Attachment 3

Westinghouse Electric Corporation
Water Reactor Divisions
Box 355
Pittsburgh Pennsylvania 15230

March 22, 1984
CAW-84-22

Mr. Harold R. Denton
Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Phillips Building
7920 Norfolk Avenue
Bethesda, Maryland 20014

APPLICATION FOR WITHHOLDING PROPRIETARY

INFORMATION FROM PUBLIC DISCLOSURE

SUBJECT: Response to NRC Questions on Setpoint Methodology for SNUPPS

REF: Att. Letter from SNUPPS to NRC (Petrick to Denton), March, 1984

Dear Mr. Denton:

The proprietary material transmitted by the reference letter for which withholding is being requested by the Standardized Nuclear Unit Power Plant System (SNUPPS) is of the same technical type as that proprietary material previously submitted by Westinghouse concerning Reactor Protection System/Engineered Safety Features Actuation System Setpoint Methodology. The previous application for withholding, AW-76-60, was accompanied by an affidavit signed by the owner of the proprietary information, Westinghouse Electric Corporation. Further, the affidavit submitted to justify the previous material was approved by the Commission on April 17, 1978, and is equally applicable to the subject material. The subject proprietary material is being submitted by the Standardized Nuclear Unit Power Plant System (SNUPPS) for the Kansas City Power and Light Company's Wolf Creek (STN 50-482) and the Union Electric Company's Callaway (STN 50-483).

Kansas Gas and Electric Company and the

Accordingly, this letter authorizes the utilization by SNUPPS of the previously furnished affidavit. A copy of the affidavit, AW-76-60, dated December 1, 1976, is attached.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference CAW-84-22 and should be addressed to the undersigned.

Very truly yours,

Robert A. Wiesemann

Robert A. Wiesemann, Manager
Regulatory & Legislative Affairs

/dr
Attachment

cc: E. C. Shomaker, Esq.
Office of the Executive Legal Director, NRC

Attachment 4

AW-76-60

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

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COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared Robert A. Wiesemann, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Corporation ("Westinghouse") and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

Robert A. Wiesemann

Robert A. Wiesemann, Manager
Licensing Programs

Sworn to and subscribed
before me this 1st day
of December 1976.

Notary Public

(1) I am Manager, Licensing Programs, in the Pressurized Water Reactor Systems Division, of Westinghouse Electric Corporation and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing or rule-making proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Water Reactor Divisions.

(2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.790 of the Commission's regulations and in conjunction with the Westinghouse application for withholding accompanying this Affidavit.

(3) I have personal knowledge of the criteria and procedures utilized by Westinghouse Nuclear Energy Systems in designating information as a trade secret, privileged or as confidential commercial or financial information.

(4) 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 should be withheld.

(i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.

(ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse 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 application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

(a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

(b) It consists 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) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.

(d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.

(e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.

(f) It contains patentable ideas, for which patent protection may be desirable.

(g) It is not the property of Westinghouse, but must be treated as proprietary by Westinghouse according to agreements with the owner.

There are sound policy reasons behind the Westinghouse system which include the following:

(a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.

(b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.

(c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.

(d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.

(e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition in those countries.

(f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

(iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.790, it is to be received in confidence by the Commission.

(iv) The information is not available in public sources to the best of our knowledge and belief.

(v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in the attachment to Westinghouse letter number NS-CE-1298, Eicheldinger to Stolz, dated December 1, 1976, concerning information relating to NRC review of WCAP-8567-P and WCAP-8568 entitled, "Improved Thermal Design Procedure," defining the sensitivity of DNB ratio to various core parameters. The letter and attachment are being submitted in response to the NRC request at the October 29, 1976 NRC/Westinghouse meeting.

This information enables Westinghouse to:

(a) Justify the Westinghouse design.

(b) Assist its customers to obtain licenses.

(c) Meet warranties.

(d) Provide greater operational flexibility to customers assuring them of safe and reliable operation.

(e) Justify increased power capability or operating margin for plants while assuring safe and reliable operation.

(f) Optimize reactor design and performance while maintaining a high level of fuel integrity.

Further, the information gained from the improved thermal design procedure is of significant commercial value as follows:

(a) Westinghouse uses the information to perform and justify analyses which are sold to customers.

(b) Westinghouse sells analysis services based upon the experience gained and the methods developed.

Public disclosure of this information concerning design procedures is likely to cause substantial harm to the competitive position of Westinghouse because competitors could utilize this information to assess and justify their own designs without commensurate expense.

The parametric analyses performed and their evaluation represent a considerable amount of highly qualified development effort. This work was contingent upon a design method development program which has been underway during the past two years. Altogether, a substantial amount of money and effort has been expended by Westinghouse which could only be duplicated by a competitor if he were to invest similar sums of money and provided he had the appropriate talent available.

Further the deponent sayeth not.

Attachment 2

WESTINGHOUSE RESPONSE TO NRC QUESTIONS ON SETPOINT METHODOLOGY FOR SNUPPS

1. The methodology utilized in determining the adequacy of the difference between the nominal trip setpoint in the Technical Specifications and the setpoint assumed in the SNUPPS accident analyses is the same as that utilized for Virgil C. Summer. This methodology was approved by the staff in NUREG-0717, supplement No. 4, dated 8/82.

2. Four protection functions have nominal trip setpoints such that the 95% probability value for the instrument uncertainties could place the trip function within 5% of the top or bottom of the instrumentation calibration range. The functions and closeness to the top or bottom of the range are:

   A. Power range Neutron Flux - High Setpoint - $[]^{+a,c}$ from top of instrument range,

   B. Pressurizer Water Level - High- $[]^{+a,c}$ from top of instrument range,

   C. Steam Generators Water Level - Low-Low - $[]^{+a,c}$ from bottom of instrument range, and

   D. Pressurizer Pressure - Low - SI - $[]^{+a,c}$ from bottom of instrument range.

In a continuing effort to monitor protection system operability, Westinghouse has reviewed reported LERs for RPS and ESF trip functions, and when available, plant data on functional test results. During this monitoring process, there has been no indication that the above trip functions experience any more additional drift than trip functions with setpoints greater than 5% from the top or bottom of the instrument span. As part of the calibration procedures, several points across the calibrated instrument range including the 0% and 100% span values are checked. Inspection of as left/as found data from these checks do not indicate any significant variances from the instrument range intermediate points. In addition, transmitters are purchased such that the upper and lower range limits for the transmitters are greater than the upper and lower range values, (See SAMA Standard PMC 20.1-1973), i.e., the calibrated instrument range is not the design limit for the device. Based on the above, Westinghouse does not believe that functions which have 95% probability setpoints (when including uncertainties using the approved Westinghouse setpoint methodology) within 5% of the top or bottom of the instrument range will respond any differently than any other protection function.

LEFT/TOP

CAL ONLY

1. ALL VALUES IN PERCENT SPAN.
2. AS NOTED IN TABLE 15.0-4 OF FSAR.
3. AS NOTED IN TABLES 2.2-1 AND 3.3-4 OF PLANT TECHNICAL SPECIFICATIONS.
4. INCLUDED IN [ ]+a,c
5. NOT USED IN THE SAFETY ANALYSIS.
6. AS NOTED IN FIGURE 15.0-1 OF FSAR.
7. AS NOTED IN TABLE 2.2-1 NOTE 1 OF PLANT TECHNICAL SPECIFICATIONS.
8. AS NOTED IN TABLE 2.2-1 NOTE 3 OF PLANT TECHNICAL SPECIFICATIONS.
9. NOT NOTED IN TABLE 15.0-4 OF FSAR BUT USED IN SAFETY ANALYSIS.
10. NOT WESTIN
11. [
12. [
13. [
14. [
15. INCLUDED
16. INCORE/EX TABLE 4.3
17. [

	PROTECTION CHANNEL	1 PROCESS MEASUREMENT ACCURACY (1)	PRI ELE ACC
1	POWER RANGE, NEUTRON FLUX - HIGH SETPOINT	[	
2	POWER RANGE, NEUTRON FLUX - LOW SETPOINT		
3	POWER RANGE, NEUTRON FLUX - HIGH POSITIVE RATE		
4	POWER RANGE, NEUTRON FLUX - HIGH NEGATIVE RATE		
5	INTERMEDIATE RANGE, NEUTRON FLUX		
6	SOURCE RANGE, NEUTRON FLUX		

CENTER/TOP

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NOTES FOR TABLE 3-16, REV.0

STINGHOUSE SCOPE.

]+a,c

]+a,c

]+a,c

]+a,c

D IN [

]+a,c

EXCORE f(ΔI) COMPARISON AS NOTED IN
4.3-1 OF PLANT TECHNICAL SPECIFICATIONS

]+a,c

18. [

19. [

]+a

20. [

21. [

22. [

23. [

TABLE 3-16

REACTOR PROTECTION SYSTEM/ENGINEERED SAFETY FEATURES ACTUATION SYSTEM CHANNEL ERROR ALLOWANCES

CALLAWAY STATION

	SENSOR						INSTRUMENT R		
2	3	4	5	6	7	8	9		
PRIMARY ELEMENT ACCURACY (1)	CALIBRATION ACCURACY (1)	PRESSURE EFFECTS (1)	TEMPERATURE EFFECTS (1)	DRIFT (1)	ENVIRONMENTAL ALLOWANCE (1)	CALIBRATION ACCURACY (1)	COMPARATOR SETTING ACCURACY (1)	TEMP EF	

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]+a,c

]+a,c

]+a,c

]+a,c

]+a,c

]+a,c

NT RACK →

10 TEMPERATURE EFFECTS (1) +a,c	11 DRIFT (1)	12 SAFETY ANALYSIS LIMIT (2)	13 STS ALLOWABLE VALUE (3)	14 STS TRIP SETPOINT (3)	15 TOTAL ALLOWANCE (1)	16 CHANNEL STATISTICAL ALLOWANCE (1)	17 MARGIN (1)	+a,c
	1.0	118% RTP	112.3% RTP	109% RTP				1
	1.0	35% RTP	28.3% RTP	25% RTP				2
	0.5	(5)	6.3% RTP	4.0% RTP				3
	0.5	6.9% RTP (9)	6.3% RTP	4.0% RTP				4
	4.2	(5)	35.3% RTP	25% RTP				5
	3.0	(5)	1.6×10^5 CPS	1.0×10^5 CPS				6

* 7	* OVERTEMPERATURE ΔT	ΔT CHANNEL		
8		TAVG CHANNEL		
9				
10		PRESSURIZER PRESSURE CHANNEL		
11		f(ΔI) CHANNEL		
12	OVERPOWER ΔT	ΔT CHANNEL		
13				
14		TAVG CHANNEL		
15	PRESSURIZER PRESSURE - LOW, REACTOR TRIP			
16	PRESSURIZER PRESSURE - HIGH			
17	PRESSURIZER WATER LEVEL - HIGH			
18	LOSS OF FLOW			
19	STEAM GENERATOR WATER LEVEL - LOW-LOW			
20	UNDERVOLTAGE - RCP			
21	UNDERFREQUENCY - RCP			
22	CONTAINMENT PRESSURE - HIGH-1			
23	PRESSURIZER PRESSURE - LOW,SI			
24	STEAMLINE PRESSURE - LOW			
25	CONTAINMENT PRESSURE - HIGH-2			
26	CONTAINMENT PRESSURE - HIGH-3			
27	NEGATIVE STEAM PRESSURE RATE - HIGH			
28	STEAM GENERATOR WATER LEVEL - HIGH-HIGH			
29	RWST LEVEL - LOW, AUTOMATIC SWITCHOVER			

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LEFT/BOTTOM

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CENTER/BOTTOM

	1.0							7
	1.0							8
		function (6)	function (7) +2.8% ΔT span	function (7)				9
								10
								11
	1.0							12
		function (6)	function (8) +2.8% ΔT span	function (8)				13
	1.0							14
	1.0	1845 psig	1874 psig	1885 psig				15
	1.0	2445psig(9)	2400 psig	2385 psig				16
	1.0	(5)	93.8%span	92%span				17
	0.6	97%design	89.2%design	90%design				18
	1.0	0%span	22.0%span	23.5%span				19
	4.0	9384 VAC	10356 VAC	10584 VAC				20
	1.0	57.0 H_Z(9)	57.1 H_Z	57.2 H_Z				21
	1.0	6.0 psig(9)	4.5 psig	3.5 psig				22
	1.0	1700psig(9)	1834 psig	1849 psig				23
	2.5	360 psig(9)	571 psig	615 psig				24
	1.0	20.0psig	18.3 psig	17.0 psig				25
	1.0	30.0psig	28.3%psig	27.0%psig				26
	1.0	(5)	<-124 psig	<-100 psig				27
	1.0	83%span	79.8%span	78.0%span				28
	1.0	32.6%span	35.2%span	36.0%span				29

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RIGHT/BOTTOM