

June 15, 2005

Mr. David Lochbaum
Nuclear Safety Engineer
Union of Concerned Scientists
1707 H Street, NW, Suite 600
Washington, DC 20006-3919

Dear Mr. Lochbaum:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your concerns raised at the 2005 Regulatory Information Conference (RIC) regarding the NRC's approval of power uprates. Thank you for your participation in the 2005 RIC. You helped to make the power uprate session a success through an open exchange of information. During this session, you asked how the NRC could move forward with approving power uprates given the simultaneous changes in our regulatory framework. You indicated that power uprates are one of many current initiatives that reduce safety margins.

The NRC staff performs comprehensive power uprate reviews, and in each case, has concluded that adequate safety margins exist at uprated power conditions to assure that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public. The NRC staff will continue to perform comprehensive power uprate reviews to ensure that the goal of maintaining safety is not compromised.

When reviewing a power uprate application, the NRC always assures that plant operation at the uprated power level will be safe, adequate margins will be maintained, and the elements of defense-in-depth are maintained. Further, for each power uprate application reviewed, the NRC staff recognizes that design parameters and margins may change. To assure that adequate safety margins are maintained, the NRC staff performs comprehensive power uprate reviews and in some cases, requires that restrictions be placed on the operating license. Also, the NRC staff monitors operating experience and updates power uprate review guidance, as appropriate, thereby assuring adequate safety margins will be maintained following the implementation of a power uprate. In summary, the NRC's review of the power uprate application will ensure that there is reasonable assurance of adequate safety and margin such that safe operation of a plant would not depend on any single element of the design, construction, maintenance, or operation of the facility.

In your presentation, you questioned the Quad Cities flow-induced vibration (FIV) issues which occurred following the implementation of an EPU as an example of margin reduction and further raised the question as to why the NRC is approving power uprates. The commercial nuclear industry has experienced several incidents of steam dryer cracking and FIV issues at nuclear power plants operating at EPU conditions. The NRC staff continues to closely monitor plant-specific actions and the industry's generic response to this issue. In response to the adverse flow effects at Quad Cities Units 1 and 2, the licensee has committed to maintain those units at pre-EPU power levels, except for limited EPU testing, until the NRC staff is satisfied

that the FIV issue is resolved. The NRC staff does not consider the FIV issue to pose immediate safety concerns. Steam dryers and other internal main steam and feedwater components must maintain structural integrity to avoid generating loose parts. The NRC is considering the need for additional regulatory actions, and is currently evaluating power uprate guidance to ensure that FIV issues are adequately addressed. In addition, the NRC continually monitors operating experience at plants that have implemented power uprates and plans to update the power uprate review guidance as necessary. Reviewing operating experience and modifying power uprate review guidance are examples of how the NRC continues assures that adequate safety margins are maintained.

Please be assured that NRC will continue to strive to ensure protection of public health and safety. If you have further requests or questions concerning the power uprate program, please contact John Stang, the NRC's Lead Project Manager for the Power Uprate Program at (301) 415-1345.

Sincerely,

/RA/

William H. Ruland, Deputy Director
Licensing and Inspection Directorate
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards

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