

PROPOSED ANO-2 TECHNICAL SPECIFICATION CHANGE

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REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4.4.5.4 Acceptance Criteria

a. As used in this Specification

1. Tubing or Tube means that portion of the tube or sleeve which forms the primary system to secondary system pressure boundary.
2. Imperfection means an exception to the dimensions, finish or contour of a tube from that required by fabrication drawings or specifications. Eddy-current testing indications below 20% of the nominal tube wall thickness, if detectable, may be considered as imperfections.
3. Degradation means a service-induced cracking, wastage, wear or general corrosion occurring on either inside or outside of a tube.
4. Degraded Tube means a tube containing imperfections $\geq 20\%$ of the nominal wall thickness caused by degradation.
5. % Degradation means the percentage of the tube wall thickness affected or removed by degradation.
6. Defect means an imperfection of such severity that it exceeds the plugging or repair limit. A tube containing a defect is defective.
7. Plugging or Repair Limit means the imperfection depth at or beyond which the tube shall be removed from service by plugging or repaired by sleeving because it may become unserviceable prior to the next inspection and is equal to 40% of the nominal tube wall thickness.
8. Unserviceable describes the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an Operating Basis Earthquake, a loss-of-coolant accident, or a steam line or feedwater line break as specified in 4.4.5.3.c, above.
9. Tube Inspection means an inspection of the steam generator tube from the point of entry (hot leg side) completely around the U-bend to the top support of the cold leg.

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SURVEILLANCE REQUIREMENTS (Continued)

10. Preservice Inspection means an inspection of the full length of each tube in each steam generator performed by eddy current techniques prior to service to establish a baseline condition of the tubing. This inspection shall be performed after the field hydrostatic test and prior to initial POWER OPERATION using the equipment and techniques expected to be used during subsequent inservice inspections.
- b. The steam generator shall be determined OPERABLE after completing the corresponding actions (plug or sleeve all tubes exceeding the plugging or repair limit and all tubes containing through-wall cracks) required by Table 4.4-2. Defective tubes may be repaired in accordance with B&W Topical Report BAW-2045PA-00 as supplemented by the information provided in B&W Report 51-1212559-00, "BWNS Kinetic Sleeve Design-Application to ANO Unit 2".

4.4.5.5 Reports

- a. Following each inservice inspection of steam generator tubes the number of tubes plugged or sleeved in each steam generator shall be reported to the Commission within 15 days.
- b. The complete results of the steam generator tube inservice inspection shall be reported on an annual basis for the period in which the inspection was completed. This report shall include:
 1. Number and extent of tubes inspected.
 2. Location and percent of wall-thickness penetration for each indication of an imperfection.
 3. Identification of tubes plugged or sleeved.
- c. Results of steam generator tube inspections which fall into Category C-3 shall be reported in a Special Report pursuant to Specification 6.9.2 as denoted by Table 4.4-2. Notification of the Commission will be made prior to resumption of plant operation. The written Special Report shall provide a description of investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence.

TABLE 4.4-2

STEAM GENERATOR TUBE INSPECTION

1ST SAMPLE INSPECTION			2ND SAMPLE INSPECTION		3RD SAMPLE INSPECTION	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S Tubes per S.G.	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug or sleeve defective tubes and inspect additional 2S tubes in this S.G.	C-1	None	N/A	N/A
			C-2	Plug or sleeve defective tubes and inspect additional 4S tubes in this S.G.	C-1	None
					C-2	Plug or sleeve defective tubes
					C-3	Perform action for C-3 result of first sample
			C-3	Perform action for C-3 result of first Sample	N/A	N/A
	C-3	Inspect all tubes in this S.G., plug or sleeve defective tubes and inspect 2S tubes in each other S.G. Special Report to NRC per Specification 6.9.2	All other S.G.s are C-1	None	N/A	N/A
			Some S.G.s C-2 but no additional S.G. are C-3	Perform action for C-2 result of second sample	N/A	N/A
			Additional S.G. is C-3	Inspect all tubes in each S. G. and plug or sleeve defective tubes. Special Report to NRC per Spec. 6.9.2.	N/A	N/A

$S = 3 \frac{N}{n} \%$ Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection

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BASES

Wastage-type defects are unlikely with proper chemistry treatment of the secondary coolant. However, even if a defect should develop in service, it will be found during scheduled inservice steam generator tubes examinations. Plugging or sleeving will be required for all tubes with imperfections exceeding the plugging or repair limit as defined in Surveillance Requirement 4.4.5.4.a. Defective tubes may be repaired by sleeving in accordance with the B&W Topical Report BAW-2045PA-00 as supplemented by the information provided in B&W Report 51-1212539-00, "BWNS Kinetic Sleeve Design-Application to ANO Unit 2". Steam generator tube inspections of operating plants have demonstrated the capability to reliably detect degradation that has penetrated 20% of the tube wall thickness. For sleeved tubes, the adequacy of the system that is used for periodic inservice inspection will be validated. Additionally, upgraded testing methods will be evaluated and appropriately implemented as better methods are developed and validated for commercial use.

Whenever the results of any steam generator tubing inservice inspection fall into Category C-3 certain results will be reported in a Special Report to the Commission pursuant to Specification 6.9.2 as denoted by Table 4.2-2. Notification of the Commission will be made prior to resumption of plant operation. Such cases will be considered by the Commission on a case-by-case basis and may result in a requirement for analysis, laboratory examinations, tests, additional eddy-current inspection, and revision of the Technical Specifications, if necessary.

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

3/4.4.6.1 LEAKAGE DETECTION SYSTEMS

The RCS leakage detection systems required by this specification are provided to monitor and detect leakage from the Reactor Coolant Pressure Boundary. These detection systems are consistent with the recommendations of Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems" May 1973.

3/4.4.6.2 REACTOR COOLANT SYSTEM LEAKAGE

Industry experience has shown that while a limited amount of leakage is expected from the RCS, the unidentified portion of this leakage can be reduced to a threshold value of less than 1 GPM. This threshold value is sufficiently low to ensure early detection of additional leakage.

The 10 GPM IDENTIFIED LEAKAGE limitation provides allowances for a limited amount of leakage from known sources whose presence will not interfere with the detection of UNIDENTIFIED LEAKAGE by the leakage detection systems.

The Surveillance Requirements for RCS Pressure Isolation Valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS Pressure Isolation Valves is IDENTIFIED LEAKAGE and will be considered as a portion of the allowed limit.

ATTACHMENT 2

AFFIDAVIT FOR
BWNS REPORT 51-1212539-00

AFFIDAVIT OF JAMES H. TAYLOR

- A. My name is James H. Taylor. I am Manager of Licensing Services in the B&W Nuclear Service Company (BWNS), which is a part of B&W Nuclear Technologies (BWNT), and as such I am authorized to execute this Affidavit.
- B. I am familiar with the criteria applied by B&W to determine whether certain information of B&W is proprietary and I am familiar with the procedures established within B&W, particularly the Nuclear Services Company, to ensure the proper application of these criteria.
- C. In determining whether a B&W document is to be classified as proprietary information, an initial determination is made by the Unit Manager, who is responsible for originating the document, as to whether it falls within the criteria set forth in Paragraph D hereof. If the information falls within any one of these criteria, it is classified as proprietary by the originating Unit Manager. This initial determination is reviewed by the cognizant Section Manager. If the document is designated as proprietary, it is reviewed again by Licensing personnel and other management within BWNS as designated by the Manager of Licensing Services to assure that the regulatory requirements of 10 CFR Section 2.790 are met.
- D. The following information is provided to demonstrate that the provisions of 10 CFR Section 2.790 of the Commission's regulations have been considered:
- (i) The information has been held in confidence by B&W. Copies of the document are clearly identified as proprietary. In addition, whenever B&W transmits the

AFFIDAVIT OF JAMES H. TAYLOR (Cont'd.)

information to a customer, customer's agent, potential customer or regulatory agency, the transmittal requests the recipient to hold the information as proprietary. Also, in order to strictly limit any potential or actual customer's use of proprietary information, the following provision is included in all proposals submitted by B&W, and an applicable version of the proprietary provision is included in all of B&W's contracts:

"Purchaser may retain Company's proposal for use in connection with any contract resulting therefrom, and, for that purpose, make such copies thereof as may be necessary. Any proprietary information concerning Company's or its Supplier's products or manufacturing processes which is so designated by Company or its Suppliers and disclosed to Purchaser incident to the performance of such contract shall remain the property of Company or its Suppliers and is disclosed in confidence, and Purchaser shall not publish or otherwise disclose it to others without the written approval of Company, and no rights, implied or otherwise, are granted to produce or have produced any products or to practice or cause to be practiced any manufacturing processes covered thereby.

Notwithstanding the above, Purchaser may provide the NRC or any other regulatory agency with any such proprietary information as the NRC or such other agency may require; provided, however, that Purchaser shall first give Company written notice of such proposed disclosure and Company shall have the right to amend such proprietary information so as to make it non-proprietary. In the event that Company cannot amend such proprietary information, Purchaser

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shall, prior to disclosing such information, use its best efforts to obtain a commitment from NRC or such other agency to have such information withheld from public inspection.

Company shall be given the right to participate in pursuit of such confidential treatment."

- (ii) The following criteria are customarily applied by B&W in a rational decision process to determine whether the information should be classified as proprietary. Information may be classified as proprietary if one or more of the following criteria are met:
- a. Information reveals cost or price information, commercial strategies, production capabilities, or budget levels of B&W, its customers or suppliers.
 - b. The information reveals data or material concerning B&W research or development plans or programs of present or potential competitive advantage to B&W.
 - c. The use of the information by a competitor would decrease his expenditures, in time or resources, in designing, producing or marketing a similar product.
 - d. The information consists of test data or other similar data concerning a process, method or component, the application of which results in a competitive advantage to B&W.
 - e. The information reveals special aspects of a process, method, component or the like, the exclusive use of which results in a competitive advantage to B&W.

AFFIDAVIT OF JAMES H. TAYLOR (Cont'd.)

- f. The information contains ideas for which patent protection may be sought.

The document(s) listed on Exhibit "A", which is attached hereto and made a part hereof, has been evaluated in accordance with normal B&W procedures with respect to classification and has been found to contain information which falls within one or more of the criteria enumerated above. Exhibit "B", which is attached hereto and made a part hereof, specifically identifies the criteria applicable to the document(s) listed in Exhibit "A".

- (iii) The document(s) listed in Exhibit "A", which has been made available to the United States Nuclear Regulatory Commission was made available in confidence with a request that the document(s) and the information contained therein be withheld from public disclosure.
- (iv) The information is not available in the open literature and to the best of our knowledge is not known by Combustion Engineering, EXXON, General Electric, Westinghouse or other current or potential domestic or foreign competitors of B&W.
- (v) Specific information with regard to whether public disclosure of the information is likely to cause harm to the competitive position of B&W, taking into account the value of the information to B&W; the amount of effort or money expended by B&W developing the information; and the ease or difficulty with which the information could be properly duplicated by others is given in Exhibit "B".

- E. I have personally reviewed the document(s) listed on Exhibit "A" and have found that it is considered proprietary by B&W because it contains information which falls within one or more of the

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criteria enumerated in Paragraph D, and it is information which is customarily held in confidence and protected as proprietary information by B&W. This report comprises information utilized by B&W in its business which afford B&W an opportunity to obtain a competitive advantage over those who may wish to know or use the information contained in the document(s).

James H. Taylor
JAMES H. TAYLOR

JAMES H. TAYLOR

State of Virginia)
City of Lynchburg) SS. Lynchburg

James H. Taylor, being duly sworn, on his oath deposes and says that he is the person who subscribed his name to the foregoing statement, and that the matters and facts set forth in the statement are true.

James H. Taylor
JAMES H. TAYLOR

JAMES H. TAYLOR

Subscribed and sworn before me
this 27th day of March 1992.

Brenda C. Cardona
Notary Public in and for the City
of Lynchburg, State of Virginia.