

July 13, 2000

Mr. A. Alan Blind  
Vice President, Nuclear Power  
Consolidated Edison Company  
of New York, Inc.  
Broadway and Bleakley Avenue  
Buchanan, NY 10511

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING GENERIC  
LETTER 96-06, INDIAN POINT NUCLEAR GENERATING UNIT NO. 2  
(TAC NO. M96822)

Dear Mr. Blind:

On September 30, 1996, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions," that requested licensees to evaluate cooling water systems that serve containment air coolers to assure that these systems were not vulnerable to water-hammer and two-phase flow conditions. In a letter dated October 30, 1996, as supplemented on January 28, April 30, August 29, and November 21, 1997, and September 15, 1998, Consolidated Edison Company of New York, Inc. (ConEd) provided information in response to the requested actions in the GL.

The NRC staff has reviewed the information provided by ConEd and has determined that additional information is needed to complete its review. The specific information requested by the staff is addressed in the enclosed request for additional information. In a telephone conversation with representatives of your staff, the NRC discussed this information and obtained agreement that ConEd would provide the additional information requested within 60 days from the date of this letter.

Sincerely,

*/RA/*

Patrick D. Milano, Senior Project Manager, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-247

Enclosure: Request for Additional Information

cc w/encl: See next page

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Units 2

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DOCUMENT NAME: C:\RAI M96822 GL 96-06.wpd

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REQUEST FOR ADDITIONAL INFORMATION  
REGARDING THE RESPONSE TO GENERIC LETTER 96-06  
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

1. Provide the justification for selecting the loss-of-coolant accident with concurrent loss of offsite power (LOCA/LOOP) as limiting scenario versus the main steam line break with concurrent LOOP (MSLB/LOOP).
2. ConEd assumed a sonic velocity of 2300 ft/sec, which is less than the 4500 ft/sec that is suggested in NUREG/CR-5220, "Diagnosis of Condensation-Induced Waterhammer," for bounding calculations. Provide a quantitative justification for the use of 2300 ft/sec.
3. The ConEd analyses were performed to compare predicted column closure waterhammer magnitudes with actual magnitudes that have been observed. Alternate valve line-ups were considered. However, sufficient information about the details of these analyses and tests, such as configurations, pressure measurement locations, and data scanning frequencies was not provided to allow an independent assessment by the staff. Provide these details.
4. Plant-specific modeling, hand calculations, and spread sheets were used to evaluate drain-down and the potential for condensate-induced waterhammer to occur. Provide additional details about these calculations to allow an independent assessment of the work by the staff.
5. A steam void-to-water ratio of 0.35 was used in the condensate-induced waterhammer analysis. Provide a quantitative evaluation (based on experimental data or deterministic calculations) to justify the use of this ratio value.
6. A structural analysis of the fan cooler unit (FCU) pressure retaining components, FCU supply and return piping, and associated support system, was performed. Provide additional details about the analysis to allow an independent assessment by the staff.
7. ConEd's two-phase flow analysis concluded that flow could be reduced by as much as 50 percent and yet enough heat would still be removed to satisfy accident assumptions (assuming no fouling of the FCU tubes). Provide sufficient details about this analysis, including justification for assuming clean tubes as the worst-case condition, to allow an independent assessment to be completed by the staff.

Enclosure