UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

Commissioners:

James R. Schlesinger, Chairman
James T. Ramey
Clarence E. Larson
William O. Doub
Dixy Lee Ray

In the Matter of CONSOLIDATED EDISON COMPANY OF NEW YORK (Indian Point Unit No. 2)	DOCKET NO. 50-247

MEMORANDUM AND ORDER

On September 27, 1972, the Atomic Safety and Licensing Appeal Board (Appeal Board) issued a memorandum dealing with a question certified by the presiding Atomic Safety and Licensing Board. On October 12, 1972, the Commission extended the period for review of the decision under 10 CFR 2.786 to November 1, 1972. By letter dated October 16, 1972, the Appeal Board made a correction to its decision.[1/] Pursuant to 10 CFR 2.786, we now review the decision as corrected.

The certified question is as follows:

> "Is it the position of the Commission that the measures taken to assure the integrity of the pressure vessels for light water reactors have been demonstrated and documented sufficiently that protection against the consequences of failure of the reactor vessel need not be included in the design of the plant and evidence concerning the integrity of the pressure vessel should not be adduced in the licensing proceedings?"

1/ The Appeal Board's decision, at page 7, referred to pressure vessels for reactors licensed for operation after July 1, 1971. The letter changed the date to January 1, 1971.

The Appeal Board concluded that such protection need not be included in plant design, and that evidence concerning vessel integrity was admissible only to the extent necessary to demonstrate compliance with applicable regulations.

The pressure vessel is a cylindrical, strong-walled container housing the reactor core, which is composed of fuel elements and control rods. The reactor vessel has inlet and outlet pipe connections which convey the reactor coolant into and out of the reactor vessel. Vessels are designed in accordance with applicable ASME codes. In the pressurized water reactor at bar, the steel vessel, over 40 feet high, is constituted of walls over 8" thick, and is designed to contain water at an operating temperature of 2485/2235 psi, with inlet and outlet temperatures of approximately 555° F. and 613° F., respectively.

Pursuant to its research and development responsibilities, the Commission has examined the subject of vessel integrity -- and continues to do so -- in an effort to assure utmost plant safety.[2/] AEC regulations lay down strict standards to assure integrity of the vessel. The regulatory staff asserts that in all cases evaluated by it the probability of vessel failure has been found to be "so low" as not to require "consideration of the consequences of such failure in the assumptions employed in determining site suitability" (Staff Brief, August 21, 1972, p. 7). In

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2/ See, e.g., "Fundamental Nuclear Energy Research," Supplemental Report to Annual Report, AEC (1967), p. 114 (involving tests on vessel used for almost three years by U.S. Army in Greenland). See also "Fundamental Nuclear Energy Research," Supplemental Report to Annual Report, AEC (1971), p. 19 (outlining AEC Heavy Section Steel Technology program, which involves testing of specimen vessels).

expressing confidence as to the low probability of vessel failure, the staff referred to the regulations mentioned by the Appeal Board, certain other regulations,[3/] certain proposed regulations now used for interim guidance,[4/] and empirical evidence gained through years of operating experience during which there has been no evidence of a problem.

On the other hand, the regulations need not be read as excluding pressure vessel integrity as a proper area of inquiry during a licensing proceeding. The Appeal Board relied upon 10 CFR 50.55 a(c) and (g), which provide, inter alia, that vessels must conform to certain requirements (Appeal Board decision, p. 8). But 10 CFR 50.55 a(a)(2), which precedes these provisions, states, inter alia:

> "As a minimum, the systems and components *** specified in paragraphs (c), (d), (e), (f), and (g) of this section shall meet the requirements described in these paragraphs. ***" (emphasis added.)

The Statement of Considerations for this regulation also refers to the requirements as a "minimum" and further provides that:

> "Compliance with the provisions of the amendments and the referenced codes is intended to insure a basic, sound quality level. It may be that the special safety significance of a particular system or component will call for supplementary measures. If analysis of the system shows that such is the case, appropriate supplementary measures are expected to be adopted by applicants and licensees, or will be required by the Commission." (36 F.R. 11423, June 12, 1971).

3/ 10 CFR Part 50, App. B, "Quality Assurance Criteria for Nuclear Power Plants".

4/ 10 CFR Part 50, App. G (proposed), "Fracture Toughness Requirements", 10 CFR Part 50, App. H (proposed), "Reactor Vessel Material Surveillance Program Requirements".

In these circumstances, we cannot agree with the conclusion of the Appeal Board that compliance with the standards is sufficient automatically to foreclose further inquiry in the course of a licensing proceeding.

The regulatory staff, despite its confidence in the low probability of vessel failure, recognized that the subject of pressure vessel integrity could, in special circumstances, be a proper area of inquiry during a licensing proceeding. The staff contended that protection against the consequences of vessel failure need not be required for a particular facility "unless it has been determined that for such facility there are special considerations that make it necessary that potential pressure vessel failure be considered" (Staff Brief, supra, at p. 10).

We adopt the view expressed by the staff as consistent with the language of the regulation and the underlying Statement of Considerations. Where there are matters raised in a case that are of "special safety significance", supplementary measures in respect to the facility under review are an appropriate subject of hearing exploration. The certified question, insofar as it deals with the admission of evidence pertaining to pressure vessel integrity in licensing proceedings, is therefore, answered in the negative.[5/]

5/ To warrant inquiry, the evidence must be directed to the existence of special considerations involving a particular facility in issue. Licensing Boards, in their discretion, are empowered to exclude contentions or challenges which have no substantial or prima facie basis, or which merely amount to generalized attacks upon the standards presently required by the regulations.

The Appeal Board further held that Licensing Boards should receive evidence necessary to satisfy them that the vessel in issue does meet the requirements of applicable regulations. In this connection, we note the statement in the Appeal Board's decision that:

> "... all of the pressure vessels for reactors licensed for operation after January 1, 1971 are required to be designed, constructed and inspected in accordance with Section III or Section III and Addenda, and Section XI of the ASME Code, ***" (Appeal Board decision, p. 7).

This language may convey the impression that all vessels in reactors licensed for operation after January 1, 1971, must conform to current codes. However, this is not correct for pressure vessels for which construction permits were issued prior to that date. For such reactors, the regulation requires that the vessel "shall" conform to the Code, Code Cases and Addenda in effect on the date of order of the vessel, and "may" conform to subsequent Codes, Code Cases and Addenda. 10 CFR 50.55 a(c)(1).[6/] In addition, the Appeal Board erroneously construed the regulations as requiring compliance with Section XI of the Code (which deals with in-service inspection) for "reactors licensed for operation after January 1, 1971." Compliance with that section is mandatory for construction permits issued on or after that date -- not for operating licenses. 10 CFR 50.55 a(g).

6/ The reactor vessel for the facility at bar was apparently designed in accordance with the 1965 Edition of Section III of the Code, and the 1965 Summer Addenda and Code Cases (see Initial Decision, July 14, 1972, p. 14). We intimate no view on the merits of the case, which are not now before the Commission.

The record is hereby returned to the Atomic Safety and Licensing Board for action not inconsistent with this memorandum and order.

It is so ORDERED.

By the Commission.

Paul C. Bender
Secretary of the Commission

Dated at Germantown, Maryland
this 26th day of October 1972.

10-26-72 Reg files

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ATOMIC ENERGY COMMISSION

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CERTIFICATE OF SERVICE

I hereby certify that copies of the MEMORANDUM AND ORDER issued by the Commission dated October 26, 1972 in the captioned matter have been served on the following by deposit in the United States mail, first class or air mail, this 26th day of October 1972:

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