Carl L. Newman
Vice President

REGULATORY DOCKET FILE COPY

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N. Y. 10003
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November 8, 1974

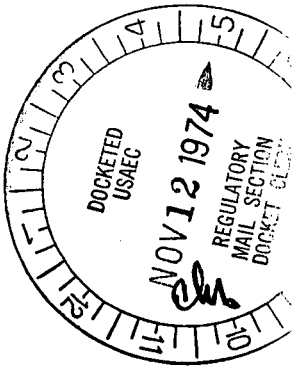
Re: Indian Point Unit No. 2
AEC Docket No. 50-247

Mr. Karl R. Goller
Assistant Director of
Operating Reactors
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Goller:

As requested by the Directorate of Licensing letter of November 8, 1973 (DeYoung to Cahill), Con Edison has developed a program to improve the service life and reliability of the hydraulic snubbers installed in Indian Point Unit No. 2. This program requires that the snubbers be inspected frequently enough to guarantee a low probability of defects, and that all snubbers be free of potential defects after each inspection.

The program consists of the following points:



1. All snubbers are inspected periodically to observe whether the fluid level is adequate and to detect any leakage.

2. At the time of the above inspection, any snubber with indications of leakage or which has lost a significant quantity of fluid since the previous inspection is to be repaired or replaced with a repaired snubber known to be free of leakage.

3. A statistical analysis is now in progress involving the snubber inspection data already reported for Unit No. 2. The reliability data to be obtained from this study will provide a quantitative determination of the inspection frequency necessary to assure a low probability of a snubber exceeding the acceptable leakage rate. The study is planned to be complete by March 31, 1975.

4. Over 85% of the Bergen-Paterson snubbers located inside the containment building now contain ethylene-propylene seals. It is planned that all snubbers inside containment as well as all snubbers located

outside containment that are inaccessible during plant operation will be replaced with snubbers employing ethylene-propylene seals by January 31, 1975. As explained in Item 5, every snubber in the plant will then contain seals of a material which current test results indicate to be appropriate for its operating environment.

5. Temperature and radiation measurements have been taken to determine the worst conditions to which each type of snubber seal material could be exposed. Temperature measurements were made by means of temperature indicating labels ("Tempilabels") installed on selected snubbers in such a way as to be exposed to temperatures at least as great as the snubber seals. These measurements show that, inside containment, snubbers on the highest temperature lines in the area of the highest ambient air temperature (pressurizer penthouse) would have maximum seal temperatures between 175°F and 200°F. Outside containment, similar measurements indicate that snubbers on the highest temperature (main steam) lines located in areas accessible during operation would reach maximum seal temperatures less than 125°F. Air temperatures in the areas outside containment where snubbers are inaccessible during operation (main steam safety valve area) have always been observed to be lower than the highest air temperatures experienced inside containment, and pipe temperatures there are lower as well. Therefore, the snubbers in these inaccessible areas would not be expected to be subjected to seal temperatures higher than 200°F.

   Radiation field measurements have been made at 100% power operation. Inside containment, snubbers installed very close to the reactor coolant pipes are subjected to gamma radiation of up to 8500 mR/hr at 100% power. In areas inside containment away from the reactor coolant pipes, the maximum field is 1000 mR/hr. Outside containment, the highest field measured in areas where snubbers are installed is 10 mR/hr.

   The October 7, 1974 report to the AEC by Bergen-Paterson on the testing of seal materials indicates that millable gum polyurethane seals are acceptable for service where temperatures are no greater than

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125°F and where total radiation exposure will be less than 10^5 Rad. That report also advised that ethylene-propylene seals provide satisfactory service where temperatures are normally no higher than 200°F and where total radiation exposure will be less than 10^7 Rad. The environmental conditions we have measured demonstrate that, with the replacements described in Item 4, all of the snubbers installed in Indian Point Unit No. 2 will be subjected to temperature and radiation conditions less severe than the maximum for which their seal materials are recommended, even if the radiation exposure were continuous for the full forty-year design life of the plant. (Continuous exposure of 8500 mR/hr for forty years would result in a dose of about 3×10^6 Rad).

Although Bergen-Paterson has recommended an inspection frequency of once a year for all snubber materials, we prefer to wait until the results of our statistical study are available to form a basis for our proposed surveillance schedule. Proposed changes to Technical Specifications reflecting that surveillance schedule will be submitted at that time.

Until approval to do otherwise is forthcoming, we will continue to follow the inspection requirements of your November 8, 1973 letter.

Very truly yours,

Carl L. Newman

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Vice President

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