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SUBJECT: Discusses instrument setpoint methodology program used in determining trip setpoints.Methodology consistent w/intent of Rev 1 to Reg Guide 1.105 & proper for instrumentation design & vintage.Procedures encl.

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May 6, 1985
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Docket No. 50-397

Director of Nuclear Reactor Regulation
Mr. A. Schwencer
Chief Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: NUCLEAR PLANT NO. 2
SETPOINT METHODOLOGY FOR WNP-2

Reference: 1) Letter, A. Schwencer (NRC) to G.C. Sorenson (Supply System), "Instrument Setpoint Methodology for WNP-2"

The purpose of this letter is to provide the NRC staff,(as requested in Reference 1) a detailed discussion of the Instrument Setpoint Methodology Program utilized in determining trip setpoints for instrumentation listed in the WNP-2 Technical Specifications.

As discussed in FSAR section C.3 page C.3-91, Regulatory Guide 1.105 revision 1 does not apply to WNP-2; however, WNP-2 voluntarily utilized this Guide in formulation of a setpoint methodology program.

Since the majority of the instrumentation listed in the WNP-2 Technical Specification was provided as part of the General Electric design scope, the methodology utilized for this instrumentation was prepared and implemented as described within the attached General Electric documents, 22A5261 and 23A1900AA.

The same basic methodology has been utilized in the determination of trip setpoints for balance-of-plant (BOP) instrumentation listed in Technical Specifications. The differences being: 1) the BOP designer numerically summed or took the square root of the sum of squares for combined instrument loop inaccuracies and, 2) when no data concerning drift was available for a particular instrument, a standard 1% drift was assigned. Specific instrument operating history data will be periodically reviewed to adjust drift allowances as necessary.

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Exhibit I (attached) shows the relationships and analytical content of the margins between assigned trip setpoint, allowable value, and analytical limit used within the WNP-2 setpoint methodology. It should be noted that allowance for "calibration error" has not been included. The reason for this is that the instrumentation assigned for WNP-2 calibration surveillance, in general, is a factor of four more accurate than the instrumentation being calibrated. This is characteristic of the trip logic instrumentation provided within the WNP-2 design, i.e., the majority of the trip instrumentation is not electronic in nature but mechanical switches attached directly to the process. This design eliminates the concerns the NRC has with the methodology applied by General Electric for those plant members of the Instrumentation Setpoint Methodology Group which have instrument loops containing electronic transmitters and trip units.

Exhibits II, III, and IV (attached) show a typical setpoint data sheet, instructions, and definitions provided for a BOP Technical Specification instrument. These exhibits detail the methodology for determination of analytical limits, allowable values, and trip setpoints which account for instrument drift and inaccuracy.

WNP-2 is in the process of reviewing Technical Specification instrument setpoints to assure consistency and proper application of the methodology described.

We believe that the methodology described above is consistent with the intent of Regulatory Guide 1.105 revision 1, and proper for the type of instrumentation design provided and the vintage of the facility.

If you have any questions concerning the above please call P.L. Powell at (509) 377-2501 on extension 2298.

G.C. Sorensen
Manager, Regulatory Programs

GWB:bap

Attachments: As Stated

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