

April 20, 1973

58-247

Angus Macbeth, Esq.  
Natural Resources Defense  
Council, Inc.  
15 West 44th Street  
New York, New York 10036

Dear Mr. Macbeth:


Reference is made to your letter, dated April 3, 1973, in which you requested the regulatory staff to respond to the following interrogatory:

"If Indian Point 2 were operated so that it is baseloaded to (a) 30 percent of full power or (b) 50 percent of full power, and then fluctuated from that point to 100 percent of full power when needed for peaking demand, what does the staff estimate would be the time that the plant would be incapacitated due to xenon decay, after it is brought down to the baseload level from operation at full power? Give figures for each successive 1/3 of core life."

The staff has not made an estimate of the incapacitated periods specified in the question. In general, the plant operating limitations relative to xenon buildup would be slightly less restrictive for a plant baseloaded at any power greater than hot standby. It is possible that, near the end of core life, the capability of the control rod and boron control systems to override the xenon buildup could be reduced to such an extent that plant startup would not be possible for a period of time up to 36 hours. This could conceivably occur even if the plant was not used as a peaking unit.

In addition to the above considerations concerning fundamental xenon buildup and decay (no spatial effects), operation between part and full power using only boron control would probably not be feasible under the design conditions of the letdown system. At some time in core life, possibly near mid-cycle, operation in the suggested manner at 30% or 50% power baseload with the use of

8110240632 730420  
PDR ADOCK 05000247  
G PDR

OFFICE ▶									
SURNAME ▶									
DATE ▶									

control rods for xenon override could potentially induce xenon oscillations in the reactor. This would make it more difficult to achieve full power due to the Technical Specification limitations on flux difference between the top and bottom halves of the reactor core and limitations on total peaking factor.

Sincerely,

Myron Karman  
Counsel for AEC Regulatory Staff

cc: Samuel W. Jensch, Esq.  
Dr. John C. Geyer  
Mr. R. B. Briggs  
Anthony Z. Roisman, Esq.  
J. Bruce MacDonald, Esq.  
Honorable Louis J. Lefkowitz  
Leonard M. Trosten, Esq.  
Atomic Safety and Licensing  
Board Panel  
Atomic Safety and Licensing  
Appeal Board  
Mr. Frank W. Karas

OFFICE ▶						
SURNAME ▶						
DATE ▶						