



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

March 22, 1991

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Dresden Nuclear Power Station Units 2 and 3
Quad Cities Nuclear Power Station Units 1 and 2
Piping Operability Criteria
NRC Docket Nos. 50-237/249 and 50-254/265

- References:
- (a) R. Stols to T.E. Murley letter dated August 7, 1989.
 - (b) L. Olshan to T. Kovach letter dated January 11, 1991.
 - (c) Conference call between Representatives of NRR (Olshan, et. al.) and Commonwealth Edison (Stols, et. al.) on March 7, 1991.

Dr. Murley:

Reference (a) transmitted proposed piping system operability criteria for Dresden and Quad Cities Stations. The purpose of this operability criteria is to evaluate conditions within a piping system and pipe supports to ensure that the safety-related piping system will continue to operate safely in the event that the piping system is found to exceed current design basis criteria as described in the FSAR and UFSAR. This criteria will be used to allow for interim operations until appropriate repairs and/or modifications to the system can be implemented.

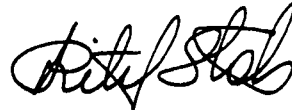
Reference (b) transmitted the results of your staff's review of the reference (a) submittal and requested that additional information be provided. Our response to the Staff's request was discussed during the reference (c) teleconference and is herewith attached.

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If there are any questions or comments regarding this submittal, please refer them to me at (708) 515-7283.

Very truly yours,



R. Stols
Nuclear Licensing Administrator

cc: A.B. Davis, Regional Administrator, RIII
L.N. Olshan, Project Manager, NRR
B.L. Siegel, Project Manager, NRR
J.A. Gavula, Inspector, RIII
A.J. Lee, Technical Staff, NRR
T.E. Taylor, Senior Resident Inspector
D. Hills, Senior Resident Inspector

Attachments: A) Request for Additional Information and Recommendation on Dresden/Quad Cities Operability Criteria.
B) Piping System Operability Criteria for Commonwealth Edison's Dresden and Quad Cities Nuclear Generating Stations dated March, 1991.

ATTACHMENT A

REQUEST FOR ADDITIONAL INFORMATION AND RECOMMENDATIONS

ON DRESDEN/QUAD CITIES OPERABILITY CRITERIA

1. NRC COMMENT

The use of Regulatory Guide 1.61 damping with original design spectra and analysis procedure is not permitted. Either the FSAR damping should be used or the design spectra and analysis methods for use with current damping should be upgraded. (Section 3.1)

CECO RESPONSE

The use of Regulatory Guide 1.61 damping with the design spectra for operability evaluations was authorized by the NRC during the IEB 79-14 program as well as during the evaluation of the reactor recirculation pump snubbers in 1986 (Reference attached documentation). The attached letter from R.F. Janecek (CECo) to J.G. Keppler (NRC) on January 15, 1981 provides the background for the use of Regulatory Guide 1.61 damping.

Additional references to support the use of R.G. 1.61 damping include the following:

- a. The spectra for the SSE load were obtained by multiplying the OBE spectra by 2, with no allowance for the higher damping in the structure during an SSE. Thus, the spectra used for analysis have additional conservatism since the higher damping during the SSE would lower the overall response.
- b. The 0.5% damping used for piping was appropriate "...for strong vibrations within the elastic limit". (Dresden UFSAR, page 12.1.1-10, attached). This is reasonably consistent with the guidance given in Regulatory Guide 1.61, Position C.3. The proposed stress limit for the design earthquake is twice the elastic limit. Thus, the proposed stress limit supports the use of higher damping values. This is part of the background discussion in the attached 1/5/81 letter.
- c. As noted in NUREG/CR-0891, "Seismic Review of Dresden Nuclear Power Station - Unit 2, For The Systematic Evaluation Program," there was considerable margin between the response spectrum from the El Centro time history and the Housner design response spectrum (Reference attached Figure 4-3) for periods above about .05 second. The time history was used in the analysis of the reactor-turbine building.

These three points are presented only as additional references. The primary reason for the proposal of Regulatory Guide 1.61 damping is the NRC acceptance of Regulatory Guide 1.61 damping during the IEB 79-14 time frame.