

May 31, 2006

The Honorable Hillary Rodham Clinton  
United States Senate  
Washington, D.C. 20510

Dear Senator Clinton:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of April 3, 2006, regarding the NRC's plans for conducting engineering and emergency preparedness inspections at the Indian Point nuclear power plant. In response to my letter of March 28, 2006, you requested additional details regarding planned engineering and emergency preparedness reviews.

As discussed in my previous letter, the NRC is an independent regulatory agency established by Congress, and our inspection and assessment processes are independent, thorough, and objective. The extensive engineering team inspection is one of a set of inspections that is required to be conducted at all operating nuclear reactor facilities pursuant to the NRC's Reactor Oversight Process (ROP). This set of inspections forms the ROP's baseline inspection program. The ROP requires that inspections be performed in seven fundamental areas (cornerstones) to measure plant performance and ensure safe plant operation. The baseline inspections address the areas you mention in your letter for an Independent Safety Assessment (ISA). Specifically, the inspections performed by NRC resident inspectors and regional specialists routinely evaluate plant design, modifications, maintenance, and operations. The ROP is a flexible risk-informed process that focuses inspections on those activities or areas that are risk significant (i.e., important to plant safety based on each plant's unique design) and has a framework that increases the level of scrutiny to focus on elements of a licensee's performance that appear to be declining.

The NRC recently undertook a substantial effort to strengthen its engineering inspection procedures to increase the scrutiny of operator actions and risk significant components with lower safety margin. This additional and specific attention improves the effectiveness of the engineering design team inspections. To develop the new engineering inspection procedure, the staff analyzed data from NRC engineering design team inspections and licensee self-assessment efforts to assess how effective they were in identifying engineering design issues. The information gained from the analysis led to the development of a prototype inspection procedure. This prototype inspection procedure differed from the former Safety System Design and Performance Capability inspection procedure (SSD&PC) in that: 1) the inspection samples are not limited to one or two systems, but instead focus on risk-significant, low-margin components and operator actions; 2) the inspection samples are not limited to mitigating system components (i.e., components important after a reactor event occurs), but may also include components that could contribute to or initiate a plant event; and, 3) significant effort is spent assessing relevant industry operating experience associated with the samples selected for inspection. The prototype inspection procedure was piloted at four sites, and analysis of the inspection results indicated that the new inspection approach was a significant improvement over the previous approach.

The new component-based inspection ensures that the selected components are capable of performing their intended safety functions by verifying that the design bases have been properly implemented and maintained. This inspection involves four weeks of on-site effort and about 700 hours of inspection by a multi-disciplined team of engineers. Each inspection team is assigned two contractors who have extensive design experience, and their contract contains certain restrictions to address conflict of interest issues. In conducting the inspection, the team performs a detailed design review of numerous key components selected after careful analysis. The review includes evaluating the adequacy of the engineering calculations and analyses, the installed configuration, operating procedures, and testing and maintenance activities. A similar process is used to select and inspect risk significant operator actions, such as opening or closing key valves or starting or stopping key pumps. Copies of the new engineering team design inspection procedure can be obtained at our website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html> by selecting IP 71111.21 Component Design Bases Inspection.

In addition to the component design bases inspection, the NRC dedicates a significant amount of the ROP baseline inspection to the evaluation of other plant activities such as evaluation of changes and tests, fire protection, permanent and temporary plant modifications, maintenance effectiveness, performance of heat transfer (i.e., cooling) equipment, operability evaluations, surveillance testing, post-maintenance testing, and, piping and pressure vessel boundary inspection. Therefore, NRC resident inspectors and regional specialists routinely evaluate work performed by the licensee to determine whether such activities support safe plant operation. As such, the systems identified for review in the legislation you proposed are covered by our routine inspection program, and our current inspection process for engineering team inspections identifies components that are more significant in ensuring plant safety than most of the systems listed in the proposed legislation.

The 1996 Maine Yankee ISA was a customized inspection, prompted by significant problems identified in the computer codes that modeled aspects of the emergency core cooling system performance. As described above, the NRC has significantly enhanced its baseline inspection program since the Maine Yankee ISA was performed. In addition, the Indian Point units have received significant engineering team inspections since 1998 to evaluate conformance to the design and licensing bases. Specifically, Indian Point Unit 2 was one of four plants in NRC Region I to receive an architect engineering team inspection in 1998. Since the current ROP was implemented more than six years ago, there have been three engineering design team inspections at Indian Point Unit 3 and two at Unit 2. In lieu of the engineering design team inspection at Unit 2 in 2001, the NRC performed a supplemental team inspection to address multiple performance deficiencies identified at the unit. This inspection had significantly more resources and covered more areas than a routine engineering team inspection and is very comparable to the system-type reviews performed at Maine Yankee. A copy of this inspection report is included in Enclosure 1. In addition, engineering team inspections are currently scheduled at each of the Indian Point units in 2007. The Commission believes that this series of inspections is sufficiently extensive and comprehensive to evaluate engineering design and performance at Indian Point.

In response to your request for a comprehensive evaluation of the radiological emergency plan at Indian Point, I believe that a number of planned programmatic activities, in addition to new initiatives, may address your concern. Radiological emergency preparedness at a nuclear power reactor is one element in protecting the public from a spectrum of potential man-made and natural events. The NRC has been improving emergency preparedness programs. In January 2004, the NRC announced the establishment of an Emergency Preparedness Project Office to enhance the effectiveness of emergency preparedness. Additional organizational changes have been made to improve emergency preparedness capabilities including coordination with State, local, and public stakeholders.

Emergency planning is performed by multiple entities, including the plant operator, State and local government officials, and by administrators of public and private facilities such as schools and hospitals. NRC emergency preparedness regulations require the development of a range of protective actions with the goal of minimizing radiation exposure to the public during a postulated radiological event. The specific protective action to be implemented depends on local factors and is guided by protective action guidelines developed by the U.S. Environmental Protection Agency (EPA). The EPA protective action guidelines reflect EPA's judgment concerning acceptable levels of risk to public health from radiation exposure. The NRC has supplemented EPA guidance to provide protective measures for postulated severe reactor accidents. The NRC believes that these guidelines constitute appropriate advice to State and local decision makers, who must make the final decision regarding protective actions for the public in the event of an emergency.

Federal oversight of the implementation of radiological emergency planning and preparedness associated with commercial nuclear facilities involves both the Department of Homeland Security (DHS) and the NRC. Consistent with former President Carter's directive in December 1979 and the longstanding Memorandum of Understanding between the Federal Emergency Management Agency (FEMA, now part of DHS) and NRC, DHS takes the lead in reviewing and assessing off-site planning and response and assisting State and local governments, while the NRC reviews and assesses the on-site planning and response. DHS findings and determinations as to the adequacy and capability of implementing off-site plans are communicated to the NRC. The NRC reviews DHS findings and performs on-site assessments as part of the NRC's oversight of the overall state of emergency preparedness for each site. Further, the NRC notes that FEMA reviewed and responded to the concerns identified in the "Witt Report" during the evaluation of the September 2002 emergency exercise at Indian Point. FEMA's response is included in Enclosure 2.

Reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Indian Point is supported by the NRC's review of DHS findings and determinations regarding State and local plans and the NRC's assessment of the licensee's on-site emergency plans, as well as the results of the ROP. NRC's planned ROP inspection activities for 2005-2006 in the emergency preparedness area include more than 100 hours of inspection reviewing program controls, equipment performance, corrective actions, and drill/exercise performance.

The capabilities of the Indian Point emergency plan were successfully demonstrated during the June 2004 full-scale, integrated emergency exercise. Inspections of Indian Point emergency preparedness activities, including the reliability of the Alert and Notification System and the implementation of back-up siren power, as required by an NRC Confirmatory Order that resulted from the Energy Policy Act of 2005, are being conducted by NRC experts in emergency preparedness. In addition, the NRC will inspect the on-site response activities and DHS will review the effectiveness of off-site preparedness and response during the full-scale graded emergency exercise at Indian Point in November 2006.

The NRC continues to work closely with State and local officials to address emergency preparedness at Indian Point. For example, the NRC recently participated in an "Emergency Planning Summit" meeting with DHS, State, and local officials to discuss emergency preparedness issues around Indian Point. I believe that the meeting helped clarify the roles and responsibilities of the different levels of government and was useful in identifying the next steps to address preparedness and response. The NRC plans to work with DHS, the New York State Emergency Management Office, and local officials to improve preparedness and response further. In addition, the NRC is aware of the ongoing DHS review of the emergency operations plans in all States and in the 75 largest urban areas, including New York. This review will be completed in two phases: the first phase includes a self-assessment and certification of plan status by each State and urban area; and the second phase will involve peer-led visits to validate the self-assessments and to help State and urban area officials identify their specific requirements for Federal planning assistance. The NRC expects that the results of this review will be considered in enhancing the planning and response activities around Indian Point.

The NRC is also in the process of performing a comprehensive review of its emergency preparedness regulations to identify areas for improvement to enhance protection of the public during a radiological event and continues to keep stakeholders engaged in the review process. As part of this review, the NRC staff conducted a public meeting on August 31 - September 1, 2005, responded to over 700 comments from the meeting and the subsequent written comment period, and posted responses to these comments on the NRC website. The staff held a workshop at the March 2006 National Radiological Emergency Preparedness Conference to engage NRC's State and local partners. Most recently, the NRC staff held a public meeting on the review with advocacy groups on May 19. The NRC staff anticipates providing the results of this review to the Commission in fall 2006. DHS has been a partner in the public meetings, and the NRC is keeping DHS fully informed of our progress.

The Commission is committed to independent, thorough, and objective inspections at all of NRC-regulated facilities, including Indian Point. The Commission continues to believe that the current increased level of oversight at Indian Point is appropriate, and the scope and depth of NRC inspections and assessments, particularly the new engineering team inspection, will address your concerns. Further, the Commission believes that emergency planning at all nuclear power plants, including Indian Point, is closely monitored. We are continuing to focus on a number of reviews and initiatives to understand and address specific needs of communities around more populated sites such as Indian Point. The NRC will continue its close coordination of these activities with the Federal, State, and locally elected officials.

If you have additional questions, the NRC staff would be happy to meet with you or your staff to discuss NRC's inspection and oversight process.

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Sincerely,

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Nils J. Diaz

Enclosures:

1. Indian Point Unit 2 - NRC Supplemental  
Inspection 05000247/2001-002,  
dated April 10, 2001
2. Radiological Emergency Preparedness  
Program - Indian Point Energy Center  
Response Due: May 2, 2003, dated  
February 21, 2003