

December 7, 2004

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

Dear Senator Carper:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letters dated October 14, 2004, and October 25, 2004, concerning the Salem and Hope Creek Nuclear Power Plants. In your letters, you expressed concerns about management and the work environment at the station, and requested information regarding NRC oversight of the plants. In particular, you expressed concern about Public Service Enterprise Group, Nuclear LLC (PSEG), efforts to address the safety conscious work environment (SCWE) at the station. You also expressed concerns about the steam leak that occurred at the Hope Creek plant on October 10, 2004, and PSEG's plans for restarting the reactor after the event.

The NRC is committed to ensuring the protection of public health and safety through oversight of the facilities that it regulates. The NRC has long recognized that a strong safety focus on the part of licensees is important to maintain safe performance at these facilities. The NRC staff has closely monitored performance at Salem and Hope Creek over the past several years and last year performed a special review of the work environment at the station. The staff did not identify any serious safety violations as a result of this review; however, it found numerous indications of weaknesses in the licensee's programs for identifying and correcting problems and in management efforts to establish an environment where employees are consistently willing to raise safety concerns. In response, PSEG committed to provide significant resources to improve station performance and developed a plan to assess and improve the work environment at both plants. This plan includes periodic internal and external assessments, improving station processes such as corrective actions and work management, and enhancing relationships between management and the work force.

The NRC has taken proactive steps to engage PSEG before the work environment and related issues result in significant plant events or serious safety violations. The NRC has increased its oversight beyond what is typically called for in NRC's reactor oversight process to monitor and ensure that PSEG makes continual progress in addressing the work environment issues at the station. The staff has increased NRC senior management involvement in agency oversight activities at the station. The staff has also established an NRC team, with members from NRC's Region I office in King of Prussia, Pennsylvania, and Headquarters, to enhance coordination of NRC review efforts and assist in evaluation of licensee self-assessment efforts. The NRC staff will carefully review PSEG's improvement plan and enhance inspections by adjusting inspection scope, as necessary, to verify the effectiveness of licensee long-term improvement efforts in these areas. The NRC will continue this heightened oversight until NRC staff can confirm that PSEG has made substantial, sustainable progress.

In November 2004, the NRC's Salem/Hope Creek Coordination Team reviewed PSEG's latest performance improvement plans and SCWE performance indicators. On December 2, 2004, the NRC staff conducted a management meeting with PSEG on its progress in improving the work environment at the station. This meeting was open to the public.

You asked for information regarding NRC's role following unplanned reactor shutdowns and specifically, in response to the event that occurred at Hope Creek on October 10, 2004. It is not unusual for a large industrial facility operating at high pressures and temperatures to experience equipment problems similar to what occurred at Hope Creek. At Hope Creek, the event involved a forced shutdown of the reactor following a steam leak in the turbine building. The leak was subsequently determined to be due to failure of a pipe between a moisture separator and the main condenser. When an event such as this occurs, NRC resident inspectors monitor the licensee's response to the event and gather information regarding the circumstances of the event to ensure there are no immediate safety issues. The NRC's main concern is the operability and reliability of risk-significant, safety-related equipment, which is necessary for the protection of the public health and safety. If potentially significant safety issues are identified, NRC management promptly engages licensee management on the issues.

In accordance with the reactor oversight process, the NRC staff has evaluated the potential safety significance of the event and is responding accordingly. As you are aware, NRC is conducting a special inspection of the Hope Creek event. The NRC inspectors will evaluate PSEG's analysis of the root cause of the steam system piping failure and planned actions to prevent recurrence. The NRC staff will also independently assess the equipment and human performance issues that complicated the response to the event. The NRC special inspection team was on site during the weeks of October 11 and October 18, 2004, conducting initial fact finding and personnel interviews. Team members have been on site periodically since then to monitor the progress of PSEG's review. The staff will complete its inspection after PSEG has completed its review and identified corrective actions to prevent similar events in the future.

You asked about NRC requirements for inspection of piping and pipe supports because PSEG had preliminarily determined that a disconnected pipe support may have contributed to the piping failure. The NRC special inspection team will specifically review PSEG's root cause analysis and planned corrective actions to ensure that the cause of the piping failure is identified and actions are taken to prevent recurrence. NRC regulations contain specific maintenance and inspection requirements for safety-related equipment. In addition, the NRC's Maintenance Rule at 10 CFR 50.65 requires licensees to perform appropriate preventive maintenance or to monitor the reliability and availability of specified structures, systems, and components (SSCs), including SSCs that are not safety-related but that meet certain criteria. The piping that failed at Hope Creek was not safety-related. The scope of the NRC special inspection for the Hope Creek event includes a review of licensee's compliance with 10 CFR 50.65.

As described above, when an unplanned shutdown occurs at a plant, NRC inspectors review closely the circumstances surrounding the event and the licensee's response. Unless a significant safety concern is identified, the NRC staff is not directly involved in licensee decisions on plant restart. However, NRC regulations set strict requirements for equipment operability prior to restart. The NRC expects licensees to take prompt actions to identify and

correct the causes of the event, commensurate with the event's significance. In this case, PSEG has committed to complete a root cause analysis and an extent-of-condition review, as well as identify corrective actions prior to restart of the plant. Prior to Hope Creek startup, the NRC staff plans to conduct a meeting, open to public observation, with PSEG management to discuss its analysis and corrective actions for the event, as well as NRC's preliminary inspection findings.

The Commission believes that NRC actions have been focused on ensuring safe operations at Salem and Hope Creek. I want to assure you that the NRC will continue to oversee closely PSEG's long-term actions to improve the work environment at the station. The upcoming meeting with PSEG will be open to public observation and is designed to provide an additional opportunity for stakeholders to be kept up to date on issues of common interest. Prior to this meeting, the NRC staff will contact your Congressional staff to brief them. If you have any questions, please feel free to contact me.

Sincerely,

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Nils J. Diaz