	File	PSC 3-83	—	12/82	Effect of noncondensibles on Subcooled Margin Indication
4	FILE	PSC 9-83	—	4/83	TACO2 Code Error
5	FILE	PSC 17-83		6/83	Overcooling TRANSIENTS From Low Power
6	FILE	PSC 22-83	—	11/83	Certification of Computer Programs
7	FILE	32-1143767-00	—	6/83	Noncondensible Gas Effects on Subcooled Margin Indication
8	PROC	NPG 0902-06	9	6/84	Computer Program Development and Certification
9	PROC	NPG 0402-01	17	8/83	Preparing AND Processing UPGD Calculations
10	PROC	NPG 1707-01	16	6/84	Processing Safety Concerns
11	INM	—	—	12/84	Computer Program Information Report
12	FILE	PSC 1-84	—	1/84	Excessive OTSG Steam Velocities
13	FILE	32-1150527 01	—	7/84	ANO-1 Cy 7 T-H Reload Analysis
14	CF	[illegible]	—	6/84	REDBLS Version 6.0 Certification File

*TYPE OF DOCUMENT

DWG - DRAWING
SPEC - SPECIFICATION
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QAM - QA MANUAL
P.O. - PURCHASE ORDER

INM - INTERNAL MEMO
LTR - LETTER
LOG -
CF - Certification File

DOCUMENTS EXAMINED

INSPECTOR: Bill Shier

SCOPE: B+W

DOCKET NO. 99900400

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ITEM NO.	*TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	DOCUMENT TITLE/SUBJECT
15	PRO	NPG-0902-06	10	MAR 1985	Computer Code Development AND Certification
16	PRO	NPG-0403-11	12	MAR 1985	Technical Document Signatures
17	PRO	NPG-0903-03	10	MAR 1985	Development of Certified Computer Program Users Manuals
18	INM	—	—	JAN 11 1985	Follow-up Actions to NRC AUDIT FINDING
19	INM	—	—	JAN 8 1985	Follow-up Action to NRC Audit - Use of Uncertified Computer Codes

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PERSONS CONTACTED

Company B&W

Docket/Report No. 99900400/85-01

Dates 2-4 through 2-8, 1985

Inspector Bob Harris

NAME(Please Print)	TITLE(Please Print)	ORGANIZATION(Please Print)
W. TUNSTILL	ASSOC. PROJ. ENG'R -	BELLEFONTE PROJ. SVCS
D. McKim	Unit Manager	B&W
J. HAPPELL	PRINCIPAL ENGINEER	B&W
J. VAMES	MECH. DESIGN & ANALYSIS SECTION MANAGER	B&W
[illegible] Dargiste	MANAGER, P&QCS	B&W

DOCUMENTS EXAMINED

INSPECTOR: Bob Harris

SCOPE:

DOCKET NO. 99900400
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ITEM NO.	*TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	DOCUMENT TITLE/SUBJECT
1	CPI			12/31/84	Computer Program Information Report
2	PROC				ADMINISTRATIVE MANUAL PROCEDURES: NPG-0902-06 (Rev. 9), "Computer Program Development and Certification", 6/1/84; NPG-0902-07 (Rev. 2), "Development and Release of Standard Mathematical Software" 9/4/84; NPG-0903-03 (Rev. [illegible]) "Development of Certified Computer Program User's Manuals", 9/4/84
3	PSC				Preliminary Report of Safety Concerns Log
4	PSCF				PSC 28-79 Piping Potential Safety Concerns
5	PSCF				PSC 40-80 Incore Instrument Piping PSC's
6	QAF				T3PIPE QA File
7	CPI	NPGD-TM-532, Rev. G	G	10/84	T3PIPE Simplified Piping Stress Analysis Program User's Manual
8	CALC	Contract No. 620-0014-50			Stress Report - Toledo Edison Co. & CEI - Davis Besse #1, Vols. 1 & 2
9	LTR	from J.J. Happell to A.D. McKim		1/11/85	T3PIPE - Review of Past Analyses

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CPI - Computer Program Information
PSC - Potential Safety Concerns

QAF - Computer Code QA File
CALC - Calculation file

PERSONS CONTACTED

Company B & W Dates 2-11-85

Docket/Report No. 99900400/85-01 Inspector W.C. Banister

Page 1 of ___

NAME(Please Print)	TITLE(Please Print)	ORGANIZATION(Please Print)
Sub ~~Dasgupta~~ DASGUPTA	Mgr	P & QCS / B&W
Dave Mars	Product Mgr.	Nuc Engr Service / B&W
D.(Lou) Cline	Svc Engr	Customer Service Dept / B&W
T.G. Wolcott	Mgr, IEM Unit	B&W

DOCUMENTS EXAMINED

INSPECTOR: W.C. Banister

SCOPE:

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ITEM NO.	*TYPE OF DOCUMENT	DOCUMENT NO	REV.	DATE	DOCUMENT TITLE/SUBJECT
1	LOG		NA	2-4-85	Preliminary Report of Safety Concers Log
2	PROC	NPG-1707-01	16	6-15-84	Administrative Manual Procedures - Quality Standards Processing Safety Concers
3	FILE	Preliminary Safety Concern PSC 18-83	NA	—	NI/RPS Nonconformances
4	INM		NA		Close-Out of PSC 18-83 NI/RPS Nonconformance
5	INM	T3,23	NA	1-29-85	Improper Operation of Lambda Power Supplies From P.S. Alleman to R.P. Williamson
6	LTR	K-88347	0	1-2-85	Information Notice IN 84-80 - Plant Transients Induced by Failure of Non-Nuclear Instrumentation (NNI) Power (OE-0022-38)
7	FILE	PSC 23-83	NA	—	Improper Lambda Power Supplies
8	File	PSC 3-84	NA	—	Circuit Board Retainer Clips
9	File	PSC 20-83	NA	—	Cables in Air Cooling Ducts - Midland.
10	File	PSC 4-84	NA	—	
11	File	PSC 5-84	NA	—	
12	File	PSC 6-84	NA	—	
13	LOG	Site Problem Reports	NA	—	Customer Service Department SPR LOG for NSS
14					

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