

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

1. All ~~nonplugged~~ <sup>Tube</sup> tubes that previously had detectable wall penetrations (>20%) that have not been plugged nor sleeved in the affected area, and all tubes that previously had detectable sleeve wall penetrations that have not been plugged.
  2. Tubes in those areas where experience has indicated potential problems.
  3. A tube inspection (pursuant to Specification 4.4.5.4.a.8) shall be performed on each selected tube. If any selected tube does not permit the passage of the eddy current probe for a tube inspection, this shall be recorded and an adjacent tube shall be selected and subjected to a tube inspection.
- c. In addition to the 3% sample, all tubes with defects below the F\* distance which have not been plugged shall be inspected in the tube sheet region.
- d. The tubes selected as the second and third samples (if required by Table 4.4-2) during each inservice inspection may be subjected to a partial tube inspection provided:
1. The tubes selected for these samples include the tubes from those areas of the tube sheet array where tubes with imperfections were previously found. *or tube sleeves*
  2. The inspections include those portions of the tubes where imperfections were previously found. *or tube sleeves*



The results of each sample inspection shall be classified into one of the following three categories:

<u>Category</u>	<u>Inspection Results</u>
C-1	Less than 5% of the total tubes inspected are degraded tubes and none of the inspected tubes are defective.
C-2	One or more tubes, but not more than 1% of the total tubes inspected are defective, or between 5% and 10% of the total tubes inspected are degraded tubes.
C-3	More than 10% of the total tubes inspected are degraded tubes or more than 1% of the inspected tubes are defective.

Note: In all inspections, previously degraded tubes must exhibit significant (>10%) further wall penetrations to be included in the above percentage calculations.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4.4.5.4 Acceptance Criteria

a. As used in the Specification:

1. Imperfection means an <sup>or tube sleeve</sup> 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.
2. Degradation means a service-induced cracking, wastage, wear or general corrosion occurring on either inside or outside of a tube.
3. Degraded Tube means a tube containing imperfections  $\geq 20\%$  of the nominal wall thickness caused by degradation.
4. % Degradation means the percentage of the tube <sup>or tube sleeve</sup> wall thickness affected or removed by degradation.
5. Defect means an imperfection of such severity that it exceeds the ~~plugging~~ <sup>repair</sup> limit. A ~~defective~~ <sup>defective tube is a</sup> tube containing a defect that has ~~is defective~~ <sup>not been repaired by sleeving or a sleeved tube that has a defect in the sleeve.</sup>
6. Plugging Limit means the imperfection depth at or beyond <sup>repair</sup> which the tube shall be removed from service because it may become unserviceable prior to the next inspection and is equal to ~~40%~~ <sup>40%</sup> of the nominal tube wall thickness. This definition does not apply to the area of the tube sheet region below the F\* distance, provided the tube has no indications of cracking within the F\* distance.
7. 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.
8. 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.

by plugging or repaired by sleeving in the affected area

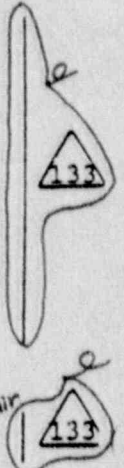




REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

9. 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.
10. Tube Roll Expansion is that portion of a tube which has been increased in diameter by a rolling process such that no crevice exists between the outside diameter of the tube and the tube sheet.
11. F\* Distance is the minimum length of the roll expanded portion of the tube which cannot contain any indications of cracking in order to ensure the tube does not pull out of the tube sheet. The F\* distance is 1.4 inches and is measured from the top of the roll expansion of the tube down toward the bottom of the tube sheet. *F\* is not applicable if a sleeve has been installed in the roll expanded portion of the tube.*
- b. The steam generator shall be determined OPERABLE after completing the corresponding actions (plug all tubes exceeding the plugging-repair limit) required by Table 4.4-2. *or sleeve in the affected areas*



4.4.5.5 Reports

- a. Following each inservice inspection of steam generator tubes, the number of tubes plugged *in each steam generator* shall be reported to the Commission within 15 days. *or sleeved*
- 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 reviewed for reportability pursuant to Specification 6.6.1. If the results are deemed reportable, such report must be submitted to the Commission prior to the resumption of plant operation.



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 5 Tubes per S. G.	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug defective tubes and inspect additional 2S tubes in this S. G. <i>or sleeve</i>	C-1	None <i>or sleeve</i>	N/A	N/A
			C-2	Plug defective tubes and inspect additional 4S tubes in this S. G.	C-1	None <i>or sleeve</i>
C-3	Inspect all tubes in this S. G., plug defective tubes and inspect 2S tubes in each other S. G. <i>or sleeve</i>	Report to NRC pursuant to specification 4.4.5.5.c.	C-3	Perform action for C-3 result of first sample	N/A	N/A
			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
C-3	Additional S. G. is C-3 <i>or sleeve</i>	Inspect all tubes in each S.G. and plug defective tubes. Report to NRC pursuant to specification 4.4.5.5.c.	Additional S. G. is C-3	Inspect all tubes in each S.G. and plug defective tubes. Report to NRC pursuant to specification 4.4.5.5.c.	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



## REACTOR COOLANT SYSTEM

### BASES

The power operated relief valves (PORVs) operate to relieve RCS pressure below the setting of the pressurizer code safety valves. These relief valves have remotely operated block valves to provide a positive shutoff capability should isolation of a relief valve be necessary.



#### 3/4.4.4 PRESSURIZER

The requirement that 150 kw of pressurizer heaters and their associated controls be capable of being supplied electrical power from an emergency bus provides assurance that these heaters can be energized during a loss of offsite power condition to maintain natural circulation at HOT STANDBY. A minimum of 7 of the 23 kw heaters meets this requirement.



#### 3/4.4.5 STEAM GENERATORS

One OPERABLE steam generator provides sufficient heat removal capability to remove decay heat after a reactor shutdown. The requirement for two OPERABLE steam generators, combined with other requirements of the Limiting Conditions for Operation ensures adequate decay heat removal capabilities for RCS temperatures greater than 350°F if one steam generator becomes inoperable due to single failure considerations. Below 350°F, decay heat is removed by the RHR system.

The Surveillance Requirements for inspection of the steam generator tubes ensure that the structural integrity of this portion of the RCS will be maintained. The program for inservice inspection of steam generator tubes is based on a modification of Regulatory Guide 1.83, Revision 1. Inservice inspection of steam generator tubing is essential in order to maintain surveillance of the conditions of the tubes in the event that there is evidence of mechanical damage or progressive degradation due to design, manufacturing errors, or inservice conditions that lead to corrosion. Inservice inspection of steam generator tubing also provides a means of characterizing the nature and cause of any tube or tube sleeve degradation so that corrective measures can be taken.

The plant is expected to be operated in a manner such that the secondary coolant will be maintained within those parameter limits found to result in negligible corrosion of the steam generator tubes. If the secondary coolant chemistry is not maintained within these parameter limits, localized corrosion may likely result in stress corrosion cracking. The extent of cracking during plant operation would be limited by the limitation of steam generator tube leakage between the primary coolant

REACTOR COOLANT SYSTEM

BASES

3/4.4.5 STEAM GENERATORS CONTINUED

system and the secondary coolant system (primary-to-secondary leakage = 500 gallons per day per steam generator). Cracks having a primary-to-secondary leakage less than this limit during operation will have an adequate margin of safety to withstand the loads imposed during normal operation and by postulated accidents. Operating plants have demonstrated that primary-to-secondary leakage of 500 gallons per day per steam generator can readily be detected by radiation monitors of steam generator blowdown. Leakage in excess of this limit will require plant shutdown and an unscheduled inspection, during which the leaking tubes will be located and plugged.

*or sleeved in the affected areas*

Wastage-type defects are unlikely with the all volatile treatment (AVT) of secondary coolant. However, even if a defect of similar type should develop in service, it will be found during scheduled inservice steam generator tube examinations. Plugging will be required of all tubes with imperfections exceeding the plugging limit which, by the definition of Specification 4.4.5.4.a is 40% of the tube nominal wall thickness. Tubes with defects below the F\* distance do not have to be plugged or repaired as long as there are no indications of cracking in the F\* distance. The F\* distance is 1.4 inches and includes a safety factor of 3 and a 0.5-inch eddy current measurement uncertainty. Steam generator tube inspections of operating plants have demonstrated the capability to reliably detect wastage-type degradation that has penetrated 20% of the original tube wall thickness.

*or sleeving in the affected area*

*or tube sleeve*



Whenever the results of any steam generator tubing inservice inspection fall into Category C-3, these results will be promptly reported to the Commission pursuant to Specification 6.9.1 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.

[INSERT]

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.



INSERT

Degraded steam generator tubes may be repaired by the installation of sleeves which span the section of degraded steam generator tubing. A steam generator tube with a sleeve installed meets the structural requirements of tubes which are not degraded.

The following sleeve designs have been found acceptable by the NRC staff:

- a. Babcock and Wilcox Kinetic Welded Sleeves (BAW-2094P, Revision 1)
- b. Bechtel-KWU Welded Sleeves (BKAT-01-P, Revision 1; EDR-TRJ-01-P)
- c. Combustion Engineering Leak Tight Sleeves (CEN-395-P)

Descriptions of other future sleeve designs shall be submitted to the NRC for review and approval prior to their use in the repair of degraded steam generator tubes. The submittals related to other sleeve designs shall be made at least 90 days prior to use.

**Babcock & Wilcox**

Nuclear Power Division  
Special Products and  
Integrated Field Services

a McDermott company

3110 Odd Fellows Road  
Lynchburg, VA 24501  
(804) 847-3700

October 27, 1989  
SGBM-89-1031

Mr. R. M. Nelson, Manager  
Nuclear Safety and Regulation Department  
Portland General Electric Company  
121 SW Salmon Street  
Portland, Oregon 97204

Subject: Submittal of B&W Topical Report BAW-2094P, "Recirculating  
Steam Generator Kinetic Sleeve Qualification for 7/8" O.D.  
Tubes," October, 1989.  
Portland General Electric Purchase Order #NQ-53186


Dear Mr. Nelson:

Enclosed are four (4) copies of the subject B&W proprietary topical  
report BAW-2094P. This report describes the design, testing and  
tooling for the subject sleeve. The report is to be used to  
support a license change application to the Trojan technical  
specifications to permit repair of defective steam generator tubes  
using the B&W sleeving method.

B&W requests that this report be considered proprietary and, in  
addition, B&W requests that its submittal to the NRC be a  
proprietary submittal in accordance with 10CFR2.790. Information  
supporting this request is included in the attached affidavit.

If you have any questions or comments regarding this submittal,  
please feel free to contact me at (503) 225-0225 or Cary Bowles at  
(804) 847-3763.

Sincerely,

  
for R. A. Bernhard  
Regional Sales Manager, Portland

gl:crb-58-9

cc: CR Bowles



**Babcock & Wilcox**

AFFIDAVIT OF JAMES H. TAYLOR

- A. My name is James H. Taylor. I am Manager of Licensing Services in the Nuclear Power Division of the Babcock & Wilcox Company. The B&W Fuel Company is administratively responsible to the Babcock and Wilcox Nuclear Power Division (NPD) and utilizes the NPD Licensing Services. Therefore I am authorized to execute this Affidavit.
- B. I am familiar with the criteria applied by Babcock & Wilcox to determine whether certain information of Babcock & Wilcox is proprietary and I am familiar with the procedures established within Babcock & Wilcox, particularly the Nuclear Power Division, to ensure the proper application of these criteria.
- C. In determining whether a Babcock & Wilcox 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 the Nuclear Power Division 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 the Babcock & Wilcox Company. Copies of the document are clearly identified as proprietary. In addition, whenever

**Babcock & Wilcox**

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

Babcock & Wilcox transmits the 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 Babcock & Wilcox, and an applicable version of the proprietary provision is included in all of Babcock and Wilcox'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



**Babcock & Wilcox**

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

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 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 Babcock & Wilcox 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 Babcock & Wilcox, its customers or suppliers.
  - b. The information reveals data or material concerning Babcock & Wilcox research or development plans or programs of present or potential competitive advantage to Babcock & Wilcox.
  - 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.

**Babcock & Wilcox**

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

- 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 Babcock & Wilcox.
- 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 Babcock & Wilcox.
- 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 Babcock & Wilcox 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,



**Babcock & Wilcox**

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

Westinghouse or other current or potential domestic or foreign competitors of Babcock & Wilcox.

- (v) Specific information with regard to whether public disclosure of the information is likely to cause harm to the competitive position of Babcock & Wilcox, taking into account the value of the information to Babcock & Wilcox; the amount of effort or money expended by Babcock & Wilcox 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 Babcock & Wilcox because it contains information which falls within one or more of the criteria enumerated in Paragraph D, and it is information which is customarily held in confidence and protected as proprietary information by Babcock & Wilcox. This report comprises information utilized by Babcock & Wilcox in its business which afford Babcock & Wilcox an opportunity to obtain a competitive advantage over those who may wish to know or use the information contained in the document(s).





AFFIDAVIT OF JAMES H. TAYLOR (CONT'D)

EXHIBIT A - PROPRIETARY DOCUMENTS(S)

BAW-2094P, "RECIRCULATING STEAM GENERATOR KINETIC SLEEVE  
QUALIFICATION FOR 7/8 INCH OD TUBES", OCTOBER, 1989.

AFFIDAVIT OF JAMES H. TAYLOR (CONT'D)

EXHIBIT B - PROPRIETARY CRITERIA APPLICABLE

From Paragraph D (ii), the following are applicable:

- a.
- b.
- c.
- d.
- e.
- f.



Bechtel • KWU  
A L L I A N C E

15740 Shady Grove Road  
Gaithersburg, Maryland 20877-1454  
(301) 258-4600  
Telecopy (301) 990-1293

November 13, 1989

Mr. Lanny Dusek  
Portland General Electric  
Trojan Nuclear Plant  
Trojan Building North - NSRD  
71760 Columbia River Hwy  
Rainier, Oregon 97048

Dear Mr. Dusek:

Transmitted herewith are the following:

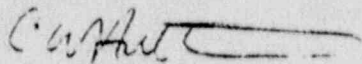
1. Draft letter license change application for use of Bechtel-KWU Alliance Sleeves.
2. Calculation "Evaluation of KWU Type I and II Sleeves for repairing Trojan Steam Generator Tubes".
3. Topical Report "Repair of Defective Steam Generator Tubes by Sleeving "BKAT-01-P Rev. 1 April 1989, 4 copies.

This is provided for your use in preparing a license amendment transmittal to the NRC for use of the Bechtel KWU Alliance sleeves at Trojan Nuclear plant.

A plant specific design supplement for the Type II sleeve will be sent to you by November 22, 1989.

If you need additional information, please call me at (301) 258-4508.

Sincerely,

  
C. W. Hultman

CWH:gs

cc: Bob Brownlee

AFFIDAVIT

STATE OF MARYLAND )

MONTGOMERY COUNTY )

ss

Diethelm Knoedler, being first duly sworn, says:

1. I am President of Universal Testing Laboratories. Universal Testing Laboratories is the owner of information contained in a document entitled "Topical Report: Repair of Defective Steam Generator Tubes by Sleeving" dated February, 1989, which Universal Testing Laboratories seeks to have withheld from public disclosure.

2. I am making this Affidavit pursuant to the provisions of the Nuclear Regulatory Commission's rules and regulations, including 10 CFR 2.790.

3. I have personal knowledge of the criteria and procedures utilized by Universal Testing Laboratories in determining and designating information as a trade secret or privileged or confidential commercial or financial information.

Under that system, information is customarily designated confidential and held in confidence if the release of that information might result in the loss of an existing or potential competitive advantage. Information which falls in one or more of the following categories is designated confidential:

- a. Information which reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by a competitor without license from Universal Testing Laboratories constitutes a competitive economic advantage over other companies.
- b. Information in the form of supporting data, including test data, relative to a process (or component, structure tool, method, etc.), the application of which data secures a competitive economic advantage, e.g. by optimization or improved marketability.
- c. Information which, if available to a competitor would reduce his expenditure or resources or improve his competitive position in the design, manufacture, shipment installation, assurance of quality, or licensing a similar product.
- d. Information concerning or relating to price, production capacities, budget levels, or commercial strategies of Universal Testing Laboratories, its customers or suppliers.



- e. Information which reveals aspects of past, present, or future Universal Testing Laboratories or customer funded development plans and programs of potential commercial value to Universal Testing Laboratories.
  - f. Information which contains patentable ideas or for which patent protection may be desirable.
  - g. Information relating to an invention.
4. The document "Topical Report: Repair of Defective Steam Generator Tubes by Sleeving" is marked "Proprietary" and is transmitted to the Nuclear Regulatory Commission in confidence.
5. The document "Topical Report: Repair of Defective Steam Generator Tubes by Sleeving" contains confidential commercial information consisting of test data or other similar data concerning a process, method or component, the application of which results in a substantial competitive advantage to Universal Testing Laboratories.
6. The document "Topical Report: Repair of Defective Steam Generator Tubes by Sleeving", as well as the information which it describes has been held in confidence by Universal Testing Laboratories and has been disclosed only after each proposed recipient of the information has executed an appropriate agreement if such agreement has been deemed necessary.
7. The information contained in the document "Topical Report: Repair of Defective Steam Generator Tubes by Sleeving" is not available in public sources and can not be properly acquired without the execution of an appropriate agreement maintaining the proprietary nature of the information from Universal Testing Laboratories.
8. Public disclosure of the document and the information contained therein is likely to cause substantial harm to the competitive position of Universal Testing Laboratories because:
- a. The information contained in the document consists of the design, manufacturing, installation and testing relating to the repair of steam generator tubes by sleeving, the application of which provides a competitive advantage to Universal Testing Laboratories in the nuclear marketplace. Development of this information by Universal Testing Laboratories involved a substantial investment of effort and money.
  - b. The information required significant effort and expense to obtain the licensing approvals necessary for application of the information.

c. The information contained in the document cannot be otherwise be duplicated by others without a substantial investment of effort and money by them.


d. In order to acquire such information, another party would also incur considerable expense and inconvenience in developing the design, manufacturing and test procedures relating to the information contained in the document.

e. The availability of such information to others would enable them to modify or create products without incurring significant research, development, engineering, manufacturing, licensing, quality assurance and other costs incurred by Universal Testing Laboratories.

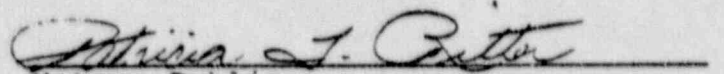
f. The disclosure of the information may enable such parties to provide such services while avoiding the forgoing costs thereby significantly impairing the position of Universal Testing Laboratories in the nuclear marketplace.

9. Because of both the substantial investment of effort and money by Universal Testing Laboratory in conceiving and developing the information described in the document "Topical Report: Repair of Defective Steam Generator Tubes by Sleeving" and Universal Testing Laboratories' expectation that this information will substantially enhance its competitive position in the nuclear industry, Universal Testing Laboratories has a rational basis for holding this information in confidence.

Further the Affiant sayeth not.

  
\_\_\_\_\_  
Diethelm Knoedler

Subscribed and sworn to before me this 10<sup>th</sup> day of Feb., 1989.

  
\_\_\_\_\_  
Notary Public  
My Commission expires: July 1, 1990  
My Commission Expires July 1, 1990



**COMBUSTION ENGINEERING**

November 27, 1989

ESE-89-433

Portland General Electric Company  
Nuclear Safety and Regulation Dept.  
121 SW Salmon Street  
Portland, Oregon 97204

ATTENTION: Mr. R. M. Nelson

**SUBJECT: Transmittal of Combustion Engineering Steam Generator Tube Sleeve  
Licensing Report CEN-395-P and Related Affidavit for Trojan**

REFERENCE: Portland General Electric Company Purchase Order No. NQ-53185

Dear Mr. Nelson:

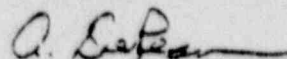
This is provided as the transmittal letter for four (4) copies, Serial Numbers 00001 through 00004 inclusive of the subject report as authorized by the reference document. Due to the proprietary nature of much of the content of this report, we ask that Portland General Electric Company handle the report in accordance with the proprietary statement noted on the cover of the reference report. As verbally requested, a copy of the NPS Document Distribution/Approval sheet showing the review process is included for PGE internal use.

Attached is the affidavit signed by Mr. A. E. Scherer referencing the Licensing Report for use in your submittal to the Commission.

If you have any questions or comments regarding the report please do not hesitate to call me.

Sincerely,

COMBUSTION ENGINEERING, INC.



A. D. DePeau  
Task Manager

ADD/kut  
Enclosures

AFFIDAVIT PURSUANT

TO 10 CFR 2.790

Combustion Engineering, Inc.    )  
State of Connecticut            )  
County of Hartford             )     SS :

I, P. L. McGill, depose and say that I am the Vice President of Nuclear Fuel of Combustion Engineering, Inc., duly authorized to make this affidavit, and have reviewed or caused to have reviewed the information which is identified as proprietary and referenced in the paragraph immediately below. I am submitting this affidavit in conformance with the provisions of 10 CFR 2.790 of the Commission's regulations and in conjunction with the application of Portland General Electric Company for withholding this information.

The information for which proprietary treatment is sought is contained in the following document:

CEN-395-P, "Trojan Steam Generator Tube Repair Using Leak Tight Sleeves"

This document has been appropriately designated as proprietary.

I have personal knowledge of the criteria and procedures utilized by Combustion Engineering in designating information as a trade secret, privileged or as confidential commercial or financial information.

Pursuant to the provisions of paragraph (b) (4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure, included in the above referenced document, should be withheld.



1. The information sought to be withheld from public disclosure concerns the design, manufacture, installation and testing of the steam generator tube welded sleeve for repairing degraded tubes, which is owned and has been held in confidence by Combustion Engineering.
2. The information consists of test data or other similar data concerning a process, method or component, the application of which results in substantial competitive advantage to Combustion Engineering.
3. The information is of a type customarily held in confidence by Combustion Engineering and not customarily disclosed to the public. Combustion Engineering has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The details of the aforementioned system were provided to the Nuclear Regulatory Commission via letter DP-537 from F. M. Stern to Frank Schroeder dated December 2, 1974. This system was applied in determining that the subject document herein are proprietary.
4. The information is being transmitted to the Commission in confidence under the provisions of 10 CFR 2.790 with the understanding that it is to be received in confidence by the Commission.
5. The information, to the best of my knowledge and belief, is not available in public sources, and any disclosure to third parties has been made pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence.
6. Public disclosure of the information is likely to cause substantial harm to the competitive position of Combustion Engineering because:

a. A similar product is manufactured and sold by major pressurized water reactor competitors of Combustion Engineering.

b. Development of this information by C-E required tens of thousands of manhours of effort and millions of dollars. To the best of my knowledge and belief a competitor would have to undergo similar expense in generating equivalent information.

c. In order to acquire such information, a competitor would also require considerable time and inconvenience developing the methodology for steam generator tube repair using leak tight sleeves for degraded tubes.

d. The information required significant effort and expense to obtain the licensing approvals necessary for application of the information. Avoidance of this expense would decrease a competitor's cost in applying the information and marketing the product to which the information is applicable.

e. The information consists of analyses of the methodology used to repair steam generator tubes using leak tight sleeves, the application of which provides a competitive economic advantage. The availability of such information to competitors would enable them to modify their product to better compete with Combustion Engineering, take marketing or other actions to improve their product's position or impair the position of Combustion Engineering's product, and avoid developing similar data and analyses in support of their processes, methods or apparatus.

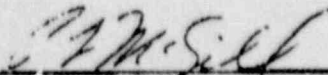
f. In pricing Combustion Engineering's products and services, significant research, development, engineering, analytical, manufacturing, licensing, quality assurance and other costs and expenses must be included. The ability of Combustion Engineering's competitors to utilize such



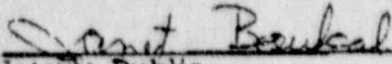
information without similar expenditure of resources may enable them to sell at prices reflecting significantly lower costs.

g. Use of the information by competitors in the international marketplace would increase their ability to market nuclear steam supply systems by reducing the costs associated with their technology development. In addition, disclosure would have an adverse economic impact on Combustion Engineering's potential for obtaining or maintaining foreign licensees.

Further the deponent sayeth not.

  
\_\_\_\_\_  
P. L. McGill  
Vice President  
Nuclear Fuel

Sworn to before me  
this 29 day of November, 1989

  
\_\_\_\_\_  
Notary Public

My Commission Expires: March 31, 1994

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
PORTLAND GENERAL ELECTRIC COMPANY, ) Docket 50-344  
THE CITY OF EUGENE, OREGON, AND ) Operating License NPF-1  
PACIFIC POWER & LIGHT COMPANY )  
 )  
(TROJAN NUCLEAR PLANT) )

CERTIFICATE OF SERVICE

I hereby certify that copies of License Change Application 187 (without proprietary enclosures) to the Operating License for Trojan Nuclear Plant, dated November 30, 1989, have been served on the following by hand delivery or by deposit in the United States mail, first class, this 30th day of November 1989:

State of Oregon  
Department of Energy  
625 Marion St NE  
Salem OR 97310

Mr. Michael J. Sykes  
Chairman of County Commissioners  
Columbia County Courthouse  
St. Helens OR 97051

*S. A. Bauer*

S. A. Bauer, Manager  
Nuclear Regulation Branch  
Nuclear Safety & Regulation

Subscribed and sworn to before me this 30th day of November 1989.

*Carole A. Hodgdon*  
Notary Public of Oregon

My Commission Expires:

*August 9, 1991*

