Westinghouse Electric Corporation Energy Systems

Box 355
Pittsburgh Pennsylvania 15230-0355

AW-95-820

May 8, 1995

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: MR. T. R. QUAY

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

SUBJECT: ADDITIONAL INFORMATION IN SUPPORT OF WESTINGHOUSE RESPONSE TO RAI 440.251 ON THE AP600 DESIGN

Dear Mr. Quay:

The application for withholding is submitted by Westinghouse Electric Corporation ("Westinghouse") pursuant to the provisions of paragraph (b)(1) of Section 2.790 of the Commission's regulations. It contains commercial strategic information proprietary to Westinghouse and customarily held in confidence.

The proprietary material for which withholding is being requested is identified in the proprietary version of the subject report. In conformance with 10CFR Section 2.790, Affidavit AW-95-820 accompanies this application for withholding setting forth the basis on which the identified proprietary information may be withheld from public disclosure.

Accordingly, it is respectfully requested that the subject information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to this application for withholding or the accompanying affidavit should reference AW-95-820 and should be addressed to the undersigned.

Very truly yours,

N. J. Liparulo, Manager
Nuclear Safety Regulatory And Licensing Activities

/nja

cc: Kevin Bohrer NRC 12H5

2409A

AW-95-820

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared James M. Brennan, 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:

James M. Brennan, Manager
Operating Plant Licensing

Sworn to and subscribed
before me this 10 day
of May, 1995

Notary Public

Notarial Seal
Rose Marie Payne, Notary Public
Monroeville Boro, Allegheny County
My Commission Expires Nov. 4, 1996
Member, Pennsylvania Association of Notaries

2410A

(1) I am Manager, Operating Plant Licensing, in the Nuclear Technology Division, of the 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 and rulemaking proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Energy Systems Business Unit.

(2) I am making this Affidavit in conformance with the provisions of 10CFR 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 the Westinghouse Energy Systems Business Unit 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.

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 of 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 10CFR Section 2.790, it is to be received in confidence by the Commission.

(iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.

(v) Enclosed is Letter NTD-NRC-95-4457, May 8, 1995 being transmitted by Westinghouse Electric Corporation (W) letter and Application for Withholding Proprietary Information from Public Disclosure, N. J. Liparulo (W), to Mr. T. R. Quay, Office of NRR. The proprietary information as submitted for use by Westinghouse Electric Corporation is in response to questions concerning the AP600 plant and the associated design certification application and is expected to be applicable in other licensee submittals in response to certain NRC requirements for justification of licensing advanced nuclear power plant designs.

This information is part of that which will enable Westinghouse to:

(a) Demonstrate the design and safety of the AP600 Passive Safety Systems.

(b) Establish applicable verification testing methods.

(c) Design Advanced Nuclear Power Plants that meet NRC requirements.

(d) Establish technical and licensing approaches for the AP600 that will ultimately result in a certified design.

(e) Assist customers in obtaining NRC approval for future plants.

Further this information has substantial commercial value as follows:

(a) Westinghouse plans to sell the use of similar information to its customers for purposes of meeting NRC requirements for advanced plant licenses.

(b) Westinghouse can sell support and defense of the technology to its customers in the licensing process.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar advanced nuclear power designs and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended for developing analytical methods and receiving NRC approval for those methods.

Further the deponent sayeth not.

Westinghouse Proprietary Class 2C

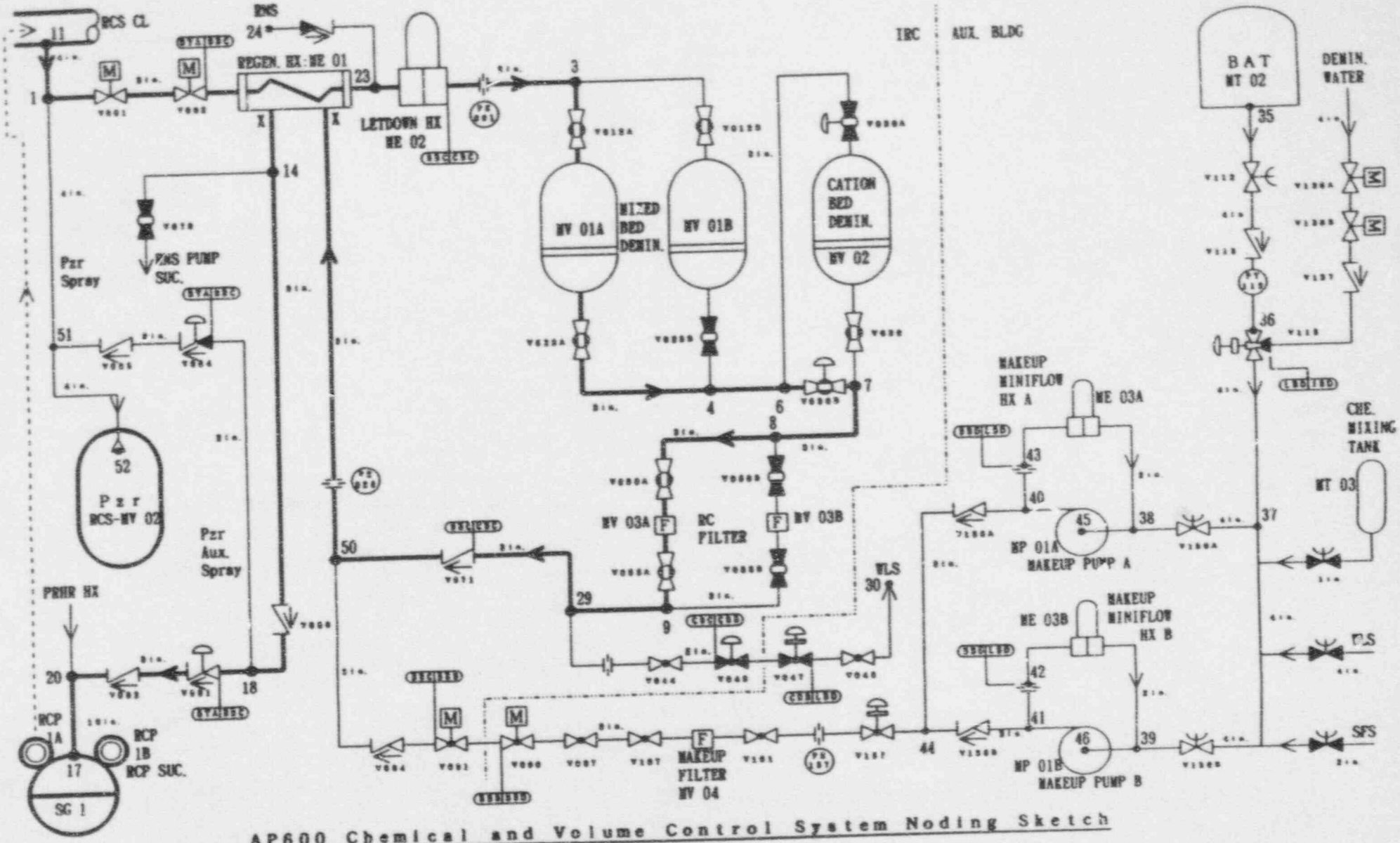
Enclosure 2 to Westinghouse Letter NTD-NRC-95-4457

Non-proprietary copy of Enclosure 1

AP600 CHEMICAL AND VOLUME CONTROL SYSTEM
SUMMARY OF CVS FLOW PATH RESISTANCES

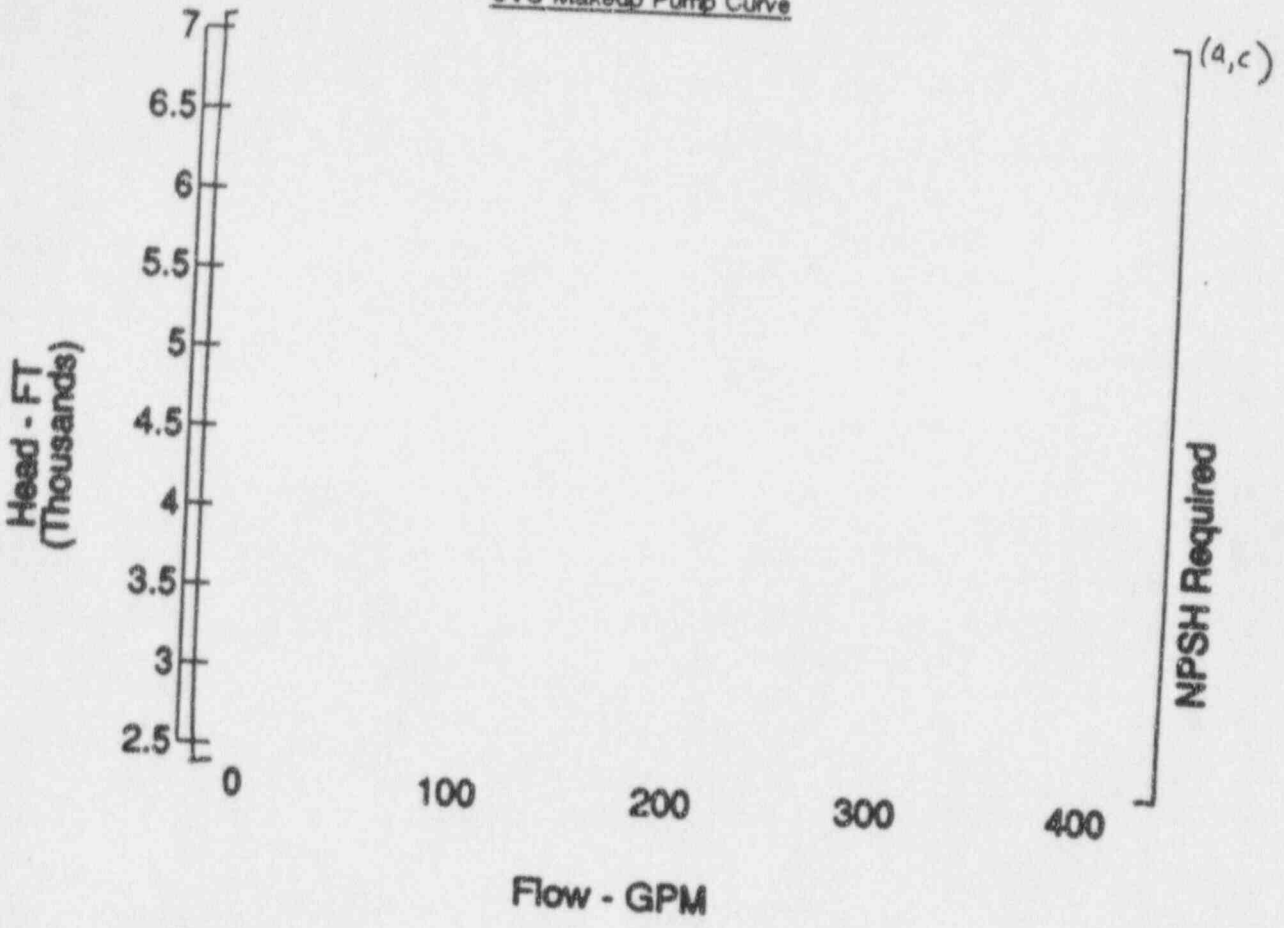
Path	From Node	To Node	Description	Actual Pipe I.D. (inches)	Total K (f*L/D)	Additional Resistance (ft/gpm^2)	(a,c) Components of Additional Resistance
1	11	1	From RCS Cold Leg to CVS Junction	3.624			
2	1	23	From CVS/RCS Tee Junction to RNS Connection on Regenerative Heat Exchanger Outlet	2.624			Regenerative HX ME01 (Tube Side)
3	23	3	From RNS Connection on Regenerative Heat Exchanger Outlet to Demineralizer Inlet Header Tee	2.624			Letdown HX ME02 (Tube Side) Flow Meter FE001
4	3	4	From Demineralizer Inlet Header Tee Through Mixed Bed Demineralizer A to Demineralizer Outlet Header Tee	2.624			Mixed Bed Demineralizer A (MV01A)
5	3	4	From Demineralizer Inlet Header Tee Through Mixed Bed Demineralizer B to Demineralizer Outlet Header Tee	2.624			Mixed Bed Demineralizer B (MV01B)
6	4	6	From Mixed Bed Demineralizer Outlet Tee to Cation Bed Inlet	2.624			
7	6	7	From Cation Bed Inlet Tee Through Cation Bed to Cation Bed Outlet Tee	2.624			Cation Bed Demineralizer (MV02)
8	6	7	Cation Bypass From Cation Bed Inlet Tee to Cation Bed Outlet Tee	2.624			
9	7	8	From Cation Bed Outlet Tee to Reactor Coolant Filter Inlet Tee	2.624			
10	8	9	From Reactor Coolant Filter Inlet Header Tee Through Reactor Coolant Filter A to Reactor Coolant Filter Outlet Header Tee	2.624			RC Filter A (MV03A)
11	8	9	From Reactor Coolant Filter Inlet Header Tee Through Reactor Coolant Filter B to Reactor Coolant Filter Outlet Header Tee	2.624			RC Filter B (MV03B)
12	9	29	From Reactor Coolant Filter Outlet Header Tee to WLS Letdown Connection	2.624			
13	29	30	Letdown Line to the WLS	1.689			Letdown Orifice
14	29	50	Purification Line from WLS Letdown Connection to Makeup Pump Connection	2.624			
15	50	14	From Makeup Pump Connection to Regenerative Heat Exchanger Shell Side Outlet Return to RCS	2.624			Regenerative HX ME01 (Shell Side) Flow Meter FE025
16	14	18	From Regenerative Heat Exchanger Shell Side Outlet to the RCS Auxiliary Pressurizer Spray	2.624			
17	18	20	From Auxiliary Pressurizer Spray Connection to the PRHR Return Tee Junction	2.624			
18	20	17	From PRHR Return Tee Junction to the RCS Steam Generator	8.750			
19	35	36	From the Boric Acid Tank to the Three-Way Blending Valve	4.026			Flow Meter FT115 Diaphragm Valve V112

Path	From Node	To Node	Description	Actual Pipe I.D. (inches)	Total K (f*L/D)	Additional Resistance (ft/gpm^2)	(a,c) Components of Additional Resistance
20	36	37	From Three-Way Blending Valve to the Makeup Pump Suction Header Tee	4.026			
21	37	38	From Makeup Pump Suction Header Tee to Makeup Pump MP01A Miniflow Return Junction	4.026			Diaphragm Valve V150A
22	38	45	From Makeup Pump MP01A Miniflow Return to Makeup Pump MP01A	4.026			
23	45	40	From Makeup Pump MP01A to Makeup Pump MP01A Miniflow Inlet Junction	2.624			
24	40	43	From Makeup Pump MP01A Miniflow Inlet to Makeup Pump MP01A Miniflow Orifice	1.689			Makeup Pump Miniflow Orifice
25	43	38	From Makeup Pump MP01A Miniflow Orifice to Makeup Pump MP01A Miniflow Return Injection	1.939			Makeup Miniflow HX A (ME 03A)
26	40	44	From Makeup Pump MP01A Miniflow Inlet to Makeup Pump Discharge Header Tee	2.624			
27	37	39	From Makeup Pump Suction Header Tee to Makeup Pump MP01B Miniflow Return Junction	4.026			Diaphragm Valve V150B
28	39	46	From Makeup Pump MP01B Miniflow Return to Makeup Pump MP01B	4.026			
29	46	41	From Makeup Pump MP01B to Makeup Pump MP01B Miniflow Inlet Junction	2.624			
30	41	42	From Makeup Pump MP01B Miniflow Inlet to Makeup Pump MP01B Miniflow Orifice	1.689			Makeup Pump Miniflow Orifice
31	42	39	From Makeup Pump MP01B Miniflow Orifice to Makeup Pump MP01B Miniflow Return Injection	1.939			Makeup Miniflow HX B (ME 03B)
32	41	44	From Makeup Pump MP01B Miniflow Inlet to Makeup Pump Discharge Header Tee	2.624			
33	44	50	From Makeup Pump Discharge Header to Purification Loop Return Junction Tee	2.624			Flow Meter FT157 Makeup Filter (MY 04)
34	18	51	Aux. Spray Line From RCS Pressurizer Spray Header Junction Tee to RCS Pressurizer Spray	1.939			
35	51	52	Pressurizer Spray Line from Aux. Spray Connection to the Pressurizer	3.624			Spray Nozzle



AP600 Chemical and Volume Control System Noding Sketch

CVS Makeup Pump Curve



Max Shutoff Head:
Minimum Design Head:
Minimum Design Flow:
Pump Minimum Flow:

[ ] (a,c)