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August 3, 1987

Re: Indian Point Unit No. 2
Docket No. 50-247

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Revised No Significant Hazards Consideration Analysis for the
Application for Amendment to Unit No. 2 Operating License Dated
June 12, 1987

In accordance with the request of the NRC staff, this letter transmits a revised No Significant Hazards analysis to supplement our June 12, 1987 application to amend the Indian Point Unit No. 2 Technical Specifications to revise the operability requirements of the containment fan cooler units, delete the requirements of their HEPA filters, charcoal adsorbers and associated fire protection and detection equipment, and revise the amount of time one containment spray pump may be inoperable. The revised no significant hazards consideration analysis represents a more complete discussion of the evaluation of the three criteria of 10 CFR 50.92(c) that provides the basis for the determination that there are no significant hazards considerations involved with that application.

Should you or your staff have any additional questions, please contact us.

Very truly yours,



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Enclosures

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Basis for No Significant Hazards Consideration Determination:

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (48 FR 14870). Example (vi) of those involving no significant hazards consideration discusses a change which may reduce a safety margin but where the results are clearly within all acceptable criteria with respect to the system or component. The proposed change to reduce the heat removal requirements of the containment fan cooler units, remove the HEPA filters and charcoal adsorbers, and increase the containment spray pump out-of-service-time is in a less restrictive direction and may initially appear to reduce a safety margin. However, consistent with the Commission's criteria in 10 CFR 50.92, we have determined that the proposed change does not involve a significant hazards consideration because the operation of Indian Point Unit No. 2 in accordance with this change would not:

- (1) involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed revisions are based on conservative analyses utilizing new, refined and more accurate methodologies. One analysis shows that with a reduction in fan cooler heat removal rate under post-LOCA accident conditions, containment pressure would be maintained well below its design value of 47 psig. The second analysis shows the fan cooler charcoal adsorbers can be removed without significantly affecting the radiological consequences of a postulated LOCA, and that the calculated off-site doses would remain within the 10 CFR 100 guidelines. If the charcoal adsorbers were removed, the reason for the charcoal fire detection instrumentation and dousing system would be eliminated and therefore the safety significance of its removal would become non-existent. Additionally, by increasing the containment spray pump out-of-service time, on-line maintenance can more readily be performed, which should enhance overall pump availability. Thus, the same safety criteria as previously evaluated are still met with the proposed changes. The allowance of additional out-of-service time for one spray pump is consistent with the allowable time approved for more recently licensed nuclear plants whose accident analyses have been found acceptable for licensing purposes.
- (2) create the probability of a new or different kind of accident from any accident previously evaluated. The proposed change to containment cooling system operability requirements does not modify the plant's configuration or operation, and therefore the identical postulated accidents are the only ones that require analysis and resolution. Nothing would be added or removed that would conceivably introduce a new or different kind of accident mechanism or initiating circumstance than that previously evaluated. The same is true for the proposed deletion of the HEPA filters and charcoal adsorbers associated with the containment fan cooler units. The original intent of these systems was to reduce the concentrations of radioiodines in the containment

atmosphere following a LOCA. Their removal is consistent with current, state-of-the-art analysis and could not conceivably introduce a new or different postulated accident to the safety analysis of the plant. In fact, one potential accident is eliminated, i.e. a fire in the charcoal adsorbers themselves. This postulated accident had called out the need for a fire protection instrumentation and charcoal dousing system. Such a mitigation system would no longer be required should the potential fire hazard be eliminated by reason of the implementation of this proposed change to the Technical Specifications. Thus, the removal of a mitigation system for a potential hazard that no longer exists could not introduce a new or different accident than any previously evaluated.

The aspect of the proposed change which would extend the amount of time a containment spray system may be inoperable during operation does not alter plant configuration or operation from that assumed in current analyses which bound those for Indian Point 2. A potentially longer time of inoperability for this system does not change the nature of the accident for which this engineered safeguard has been installed. Since no change to the system or its operation is involved, there is no potential for a new or different accident from any previously evaluated.

In general, the proposed changes do not adversely affect the ability of the plant's containment heat removal systems to perform their required safety functions, and allow the containment safeguards to mitigate the consequences of a design basis LOCA in a manner equivalent to that previously approved.

- (3) involve a significant reduction in a margin of safety. With the proposed change, all safety criteria previously evaluated are still met, remain conservative, and are in fact increased with respect to the service water system flow demands.

The safety function of the fan coolers is to recirculate and cool the containment atmosphere in the event of a loss of coolant accident, thereby reducing the likelihood that the containment pressure would exceed its design value of 47 psig. Worst case containment pressure transients during hypothetical loss of coolant accidents were reanalyzed as a basis for evaluating the proposed change in the minimum containment cooling system operability requirements. This reanalysis was conducted using the latest methodology/computer model, and is included as Enclosure 1 to this Attachment. The analysis shows that even during the worst case LOCA with minimum safeguards (3 fan coolers, 1 containment spray pump) the maximum containment pressure does not exceed 40.5 psig, which is well below design value.

The proposed deletion of the requirement for the HEPA filters and the charcoal adsorbers has been analyzed to determine the effect

on the margin of safety. The analysis shows that the containment fan cooler HEPA filters and charcoal adsorbers can be removed without significantly affecting the radiological consequences of a postulated LOCA, that the calculated off-site doses would remain within the 10 CFR 100 guidelines, and that the calculated control room doses would be consistent with those originally reported in the FSAR. An assessment of the potential impact to the environmental qualification of equipment due to this change was also conducted. The assessment concluded that the margins in the current environmental qualification program are not adversely affected by this change.

The proposed change in the amount of time a containment spray system can be inoperable during plant operation has also been reviewed to determine a potential effect on the margin of safety. With the new containment integrity analysis provided in Enclosure 1, we have established that the IP-2 containment has substantial margins compared to its design pressure following a worst case loss of coolant accident.

Therefore, based on the above, we conclude that the proposed changes do not constitute a significant hazards consideration.

The proposed changes have been reviewed by the Station Nuclear Safety Committee and the Consolidated Edison Nuclear Facilities Safety Committee. Both committees concur that these changes do not represent a significant hazards consideration.