



**Commonwealth Edison**  
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August 16, 1989

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

Subject: Byron Station Units 1 and 2  
 Braidwood Station Units 1 and 2  
 10 CFR 50.62 ATWS Rule  
NRC Docket Nos. 50-454/455 and 50-455/456

- Reference: (a) February 15, 1989, letter from S. C. Hunsader to  
 T. E. Murley  
 (b) June 30, 1989, letter from L. N. Olshan to  
 T. J. Kovach  
 (c) July 18, 1989, letter from S. P. Sands to T. J. Kovach

Dear Dr. Murley:

In references (b) and (c) Commonwealth Edison received approval of the Byron and Braidwood Stations design for the ATWS Mitigation System required to satisfy the requirements of 10 CFR 50.62. During the performance of the human-factors engineering reviews required in the Safety Evaluation Reports, four items were identified for revision to the design that was submitted in reference (a). The Attachment to this letter contains a description of the proposed revisions to the design.

Commonwealth Edison requests approval of the design revisions to the ATWS Mitigation System by November 1, 1989, in order to support the installation of the system during the Byron Unit 1 next refueling outage scheduled to begin in January 1990.

Please direct any questions regarding this matter to this office.

Very truly yours,

R. A. Chrzanowski  
 Nuclear Licensing Administrator

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 PDR ADOCK 05000454  
 P PDC

cc: Byron Resident Inspector  
 Braidwood Resident Inspector  
 S. P. Sands - NRR  
 L. N. Olshan - NRR  
 Region III Office  
 Office of Nuclear Facility Safety - IDNS

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## ATTACHMENT

### Requested Revisions to Approved ATWS Mitigation System (AM) Design for Byron/Braidwood Stations

1. Present design derives all four steam generator level inputs from one channel, RPS Channel 1SG Level.

Revised design would derive 2 steam generator level inputs from channel 1 and 2 steam generator levels from Channel 2. This change would eliminate the possibility of a unit trip from the AMS for any possible loss of steam generator level input to AMS from a single RPS channel. Isolation and segregation of inputs would be maintained in accordance with the present approved design. This change is desired to improve AMS reliability against false actuations.

2. Present design incorporates Main Control Room Annunciators which annunciate "AMS Inoperable" and "24VDC P/S Failure". The revised design would combine the inputs to these annunciators into a single annunciator "AMS Trouble" with each of the inputs "AMS Inoperable" and "24VDC Power Supply Failure" providing a sequence of events recorder message. This change results from human factors review of the system design.
3. Present design includes main control board indicator lights for "AMS Initiated " and "AMS in Test".

Revised design would eliminate both of these indicators. The "AMS Initiated" indicator is redundant because there is an "AMS Initiated" Annunciator. The "AMS In Test" indication will be added as an input to the "AMS Trouble" annunciator with a separate sequence of events recorder message for "AMS in Test". This change results from human factors review of the system design.

4. Present design arms the AMS at 40% power. Revised design would reduce the arming setpoint to 30%. This would permit the arming permissive light in the Main Control Board to conform to the dark board concept. Arming at the lower power level is in a conservative direction. This change results from human factors review of the system design.