

February 6, 1987

Docket No. 50-455

DISTRIBUTION

Docket File

NRC PDR  
Local PDR  
PD#3 RDg.  
T. Novak  
OGC  
E. Jordan

J. Partlow  
N. Thompson  
B. Grimes  
L. Olshan  
C. Vogan  
C. Tinkler  
ACRS(10)

Mr. Dennis L. Farrar  
Director of Nuclear Licensing  
Commonwealth Edison Company  
Post Office Box 767  
Chicago, Illinois 60690

Dear Mr. Farrar:

SUBJECT: BYRON UNIT 2, NRC EVALUATION OF REACTOR CONTAINMENT FAN COOLERS

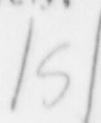
By letter dated January 13, 1987, you provided a discussion of the adequacy of the Reactor Containment Fan Cooler (RCFC) heat removal capability. This re-evaluation of the RCFC capability was necessitated by the discovery, upon completion of preoperational testing, that all four of the fans produced a flow rate lower than the design flow specified in the FSAR, (Table 6.2-56). The evaluation transmitted January 13, 1987 contended that diminished fan flow capacity was offset by increased effectiveness of the fan cooler coils as demonstrated by tests conducted at Wyle Laboratories. The staff, upon review of the discussion determined that additional quantitative analysis was needed to provide sufficient justification for the conclusion of adequacy regarding the RCFC.

By letter dated January 23, 1987, you provided additional information demonstrating the installed RCFC heat removal capability exceeds the heat removal capability assumed in the containment integrity analysis. During the course of the review it was determined that the RCFC heat removal capability assumed in the containment analysis exceeded the original performance specified by the vendor, due to differences in the assumed cooling water flow rates and fan flow rates. It is the staff conclusion however, that the data obtained from tests of representative coils support the contention that the installed RCFC capability exceeds the relevant design requirement, i.e., the performance assumed in the containment integrity safety analysis. Therefore, the staff finds the Byron Unit 2 fan coolers to be adequate to perform their design function. The staff, also concludes as a result of this review, that the FSAR (in Table 6.2-56) should be updated to reflect the new minimum fan flow requirement of 54,000 cfm, based on the Wyle Laboratory testing as well as the heat removal requirement established by the safety analysis ( $143 \times 10^6$  BTU/HR) instead of the current inappropriate reference to earlier vendor specifications. We likewise observe that the FSAR should be modified to include a curve depicting the heat removal capability vs. containment integrity analysis.

8702130287 870206  
PDR ADOCK 05000455  
P PDR

Finally, it is our position that Commonwealth Edison should provide additional information demonstrating that the enhanced performance of the RCFC, observed from testing, does not adversely affect the assumptions regarding RCFC performance contained in the ECCS containment backpressure analysis. Alternatively, there may be a demonstration of acceptable consequences for the ECCS Appendix K evaluation. This additional information should be submitted for our review within 30 days of receipt of this transmittal.

Sincerely,



Steven A. Varga, Director  
Project Directorate #3  
Division of PWR Licensing-A

cc: See next page

PD#3  
CVogan  
2/5/87

PD#3  
LOIshan:mak  
2/5/87

PSB  
CTinkler  
2/3/87

PD#3  
SVarga  
2/6/87

C.L.

Mr. Dennis L. Farrar  
Commonwealth Edison Company

Byron Station  
Units 1 and 2

cc:

Mr. William Kortier  
Atomic Power Distribution  
Westinghouse Electric Corporation  
Post Office Box 355  
Pittsburgh, Pennsylvania 15230

Michael Miller  
Isham, Lincoln & Beale  
One First National Plaza  
42nd Floor  
Chicago, Illinois 60603

Mrs. Phillip B. Johnson  
1907 Stratford Lane  
Rockford, Illinois 61107

Dr. Bruce von Zellen  
Department of Biological Sciences  
Northern Illinois University  
DeKalb, Illinois 61107

Mr. Edward R. Crass  
Nuclear Safeguards & Licensing  
Sargent & Lundy Engineers  
55 East Monroe Street  
Chicago, Illinois 60603

Mr. Julian Hinds  
U. S. Nuclear Regulatory Commission  
Byron/Resident Inspectors Offices  
4448 German Church Road  
Byron, Illinois 61010

Mr. Michael C. Parker, Chief  
Division of Engineering  
Illinois Department of  
Nuclear Safety  
1035 Outer Park Drive  
Springfield, Illinois 62704

Ms. Diane Chavez  
528 Gregory Street  
Rockford, Illinois 61108

Regional Administrator, Region III  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Joseph Gallo, Esq.  
Isham, Lincoln & Beale  
Suite 1100  
1150 Connecticut Avenue, N.W.  
Washington, D. C. 20036

Douglass Cassel, Esq.  
109 N. Dearborn Street  
Suite 1300  
Chicago, Illinois 60602

Ms. Pat Morrison  
5568 Thunderidge Drive  
Rockford, Illinois 61107

Ms. Lorraine Creek  
Rt. 1, Box 182  
Manteno, Illinois 60950