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October 23, 1990

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

Attn: U.S. NRC Document Control Desk

Subject: Braidwood Nuclear Power Station Unit 1
Byron Nuclear Power Station Unit 2
Revised Schedule for Transition in
Neutronics Codes for PWR Reload Design
NRC Docket Nos. 50-456 and 50-455

- References:
1. Letter from J. A. Silady to T.E. Murley, dated February 21, 1990, "Transition in Neutronics Codes for PWR Reload Design".
 2. Conference call between CECO (J.A. Silady and B.J. Adams) and NRR (D.B. Fieno), on June 26, 1990.
 3. Letter from J.A. Silady to T.E. Murley dated July 13, 1990 submitting "Commonwealth Edison Company Topical Report on Benchmark of PWR Nuclear Design Methods using the PHOENIX-P and ANC Computer Codes", CECO report NFSR-005.

Dear Dr. Murley:

References 1 and 2 described Commonwealth Edison Company (CECo) plans to implement the NRC-approved Westinghouse Codes PHOENIX-P and ANC to replace the existing ARK and 2D codes which CECO uses to perform neutronic analyses for PWR reload designs. Reference 3 submitted the CECO Topical Report in support of the implementation of PHOENIX-P and ANC for use by CECO Nuclear Fuel Services (NFS) reload design engineers.

Reference 3 also provided the planned transition schedule and requested date for receipt of NRC approval (December 15, 1990). CECO has recently reevaluated this schedule in light of a workscope change between NFS and the Westinghouse Nuclear Fuel Division (WNFD) for Braidwood 1 Cycle 3 (BWIC3) reload licensing analyses. Although both organizations are currently utilizing PHOENIX/ANC in support of the BWIC3 reload in a parallel effort, the official "analyses of record" for input to the Reload Safety Evaluation will now be provided by WNFD. The remaining workscope of generating the Nuclear Design Report (NDR), Station Curvebook, and the Core Operating Limits Report (COLR) will be provided by NFS after appropriate consistency checks with the WNFD analyses.

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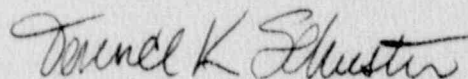
Since CECo will have primary responsibility for specifying parameters for the Core Operating Limits Report as well as the NDR and Station Curvebook, an NRC Safety Evaluation Report approving CECo's use of these codes is needed by January 15, 1991. This date is based on the expected transmittal date for the final COLR to the station for Onsite Review and subsequent Offsite Review.

The revised SER date of January 15, 1991 represents a six month review period from the mid-July Topical submittal. Because the codes and methodology have been previously reviewed and approved by the Staff based on Westinghouse submittals, CECo believes this schedule is reasonable for review of CECo's Topical Report on the same codes and methods. It is also consistent with the approval timeframe needed to support the related administrative license amendment to add a reference for the PHOENIX/ANC Topical Report to the Technical Specification 6.9.1.9 discussion of the approved methods upon which the COLR is based. This proposed change will be submitted as part of a dual station amendment which also incorporates other administrative changes in Section 6 of the Byron and Braidwood Technical Specifications. The planned submittal in late November, 1990 should allow adequate time for review prior to the Spring 1991 refueling outage (i.e., prior to start of BWIC3).

The Attachment updates the review schedule previously transmitted to you in References 1 and 3. As noted in References 2 and 3, the reload design, safety analysis input, and COLR for Byron 2 Cycle 3 (BY2C3) were determined using ARK/2D so that only the NDR and Curvebook are being generated with PHOENIX-P/ANC (for enhanced critical predictions, etc.). Based on the Reference 2 and 3 discussions, this limited scope application for BY2C3 will therefore proceed in advance of SER issuance for the Topical Report.

Please contact this office if this understanding is incorrect or should further information be required.

Very truly yours,



Nuclear Licensing Administrator
T.K. Schuster

Attachment

Updated Proposed CECo PHOENIX-P/ANC Topical Review Schedule

cc: A. B. Davis - Regional Administrator, RIII
C. P. Patel - Zion Project Manager, NRR
S. P. Sands - Braidwood Project Manager, NRR
T. Joyce - Byron Project Manager, NRR
R. C. Jones - Reactor Systems Branch Chief, NRR
Senior Resident Inspector - Zion
Senior Resident Inspector - Byron
Senior Resident Inspector - Braidwood

Attachment

Updated CECo PHOENIX-P/ANC Topical Review Schedule

	<u>Date</u>	<u>Status</u>
Initial Discussion of CECo Plans with NRR	10/20/89	Complete
CECo Discusses PHOENIX-P/ANC Topical Scope	01/10/90	Complete
CECo Discusses Curvebook/Nuclear Design Report Use of PHOENIX-P/ANC for Byron Unit 2 Cycle 3	06/26/90	Complete
CECo Submit PHOENIX-P/ANC Topical to NRC	07/13/90	Complete
Meeting(s) to Address Staff Questions	As Needed	
CECo use of PHOENIX-P/ANC for Curvebook and NDR Calculations for Byron Unit 2 Cycle 3	11/01/90*	
CECo Submits BY/BW Administrative Tech Spec Changes (including new Topical reference in Sect. 6)	11/28/90	
Topical Approval (SER) Needed from NRC	01/15/91**	
CECo use of PHOENIX-P/ANC for COLR, Curvebook and NDR for Braidwood Unit 1 Cycle 3	01/15/91**	
Target for NRC Issuance of Tech. Spec. Change	03/15/91***	

* BY2C3 Expected Startup

** BW1C3 COLR Transmittal for Onsite and Offsite Review

*** Approximately two weeks into the Refuel Outage prior to BW1C3