William J. Cahill, Jr.
Vice President

Regulatory File Cy.

50-247
50-286

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N Y 10003
Telephone (212) 460-3819

February 20, 1973

Mr. A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso

Your letter dated November 20, 1972 requested, within 45 days, an analysis of the effects of fuel densification on normal operation, anticipated transients and accidents, including the postulated loss-of-coolant accident.

On January 8, 1973, we advised that additional time would be required to prepare the information requested, and that a schedule for our reply would be provided shortly. We can now report that a full analysis of the limiting cases, (the postulated loss-of-coolant accident and the overpower transients) and a comparative analysis of the other transients using the Zion plant as a reference case, will be submitted on March 23, 1973.

A full analysis of all the transients will be provided at a later date.

Very truly yours

William J. Cahill, Jr.
Vice President

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Jan. 24, 1973

Docket Nos. 50-247
and ~~50-282~~ 50-286

Consolidated Edison Company
of New York, Inc.
ATTN: Mr. William J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10002

Gentlemen:

Our letter to you dated December 19, 1972, regarding the safety implications of postulated failure of high energy piping systems outside of the containment, transmitted a guide entitled "General Information Required for Consideration of the Effects of a Piping System Break Outside Containment."

As a result of further consideration and review by the staff certain changes to this guide have been made and errors have been corrected. These changes and corrections are shown in the enclosed errata sheet.

Please factor these changes into your current study of the problem.

Sincerely,

Original signed
by Karl Kniel

Karl Kniel, Chief
Pressurized Water Reactors
Branch No. 2
Directorate of Licensing

Enclosure:
Errata Sheet

cc:
Listed on page 2

OFFICE ▶	PWR-2 KK					
7317 SURNAME ▶	KarlKniel:nlg					
DATE ▶	1/24/73					

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DATE ▶						

ERRATA SHEET FOR "GENERAL INFORMATION REQUIRED FOR CONSIDERATION OF THE EFFECTS OF A PIPING SYSTEM BREAK OUTSIDE CONTAINMENT"

The following lists the changes that have evolved on our initial information request:

1. Page 2, Item 2--Insert the following in 2. to precede the existing first sentence:

   "Design basis break locations should be selected in accordance with the following pipe whip protection criteria; however, where pipes carrying high energy fluid are routed in the vicinity of structures and systems necessary for safe shutdown of the nuclear plant, supplemental protection of those structures and systems shall be provided to cope with the environmental effects (including the effects of jet impingement) of a single postulated open crack at the most adverse location(s) with regard to those essential structures and systems, the length of the crack being chosen not to exceed the critical crack size. The critical crack size is taken to be 1/2 the pipe diameter in length and 1/2 the wall thickness in width."

2. Page 2, Item 2(a)(2)--Change nomenclature to read "any intermediate locations between terminal ends where the primary plus secondary stress intensities Sn ... "

3. Page 4, Item 2.(b)(2)--Change 0.9 $(S_h + S_A)$ to 0.8 $(S_h + S_A)$.

4. Page 6, Item 7 --Add "structural" to read "The structural design loads..."

5. Page 7, Item 11.(a)--Add "required" so as to read, "Loss of required redundancy..."

6. Page 7, Item 11.(a)--Delete "the steam line break" and replace with "that" to read "...the consequences of that accident..."

7. Page 8, Item 11.(b)-- Replace (b) with the following: (b) "Environmentally induced failures caused by a leak or rupture of the pipe which would not of itself result in protective action but does disable protection functions. In this regard, a loss of redundancy is permitted but a loss of function is not permitted. For such situations plant shutdown is required."

8. Page 8, Item 13--Change wording in the first sentence to read "Environmental qualification should be demonstrated by test for that electrical equipment required to function in the steam-air environment resulting from a high energy fluid line break."