

SUPPLEMENTAL
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50-286

SEP 12 1968

Chairman Seaborg
Commissioner Ramey
Commissioner Tape
Commissioner Johnson

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. - REQUEST FOR EXEMPTION
FROM 10 CFR 50.10(b)

By letter dated July 23, 1968, Consolidated Edison Company of New York, Inc. requested an exemption from the requirements of 10 CFR 50.10(b) which would permit the following operations to be conducted prior to issuance of a construction permit for Indian Point Nuclear Generating Unit No. 3:

1. Pouring of the base mat concrete of the containment building up to the bottom liner plate. This includes the walls of the reactor vessel cavity and the recirculating pump pit.
2. Installation of the bottom liner plates and transition knuckle plates.
3. Installation of the rebar for the base concrete over the bottom liner plates.

Consolidated Edison requested that this exemption be issued by September 15, 1968.

In the proposed amendment to 10 CFR 50, which will be forwarded to the Commission shortly, concerning the installation of footings, foundations, and below grade walls of power reactor facilities prior to issuance of a construction permit, we are proposing the following criteria to govern the granting of construction exemptions:

50.12 Specific exemptions.

- (b)(1) There is a public need for the energy to be produced by the proposed power reactor on the schedule projected by the applicant.

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- (2) Characteristics of the reactor site and the design criteria for the construction to be performed under the exemption have been adequately described in the application to construct and operate the facility well in advance of the application for exemption.
- (3) Resolution of known safety problems would not require modification of the requested construction.

Consideration of the pending exemption request from Consolidated Edison Company of New York, Inc. is made with the knowledge that the design of the containment building proposed for Indian Point Nuclear Generating Unit No. 3 is identical to that approved for the construction permit of the containment building for Indian Point Nuclear Generating Unit No. 2. Construction Permit No. CPPR-21 was issued to the Consolidated Edison Company of New York, Inc. on October 14, 1966 for Indian Point Nuclear Generating Unit No. 2. The information concerning structural design of the Unit No. 2 containment which was required of the applicant and reviewed by the staff at that time was more limited in nature than our current requirements in this area. Since the issuance of the construction permit for Unit No. 2, we have continued to develop experience in the technical review of the adequacy of the structural design of containment buildings. As a consequence, we transmitted a list of questions on containment structural design to the applicant on July 16, 1968 which requested more information than available in the Unit No. 2 application. This request included questions concerning analytical techniques used in the design of the bottom mat, liner buckling at the base of the walls, seismic design assumptions for the transition knuckle plates, ground water infiltration, and construction practices and inspection. Until satisfactory responses to this request have been received and evaluated, we cannot determine if the work which the applicant proposes to perform under the exemption will be acceptable.

As previously noted, the applicant proposes to pour the walls of the reactor vessel cavity and the recirculating pump pit. Until we have completed our evaluation of the layout of the emergency core cooling system, we cannot determine if the arrangement of the pumps, sump, and embedded piping is adequate to ensure proper operation of the emergency core cooling system following a loss of coolant accident. In addition, before final evaluation of the reactor vessel cavity can be completed, the possible implications of the comments of the ACRS on the Zion project should be considered and discussed with the applicant as they might now apply to the Indian Point site. Therefore, we cannot presently conclude that resolution

of known safety problems would not require modification of the construction requested to be exempted from a construction permit.

For the reasons stated above, the application for exemption does not meet the criteria we propose in section 50.12(b), except with respect to the public need for energy on the schedule projected. Since the structures which would be constructed under the proposed exemption are massive (6800 cu. yds. of concrete, 100 tons of rebar, 90 tons of liner plate, and 38 tons of embedded steel), any modification occasioned by our review might involve removal of large quantities of concrete which would greatly delay the construction schedule. Accordingly, we propose to defer action on the request for an exemption from the requirements of 10 CFR 50.10(b) until we have evaluated the pertinent portions of the responses to our questions of July 16, 1968, and have determined that the design is acceptable. We propose to advise the company accordingly, as set forth in the attached letter.

((Signed) HLP

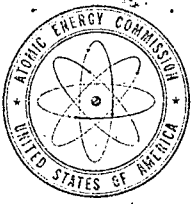
Harold L. Price
Director of Regulation

Enclosure:
Proposed ltr to Consolidated
Edison Co. of New York, Inc.

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DATE ▶	9/4/68	9/6/68	9/6/68	9/7/68	9/17/68	9/10/68

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UNITED STATES
ATOMIC ENERGY COMMISSION

WASHINGTON, D.C. 20545

Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003

Attention: Mr. W. Donham Crawford
Administrative Vice President

Gentlemen:

We have received your letter dated July 23, 1968, requesting an exemption to the requirements of 10 CFR 50.10(b) which would permit the following operations to be conducted in connection with the proposed Indian Point Unit 3 prior to issuance of a construction permit:

1. Pouring of the base mat concrete up to the bottom liner plate. This includes the walls of the reactor vessel cavity and the recirculating water sump.
2. Installation of the bottom liner plates and transition knuckle plates.
3. Installation of the rebar for the base concrete over the bottom liner plates.

As reflected in our meeting on April 16, 1968 and in a subsequent list of questions dated July 16, 1968, our review of the design of the containment structure will require additional information, significant portions of which relate directly to the areas of your exemption request. Specifically, these include questions concerning: base mat waterproofing, cylinder-to-slab junction design, base mat design and analytical procedures, seismic design, liner design, material selection for concrete, corrosion protection, and construction practices and inspections. Until satisfactory responses have been received and evaluated, we cannot determine if the work proposed under the exemption will be acceptable.

We also note that work requested under the exemption involves pouring the walls of the reactor vessel cavity and the recirculating water sump. Until we complete our review of the emergency core cooling system with respect to both function and system layout, we cannot determine if these structures are adequate.

Accordingly, we cannot presently conclude that resolution of known safety problems would not require modification of the requested construction. Since the construction proposed involves massive structures, any major design modification which might be occasioned by our review could greatly extend the construction schedule. Therefore, we will defer action on your request for an exemption from the requirements of 10 CFR 50.10(b) until we have evaluated the pertinent portions of your response to our requests for additional information, and have determined that the design of those items covered in your exemption request is acceptable.

In this regard, we recognize that the Unit No. 3 containment structure is substantially the same as that of Unit No. 2. No change in the requirements for Unit No. 2 are currently contemplated; however, should significant new technological information be developed during review of Unit No. 3, the design of Unit No. 2 would be reconsidered.

Sincerely,

Peter A. Morris, Director
Division of Reactor Licensing

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

Draft
8/28/68

Chairman Seaborg
Commissioner Ramey
Commissioner Tape
Commissioner Johnson

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. - REQUEST FOR
EXEMPTION FROM 10 CFR 50.10(b)

By letter dated July 23, 1968, Consolidated Edison Company of New York, Inc. requested an exemption ^{from} to the requirements of 10 CFR 50.10(b) which would permit the following operations to be conducted prior to issuance of a construction permit for Indian Point Nuclear Generating Unit No. 3:

1. Pouring of the base mat concrete of the containment building up to the bottom liner plate. This includes the walls of the reactor vessel cavity and the recirculating pump pit.
2. Installation of the bottom liner plates and transition knuckle plates.
3. Installation of the rebar for the base concrete over the bottom liner plates.

Consolidated Edison requested that this exemption be issued by September 15, 1968.

~~Background~~

In the proposed amendment to 10 CFR 50, concerning the installation of footings, foundations, and below grade walls of power reactor facilities prior to issuance of a construction permit ~~states~~, ^{which will be forwarded to the Commission shortly,} we are proposing the following criteria

to govern the granting of construction exemptions. ~~Subsection (b) would implement the existing provisions of subsection (a).~~

50.12 Specific exemptions.

- (a) The Commission may, upon application by any interested person, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.
- (b) The Commission may grant an exemption from the requirements of Section 50.10 to authorize the installation of the footings, foundations and those portions of the internal and external walls of a power reactor structure that are below finished grade level upon determining, as a basis for making the determinations required by paragraph (a) of this section, that:

- (1) There is a public need for the energy to be produced by the proposed power reactor on the schedule projected by the applicant;
- (2) Characteristics of the reactor site and the design criteria for the construction to be performed under the exemption have been adequately described in the application to construct and operate the facility well in advance of the application for exemption.
- (3) Resolution of known safety problems would not require modification of the requested construction.

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- (4) Granting of the exemption would not otherwise adversely affect the public interest.

~~Discussion~~

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from (a) Ed

Consideration of this exemption request is made with the knowledge that the design of the containment building proposed for Indian Point Nuclear Generating Unit No. 3 is identical to that approved for the construction permit of the containment building for Indian Point Nuclear Generating Unit No. 2. Construction Permit No. CPPR-21 was issued to the Consolidated Edison Company of New York, Inc. on October 14, 1966 for Indian Point Nuclear Generating Unit No. 2. The information concerning structural design of the Unit No. 2 containment which was required of the applicant and reviewed by the staff at that time was more limited in nature than our current requirements in this area. Since the issuance of the construction permit for Unit No. 2, we have continued to develop experience in the technical review of the adequacy of the structural design of containment buildings. As a consequence, we transmitted a list of questions on containment structural design to the applicant on July 16, 1968 which requested more information than available in the Unit No. 2 application. This request included questions concerning analytical techniques used in the design of the bottom mat, liner buckling at the base of the walls, seismic design assumptions for the transition knuckle plates, ground water infiltration, and construction

practices and inspection. Until satisfactory responses to this request have been received and evaluated, we cannot determine if the work which the applicant proposes to perform under the exemption will be acceptable.

As previously noted, the applicant proposes to pour the walls of the reactor vessel cavity and the recirculating pump pit. Until we have completed our evaluation of the layout of the emergency core cooling system, we cannot determine if the arrangement of the pumps, sump, and embedded piping is adequate to ensure proper operation of the emergency core cooling system following a loss of coolant accident. In addition, before final evaluation of the reactor vessel cavity can be completed, the possible implications of the comments of the ACRS on the Zion project should be considered and discussed with the applicant as they might now apply to the Indian Point site. Therefore, we cannot presently conclude that resolution of known safety problems would not require modification of the construction requested to be exempted from a construction permit.

the application for exemption does not meet the criteria we propose in § 50.12(b), except with respect to the public need for energy on the schedule projected.
For the reasons stated above, we cannot make those determinations required by the proposed amendment to 10 CFR 50.*

Since the structures which would be constructed under the proposed exemption are massive (6800 cu. yds. of concrete, 100 tons of rebar, 90 tons of liner plate, and 38 tons of

and (b)(4)
* Paragraphs 50.12(b)(2), and ~~50.12(b)(3)~~. Adequate information has been submitted to support the findings required by paragraphs 50.12(b)(1), and ~~50.12(b)(4)~~.

embedded steel), any modification occasioned by our review might involve removal of large quantities of concrete which would greatly delay the construction schedule. Accordingly, we propose to defer action on the request for an exemption from the requirements of 10 CFR 50.10(b) until we have evaluated the pertinent portions of the responses to our questions of July 16, 1968, and have determined that the design is acceptable.

Harold L. Price
Director of Regulation

Handwritten notes:
Approved
for
the
file
of the
Agency

*we propose to
and advise the company accordingly
as set forth in the attached letter*