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J. G. Davis, Deputy Director for Field Operations

CONSOLIDATED EDISON COMPANY (INDIAN POINT 3) STARTUP TESTING REQUIREMENTS DOCKET NO. 50-286

In accordance with action request FO #336, the startup testing requirements identified in Brunner's memo to Thornburg dated March 6, 1974, were discussed with J. Angelo, the Licensing Project Manager for Indian Point 3.

Regarding the requirements for testing to demonstrate shutdown from outside the control room and to demonstrate the ability to safely withstand loss of off-site power, the applicant will be required by DL to conduct both of these tests from > 10% power in accordance with Regulatory Guide 1.68. The applicant's answer to FSAR Question 13.5 in Supplement 22 is not considered by DL to be adequate in this regard, since all PWR licensees are currently being required to run these tests from power. The applicant will be informed of these requirements by Licensing. We will provide to you and to Region I, copies of Licensing's letter when it is issued.

Regarding control rod drop testing, the use of a statistical approach to determine the need for additional rod drop testing on fast or slow rods is considered to have merit, provided this results in as much conservatism as the testing required by Regulatory Guide 1.68. In our opinion, Chauvenet's criterion (referenced in Con Ed's internal memo, Lee to Cantone) is not appropriate for this purpose. This criterion is designed to identify for exclusion from the data events which have a high probability of being incorrect and a correspondingly low probability of occurrence. Regulatory Guide 1.68 by requiring additional testing of the fastest and slowest rods assures that two rods will always be tested. Application of Chauvenet's criterion gives only one chance in 106 that a fast or slow rod will require testing.

While we concur that it appears unreasonable to test rods whose drop time conforms closely to the mean, we do not see how a statistical approach can be even approximately as conservative as Regulatory Guide 1.68, unless there is a reasonable probability that the slowest and fastest rods will fall outside the limits and be tested. We do believe that this could be achieved by using a 2 sigma acceptance limit.

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Assuming that the test data follows the standard distribution pattern, or even if the pattern deviates slightly from the standard, a 2 sigma limit would represent about one chance in 21 of the drop time of a given rod falling outside the limit. With 53 rods being tested, two to three would likely require supplemental testing. This would, we believe, be consistent with the intent of Regulatory Guide 1.68. It would be appropriate to retest all rods that fall outside of the selection band, if a statistical criterion is used.

It is recommended that the Indian Point 3 rod drop test procedure not be approved unless the applicant either follows Regulatory Guide 1.68 or uses a more conservative criterion for the selection of rods to be retested. Angelo concurs in this position.

I believe this completes the action requested by FO #336.

/s/

B. H. Grier, Assistant Director  
for Construction & Operation  
Directorate of Regulatory Operations

cc: J. Angelo, L  
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