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May 1, 1971

P. A. Morris, Director, Division of Reactor Licensing

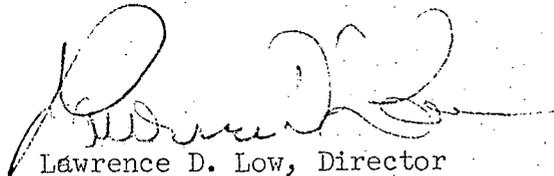
CONSOLIDATED EDISON COMPANY - INDIAN POINT 2, CO REPORT NO. 247/71-3

The enclosed report of an inspection of the subject facility on January 20-21, 1971, is forwarded for information and for possible action. A copy of a report by our consultant, R. Lofy, Parameter, Inc., is provided as an attachment to the enclosed report. The purpose of the inspection was to obtain information relating to engineering criteria used in the design, fabrication and installation of piping supports for reactor systems important to nuclear safety.

The possible need for action relates to the fact that the licensee's flexibility analysis of piping systems takes into account the temperature and pressure transients described in the FSAR but does not include fluid dynamic effects such as pump surges, water hammer and steam flow changes. It is the licensee's view that such considerations are not clearly required by the Nuclear Piping Code, B31.7.

The failure to incorporate dynamic effects in the flexibility analysis of piping systems at PWR's is very similar to the philosophy that prevails for BWR's and which was discussed in my memorandum, L. D. Low to P. A. Morris, dated March 18, 1971. As discussed in the memorandum, several unusual occurrences, involving piping and pipe supports, have been caused by dynamic effects that resulted in excessive forces, pipe movements and vibration. We consider the potential for similar situations at PWR's to be significant. Therefore, we reiterate our suggestion that applicants for construction permits and operating licenses be required to specifically evaluate dynamic effects in piping designs. In addition, applicants should be required to clearly document in their FSAR's that the test program adequately provides for dynamic measurements of pipe movement during preoperational and power ascension testing as required by Section 1-701.5.4 of the USA Standard B31.7 Nuclear Piping Code. The documentation should provide test acceptance criteria as required by Appendix B to 10 CFR 50. We also suggest that licensees with operating reactors be required to verify that installed piping adequately provides for movement associated with dynamic loads. This suggestion was discussed in my memorandum, L. D. Low to P. A. Morris, dated April 8, 1971.

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Lawrence D. Low, Director
Division of Compliance

Enclosure:

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P. A. Morris

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