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Docket No. 50-286

MAR 22 1973

Consolidated Edison Company
of New York, Inc.
ATTN: Mr. William J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10003

Gentlemen:

As part of our continuing review of your application for an operating license for the Indian Point Nuclear Generating Unit No. 3, we have determined that modifications of certain portions of the instrumentation, control, and electrical systems and certain portions of the mechanical engineering systems may be required to comply with Regulatory criteria or requirements. Enclosures 1 and 2 list how these systems are affected, delineate our positions, and give the basis for each position.

It will be necessary that you amend your FSAR to state clearly your position regarding compliance with each of the requirements listed in Enclosures 1 and 2. We are prepared to meet with you to discuss any of our positions if you believe further discussion is necessary. If such a meeting is needed, we request that your position on each of these matters and your specific questions regarding our requirements should be provided to us prior to such a meeting.

Additionally, we require that you submit three copies of a comprehensive Industrial Security Plan which brings together into one package all previously presented information including information provided in earlier in camera hearings held in conjunction with Indian Point Nuclear Generating Unit No. 2. Your response to this request will be governed by the provisions of 10 CFR 2.790 regarding public disclosure.

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Our tentative review schedule is based on the assumption that this additional information will be available for our review by April 6, 1973. If you cannot meet this date, please inform us within seven (7) days after receipt of this letter so that we may revise our schedules.

Sincerely,

Original signed by R. C. DeYoung

R. C. DeYoung, Assistant Director
for Pressurized Water Reactors
Directorate of Licensing

Enclosures:

1. AEC Requirements -
Instrumentation, Control,
and Electrical Systems
2. AEC Requirements -
Mechanical Engineering
Systems

cc: LeBoeuf, Lamb, Leiby,
and MacRae
ATTN: Arvin E. Upton, Esq.
1821 Jefferson Street, N. W.
Washington, D. C. 20036

OFFICE ▶	PWR-1 <i>[Signature]</i>	PWR-1 <i>[Signature]</i>	AD:PWRs <i>[Signature]</i>			
SURNAME ▶	HSpector:mds	DBVassallo	RDeYoung			
DATE ▶	3/21/73	3/21/73	3/23/73			

ENCLOSURE 1

AEC REQUIREMENTS

INSTRUMENTATION, CONTROL, AND ELECTRICAL SYSTEMS

1. Disconnection of Instrument Bus 33

Instrument Bus 33 is one of four vital instrument buses and as currently designed, its power is disconnected as part of the load shedding scheme following an accident. We consider this arrangement to be a violation of Section 4.20 of IEEE Std 279-1968, which requires that "the design shall minimize the development of conditions which would cause meters, annunciators, recorders, alarms, etc., to give anomalous indications confusing to the operator."

We require that the protection system be designed in accordance with IEEE Std 279-1968. The disconnection of power to Instrument Bus 33 in the event of an accident is unacceptable because that feature does not conform with the requirements of Section 4.20 of IEEE Std 279-1968.

2. Injection Line Flow Instrumentation

The procedure described on pages 6.2-11 through 6.2-15 of the FSAR for the change-over from the injection phase to the recirculation phase of the ECCS following a LOCA is unacceptable. Assuming a single failure, such as a failure of one battery, only two low head injection line flow instruments may be providing information to the operator.

We require that, at least three of the four low head injection line instruments must be functioning for the operator to have sufficient information. Describe the design changes you propose to assure that following a LOCA and assuming any single failure, there will be sufficient information available to the operator to correctly complete the change-over from the injection phase to the recirculation phase.

ENCLOSURE 2

AEC REQUIREMENTS

MECHANICAL ENGINEERING SYSTEMS

1. Seismic Instrumentation

In addition to the two strong motion accelerographs and Control Room readout referred to in the responses to Requests Nos. 5.13 and 5.38 of Supplements 2 and 10 of the FSAR, respectively, we require that the following seismic instrumentation be installed to conform with the intent of AEC Safety Guide No. 12, "Instrumentation for Earthquakes":

- a) Instrumentation which provides the means for an immediate comparison between the response spectra resulting from seismic events and the plant response spectra, e.g. a multielement seismiscope located on the containment base mat.
- b) Three triaxial peak recorders located within the Reactor Coolant Pressure Boundary, on reactor equipment and/or piping at high elevations. Specific locations should be selected to obtain the most pertinent information.

Also, we require that a plan be developed delineating the manner in which data that will be obtained from the installed seismic instrumentation in the event of an earthquake will be utilized on a timely basis. The criteria and procedures that will be used to compare measured responses of seismic Category 1 structures in the event of an earthquake with the results of the system dynamic analyses should be included.

2. Preoperational Piping Dynamic Effects Test Program

We require that preoperational piping dynamic effects testing be conducted during startup functional testing on piping systems and restraints classified as comparable to ASME Class 1 and Class 2 components. The purpose of these tests is to confirm that these components have been designed to withstand the dynamic loadings from operational transient conditions that will be encountered during service as required by Paragraph 116 of USAS B31.1 - 1955 edition.

We require that you supplement the FSAR with a description of a test program that includes:

- a) A list of the transient conditions and the associated actions (pump trips, valve actuations) that will be used in the pre-operational piping dynamic effects test program to verify the integrity of the system.*
- b) A list of selected locations in the piping system that will be subjected to visual inspection by the piping designer during these tests. For each of these selected locations, provide the maximum deflection (peak-to-peak) allowed to stay within the limits established by the upset condition of Table A.1-2 of the FSAR.

In your response, discuss your intent to comply with the following criteria:

If vibration is noted beyond the acceptable levels set by 2b above, corrective restraints should be designed and installed. If during the test, the piping systems restraints are damaged, corrective restraints will be installed and another test will be performed to determine that the vibrations have been reduced to an acceptable level.

*Additional guidance for the selection of such transients is provided in the "AEC Guide for Planning of Initial Startup Programs" December 7, 1970.