

June 26, 2000

Mr. David A. Lochbaum  
Union of Concerned Scientists  
1616 P Street NW., Suite 310  
Washington, DC 20036-1495

Dear Mr. Lochbaum:

I am responding to the supplemental information regarding the Petition dated March 14, 2000, that you submitted pursuant to 10 CFR 2.206 to the U.S. Nuclear Regulatory Commission (NRC) on behalf of the Union of Concerned Scientists, the Nuclear Information & Resource Service, the PACE Law School Energy Project, and Public Citizen's Critical Mass Energy Project. This supplemental information consisted of a letter from you dated April 14, 2000, a letter from Mr. Riccio dated April 12, 2000, and information provided at the April 7, 2000, public meeting. In addition to discussing the request that the NRC issue an order to Consolidated Edison Company of New York, Inc. (Con Ed) preventing the restart of Indian Point Nuclear Generating Unit No. 2 (IP2), or modify the license for IP2 to limit it to zero power, until all four steam generators are replaced, these supplements contained additional information intended to provide the specifics necessary to consider the other requests under 10 CFR 2.206. Specifically, you requested that the steam generator tube integrity concerns identified in Dr. Joram Hopenfeld's differing professional opinion (DPO) and in Generic Safety Issue (GSI-163) be resolved and that potassium iodide tablets be distributed to residents and businesses within the 10-mile emergency planning zone (EPZ) or stockpiled in the vicinity of IP2 prior to allowing restart of IP2.

My letter to you dated April 5, 2000, confirmed that the request to order IP2 to remain shut down until all four steam generators are replaced met the criteria to be considered under 10 CFR 2.206. This issue is currently under staff review. In addition to our review of this specific request, a number of other activities have either been completed or are in progress related to evaluating the integrity of the IP2 steam generator tubes. Included in these activities are an Augmented Inspection Team inspection, steam generator follow-up inspections, engineering evaluations on the effect of fast cool down rates, evaluation of the IP2 steam generator operational assessment, and the formation of a lessons learned task group. The results of these activities are being made publicly available as they are completed.

In the April 5, 2000, letter, I stated that the NRC staff had determined that your request that the NRC issue an order to prevent Con Ed from restarting IP2, or modify the license for IP2 to limit it to zero power, until the concerns raised in Dr. Hopenfeld's DPO and GSI-163 are resolved and until potassium iodide tablets are distributed to people and businesses within the 10-mile EPZ or stockpiled in the vicinity of IP2, does not meet the criteria set forth in NRC Management Directive 8.11, Part II, for review under 10 CFR 2.206. My basis for that decision was that they raise generic issues for which you have not provided sufficient facts specific to IP2 restart to support your request. However, I indicated that you could provide additional information to support the plant-specific nature of these two issues.

Based on the additional information provided at the April 7, 2000, public meeting and the information in Mr. Riccio's April 12, 2000, letter, the staff has determined that your request that the NRC issue an order to prevent Con Ed from restarting IP2, or modify the license for IP2 to limit it to zero power, until potassium iodide tablets are distributed to people and businesses within the 10-mile EPZ or stockpiled in the vicinity of IP2, meets the criteria of 10 CFR 2.206. As provided by Section 2.206, we will take action on your request within a reasonable time and, in any event, prior to plant restart.

Additional information provided in a letter from Mr. Riccio, dated June 12, 2000, will be considered in our review, as appropriate. The additional request in Mr. Riccio's June 12, 2000, letter concerning reevaluating the adequacy of the emergency planning drill conducted at IP2 will be considered separately by the Petition Review Board.

However, the information presented by you and the other petitioners regarding Figure 2(a) of NUREG/CR-5752 is generic in nature and does not provide information uniquely applicable to IP2 to support the assertions raised in your 10 CFR 2.206 Petition relating to Dr. Hopenfeld's DPO issue. As stated in NUREG/CR-5752, Figure 2(a) is a schematic or generalized representation of the process for crack initiation and growth in Alloy 600 tubes, which was developed based on laboratory test data. These laboratory tests were conducted under accelerated conditions and represent degradation mechanisms, but do not duplicate actual operating conditions in steam generators and thus cannot be used to accurately predict field performance. The scale on the diagram is primarily to illustrate trends and is not intended to be a quantitative representation of steam generator tube performance. For example, the "fast propagation" slope, which is not based on actual data, is shown much steeper than the "slow propagation" slope in order to emphasize the change. The crack growth rate in this region, about ten times the rate in the "slow propagation" region, can still be quite slow. The crack propagation rate does not change significantly as a result of design-basis accident loads, because these loads are of short duration, while long-term loads are the main contributor to crack growth rates. Another reason why these test conditions and, hence, the results, are not necessarily representative of actual steam generator tube behavior, is because cracking can relieve residual stresses and other stresses can vary with plant startup, operation, and shutdown. Finally, crack growth rates, critical defect size/depth, and crack initiation times vary with changing environmental and loading conditions, heat treatment, and cold-working (which results in residual stresses) of the material. Further, the results shown in Figure 2(a) were obtained using an Alloy 600 material that was highly susceptible to intergranular stress corrosion cracking. Thus, we conclude that the information in NUREG/CR-5752 that you cited in your April 14, 2000, letter does not change our previously-stated determination that the concerns raised in Dr. Hopenfeld's DPO and GSI 163 are generic issues for which you have not provided sufficient facts specific to IP2 restart to support review under 10 CFR 2.206. However, Dr. Hopenfeld's DPO remains under staff review. The results of this review will be made publicly available in accordance with the guidance of Management Directive 10.159, "Differing Professional Views or Opinions".

D. Lochbaum

- 3 -

We appreciate your interest in and concern for ensuring public health and safety and the continued safety of nuclear power reactors.

Sincerely,

***/RA Roy P. Zimmerman for/***

Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation

Enclosure: Notice

cc w/encl: Licensee (w/copy of incoming 2.206 request)  
and Service List

D. Lochbaum

- 3 -

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UNITED STATES NUCLEAR REGULATORY COMMISSION  
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
DOCKET NO. 50-247  
FACILITY OPERATING LICENSE NO. DPR-26  
RECEIPT OF ADDITIONAL INFORMATION RELATING TO  
PETITION FOR DIRECTOR'S DECISION UNDER 10 CFR 2.206

Notice is hereby given that additional information has been submitted in support of a Petition dated March 14, 2000, filed by Mr. David A. Lochbaum, on behalf of the Union of Concerned Scientists, the Nuclear Information & Resource Service, the PACE Law School Energy Project, and Public Citizen's Critical Mass Energy Project (petitioners). The petitioners requested that the U.S. Nuclear Regulatory Commission (NRC) take action with regard to Indian Point Nuclear Generating Unit No. 2 (IP2), owned and operated by the Consolidated Edison Company of New York, Inc. (the licensee). The petitioner requested that the NRC issue an order to the licensee preventing the restart of IP2, or modify the license for IP2 to limit it to zero power, until (1) all four steam generators are replaced, (2) the steam generator tube integrity concerns identified in Dr. Joram Hopenfeld's differing professional opinion (DPO) and in Generic Safety Issue (GSI-163) are resolved, and (3) potassium iodide tablets are distributed to residents and businesses within the 10-mile emergency planning zone (EPZ) or stockpiled in the vicinity of IP2. The original Petition was published in the Federal Register on April 11, 2000 (65 FR 19398). The supplemental information consisted of a letter from Mr. Lochbaum dated April 14, 2000, a letter from Mr. Riccio dated April 12, 2000, and information provided at an April 7, 2000, public meeting.

As stated in the original Federal Register notice, the request that the NRC prevent the licensee from restarting IP2 until all four steam generators are replaced is being treated

pursuant to 10 CFR 2.206 of the Commission's regulations. The original request that the NRC prevent the licensee from restarting IP2 until the DPO filed by Dr. Hopenfeld is resolved and until potassium iodide tablets are distributed to people and businesses within the 10-mile EPZ or stockpiled in the vicinity of IP2 was not being treated at that time pursuant to 10 CFR 2.206 of the Commission's regulations. However, the petitioners provided additional information at the April 7, 2000, public meeting and in Mr. Riccio's April 12, 2000, letter concerning the population density in the vicinity of the IP2 site and difficulties in emergency planning at the site which, in their view, make adequate evacuation and/or sheltering of the local population impossible. Based on this additional information, the NRC staff has determined that the request that the NRC issue an order to prevent Con Ed from restarting IP2, or modify the license for IP2 to limit it to zero power, until potassium iodide tablets are distributed to people and businesses within the 10-mile EPZ or stockpiled in the vicinity of IP2 meets the criteria of 10 CFR 2.206. As provided by Section 2.206, action will be taken on this request within a reasonable time.

In their April 14, 2000, letter, the petitioners contend that the information in NUREG/CR-5752, "Assessment of Current Understanding of Mechanisms of Initiation, Arrest, and Reinitiation of Stress Corrosion Cracks in PWR Steam Generator Tubing," is relevant to their request to replace the IP2 steam generators and to resolve Dr. Hopenfeld's DPO prior to IP2 restart. However, the information in NUREG/CR-5752 is a schematic or generalized presentation of the process for crack initiation and growth and was not intended to be representative of actual plant conditions. Thus, NUREG/CR-5752 is not directly applicable to IP2 and does not provide information specific to IP2 restart. Therefore, the request that the NRC prevent the licensee from restarting IP2 until the DPO filed by Dr. Hopenfeld is resolved will not be treated pursuant to 10 CFR 2.206 of the Commission's regulations.

Copies of the Petition and additional information are available for inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street NW., Washington, DC, and accessible electronically through the ADAMS Public Electronic Reading Room link at the NRC Web site (<http://www/nrc.gov>).

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Roy P. Zimmerman, Acting Director  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,  
this 26<sup>th</sup> day of June 2000

Indian Point Nuclear Generating Station  
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