

PROPRIETARY



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

January 21, 2010
U7-C-STP-NRC-100024

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

South Texas Project
Units 3 and 4
Docket Nos. 52-012 and 52-013
Response to Request for Additional Information

Attached is the response to an NRC staff question included in Request for Additional Information (RAI) letter number 242 related to Combined License Application (COLA) Part 2, Tier 2 Section 6.2.

This response addresses RAI 06.02.01.01.C-11. The response contains some information that is proprietary to Westinghouse Electric Company LLC. The non-proprietary version of the response is contained in Attachment 1 and the proprietary version is in Attachment 2. Since Attachment 2 contains information proprietary to Westinghouse Electric Company LLC, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit is contained in Attachment 3 and sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b) (4) of Section 2.390 of the Commission's regulations. Also included in Attachment 3 is Westinghouse authorization letter CAW-10-2734, Proprietary Information Notice, and Copyright Notice.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations. When separated from the proprietary attachment, this cover letter and attachment 1 are not proprietary.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse Affidavit should reference CAW-10-2734 and should be addressed to: B. F. Maurer, Manager, ABWR Licensing, Westinghouse Electric Company LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

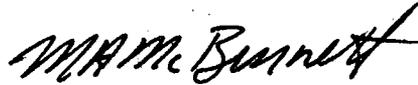
There are no commitments in this letter.

D091
NRC

If you have any questions other than those related to the proprietary aspects of this response, please contact me at (361) 972-7206, or Bill Mookhoek at (361) 972-7274.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 1/21/2010



Mark McBurnett
Vice-President, Oversight and Regulatory Affairs
South Texas Project Units 3 & 4

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Attachments:

1. RAI 06.02.01.01.C-11(Non-proprietary version)
2. RAI 06.02.01.01.C-11(Proprietary version)
3. Request for Withholding of Proprietary Information

cc: w/o attachment except*
(paper copy)

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J. J. Nesrsta
Kevin Pollo
L. D. Blaylock
CPS Energy

RAI 06.02.01.01.C-11**QUESTION**

Provide the results of containment pressure and temperature analysis (WCAP-17058-P) for the long term Feed Water Line Break (FWLB) simulation. Provide the mass and energy release rate to containment and the ECCS flow rate from the suppression pool for this scenario.

RESPONSE:

The long-term feedwater line break (FWLB) peak pressure and temperature responses are shown in Figures 1 through 5. For the peak suppression pool plot (Figure 5), the solid line represents the liquid temperature in the suppression pool only (wetwell only). The dashed line represents the combined energy of the liquid in the wetwell and lower drywell, divided by the total mass of liquid. The dashed line is the reported peak suppression pool temperature.

Figures B-7 and B-8 in WCAP17058-P present the mass and energy releases from the GOBLIN vessel model to the primary containment for the FWLB analysis. Figures B-9 and B-10 present the ADS mass and energy releases to the suppression pool for the FWLB analysis, and Figures B-11 and B-12 present the pump side mass and energy releases to primary containment for the FWLB analysis. The GOBLIN mass and energy data is used for the first 480 seconds. After this time, mass and energy releases are calculated in GOTHIC using a more simplified vessel model.

The GOTHIC mass and energy releases for this FWLB analysis, which begin at 480 seconds, are shown in Figures 6 and 7. As for the ECCS system in GOTHIC, it consists of the following:

- 3 low pressure flooder pumps (LPFL) (9.36 ft³/s per available pump)
- 2 high pressure core flooder pumps (HPCF) (7.132 ft³/s per available pump)
- 1 reactor core isolation cooling pump (RCIC), which is accounted for in GOBLIN
- 3 residual heat removal (RHR) heat exchangers, of which one is considered to be failed.

In the GOTHIC calculation, at the end of the GOBLIN calculation time, 2 low pressure flooder (LPFL) pumps and 2 high pressure core flooder (HPCF) pumps begin injecting directly into the GOTHIC vessel from the suppression pool at full flow until 30 minutes into the event. In addition, 1 LPFL pump is spilling flow directly into the drywell from the suppression pool. This spilling occurs because it is assumed that this LPFL is attached to the broken feedwater line. Pump heat from all 5 pumps is added directly to the suppression pool starting at a transient time of 0 seconds.

After 30 minutes, operator actions may be credited. At this time, 1 LPFL pump is diverted to drywell and wetwell sprays and includes energy removal from 1 RHR heat exchanger. The second LPFL is diverted to suppression pool recirculation cooling with energy removal from 1 RHR heat exchanger. Sprays and recirculation pool cooling continue until the run has been terminated.

There is no COLA change as a result of this response.

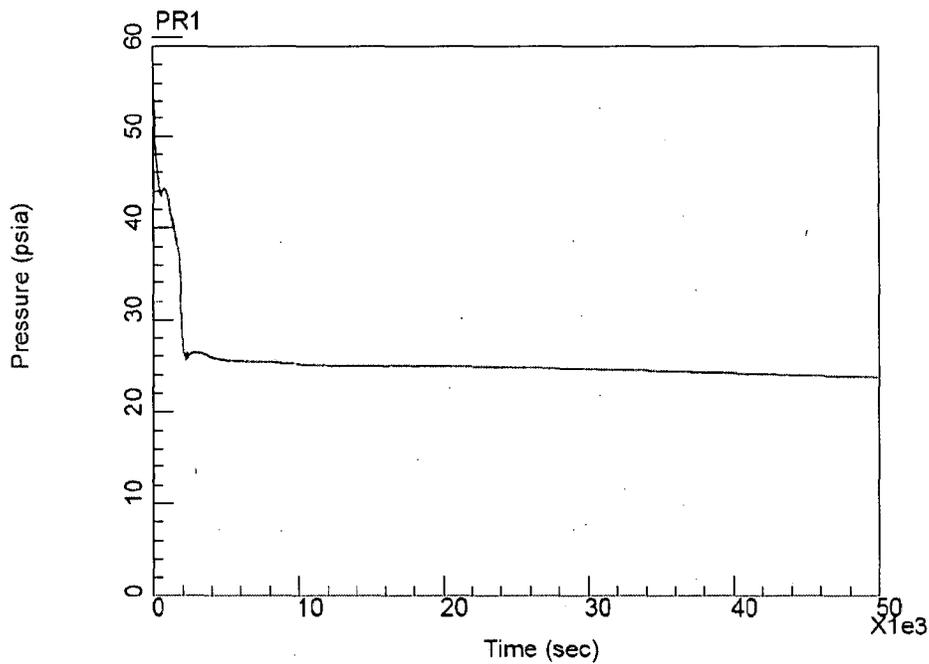


Figure 1 Long-Term FWLB Drywell Pressure

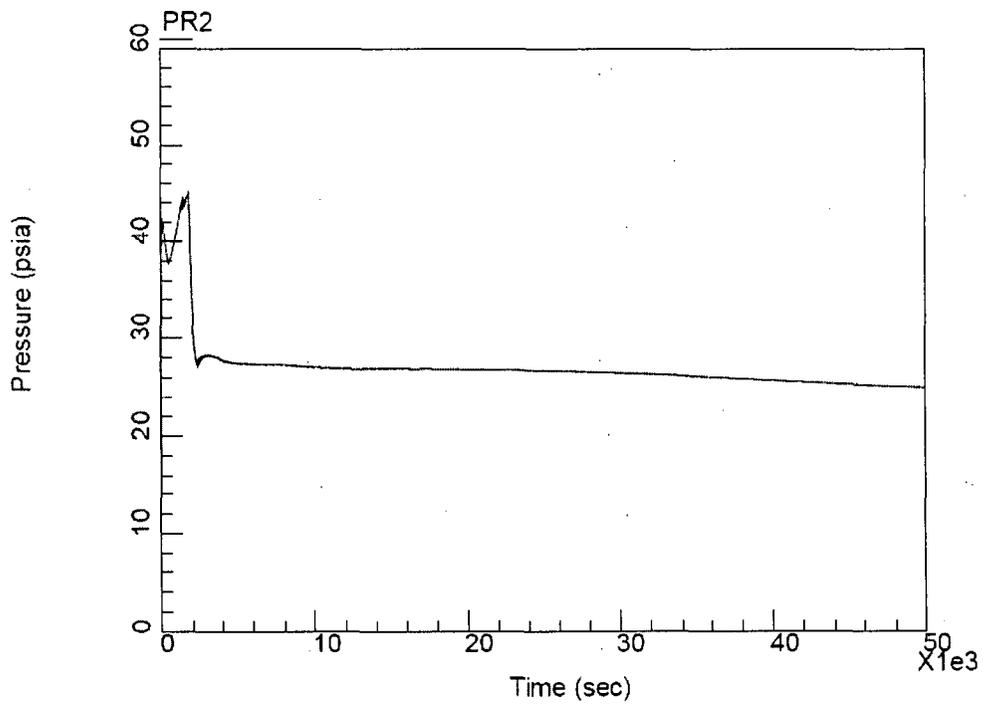


Figure 2 Long-Term FWLB Wetwell Pressure

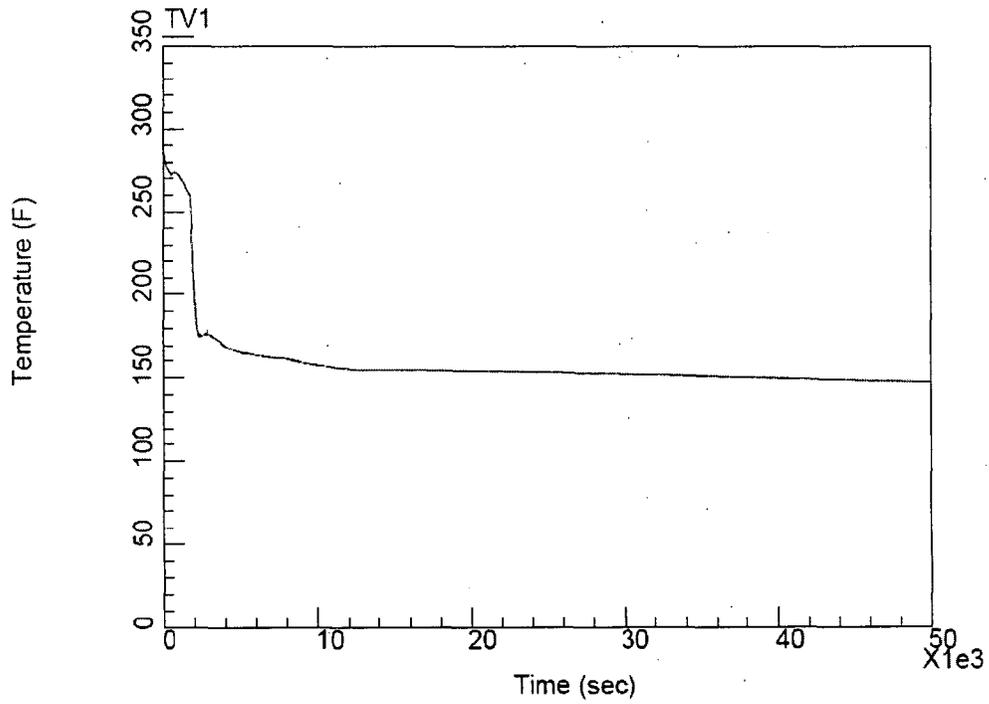


Figure 3 Long-Term FWLB Drywell Temperature

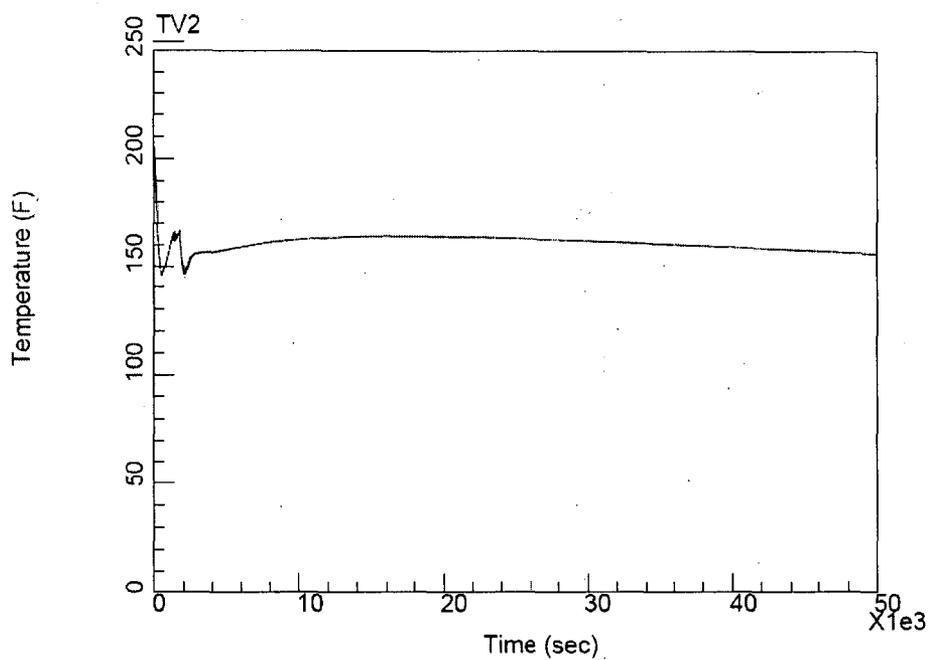


Figure 4 Long-Term FWLB Wetwell Temperature

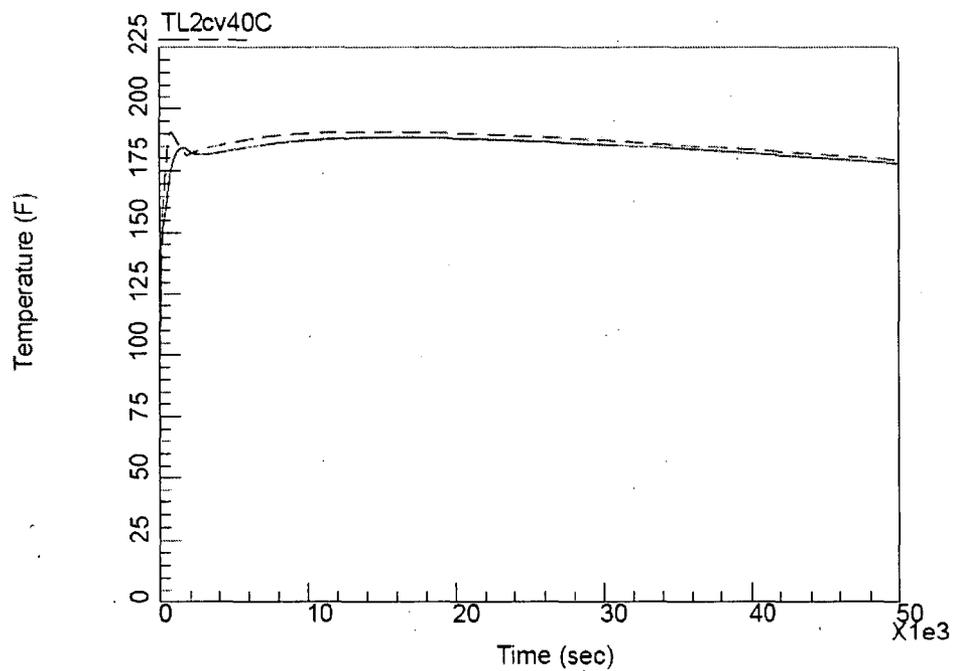


Figure 5 Long-Term FWLB Suppression Pool Temperature



Figure 6 Long-Term FWLB GOTHIC Mass Releases

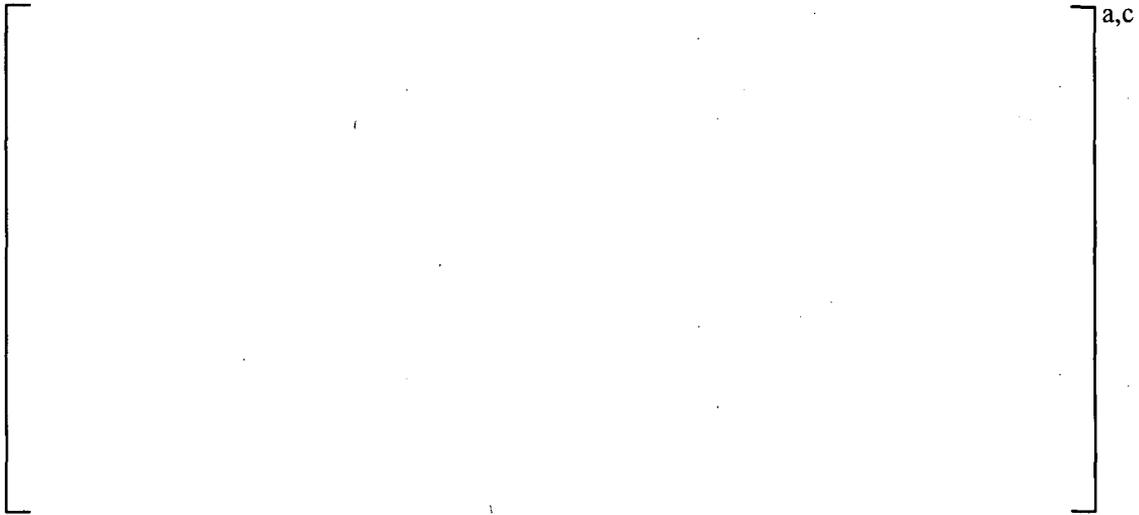


Figure 7 Long-Term FWLB GOTHIC Energy Releases



Request for Withholding of
Proprietary Information

Westinghouse

U7-C-STP-NRC-100024
Attachment 3

Westinghouse Electric Company
Nuclear Services
P.O. Box 355
Pittsburgh, Pennsylvania 15230-0355
USA

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

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Direct fax: (412) 374-6526
e-mail: maurerbf@westinghouse.com
Project Ltr.: WEC-STP-2010-0001 P-Enclosure

CAW-10-2734

January 21, 2010

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: "Response to NRC RAI 06.02.01.01.C-11" (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-10-2734 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying affidavit by South Texas Project Nuclear Operating Company.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-10-2734 and should be addressed to B. F. Maurer, Manager, ABWR Licensing, Westinghouse Electric Company LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Very truly yours,

B. F. Maurer, Manager
ABWR Licensing

Enclosures

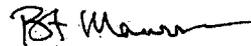
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

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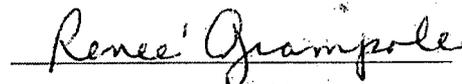
COUNTY OF ALLEGHENY:

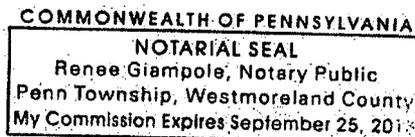
Before me, the undersigned authority, personally appeared B. F. Maurer, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit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



B. F. Maurer, Manager
ABWR Licensing

Sworn to and subscribed before me
this 21st day of January 2010



Notary Public

- (1) I am Manager, ABWR Licensing, in Nuclear Services, Westinghouse Electric Company LLC (Westinghouse), 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 rule-making proceedings, and am authorized to apply for its withholding on behalf of Westinghouse.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.390 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 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 2.390 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 that 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 10 CFR Section 2.390, 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) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in "Response to NRC RAI 06.02.01.01.C-11" (Proprietary) for submittal to the Commission, being transmitted by South Texas Project Nuclear Operating Company (STPNOC) letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse is that associated with the NRC review of the South Texas Project Units 3 and 4 COL Application.

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

- (a) Assist the customer in obtaining NRC review of the South Texas Project Units 3 and 4 COL Application.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of this information to its customers for purposes of plant specific ABWR containment analysis for licensing basis applications.
- (b) Its use by a competitor would improve their competitive position in the design and licensing of a similar product for ABWR containment analyses.
- (c) The information requested to be withheld reveals the distinguishing aspects of a methodology which was developed by Westinghouse.

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 calculations 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.

Further the deponent sayeth not.

Request for Withholding of
Proprietary Information

Proprietary Information Notice

Transmitted herewith are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal pursuant to 10 CFR 2.390(b)(1).

Copyright Notice

The reports transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.390 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond those necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.