

FROM: Consolidated Edison Co. of N. Y.
New York, New York
(W. Donham Crawford)

DATE OF DOCUMENT:
July 23, 1968

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NO.: 2741

LTR. MEMO: REPORT: OTHER:

X

TO: Dr. Peter A. Morris

ORIG.: CC: OTHER:
3 Signed Copies

ACTION NECESSARY CONCURRENCE DATE ANSWERED:
NO ACTION NECESSARY COMMENT BY:

CLASSIF.: POST OFFICE
U REG. NO:

FILE CODE:
50-286

DESCRIPTION: (Must Be Unclassified) LTR requesting an exemption pursuant to 10 CFR 50.12 to permit certain work on the Containment Bldg as described in Encis A and B prior to receipt of a construction permit.....

REFERRED TO DATE RECEIVED BY DATE

Muller 8-6

w/4 cys for ACTION (1 set encls only)

ENCLOSURES:
A-Description of Work
B-Drawing B-177476-See Rpts jacket fwding.
C Schedule for Performance of Work

Info Copies to:

H. Price & Staff (w/o drawing)

Dr. Morris/Schroeder (w/o drawing)

Boyd (w/o drawing)

Skovholt/Kelly (w/o drawing)

D. Thompson (w/o drawing)

Saltzman (w/o drawing)

Dube/Levine (w/o drawing)

(3 cys each rec'd)

Do Not Remove

REMARKS: DISTRIBUTION: 1-formal file
1-suppl file 1-AEC PDR
2-Compliance 1-OGC 3-ACRS
3-Hearing File

**NOTE: Copies to the Drawing will be provided when available.

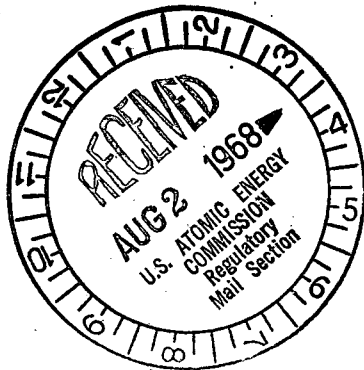
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PDR ADOCK 05000286
A PDR

CONSOLIDATED EDISON COMPANY OF NEW YORK, Inc.

4 IRVING PLACE
NEW YORK, N. Y. 10003

W. DONHAM CRAWFORD
ADMINISTRATIVE VICE PRESIDENT



July 23, 1968

Re Consolidated Edison Company of
New York, Inc - Docket No 50-286

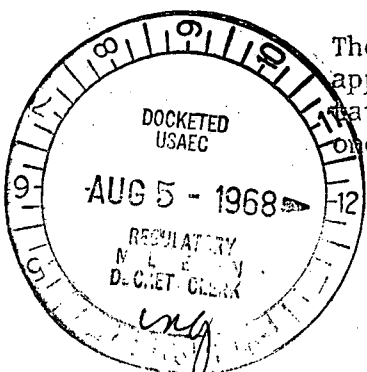
Dr Peter A Morris, Director
Division of Reactor Licensing
U S Atomic Energy Commission
Washington, D C 20545

Dear Dr Morris

On April 26, 1967 Consolidated Edison Company of New York, Inc filed an application with the Division of Reactor Licensing for licenses (including a construction permit) to construct, own, use and operate a utilization facility in Westchester County, New York, to be part of "Indian Point Station Unit No 3." The purpose of this letter is to request an exemption, pursuant to 10 CFR 50.12, from the provisions of 10 CFR 50.10(b) in order to permit certain work on the Containment Building for this facility, described in Enclosures A and B, to be performed in advance of a construction permit. This work, estimated to cost \$660,000 consists essentially of pouring the concrete for the base mat, installing the bottom liner plates and transition knuckle plates, and installing reinforcing steel for the base concrete over the bottom liner plates. Con Edison desires to commence this work by September 15, 1968.

The fundamental justification for this exemption is that the output of Indian Point 3 is necessary to meet the summer 1972 electric power requirements of Con Edison's system and of the State and region in which this system is located. Unless Con Edison is permitted to proceed with this preliminary construction work in advance of a construction permit, it will not be possible, in our judgment, for this facility to be completed in time to meet these requirements. A more detailed explanation of the reasons supporting this exemption is set forth below.

The latest date for completion of Indian Point 3 stated in our application for licenses is June 1, 1971. It is our current expectation that this facility will go into commercial operation within one year thereafter. In order to meet the schedule for commercial



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operation it is essential that construction proceed expeditiously, consistent with all applicable laws and regulations. Work that is permissible under 10 CFR 50.10(b) has already commenced and will be continued. However, unless additional work can be performed in advance of the issuance of a construction permit, the project's present schedule cannot be maintained.

With Indian Point 3 in service and with planned retirements completed, it is estimated that Con Edison's generating capacity in June 1972 will be 10077 megawatts. This capacity should be compared with a projected peak load for Con Edison's system, as of that date, of 8050 megawatts. Thus, a reserve of 2027 megawatts (or about 25.2%) is projected to cover operating capacity reductions at thermal plants, errors in projecting load growth, emergency outages of generating units and transmission facilities, and to provide operating reserve.

Our current daily experience of unavailable capacity for units which will be operating in 1972, exclusive of forced outages of complete units, is approximately 500 megawatts. This daily loss of capacity results from deratings of various units on the system, partial unit outages and conditions affecting auxiliary equipment such as coal mill outages, boiler feed pump trouble, turbine blade fouling and other miscellaneous causes. This average daily unavailability of capacity reduces our anticipated available installed capacity to 9577 megawatts, which results in an available installed margin (including Indian Point 3) of 1527 megawatts to cover the remaining requirements listed above.

Our largest generating units in 1972 are expected to be Ravenswood 3, Indian Point 2 and Indian Point 3, each of approximately 1,000 megawatts. In addition we expect to have seven generating units in the 400-megawatt class. An available installed reserve of 1527 MW thus would be adequate to cover the loss of only one of the largest units. Support from interconnected systems would be relied upon for additional contingency requirements.

Con Edison's available installed reserve, without Indian Point 3 and without planned retirements of 199 MW, would be 761 megawatts. This margin would be much too small and unless additional power were available, reliability of supply of electric service to the heavily populated New York City metropolitan area would be jeopardized.

It is estimated that the total capacity resources in New York State in the summer of 1972 will be 23670 megawatts, including Indian Point 3. The peak New York State load for the same period is expected to be 18770 megawatts, leaving a capacity margin of 4900 megawatts to cover contingencies such as those noted above. As stated previously, out anticipated average daily unavailability of capacity in 1972 is 500 MW. We estimate the average daily unavailable

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capacity for the remainder of New York State power plants is of the same magnitude, thereby reducing the anticipated total New York State reserve margin for 1972 to 3900 MW. If Indian Point 3 is not available for the summer peak in 1972, the reserve capacity would be further reduced to 2935 MW. Therefore, a delay in the availability of Indian Point 3 would have a serious effect on the necessary reserve capacity in 1972 for the entire State.

When we submitted our application for licenses we believed we had allowed a sufficient period for review of the application and that a construction permit would be granted early enough to allow us to commence work on a timely basis. However, it appears that even under favorable circumstances a construction permit cannot be granted until considerably beyond the date on which we had based our plans.

In light of these facts, we have carefully reconsidered the schedule for this project, taking into account the use of overtime and other factors. We believe not less than a 42-month period will be required from the date of commencement of the above-described work until the facility can go into commercial operation. Accordingly, we believe we must proceed with the above-described work by September 15, 1968 in order to have reasonable assurance that Indian Point 3 will be in commercial operation in time to meet summer 1972 electric power requirements. This is a tight schedule which reflects the advantages that could accrue from increased expenditures for overtime work. All of the work we propose to carry out must be completed before erection of the remainder of the nuclear plant can be performed. We estimate that this work will require six months to complete and that a delay in initiating this work by September 15, 1968 would cause a corresponding delay in the commercial availability date of this facility. Enclosure C provides additional details concerning the construction schedule.

As you know, the Indian Point 3 plant will be constructed at a location that has already been approved by the AEC with respect to a provisional operating license for Indian Point 1 and a provisional construction permit for Indian Point 2. We believe this fact, and the data we have submitted in support of licenses for the Indian Point 1 and 2 units, should be helpful in connection with the Commission's review of our present request.

Your letters of February 19, 1968, July 1, 1968 and July 16, 1968 asked a number of questions concerning our application for licenses for Indian Point 3. We are striving to answer these letters as soon as possible. However, we believe that the work we seek permission to perform will not be significantly affected by any future modifications in the design of Indian Point 3 necessitated by our response to these questions, including those pertaining to the design criteria applicable to protection against tornadoes.

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It appears to us the AEC has clear authority to grant this exemption and that precedents exist therefor. We believe the most significant precedent consists of the AEC's action of March 15, 1968 granting an exemption to the Boston Edison Company to pour concrete which would constitute the footings, base slab, internal walls and a portion of the external walls of the pressure suppression chamber for the Pilgrim Nuclear Power Station. (See In the Matter of Boston Edison Company, Docket No 50-293.)

Con Edison fully recognizes that neither a construction permit nor an operating license can be granted for this facility unless and until all of the licensing requirements of the AEC have been fully satisfied. Moreover, we appreciate that the granting of the requested exemption would not constitute an approval by the Commission of the type or adequacy of the proposed building structure and appurtenances. We further realize that the granting of this exemption would have no effect on the subsequent granting or denial of a construction permit for Indian Point 3 and that any work performed pursuant to this exemption would be at the risk of Con Edison.

We respectfully request your early consideration of this exemption. If we can be of any assistance to you in your deliberations, we would be happy to meet with you to discuss or explain any of the statements made in this letter or in our Application for Licenses.

Sincerely yours



fmz

W Donham Crawford

Enclosures:

- A - Description of Work
- B - Drawing
- C - Schedule for Performance
of Work

Enclosure A

Description of Work

Containment Building

1. Pour the base mat concrete up to the bottom liner plate. *
2. Install the bottom liner plates and transition knuckle plates. *
3. Install the rebar for the base concrete over the bottom liner plates. *

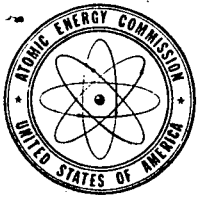
* This includes the walls of the reactor cavity and the recirculating sump pit.

Enclosure C

Schedule for Performance of Work

(Containment Building)

Item	Steel (Tons Rebar)	Concrete (Cu Yds)	Embedded Steel (Tons)	Liner Plates (Tons)	Weeks to Perform Work	Cumulative Weeks Schedule Time
Base Mat		6800	38		14	14
Liner Plate				90	14	20
Install Upper Rebar	100				8	24



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

Docket

F 115

Docket Nos. 50-247 ✓
and 50-286 ✓

November 20, 1972

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

RE: Indian Point Nuclear Generating Units 2 and 3

Gentlemen:

The Commission's Regulatory Staff has completed a review of fuel densification and its effect on reactor operation including transients and postulated loss-of-coolant accidents. The Staff's investigations and conclusions are reported in "Technical Report on Densification of Light Water Reactor Fuels" dated November 14, 1972, a copy of which is enclosed for your information and guidance. This report concludes that densification of fuel may occur and that the resulting formation of fuel column gaps should be anticipated in all light water reactor fuels. The report also provides the essential elements to be included in calculational models used to account for the effects of fuel densification.

The Regulatory Staff believes that the fuel for the subject facility(s) is susceptible to densification. Therefore, we request that you provide the necessary analyses and other relevant data for determining the consequences of densification and the effects on normal operation, anticipated transients, and accidents, including the postulated loss-of-coolant accident, using the guidance provided in the enclosed report. If the analyses indicate that changes in design or operating conditions are necessary to maintain required margins, you should submit proposed changes and operating limitations with the analyses.

"See Central Files for concurrence
copy and distribution"

OL

In order that the Regulatory Staff can conduct an expeditious and orderly review of these matters, we request that you submit the analyses and additional information within 45 days from the date of this letter.

It is requested that this information be provided with one signed original and thirty-nine additional copies. If your submittal is for more than one unit, a total of sixty copies is needed.

Sincerely,

A Giambusso

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosure:
Technical Report on Densification
(November 14, 1972)

cc: Mr. Leonard M. Trosten, Esquire
LeBoeuf, Lamb, Leiby & MacRae
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Washington, D. C. 20036

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