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March 17, 1997

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

Document Control Desk
Office of Nuclear Reactor Regulation
Mail Station PI-137
Washington, DC 20555

SUBJECT: 180 Day Response to US Nuclear Regulatory Commission Generic Letter 96-05: Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves

Pursuant to 10 CFR 50.54(f), the following information provides Consolidated Edison of New York, Inc.'s (Con Edison) 180-day response to Generic Letter (GL) 96-05.

GL 96-05 requests that certain actions be taken by utilities to establish or ensure effectiveness of programs to verify on a periodic basis that safety-related motor-operated valves (MOVs) continue to be capable of performing their safety functions. Con Edison is a member of the Westinghouse Owners' Group (WOG), which has joined together with the BWR Owners' Group to develop a Periodic Verification Program for demonstrating MOV adequacy. The Con Edison Periodic Verification Program will be consistent with the joint program.

Indian Point Unit No. 2 (IP2) has complied with the recommendations of GL 89-10 to establish a program to demonstrate that safety-related MOVs are capable of performing their design basis functions. IP2 has implemented its GL 89-10 MOV Program Plan and has completed the design basis reviews, analyses, verifications, tests and inspections as described in the previous notification to your office dated August 2, 1995. Subsequent activities to maintain and verify the continued adequacy of the switch settings previously established are contained in Con Edison's Periodic Verification Program that meets the requirements of GL 96-05 (GL 89-10 and its supplements were superseded by GL 96-05 with regard to MOV periodic verification). Each MOV in the Program Plan is tested on an interval that provides confidence that the valve will perform its function on demand. IP2 plans to follow the program as described in WOG Letter OG-97-018, "Joint BWR and Westinghouse Owners' Group Program on Motor-Operated Valve (MOV) Periodic Verification."

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In accordance with Supplement 1 of NRC Generic Letter 89-10, the verification of these switch settings was to be accomplished through static (no differential pressure or flow) diagnostic thrust and/or torque measurements. Since static testing may not reflect valve factor changes due to an aging mechanism (or other causes), IP2 is joining with the Westinghouse and BWR Owners' Groups to collectively test and evaluate a large population of valves under dynamic conditions with appropriate diagnostic equipment. This testing will be shared by the participating utilities using a standardized testing specification. The resulting information will be first analyzed by each utility to determine that each of its station's operability requirements have been met, and the test data will be forwarded to the WOG for review and dissemination for analysis. The results will then be disseminated to the participating utilities through their respective Owners' Groups. It is anticipated

that through this process, the determination of changes in performance (such as age related degradation) can be properly identified and appropriate corrections can be developed in a consistent and timely manner. This process is expected to take five years after the inception of the program.

The WOG is submitting OG-97-018, "Joint BWR and Westinghouse Owners' Group Program on Motor-Operated Valve (MOV) Periodic Verification" and OG-97-019, "Risk Ranking Approach for Motor-Operated Valves in Response to Generic Letter 96-05" to the NRC for its review and comment.

The WOG has designated the IP2 valves to be diagnostically tested under dynamic conditions. The valves are to be tested three consecutive times at intervals of no less than one year. The testing will be accomplished in accordance with the joint program Test Specification. Due to the current review of the joint Periodic Verification Program by the NRC and the relatively short time until the IP2 refueling outage (i.e. May 1997), there could be some aspects of testing that are not captured in the initial testing of these valves. These differences will be identified and resolved by the joint program upon final scope and content determination of the Periodic Verification Program.

The emphasis of the periodic verification program will remain performance of static diagnostic testing. This testing will be performed on an interval associated with each valve's margin between required thrust and available thrust and also the relative risk associated with a valve failure to respond during a safety-related actuation. The WOG has provided the following matrix of intervals for static diagnostic testing based on risk ranking ("HIGH," "MEDIUM" and "LOW") and margin ("HIGH," "MEDIUM" and "LOW").

	Criteria for Frequency of Static Testing		
	"LOW" Margin	**"MEDIUM" Margin**	**"HIGH" Margin**
"HIGH" Risk**	1 cycle	2 cycles	3 cycles
"LOW" Risk	3 cycles	6 cycles*	6 cycles*

* Not to exceed 10 years

** The "HIGH" Risk criteria applied in the IP2 analysis includes both the "HIGH" and "MEDIUM" risk criteria in the WOG approach, and the WOG "MEDIUM" risk criteria is not shown in the matrix

where,

"LOW" margin is less than 5%
"MEDIUM" margin is equal to or greater than 5% and less than or equal to 10%
"HIGH" margin is greater 10%

The existing Probabilistic Safety Assessment model for IP2 was used to quantify "Importance" and contribution to core damage frequency associated with valve failure to stroke to the demanded position. The evaluation considered both "Fussell-Vesely" and risk achievement worth analyses. The resulting evaluations placed the valves into "HIGH" and "LOW" groups consistent with other industry analyses. The results of the probabilistic assessment will be reviewed by an expert panel consisting of representatives from various organizations (such as, Operations , Engineering, Test and Performance, Instrument and Control, Maintenance and the Probabilistic Safety Assessment group) who are knowledgeable and experienced with MOVs. This panel will provide the deterministic evaluation as recommended in "Guideline for Optimizing Safety Benefits in Assuring the Performance of Motor-Operated Valves," NUMARC, December 17, 1993.

There are 132 valves in the IP2 MOV Program. 22 MOVs have been evaluated to be "HIGH" Risk. Of the 22 "HIGH" Risk MOVs, three have margins of less than 5% and two have margins between 5% and 10%. The above matrix is repeated below with the number of valves in each category, using current information.

	"LOW" Margin	**"MEDIUM" Margin**	**"HIGH" Margin**
"HIGH" Risk**	1 cycle - 3 MOVs	2 cycles - 2 MOVs	3 cycles - 17 MOVs
"LOW" Risk	3 cycles - 7 MOVs	5 cycles - 2 MOVs*	5 cycles - 101 MOVs*

* The 5 cycle interval is expected to be within the overall 10 year limit with the 24 month cycle at IP2

** The "HIGH" Risk criteria applied in the IP2 analysis includes both the "HIGH" and "MEDIUM" risk criteria in the WOG approach, and the WOG "MEDIUM" risk criteria is not shown in the matrix

Based on operational concerns (such as train outage sequencing) valves may be tested more frequently than specified above.

Results from each test performed under this periodic verification program will be reviewed to ensure that the settings are adequate to maintain the output capability of the actuator within its design requirements, as established in the GL 89-10 MOV Program Plan. Appropriate changes to margins, and settings will be made as necessary, based on the results of this testing. The Tracking and Trending Program that was developed for the GL 89-10 MOV Program Plan will be used to ensure that negative trends are identified and corrected in order to maintain the actuator performance at an acceptable standard.

Stephen E. Quinn

Subscribed and sworn to
before me this 17th day
of March 1997.

Notary Public
Karen L. Lancaster
KAREN L. LANCASTER
Notary Public, State of New York
No. 60-4643659
Qualified In Westchester County
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