

November 30, 1995



U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Quad Cities Units 1 and 2
Notification of a Change to Schedule for Commitments related to 10 CFR
50.63, Station Blackout (SBO) Rule
NRC Docket Nos. 50-254 and 50-265

- References:
- (1) M.H. Richter to T. Murley letter dated February 15, 1991
 - (2) B.L. Siegel to T.J. Kovach letter dated December 11, 1990
 - (3) L.N. Olshan to T.J. Kovach letter dated July 18, 1991
 - (4) J. Schrage to USNRC letter dated September 1, 1995

This letter transmits Commonwealth Edison Company's (ComEd's) notification to the NRC Staff of delays in the completion of the Alternate AC - Diesel Generator (AAC-DG) modifications. These mods are necessary for compliance to the requirements to 10 CFR 50.63, the "Station Blackout Rule," (SBO) for Quad Cities Station. This letter describes the current status of both units and the basis for the delay for Quad Cities Unit 1.

In order to meet the requirements of 10 CFR 50.63, ComEd committed to install two AAC DGs at Quad Cities Station by December 31, 1995 (Reference 1). The NRC Staff reviewed and approved these commitments in the Reference (2) and (3) Safety Evaluations.

QUAD CITIES UNIT 2:

Unit 2 is currently in operating cycle 14. By December 31, 1995, the Unit 2 Station Blackout Diesel Generator which is rated at 4785 kW (2000 hour rating) will be operable and controllable within one hour from the main control room. The Unit 2 SBO DG will have the capability to connect to either safety-related division buses 23-1 or 24-1. The Unit 2 SBO DG will be primarily dedicated to Unit 2, but will also be able to power the safety buses (13-1 and 14-1) of the opposite unit, up to the current limitation of the safety-related feeds and cross-ties.

The Unit 2 SBO DG will be capable of powering one division of normal safe shutdown systems and equipment for each unit and attaining safe shutdown from the control room. Safe shutdown equipment includes decay heat removal, battery charging, HVAC in dominant areas of concern, and emergency lighting. In summary, Quad Cities Unit 2, with the completion of the AAC-DG modifications, will have completed all SBO commitments made in Reference (1).

QUAD CITIES UNIT 1:

Unit 1 is currently in operating cycle 14. ComEd has scheduled the start of the fourteenth refuel outage (Q1R14) for February, 1996.

The original start of Q1R14 was planned for 1995, however, Unit 1's previous refueling outage was

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an extended one (March 1994 - August 1994). This extension was due to a number of factors, two of which were - unplanned work scope due to a recirculation pump speed increase and vessel internals inspection; and a diversion of resources during two periods when the Station was in a dual unit outage. Furthermore, in October of 1994, management decided to place Units 1 and 2 in shutdown pending upgrades to Operation's standards, and improvements to plant material condition. Unit 1 returned to service in January of 1995.

In the September 1, 1995, letter (Reference 4) it was stated that Unit 1 AAC-DG and all required diesel generator auxiliaries, would be installed and modification/acceptance tested and all necessary maintenance procedures would be completed by the end of 1995. In addition, post modification/operability testing of the Unit 1 AAC-DG would be completed during Q1R14.

On September 29, 1995, the Unit 1 AAC-DG experienced a muriatic acid event which damaged many electronic components. This event has caused delays in completing ComEd's Unit 1 AAC-DG commitments for December 31, 1995 (Reference 4).

However, Quad Cities current schedule is to have the Unit 1 AAC-DG operable and controllable within one hour from the main control room by June 30, 1996, as noted in the September 1, 1995 letter, (Reference 4).

ComEd has evaluated the deterministic and probabilistic impact of the delay in completion of the AAC-DG commitments upon the safety and health of the public, as well as the overall risk to Nuclear safety.

ComEd's IPE for Quad Cities Station included sensitivity studies related to the benefits of hardware and procedure changes at Quad Cities Station:

- One of these sensitivity studies concluded that a procedure to permit RCIC operation in a manual mode that is independent of DC power sources would lead to a 43% reduction in core damage frequency (CDF), giving a new value of $6.81 \text{ E-}07/\text{yr}$. This procedure is now implemented.
- An additional sensitivity study concluded that this RCIC procedure, combined with the addition of an SBO DG for each unit, and use of station maintenance batteries or a portable DC generator (to maintain DC power for a longer period in SBO events), would lead to a 47% reduction in core damage frequency (CDF), giving a new value of $6.38 \text{ E-}07/\text{yr}$.

The difference between the CDF values for these two cases (i.e., a $4.3 \text{ E-}8/\text{yr}$. reduction, equaling 4% of the total CDF of $1.20 \text{ E-}6/\text{yr}$ as noted in the Quad Cities IPE) is a bounding value for the decrease in CDF that will be achieved by completion of the SBO DG modifications (since the necessary RCIC procedure has been implemented). This CDF difference is a bounding value because it represents the benefit of not only the SBO DGs, but also the benefit of a procedure to extend the period during which DC power would be available should an SBO occur.

Delaying the SBO modification at Quad Cities by six months does not change the CDF for the current plant configuration, and NEI guidelines do not explicitly address such delays. However, the NEI guidelines do address temporary increases in risk. In order to assess the impact of delaying the SBO modifications, ComEd applied the NEI guidelines as if the 6 month delay caused a temporary CDF increase of $4.3 \text{ E-}8/\text{yr}$.

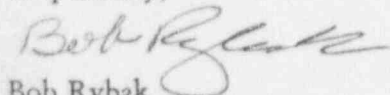
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A CDF increase of 4.3 E-8/yr for 6 months (0.5 year) corresponds to an increase in core damage probability (CDP) of 2.2 E-8 . Under the current NEI guidelines, temporary plant changes giving a CDP increase of less than 1 E-6 are not risk significant. Therefore, a six month delay in the operability of one AAC-DG at Quad Cities Station is not risk significant.

To the best of my knowledge and belief, the statements contained above are true and correct. In some respect these statements are not based on my personal knowledge, but obtained information furnished by other Commonwealth Edison employees, contractor employees, and consultants. Such information has been reviewed in accordance with Company practice, and I believe it to be reliable.

If there are any comments or questions pertaining to this letter, please direct them to this office.

Respectfully,



Bob Rybak
Nuclear Licensing Administrator

cc: H. Miller, Regional Administrator - RIII
R. Pulsifer, Project Manager - NRR
C. Miller, Senior Resident Inspector - Quad Cities
Office of Nuclear Facility Safety - IDNS