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DCP/NRC0503  
Docket No.: STN-52-003

May 9, 1996

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

ATTENTION: T. R. QUAY

SUBJECT: TRANSMITTAL OF WESTINGHOUSE SETPOINT METHODOLOGY FOR AP600  
PROTECTION SYSTEMS

Reference: NRC Generic letter 91-04, "Changes in Technical Specification Surveillance Intervals  
to Accommodate a 24-Month Fuel Cycle"

Dear Mr. Quay:

Please find enclosed the Westinghouse Setpoint Methodology for AP600 Protection Systems.  
WCAP-14605 provides the proprietary version of the setpoint methodology document while  
WCAP-14606 provides the non-proprietary version.

As agreed to by Westinghouse and the NRC I&C branch in 1995, this document provides the AP600  
protection system setpoint methodology; it does not present setpoint calculations or uncertainty  
allowances typically seen in a Westinghouse setpoint study for an operating plant. The setpoint values  
which appear in this document are those assumed in the safety analyses as of April 1, 1996; these are  
provided to approximate the setpoint values until the setpoint study is performed.

Key assumptions used in the development of this setpoint methodology document include:

1. This setpoint methodology document assumes 24-month fuel cycles. Therefore, the reference requirements are included in the methodology.
2. Digital electronics will be used for the AP600 protection system using commercially dedicated systems available at the time of construction to take advantage of the latest technology. WCAP-13383 will provide a discussion of commercial dedication.
3. The setpoint methodology assumes a 95% probability/95% confidence level since the Revised Thermal Design Procedure used to develop the AP600 core limits and DNB correlation limits assumes 95/95. This implies an equipment testing program will be performed by the instrumentation suppliers to produce sufficient determination of uncertainties at the 95/95 level.

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4. As a result of the reference, trending of instrument calibration and drift uncertainties will be AP600 requirement of the COL holder. This trending will reduce the impact of uncertainty analysis on the AP600 safety analyses and Technical Specifications setpoints. COL holder calibration procedures must be written consistent with the AP600 setpoint methodology.
5. This setpoint methodology is consistent with the AP600 Technical Specifications (TS) Table 3.3.1-1 and 3.3.2-1 single column Nominal Trip Setpoint format. Also, while Westinghouse setpoint studies for operating plants typically include a copy of applicable portions of the TS, the AP600 setpoint methodology document simply references the applicable TS.
6. Instrumentation operability is directly related to instrumentation equipment design. Since there is no specific instrumentation equipment design at this time, instrument operability is not addressed in the setpoint methodology.
7. The uncertainty algorithm is directly related to the instrumentation equipment design. Since there is no specific instrumentation equipment design at this time, the only specific uncertainty algorithm included in the setpoint methodology document for uncertainty components is "square root of the sum of the squares".

Transmittal of this document closes the Westinghouse commitment detailed in the Open Item Tracking System (OITS #1042) to provide a qualitative instrument setpoint methodology document to the NRC. This submittal schedule allows for NRC review of this document and resolution of any comments prior to writing the FSER.

The Westinghouse Electric Corporation copyright notice, proprietary information notice, application for withholding and affidavit are attached.

This submittal contains Westinghouse proprietary information consisting of trade secrets, commercial information or financial information which we consider privileged or confidential pursuant to 10CFR9.17(a)(4).

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Correspondence with respect to the application for withholding should reference AW-96-964, and should be addressed to Brian A. McIntyre, Manager of Advanced Plant Safety and Licensing, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania, 15230-0355.

May 9, 1996

Please contact Brian McIntyre on (412) 374-4334 if you have any questions or comments regarding this transmittal.

*WIRIR* for  
Brian A. McIntyre, Manager  
Advanced Plant Safety and Licensing

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Attachments  
Enclosures

cc: W. Huffman, NRC (1L, 1A, 1E)  
S. Andre, Westinghouse (1L, 1A, 1E)  
E. Dzenis, Westinghouse (1L, 1A, 1E)  
N. Liparulo, Westinghouse (w/o attachments)