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March 5, 2008

Docket Nos.: 50-424
50-425

NL-08-0300

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

**Vogtle Electric Generating Plant
Response to NRC Request for Additional Information Regarding License
Amendment Request to Revise Technical Specifications (TS) 3.3.2, "ESFAS
Instrumentation," and TS 3.5.4, "Refueling Water Storage Tank (RWST)"**

Ladies and Gentlemen:

On January 9, 2008 Southern Nuclear Operating Company (SNC) submitted a License Amendment Request to the NRC to revise the Vogtle Electric Generating Plant (VEGP) Technical Specifications (TS) 3.3.2, "ESFAS Instrumentation," and TS 3.5.4, "Refueling Water Storage Tank (RWST)." The proposed TS changes are required to meet commitments related to the resolution of issues identified in NRC Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors," dated September 13, 2004.

On January 28, 2008, SNC received a Request for Additional Information (RAI) from the NRC regarding the January 9, 2008 submittal. SNC responded to the subject RAI by letter dated February 6, 2008.

On February 25, 2008 a teleconference held between SNC, the NRC, and Westinghouse Electric Company LLC (Westinghouse), regarding the License Amendment Request, resulted in a request from the NRC for additional information. Enclosure 1 contains the SNC response to the NRC's request. Enclosure 2 contains proprietary information as defined by 10 CFR 2.390. Enclosure 3 contains a non-proprietary version of SNC's response for VEGP.

In Enclosure 4, Westinghouse, as the owner of the proprietary information, has executed an affidavit which identifies that the enclosed proprietary information has been handled and classified as proprietary, is customarily held in confidence, and has been withheld from public disclosure. The proprietary information was provided to SNC in a Westinghouse transmittal that is referenced by the affidavit. Westinghouse hereby requests that the enclosed proprietary information be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390.

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,



L. M. Stinson
Vice President Fleet Operations Support

LMS/LPH/daj

- Enclosures:
1. Vogtle Electric Generating Plant Response to NRC Request for Additional Information
 2. Vogtle Electric Generating Plant Response to NRC Request for Additional Information (Proprietary)
 3. Vogtle Electric Generating Plant Response to NRC Request for Additional Information (Non-Proprietary)
 4. Westinghouse Electric Company Affidavit

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. T. E. Tynan, Vice President – Vogtle
Mr. D. H. Jones, Vice President – Engineering
RType: CVC7000

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Acting Regional Administrator
Mr. S. P. Lingam, NRR Project Manager – Vogtle
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

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Enclosure 1

Response to NRC Request for Additional Information

Enclosure 1

Response to NRC Request for Additional Information

1. NRC Request

Provide the original licensing basis for the RWST semi-automatic switchover process in the original VEGP SER.

SNC Response

The original VEGP SER, dated June 1985 states:

(Page 6-20):

“The RWST is large enough to allow for safety injection and manual switchover of ECCS and containment spray pumps to the containment emergency sumps.... From the assumed allowances and flow rates, the applicant calculated that the minimum time to inject the design amount of water from the RWST before initiating the switchover process was approximately 19 minutes and the time to complete ECCS switchover was approximately 12 minutes once the low-low-level alarm in the RWST is actuated. The switchover time was computed considering the worst-case single active failure (not isolating one RHR pump from the RWST). Operator actions were estimated to require less time than was available for switchover.”

(Page 6-24):

“The applicant has proposed a partially automatic system to effect switchover of the low-head system from the injection to the recirculation mode. Operator action will be required to complete this switchover. Logic is provided to automatically open the containment emergency sump isolation valves on low-low level in the refueling water storage tank (RWST) concurrent with a safety injection signal so as to provide a source of water to the RHR pumps. Manual actions are then required in order to isolate the RWST, isolate the SI miniflow lines, isolate the alternate miniflow lines of the centrifugal charging pump, and to align the suction of the SI and centrifugal charging pumps to the discharge of the RHR pumps. Switchover normally starts 19 minutes after ECCS initiation. The applicant has stated in FSAR Amendment 8 that once switchover begins, the operator has 22 minutes' worth of water in the RWST, considering the most limiting single failure, to complete the switchover, yet the manual actions only require about 12 minutes.

The applicant was asked to describe the consequences of failing to perform the manual actions properly, i.e., omitting a procedural step or performing the steps out of order. In FSAR Amendment 8, the applicant stated that the charging pumps and the SI pumps can be damaged as a result of failing to change the position of particular valves. The applicant was then asked to clarify this response and to indicate whether the consequences were a result of a single failure. In FSAR Amendments 10 and 13, the applicant stated that this damage can only occur as the result of multiple operator errors. This response is acceptable.”

Enclosure 1

Response to NRC Request for Additional Information

2. NRC Request

Discuss the methodology used to determine the overall instrument uncertainty for the RWST Level Low-Low trip function.

SNC Response

See Enclosure 2.

3. NRC Request

Discuss the process used to address instrumentation found out of calibration.

SNC Response

By VEGP procedures, if the As-found data for an instrument is outside of the Technical Specification Allowable Value, the calibration is stopped, a Supervisor is notified of the condition, and the condition is entered into the corrective action program. The Technician will then proceed to correct the condition using plant procedures.

If the As-found data is within the Technical Specification Allowable Value but outside of the As-found acceptance criteria, the instrumentation is calibrated to within acceptable As-left conditions. In addition, the condition is entered into the corrective action program. For the new RWST Level Low-Low setpoint, the Technical Specification Allowable Value and the calibration As-found acceptance criteria are the same.

VEGP TS Table 3.3.2, "ESFAS Instrumentation," Note (i) states, in part, "A channel is OPERABLE with an actual Trip Setpoint value outside its calibration tolerance band provided the Trip Setpoint value is conservative with respect to its associated Allowable Value and the channel is readjusted to within the established calibration tolerance band of the Nominal Trip Setpoint." Therefore, if the As-found data for an instrument channel is outside its calibration tolerance band, but is within its Allowable Value, then per Note (i), the instrument channel is operable and can be readjusted to within the calibration tolerance band of the Nominal Trip Setpoint. If the As-found data for an instrument channel exceeds its Allowable Value, then the instrument channel is inoperable. Plant Operations staff determines the operability of the instrumentation found out of calibration.

At present, the As-found and As-left acceptance criteria are the same, so the calibration may adjust the instrumentation to closer match the Nominal Trip Setpoint.

If at any time during the process the Technician determines the instrumentation is not responding as expected, the condition is entered into the corrective action program, and the instrumentation is reworked to restore the channel to operable condition using site procedures.

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Enclosure 3

**Response to NRC Request for Additional Information
(Non-Proprietary)**

Westinghouse Non-Proprietary Class 3

**Vogtle Electric Generating Plant
Response to NRC Request for Additional Information
Regarding License Amendment Request to Revise Technical
Specifications (TS) 3.3.2, "ESFAS Instrumentation," and TS 3.5.4,
"Refueling Water Storage Tank (RWST)"**

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The basic uncertainty algorithm used to determine the overall instrument uncertainty for the RWST Level Low Low trip function is the square-root-sum-of-the squares (SRSS) of the applicable uncertainty terms. This is the same methodology as defined in WCAP-11269, Revision 1, "Westinghouse Setpoint Methodology for Protection Systems Vogtle Station," as modified for term dependencies as shown on the attached tables. This methodology combines the uncertainty components for a channel in an appropriate combination of those groups which are statistically and functionally independent. Those uncertainties which are not independent are conservatively treated by arithmetic summation and then combined via SRSS with the independent terms. This approach is consistent with NRC Regulatory Guide 1.105, Revision 3, "Setpoints for Safety-Related Instrumentation," and ISA Standard 67.04.01-2006, "Setpoints for Nuclear Safety-Related Instrumentation."

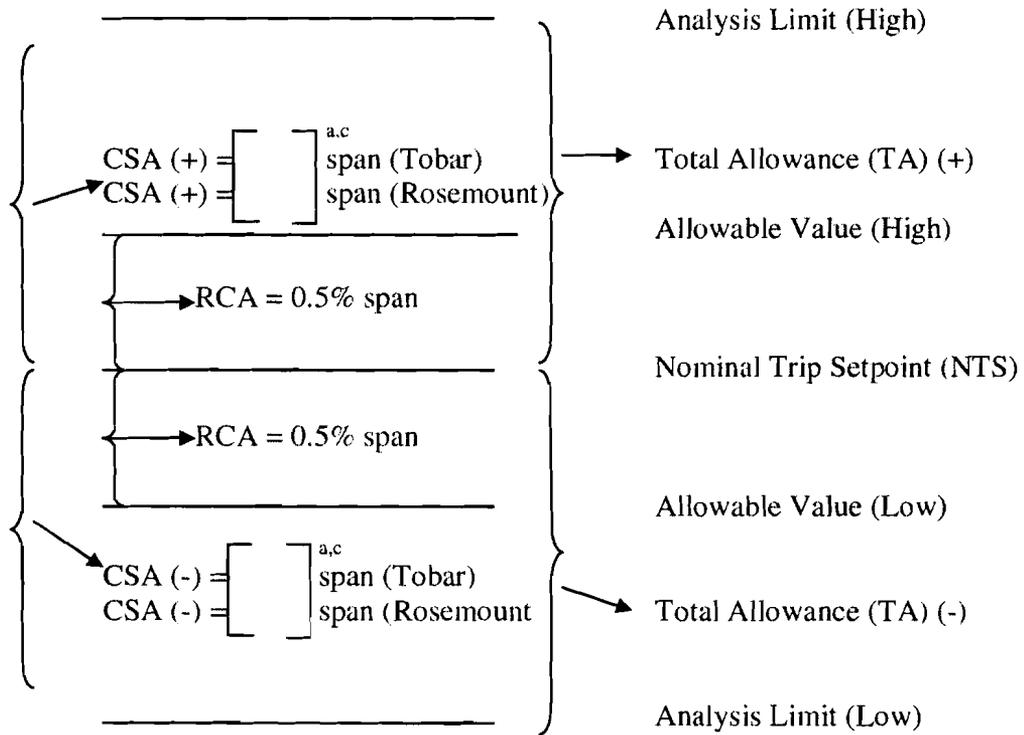
A calculation determined the bounding Channel Statistical Allowance (CSA) for this function. The Allowable Values (AVs) are determined by adding (or subtracting) the calibration accuracy, defined by the Rack Calibration Accuracy (RCA), to the Nominal Trip Setpoint (NTS) in the non-conservative direction(s) (i.e., toward or closer to the Analysis Limit(s) (AL)) for the application. The magnitude of the as left (calibration accuracy term) and the as found tolerances are the same and are specified in the station procedures.

Vogtle RWST Methodology

Summary	
Parameter	Value
Channel Statistical Allowance (CSA)	[] ^{a,c}
Total Allowance (TA)	[]
Margin	[]
* Analysis Limit (High)	189.72 inches
* Allowable Value (High)	180.54 inches
* Nominal Trip Setpoint (NTS)	177.48 inches
* Allowable Value (Low)	174.42 inches
* Analysis Limit (Low)	165.24 inches
Span	612 inches

*** Reference point is 0% span (which is 36 inches from the bottom of the tank)**

Westinghouse Non-Proprietary Class 3



Allowable Values based on $NTS \pm RCA$
 RCA = Acceptable "As Left" based on plant test procedures
 Acceptable "As Found" = Allowable value
 Total Allowance = Analysis Limit \pm NTS
 Margin = TA \pm CSA

TABLE 3-16
RWST LEVEL – LOW LOW
 (Rosemount 1153 Transmitters)

Parameter	Allowance*
Process Measurement Accuracy (PMA ₁)	[] ^{a,c}
[] ^{a,c}	
Process Measurement Accuracy (PMA ₂)	
[] ^{a,c}	
Process Measurement Accuracy (PMA ₃)	
[] ^{a,c}	
Process Measurement Accuracy (PMA ₄)	
[] ^{a,c}	
Process Measurement Accuracy (PMA ₅) Bias	
[] ^{a,c}	
Primary Element Accuracy (PEA)	
Sensor Calibration Accuracy (SCA)	
Sensor Reference Accuracy (SRA)	
Sensor Measurement & Test Equipment Accuracy (SMTE)	
Sensor Pressure Effects (SPE)	
Sensor Temperature Effects (STE)	
Sensor Drift (SD)	
Environmental Allowance Seismic Effect (EA)	
Rack Calibration Accuracy (RCA)	
Rack Measurement & Test Equipment Accuracy (RMTE)	
Rack Temperature Effect (RTE)	
Rack Drift (RD)	
----- * In percent span (51 ft)	

TABLE 3-16 (continued)
RWST LEVEL LOW LOW

Channel Statistical Allowance =

$$\sqrt{PMA_1^2 + PMA_2^2 + PMA_3^2 + PMA_4^2 + PEA^2 + (SMTE + SD)^2 + (SMTE + SCA)^2 + SRA^2 + SPE^2 + STE^2 + (RMTE + RD)^2 + (RMTE + RCA)^2 + RTE^2}$$

+ EA + PMA₅



TABLE 3-16a
RWST LEVEL – LOW LOW
 (Veritak/Tobar 32PA2 Transmitters)

Parameter	Allowance ^{a,c}
Process Measurement Accuracy (PMA ₁) [] ^{a,c}	[] ^{a,c}
Process Measurement Accuracy (PMA ₂) [] ^{a,c}	
Process Measurement Accuracy (PMA ₃) [] ^{a,c}	
Process Measurement Accuracy (PMA ₄) [] ^{a,c}	
Process Measurement Accuracy (PMA ₅) Bias [] ^{a,c}	
Primary Element Accuracy (PEA)	
Sensor Calibration Accuracy (SCA)	
Sensor Reference Accuracy (SRA)	
Sensor Measurement & Test Equipment Accuracy (SMTE)	
Sensor Pressure Effects (SPE)	
Sensor Temperature Effects (STE)	
Sensor Drift (SD)	
Environmental Allowance Seismic Effect (EA)	
Rack Calibration Accuracy (RCA)	
Rack Measurement & Test Equipment Accuracy (RMTE)	
Rack Temperature Effect (RTE)	
Rack Drift (RD)	
----- ^a In percent span (51 ft)	

Westinghouse Non-Proprietary Class 3

TABLE 3-16a (continued)
RWST LEVEL LOW LOW

Channel Statistical Allowance =

$$\sqrt{PMA_1^2 + PMA_2^2 + PMA_3^2 + PMA_4^2 + PEA^2 + (SMTE + SD)^2 + (SMTE + SCA)^2 + SRA^2 + SPE^2 + STE^2 + (RMTE + RD)^2 + (RMTE + RCA)^2 + RTE^2}$$

+ EA + PMA₅



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Enclosure 4

Westinghouse Electric Company Affidavit



Westinghouse Electric Company
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Proj letter ref NL-08-0300

Our ref: CAW-08-2390

February 28, 2008

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: "Vogtle Electric Generating Plant, Response to NRC Request for Additional Information Regarding License Amendment Request to Revise Technical Specifications (TS) 3.3.2, 'ESFAS Instrumentation,' and TS 3.5.4, 'Refueling Water Storage Tank (RWST)'" (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced letter is further identified in Affidavit CAW-08-2390 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 Southern Nuclear Company.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-08-2390, and should be addressed to J. A. Gresham, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Very truly yours,

A handwritten signature in black ink, appearing to read 'J. A. Gresham', written over a horizontal line.

J. A. Gresham, Manager
Regulatory Compliance and Plant Licensing

Enclosures

cc: J. Thompson, NRC

bcc: J. A. Gresham (ECE 4-7A) 1L
R. Bastien, 1L (Nivelles, Belgium)
C. Brinkman, 1L (Westinghouse Electric Co., 12300 Twinbrook Parkway, Suite 330, Rockville, MD 20852)
RCPL Administrative Aidc (ECE 4-7A) 1L, 1A (letter and affidavit only)
Jim Andrachek
Frank Ferri

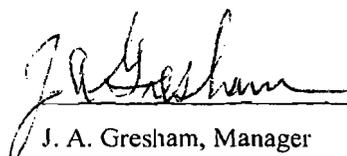
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared J. A. Gresham, 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:

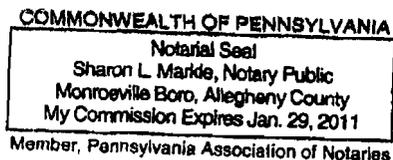


J. A. Gresham, Manager
Regulatory Compliance & Plant Licensing

Sworn to and subscribed before me
this 28th day of February, 2008



Notary Public



- (1) I am Manager, Regulatory Compliance & Plant 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, "Vogtle Electric Generating Plant, Response to NRC Request for Additional Information Regarding License Amendment Request to Revise Technical Specifications (TS) 3.3.2, 'ESFAS Instrumentation,' and TS 3.5.4, 'Refueling Water Storage Tank (RWST)'" (Proprietary), for Vogtle Units 1 and 2, being transmitted by Southern Nuclear Company letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted for use by Westinghouse for Vogtle Units 1 and 2 is expected to be applicable for other licensee submittals in response to certain NRC Requests for Additional Information on instrumentation setpoints.

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

- (a) Provide information in support of plant power uprate licensing submittals.
- (b) Provide customer specific response to NRC requests for information.
- (c) Provide licensing support for customer submittals.

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 licensing documentation associated with power uprate licensing submittals.
- (b) Westinghouse can sell support and defense of the technology to its customer in the licensing process.
- (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 information 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.

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).

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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.