



**Commonwealth Edison**  
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October 10, 1985

Mr. Harold R. Denton, 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 Unit 1 and 2  
Byron Station Units 1 and 2  
Braidwood Station Units 1 and 2  
Schedule for Complying with 10CFR 50.62, ATWS  
NRC Docket Nos. 50-237/249, 50-254/265,  
50-295/304, 50-373/374, 50-454/455 and 456/457

- Reference (a): Reduction of Risk from Anticipated Transients  
Without Scram, 10CFR 50.62
- (b): Quality Assurance Guidance for ATWS Equipment,  
Generic Letter 85-06
- (c): E. D. Swartz letter to H. R. Denton  
dated April 13, 1982
- (d): L. O. DelGeorge letter to Secretary of  
the Commission dated April 21, 1982.

Dear Mr. Denton:

As required by 10CFR 50.62(d), Commonwealth Edison is hereby submitting its projected schedule for complying with the ATWS rule. Attachment A contains the schedule for the BWR stations, and Attachment B contains the schedule for the PWR stations.

The issuance of Generic Letter 85-06 which contained quality assurance guidance started the 180 day period within which licensees and applicants were required to submit schedules for complying with the rule. Since 10 CFR 50.62 (c)(6) requires that we provide information sufficient to demonstrate to the Commission the adequacy of our proposed modifications to meet the rule's requirements, we have factored this review into our schedule.

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Although the ATWS rule does not state when this submittal should be provided, we believe it prudent to request an NRC pre-implementation review and approval of both generic and plant specific designs for modifications which have not been completed.

In addition we are supplying other non-design assumptions under which the schedule was developed since they affect whether the schedule can be met.

There are two main reasons why the BWR stations are submitting schedules which fall within the recommended implementation schedule contained in the rule. The first reason is that Commonwealth Edison was working on the ARI modification prior to issuance of the rule, and the second reason is the determination by the NRC that simultaneous operation of the SLCS pumps would not necessitate new Technical Specification requirements.

The above favorable circumstances do not apply to the modifications required for PWRs. Because the conceptual designs have not been approved to date, we have become apprehensive concerning what comments the NRC staff may have on the WOG submittal. We have proceeded as far in our planning as seems advisable pending NRC feedback on the basic design concepts. Attachment B demonstrates why we are proposing modification implementation dates for the PWR units, other than Byron Unit 1, which are beyond the dates recommended in the rule.

If there are any further questions on the schedules, please contact this office.

Forty copies of this letter with attachments are enclosed for your use.

Sincerely,



Greg Alexander  
Nuclear Licensing Administrator

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Attachments

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Attachment A  
BWR Stations  
Dresden, Quad Cities, and LaSalle County

The rule required the three following modifications for BWRs:

1. An alternate rod injection system
2. An automatic recirculating pump trip under conditions indicative of an ATWS
3. A standby liquid control system with a minimum flow capacity and boron content equivalent in control capacity to 86 gpm of 13 weight percent sodium pentaborate solution

Dresden

The modifications for ARI and recirculation pump trip have been completed. We believe that these modifications meet the intent of the rule, and we will arrange a schedule for submittal of information to comply with 10 CFR 50.62 (c) (6) with the NRC Project Manager. The standby liquid control system modification is scheduled for the second refueling outage subsequent to July 26, 1984 as follows:

Dresden Unit 2 - Fall 1986  
Dresden Unit 3 - Fall 1987

The schedule presupposes that the two SLCS pumps will be operated simultaneously, boron concentration will be increased, no new Technical Specification requirements, and the current refueling dates. Further, no change in the injection point is contemplated.

Quad Cities

The modifications for ARI and recirculation pump trip have been completed. We believe that these modifications meet the intent of the rule, and we will arrange a schedule for submittal of information to comply with 10 CFR 50.62 (c) (6) with the NRC Project Manager. The standby liquid control system modification is scheduled for the second refueling outage subsequent to July 26, 1984 as follows:

Quad Cities Unit 1 - Spring 1987  
Quad Cities Unit 2 - Fall 1986

The Quad Cities schedule is based on the same assumptions as the Dresden schedule.

LaSalle

The modification for recirculation pump trip is complete. The ARI and standby liquid control system modifications are scheduled for the second refueling outage subsequent to July 26, 1984 as follows:

LaSalle County Unit 1 - Spring 1987  
LaSalle County Unit 2 - Spring 1988

The LaSalle County schedule is based on the same assumptions as the Dresden and Quad Cities schedules except that the boron concentration will not be increased.

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Attachment B  
PWR Stations  
Zion, Byron and Braidwood

The rule requires that PWRs have equipment diverse from the reactor trip system to automatically initiate the auxiliary feedwater system and initiate a turbine trip under conditions indicative of an ATWS. The rule also stipulates that a schedular justification be submitted if the modifications are scheduled to be implemented later than the second refueling outage after July 26, 1984 or the date of issuance of a license authorizing operation above 5 percent of full power. With the exception of Byron Unit 1, all PWR units require a schedular justification.

Factors which have affected our ability to meet the recommended implementation schedule are the delay in issuance of reference (b) and the delay in NRC approval of the AMSAC conceptual design.

The Westinghouse Owners Group (WOG) met with the NRC on June 10, 1985 to present the proposed generic ATWS modification (AMSAC) for NRR review and generic approval. The Commonwealth Edison Company is a member of the WOG, and is familiar with this activity. It is our understanding that NRR comments and/or approval on the generic design are due in mid November 1985. In any case, we believe our schedule for ATWS implementation should await a pre-implementation NRR final approval of the generic conceptual designs and has therefore been factored into our proposed schedule.

Below is a proposed schedule of our activities with the start date tied to NRC approval of the WOG AMSAC design.

The following hardware design and procurement schedule appears achievable for Byron, Braidwood, and Zion based on expected milestones:

<u>ACTIVITY</u>	<u>DATE/INTERVAL</u>
<u>W</u> OG Presentation of AMSAC	June 10, 1985
NRR Generic Final Approval	Mid-November, 1985
Develop Byron/Braidwood/Zion Specific Design Based on Generic Approval for Submittal to NRR (Pursuant to 10 CFR 50.62 (c) (6))	+ 3 months
Obtain NRR Pre-Implementation Final Approval on Specific Design	+ 3 months
Procurement Activities	+ 5 months
Equipment Delivery	+ 14 months

Assuming timely NRR review and approval of final generic and plant specific designs, and anticipated vendor performance, we project that new equipment will be delivered in Fall 1987.

The following table provides our currently scheduled fuel load, plant in-service, and associated planned refueling outage dates. Given those current schedules and the above discussed Fall 1987 projected ATWS hardware delivery, our proposed ATWS implementation completion is not tied to a fixed date, but rather to return to power from an appropriately scheduled refueling outage. Further, current fuel cycles are based on a twelve month period which are currently under review for expansion to eighteen months. In the interim, should fuel cycle duration lengthen, or fuel load/plant in-service dates become revised due to the results of periodic budget and schedule reviews, then the associated ATWS implementation schedule would slip accordingly to the revised refueling outage.

	<u>Fuel Load</u>	<u>Plant In Service</u>	<u>Planned Refueling Outages</u>	<u>Proposed ATWS Implementation</u>
Byron Unit 1	-	-	Winter 86 Winter 87	Winter 87
Braidwood Unit 1	3/31/86	10/31/86	Summer 88	Summer 88
Byron Unit 2	5/31/86	10/31/86	Summer 88	Summer 88
Braidwood Unit 2	6/30/87	12/31/87	Fall 89	Prior to Plant In-Service
Zion Unit 1	-	-	Summer 86 Fall 87	Fall 87
Zion Unit 2	-	-	Spring 87 Fall 88	Fall 88

Aside from the projected procurement lead time requirement, the following provides additional justification for final implementation beyond the recommended implementation dates contained in the rule. References (c) and (d) provided the Commonwealth Edison Company position on the ATWS issue; the conclusions contained in these documents are applicable to our PWR stations. Also the SER for Byron Station noted that necessary plant modifications would take 1 to 4 years to implement and that PWRs could continue to operate during this period because the risk from ATWS events was acceptably small.