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May 31, 1979

Mr. James G. Keppler, Director  
Directorate of Inspection and  
Enforcement - Region III  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Subject: Dresden Station Units 1, 2 and 3  
and Quad-Cities Station Units 1 and 2  
Revised Response to IE Bulletin 78-14  
"Deterioration of Buna-N Components  
in ASCO Solenoids"  
NRC Docket Nos. 50-10/237/249 and  
50-254/265

References (a): J. G. Keppler letter to B. Lee, Jr.  
dated December 19, 1978

(b): C. Reed letter to J. G. Keppler  
dated February 2, 1979

Dear Mr. Keppler:

Reference (a) transmitted IE Bulletin No. 78-14  
regarding the deterioration of Buna-N components in ASCO  
solenoid valves.

In accordance with that bulletin, we reviewed the  
use of Buna-N material in our control rod scram systems. Our  
review determined that Buna-N materials are used in the control  
rod drive scram pilot solenoid valves, backup scram solenoid  
valves, and the scram discharge volume vent and drain solenoid  
valves. Since most of these valves were installed as part of  
the original plant, no packaging dates were available for the  
internal components of these valves.

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As a result of the review, Reference (b) documented our plan for replacement and preventative maintenance of this equipment at our units. This plan provided for the inspection and rebuilding of five percent (5%) of the ASCO solenoid valves at each refueling outage. The backup scram valves were to be inspected and rebuilt at the next refueling outage of each unit and at alternate refueling outages thereafter.

This program was based on the fact that we had not experienced any scram time anomalies due to Buna-N deterioration at Dresden or Quad-Cities Stations. This experience included almost nineteen years of operation at Dresden Unit 1, nine years of operation at Dresden Units 2 and 3, and eight years of operation at Quad-Cities Units 1 and 2. Reference (b) also pointed out that the existing control rod drive surveillance programs specified in the Technical Specifications would be adequate to detect any failures or drive performance degradation due to Buna-N material deterioration. Further, even if a failure of an ASCO solenoid in an individual drive were to occur, operation of either of the backup scram valves would ensure insertion of that drive in the event an actual scram condition existed.

We continue to feel that the program transmitted to you in Reference (b) would be adequate to prevent the problems which were identified in Reference (a). However, because of continued concern that the program would permit operation of safety-related components beyond the manufacturer's recommended service life, we are revising that program as follows. Subject to the delivery of parts, the Buna-N material in the scram pilot, backup scram, and the scram discharge volume vent and drain solenoids will be replaced by the end of 1980. Subsequently, approximately 1/4 of these solenoids will be rebuilt during each refueling cycle. Based on this schedule, and assuming an eighteen month unit operating cycle, each solenoid will be in service for approximately six years. This program is compatible with the seven year service life recommended by the manufacturer.

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Please address any questions concerning this matter to  
this office.

Very truly yours,



Cordell Reed  
Assistant Vice-President

cc: Director, Division of Reactor  
Operations Inspection

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