



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

March 30, 1990

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

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
Zion Station Units 1 and 2
LaSalle County Station Units 1 and 2
Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Supplemental Response to Station Blackout Rule
NRC Docket Nos. 50-237/249, 50-254/265,
50-295/304, 50-373/374, 50-454/455 and
50-456/457

References: (a) 10 CFR Part 50.63, Loss of all Alternating Current Power.
(b) M. Richter (CECo) letter to U.S. NRC, dated April 17, 1989.
(c) B. Lee (NUMARC) letter to NUMARC Board of Directors, dated January 4, 1990.

Dr. Murley:

Reference (a) requires that each light-water-cooled nuclear power plant be able to withstand and recover from a station blackout (SBO) of a specified duration. A response to the SBO rule was required from each licensee by April 17, 1989. Reference (b) provided Commonwealth Edison Company's (CECo) initial response to the SBO rule for Dresden, Quad Cities, Zion, LaSalle County, Byron and Braidwood Stations. For these responses, the stations were evaluated against the requirements of the SBO rule using guidance from NUMARC 87-00 and Regulatory Guide 1.155. Based on NRC concerns after reviewing several utilities' SBO responses and support documentation, Reference (c) was issued to provide clarifications to portions of the NUMARC 87-00 guidelines. Reference (c) requested that each licensee provide a supplemental response indicating that (1) the initial SBO response was based on the use of the NUMARC 87-00 guidance including the clarifications in Reference (c), and/or (2) any deviations from the NUMARC 87-00 guidance have been or will be clearly indicated. Additionally, it was requested that the supplemental response should confirm that the diesel generator target reliability chosen for each plant is to be maintained. This letter provides CECo's response to those requests for Dresden, Quad Cities, Zion, LaSalle County, Byron and Braidwood Stations.

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Prior to the issuance of Reference (c), CECO had been involved in discussions with the NRC staff on the SBO responses for Dresden and Quad Cities Stations. As a result of these discussions, and the clarifications presented in Reference (c), new alternatives to comply with the SBO rule were evaluated for these stations. During a meeting on March 28, 1990, the selected alternative was presented to the staff. The staff indicated that the selected alternative complied with the SBO rule, and that submittal of a revised response for each station by April 30, 1990, was acceptable. The revised response, and associated supporting documentation, will clearly indicate any deviation from the NUMARC 87-00 guidance.

CECO has reviewed the LaSalle County Station SBO response against the clarifications presented in Reference (c), and the guidance which resulted from CECO/NRC staff discussions concerning the responses for Dresden and Quad Cities Stations. Based on these clarifications and discussions, CECO is presently re-evaluating the Emergency AC power classification and re-performing some of the SBO coping calculations. Upon completion of the new coping calculations, a revised response for LaSalle County Station will be submitted by May 31, 1990. The revised response, and associated supporting documentation, will clearly indicate any deviation from the NUMARC 87-00 guidance.

CECO has reviewed the Zion Station SBO response against the clarifications presented in Reference (c). NUMARC 87-00 methodology was initially used to calculate the steady-state temperature following the loss of ventilation to the Control Room and Auxiliary Electric Equipment Rooms. Subsequent to the submittal of the Zion Station response, additional analyses (transient temperature analyses) were performed to ensure that sufficient temperature margin would exist during a SBO event for these rooms. The results of these analyses showed that for the four-hour SBO duration at Zion Station, the temperature in the Control Room and Auxiliary Electric Equipment Rooms will remain below 120 degrees Fahrenheit (without taking credit for opening access doors). The present supporting documentation clearly indicates the use of these transient temperature analyses.

CECO has reviewed the SBO responses for Byron and Braidwood Stations against the clarifications presented in Reference (c). Additionally, subsequent to the issuance of Reference (c), CECO has been involved in discussions with the NRC staff (on February 26, 1990) regarding the SBO responses for these stations. Based on these clarifications and discussions, a concern has arisen on the staff's generic position on the loads which must be carried by an emergency diesel generator when it is utilized as an alternate AC power source. CECO is currently seeking clarification of this item through NUMARC, since it could have a significant impact on the responses for Byron and Braidwood Stations. Any revised responses, and supporting documentation, resulting from these discussions will clearly indicate any deviations from the NUMARC 87-00 guidance.

Dr. T.E. Murley

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For all of the CECO nuclear stations, the chosen diesel generator reliability target will be maintained.

Please address any questions that you or your staff may have concerning this response to this office.

Respectfully,

Milton H. Richter

M. H. Richter
Generic Issues Administrator

cc: A.B. Davis, Regional Administrator - Region III
Resident Inspectors D/QC/LSC/Z/BY/BW

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