



**Commonwealth Edison**  
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Dec

July 24, 1989

**PRIORITY ROUTING**

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FILE

OK 1

Mr. A. Bert Davis  
 Regional Administrator  
 U.S. Nuclear Regulatory Commission  
 Region III  
 799 Roosevelt Road  
 Glen Ellyn, IL 60137

**Subject:** Dresden Nuclear Power Station Units 2 and 3  
 Quad Cities Nuclear Power Station Units 1 and 2  
 LaSalle County Station Units 1 and 2  
 Commonwealth Edison BWR Operating Restrictions  
 to Preclude Regional Oscillations  
NRC Docket Nos. 50-237/249; 50-254/265 & 50-373/374

- References (a): January 26, 1989, letter from H.E. Bliss to A.B. Davis (same subject).
- (b): February 16, 1989 letter from A.B. Davis to Cordell Reed (same subject).

Dear Mr. Davis:

Reference (a) discussed Commonwealth Edison's intentions for removing certain conservative operating provisions which were developed and implemented by Edison prior to the issuance of NRC Bulletin 88-07, Supplement 1. Edison felt that removing these self-imposed restrictions were appropriate to more closely reflect the GE and NRC prescribed measures. The attachment to Reference (a) also included a comment on the need for clarification of the Bulletin provisions regarding entry into Bulletin Regions A and B under circumstances which challenge vital equipment or fuel. Prior to submittal of Reference (a), it was discussed with both NRR (B.L. Siegel) and Region III (M.A. Ring, R. Lanksbury). In addition, this point was also addressed in a BWR Owners Group (BWROG) letter from D.R. Grace to A. Thadani dated January 26, 1989, and in the CECO response to I.E. Bulletin 88-07, Supplement 1 dated March 3, 1989.

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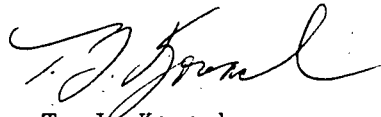
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In the Reference (b) letter, Region III indicated that Edison could not unilaterally adopt this interpretation and that the Bulletin requirements must be implemented without exception. Because of the significance of this issue, both CECO and BWROG have maintained dialogue with NRR and your staff in an attempt to reach a final resolution. During an April 6, 1989 meeting with NRR, the Owners presented their justification for allowing intentional entry into Regions A, B, or C under certain abnormal conditions. Based on Edison's understanding of that meeting, NRR has agreed in principle that entry into Regions A, B, or C is permissible in response to abnormal operating conditions that challenge vital equipment or the fuel. Edison is currently in the process of implementing this philosophy at all three of our BWR stations. For your information, attached are the Edison provisions and justifications for allowing entry into the potential instability regions under some circumstances. Included as part of this attachment is the BWROG Summary of the April 6, 1989, meeting with NRR.

Please contact this office should further information be required.

Very truly yours,



T. J. Kovach  
Nuclear Licensing Manager

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Attachment

cc: B.L. Siegel - Project Manager, NRR  
P.C. Shemanski - Project Manager, NRR  
T.M. Ross - Project Manager, NRR  
S.G. DuPont - Senior Resident Inspector, DR  
R.D. Lanksbury - Senior Resident Inspector, LSCS  
R.L. Higgins - Senior Resident Inspector, QC

July 10, 1989

Messrs: R. L. Bax  
G. J. Diederich  
E. D. Eenigenburg

Subject: Inadvertent Entry Into Regions of Potential Instability

- References:
1. NRC Bulletin 88-07, Supplement 1, dated December 30, 1989.
  2. BWROG letter to A. Thadani (NRC), "NRC Bulletin 88-07, Supplement 1, 'Power Oscillations in Boiling Water Reactors' ", dated January 26, 1989.
  3. A. Thadani letter to BWROG, "Power Oscillations in Boiling Water Reactors", dated March 22, 1989.
  4. BWROG letter to A. Thadani, dated June 14, 1989 (enclosed).

In reference 1, the NRC provided operating guidance for avoiding postulated power oscillations and required that General Electric's "Interim Recommendations For Stability Actions" be adopted. These recommendations prohibit intentional entry into the low flow, high power operating regions known to be susceptible to instabilities.

Following the issuance of Reference 1, the BWR Owners Group (BWROG) has worked closely with the Commission to clarify this issue and identify circumstances under which entry into the defined regions may be necessary. In the reference 2 letter to the Commission, the BWROG provided an interpretation to the Bulletin supplement which stated that entry into the stability regions may be required to protect fuel or equipment vital to plant safety. The NRC responded to the Owners position in Reference 3 stating that justification should be prepared for plants adopting this interpretation.

The BWROG provided justification for such entry during an April 6, 1989 meeting between the BWROG Stability Committee and NRC staff personnel. To ensure the NRC and BWROG had reached a mutual understanding during the April 6 meeting, a subsequent telecon was held between the NRC (L. Phillips and H. Richings) and BWROG representatives (T. J. Rausch et. al.) on June 6, 1989, to discuss the meeting highlights (see Reference 4, enclosed). The rationale for allowing entry into either region A, B or C defined in Reference 1 was found acceptable by the NRC and is summarized below:

1. Current operator training places strict emphasis on prompt corrective action and close adherence to procedures. Abnormal operating procedures have been developed to mitigate specific plant casualties. It is prudent operating practice to handle the specific event at hand and not distract the operator by imposing additional stability related restrictions. The Bulletin Supplement requirements are interim in nature and conservatively minimize the potential for unacceptable instabilities after entering the associated region(s). Therefore, changing this fundamental operating philosophy by placing a priority on instability avoidance over responding to postulated events is detrimental to safe operating practices.
2. Abnormal Operating procedures for responding to stability concerns have been developed and will be consulted for the appropriate corrective actions if one of the regions of potential instability is entered following the response to an unusual event.
3. It is not always possible to determine beforehand if the plant will end up in region A, B or C for every possible transient or equipment failure response. Since a scram is not required by the interim recommendations upon entering regions B or C, it is inappropriate to require a scram prior to taking action which may result in entry into these regions. Although a scram is required for LaSalle upon entry into region A or upon loss of forced recirculation, it is more important to respond to the immediate concern at hand rather than distract the operator's attention by requiring him to determine if a given set of responses will cause the unit to end up in Region A or natural circulation.

For the reasons stated above, entering the regions of potential instability (i.e., regions A and B) to protect vital equipment or fuel should not be construed as "intentional" entry provided the appropriate corrective actions for that region are promptly administered in accordance with the Bulletin supplement.

Although this letter provides circumstances under which the potential exists for entry into regions A, B, or C, each station must ensure the Bulletin requirements are adhered to following such entry. An acceptable method is to place an appropriate reference to the stability abnormal response procedure in those normal and abnormal operating procedures having the potential for initiating entry into the stability regions. Alternate methods may also be employed (e.g. operator aids that signal entry into the defined stability regions), but such alternates must be approved by Nuclear Fuel Services and this office. Contact Tom Rausch

(X3850) or Mark Wagner (X3497) to discuss the acceptability of alternative methods for ensuring that proper operator actions will be taken following entry into the stability regions. Each station is requested to respond in writing to the manager of Nuclear Fuel Services (with copy to T. J. Rausch) by August 31, 1989, summarizing their proposed strategy for ensuring the newly clarified Bulletin requirements are met.

*Dennis Galle* 7/13/89  
Dennis Galle

cc: C. Reed  
L. O. DelGeorge  
D. M. Farrar  
W. F. Naughton  
B. B. Palagi  
T. J. Kovach/J. A. Silady  
A. L. Misak  
M. A. Falcone  
E. A. McVey  
T. J. Rausch  
X M. E. Wagner  
File: Stability