

Stephen E. Quinn  
Vice President

Consolidated Edison Company of New York, Inc.  
Indian Point Station  
Broadway & Bleakley Avenue  
Buchanan, NY 10511  
Telephone (914) 734-5340

Document Control Desk  
US Nuclear Regulatory Commission  
Mail Station P1-137  
Washington, DC 20555

SUBJECT: Comments Regarding NRC letter; "Resolution of Spent Fuel Storage Pool Safety Issues: Issuance of Final Staff Report and Notification of Staff Plans to Perform Plant-Specific, Safety Enhancement Backfit Analyses, Indian Point Nuclear Generating Unit No. 2" (TAC No. M95848) dated October 9, 1996

Following are the comments and clarifications of Consolidated Edison Company of New York, Inc. (Con Edison) with regard to the regulatory analyses proposed for Indian Point 2 contained in the subject letter.

Leak Detection Capability

The Indian Point 2 spent fuel pool was constructed without a leak detection system. Loss of water from the spent fuel pool is detected by level instrumentation. In addition to installed instrumentation, an operator is required to visually observe the spent fuel pool level twice per twelve hour shift (4 times per day). The level instrumentation has an alarm in the control room which activates when a variation of  $\pm 6$ " from normal level occurs. Alarm Response Procedure, SGF (2-2), requires that when a spent fuel pool level alarm is received, a direct visual observation of the spent fuel pool level be performed. If the water level is low, restoration of normal level using the makeup system is required. An additional procedure, A17.0.5 "Undesirable Level Decrease in the Unit 2 Spent Fuel Pool," provides two alternative makeup water sources in the event the first choice is not available. The procedure directs that an investigation be initiated to determine the cause of the low water level which includes: refueling cavity leakage, spent fuel pool cooling or purification piping leakage, spent fuel pool liner leakage, spent fuel pool cooling system valve lineup, or spent fuel pool gate seal problems.

In addition to these extensive administrative controls, there are Technical Specification requirements and FSAR analyses regarding spent fuel pool level. Technical Specification 3.8.C.2 requires the spent fuel pool water level to be maintained at or above a minimum level and restoration of this level is required in 4 hours if the level decreases below the Technical Specification required level. The potential for leakage through the spent fuel pool liner is addressed in the FSAR, Section 14.2.1.3 Fuel Cask Drop Accident. A cask drop is the bounding accident. This accident assumes puncture of the pool liner and some

November 18, 1996

Re: Indian Point Unit No. 2

Docket No. 50-247

CON ED  
NUCLEAR LICENSING  
CORRES. NO. NCR 603119  
FILE CODE 1 CAOSDDA  
FILE CODE 2 UTIDU30A  
FILE CODE 3  
COPIES PLACED IN  
FILE 1  FILE 2  FILE 3

cracking of the concrete below. Since the pool is founded on solid rock and since the bottom of the pool is approximately 24 feet below the surrounding grade, very little water can be lost from the pool. The capacity of the makeup demineralized water supply to the pool is 150 gpm.

Based on the above, Con Edison believes that appropriate detection and monitoring capability exist for spent fuel pool leakage.

#### Cooling System Capability

The spent fuel pool cooling system is capable of handling the postulated worst case heat load, e.g., worst case river water temperature, full core discharge after the required time and no evaporation or convective heat losses assumed. The analysis done for the last rereack provided in the June 20, 1989 submittal to the NRC shows compliance of the cooling capability with Standard Review Plan 9.1.3 and Branch Technical Position ASB 9-2.

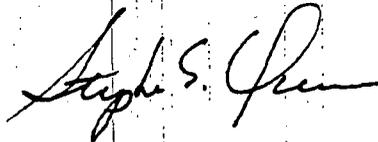
Administrative controls are in place to ensure that the basis for the spent fuel pool cooling analysis, i.e., minimum time before discharge of fuel from reactor to spent fuel pool, is adhered to. Administrative controls are also provided to assure the spent fuel pool temperature remains well below the maximum temperature assumed in the analysis. SOP 4.3.1, "Spent Fuel Pool Cooling" and SOP 17.31, "Refueling Operations Surveillance" require a minimum shutdown time for fuel movement based on river water temperature. In addition, the spent fuel pool cooling procedure requires the cooling water to be no more than 125°F. In the event the spent fuel pool temperature goes above 125°F, an alarm in the control room notifies the operators. The aforementioned Alarm Response Procedure requires action to be taken to reduce the temperature below 125°F. If the temperature is due to loss of spent fuel pool cooling, the operator is directed to take actions to restore cooling. If cooling cannot be restored, the operator is directed to provide makeup to the spent fuel pool per heat-up and make-up rate graphs to maintain water level in the pool. Three sources of makeup water are specified by the procedure.

Per the analysis, and as described in the FSAR, with no heat removal the time for the spent fuel pool water to rise from 180°F to 212°F with a full core in storage is at least 1.8 hours. Each of the three makeup water sources can be provided within the 1.8 hours. Since operator actions commence when the pool reaches 125°F additional margin to the 1.8 hours is available and therefore, the Technical Specification required Spent Fuel Pool level will be maintained. Furthermore, the capability of each of the three different sources of makeup water exceeds the maximum makeup rate of 62 gpm for boil off.

The above information is provided for consideration in developing plans for inspections and other activities associated with the planned regulatory analysis.

Should you have any questions regarding this matter, please contact Mr. Charles W. Jackson, Manager, Nuclear Safety and Licensing.

Very truly yours,



cc: Mr. Hubert J. Miller  
Regional Administrator - Region I  
US Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Mr. Jefferey F. Harold, Project Manager  
Project Directorate I-1  
Division of Reactor Projects I/II  
US Nuclear Regulatory Commission  
Mail Stop 14B-2  
Washington, DC 20555

Senior Resident Inspector  
US Nuclear Regulatory Commission  
PO Box 38  
Buchanan, NY 10511