



COMBUSTION ENGINEERING OWNERS GROUP

---

April 21 2000  
CEOG-00-108

NRC CEOG Project Number 692

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

**Subject: Resolution of Errors Identified in Topical Report CE NPSD-1167  
Concerning Elimination of Response Time Testing Requirements in  
CEOG Plants**

**Reference:** R. Phelps (CEOG) letter to NRC submitting CE NPSD-1167 Rev 01, "Joint Application Report for Elimination of Pressure Sensor Response Time Testing Requirements," CEOG-99-304, dated 9/30/99.

Revision 01 of CE NPSD-1167 was submitted for NRC review via the Reference letter. NRC approval of the subject report has been delayed due to several errors identified during the review process. As requested, this letter addresses ABB's investigation of these errors and describes actions implemented to ensure that all data and analyses presented in CE NPSD-1167 are accurate.

Inaccurate pressure sensor response time data: CEOG topical reports typically incorporate analyses and information obtained from various ABB and utility sources. Reliance on accurate information provided by the participants is a basis for the subject report. Post-submittal review by the utility determined that certain reactor coolant system flow transmitter response data for one plant was inaccurate; the data provided principally represented a transmitter with fixed rather than variable damping. Identification of this error was achieved through an independent review and confirmation of utility-specific information contained in the report. The error was found during a utility review; ABB performs reasonableness and validity checks but does not have a process to independently monitor a utility QA process. The data for this RCS flow transmitter will be removed from Revision 02 of the subject report to resolve this error.

Incorrect data calculation: An error was found in the mean and standard deviation values shown for one transmitter with variable damping installed at a plant. Reconstruction of the source data set showed that a correction factor was incorrectly applied to one set of data.

ABB C-E Nuclear Power, Inc.

DAY 7

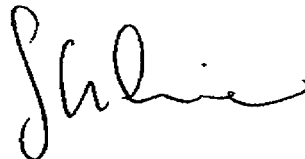
The affected data set was the most recent data for that function. A procedure change in the way that the data was recorded had occurred prior to recording this last data set. Previous data recorded for this function had included the response time for the matrix relays. This matrix relay response time was subtracted from the recorded transmitter response time prior to calculating the statistical response of the transmitter. This correction was also applied to the most recent data set for the function even though the recorded data did not include the matrix response time. This resulted in a small but non-conservative correction to the data with the result that the final calculated response time allocation to the transmitter was low by approximately 10 milliseconds. Resolution of this error was achieved by re-verifying with the utility the correctness of the recorded data and the way that ABB was applying the data for this application.

Inappropriate penalty factor: A source of statistical information different from that used by the NRC staff when computing data set statistics resulted in a differing value for the correction factor applied to the data set when calculating 95/95 bounds. Review of the statistics handbook utilized by the NRC staff reviewer confirmed that the correction factor table in NUREG-1475 yielded a slightly more conservative value. This inconsistency was resolved by applying the correction factors from NUREG-1475 to the data set.

In addition to the above actions, ABB and the involved CEONG utilities are performing a detailed review and verification of all information contained in CE NPSD-1167. We believe these actions will ensure that errors have been eliminated from the subject report. Corrections will be made and Revision 02 of this report submitted for staff review by May 12, 2000. The overall impact of the identified errors was minor and found to cause no substantive changes to the conclusions given in this report.

Should you have any questions on the above please contact me at 860-285-9263.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'S. Lurie', written in a cursive style.

Stephen W. Lurie  
Project Manager

SWL/vap

cc: J. S. Cushing, NRC  
G. C. Bischoff, ABB  
D. W. McQuade ABB  
Mr. Moon, Myung-Kook, KEPCO (Korea)  
Mr. Chae, Song-Suk, KEPCO (Korea)  
R. Schumacher, ABB (Korea)  
CEOG Files

#### **INSTRUMENTATION AND CONTROLS WORKING GROUP**

K. Bjornn, APS (Palo Verde)	J. Remer, EO-ANO (Russellville)
L. Conklin, SCE (San Clemente)	J. Winslow, SCE (San Clemente)
W. Kemper, BGE (Lusby)	D. Wolf, FPL (Jensen Beach)
S. Matharu, EO-WSES (Killona)	

#### **C-E OWNERS GROUP MANAGEMENT COMMITTEE**

R. Bernier, APS (Palo Verde)	D. Pilmer, SCE (San Clemente)
R. Burski, EO-WSES (Killona)	R. Puckett, EO-ANO (Russellville)
J. Holman, EO-WSES (Killona)	A. B. Spinell, ABB (Windsor)
T. Patterson, FPL (Jensen Beach)	Mr. Min, Seock-Kwan, KEPCO (Korea)
G. Pavis, BGE (Lusby)	

#### **ABB RESIDENT SITE MANAGERS**

G. P. Bundick, (WSES-Killona)	J. Isakson, (BG&E-Lusby)
K. K. Chung, (KEPCO-Yonggwang 3 & 4)	S. W. Long, (ANO-Russellville)
J. Compas, (APS-Palo Verde)	J. M. Wade, (SCE-San Clemente)
A. J. DeGrasse, (FPL-Ft. Pierce)	