

January 7, 2005

The Honorable Joseph R. Biden, Jr.  
United States Senate  
Washington, D.C. 20510

Dear Senator Biden:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of December 9, 2004, regarding activities related to an October 10, 2004 steam pipe break at the Hope Creek Generating Station (Hope Creek). You also raised questions regarding the "B" reactor recirculation pump, specifically with respect to potential consequences if the pump were to fail.

An NRC special inspection team has reviewed the circumstances surrounding the October 10, 2004 steam pipe break. The five-member team of inspectors performed on-site reviews of Public Service Enterprise Group, Nuclear LLC (PSEG) actions to determine the root cause, review the extent of the problems, and identify corrective actions. The special inspection included a review of engineering guidance to operators to address a malfunctioning steam valve that may have caused or contributed to the steam pipe break. As discussed with your staff on December 21, 2004, the special inspection team has completed its activities and plans to publish the preliminary results in advance of a public exit meeting scheduled for January 12, 2005.

The NRC staff continues to review not only PSEG's corrective actions for the pipe failure, but also corrective actions on other ongoing technical issues, including PSEG's efforts to address the issues associated with the "B" reactor recirculation pump. On December 17, 2004, members of the NRC Region I and Headquarters technical staffs met with PSEG technical staff in a public meeting to gather information and to ask questions about the recirculation pump and other related technical issues. The staff expects to issue a summary of the review prior to the public meeting scheduled for January 12, 2005. The outcome of the NRC review of the recirculation pump issues will also be discussed at that meeting. The NRC will also continue monitoring plant operations thereafter.

Regarding the relationship between safety-related and non-safety-related aspects of the "B" reactor recirculation pump, the description provided in your letter was accurate. Certain components may perform non-safety-related functions as well as safety-related functions. In the case of a reactor recirculation pump, the non-safety-related function of the pump is to circulate water through the reactor core for the production of electricity. The safety-related function of the pump seals and pump casing is to prevent a loss of reactor coolant, which could impact cooling of the reactor core. If the reactor recirculation pump stopped running, it would likely lead to plant shutdown. If the pump seals or pump casing were to fail, reactor coolant leakage would be detected by the plant's systems, and actions could be taken to put the plant in a safe condition. Depending on the size of the leak, this might involve shutting down and

injecting water as needed to counter leakage while also taking action to stop the leak. Failure of a recirculation pump to run and the loss of reactor coolant are both events that are within the plant's design basis, and operators have received extensive training on how to cope with these types of events. The NRC is focused on the licensee's ability to identify any degradation of pump conditions and to respond prior to failure.

The NRC is committed to ensuring the protection of public health and safety through oversight of the facilities that we regulate. NRC actions have been focused on ensuring safe operations at Hope Creek. The plant will not be permitted to operate unless the NRC believes it is safe. The preliminary inspection and review of the other technical issues indicate that the licensee can safely operate the plant without replacing the recirculation pump shaft. A publicly available letter will formalize the commitments made by PSEG to the NRC regarding implementation of a monitoring program for the "B" recirculation pump, actions to be taken in the event of abnormal indications, and future repairs of the pump. Additionally, I want to assure you that the NRC will continue to oversee PSEG's actions to address technical issues at Hope Creek and will maintain openness for public involvement in the regulatory process. The NRC plans to discuss the results of its reviews of the October 10, 2004 steam pipe break, the "B" reactor recirculation pump issues, and other technical issues at a public meeting on January 12, 2005. This meeting, along with issuing the preliminary results of the special inspection and summaries of NRC technical issue reviews, will provide an opportunity for the public to review the results of our assessments before the plant starts up from the refueling outage. If you have further questions, please feel free to contact me.

Sincerely,

*/RA/*

Nils J. Diaz

Identical letter sent to:

The Honorable Joseph R. Biden, Jr.  
United States Senate  
Washington, D.C. 20510

The Honorable Thomas R. Carper  
United States Senate  
Washington, D.C. 20510

The Honorable Michael N. Castle  
United States House of Representatives  
Washington, D.C. 20515