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Congress of the United States
House of Representatives
Washington, DC 20515-2107

December 13, 1999

The Honorable Richard Meserve
Chairman
Nuclear Regulatory Commission
Washington, DC 20555

Dear Chairman Meserve:

I am again writing to request information regarding the year-2000 (Y2K) readiness of certain nuclear power plants. I recently learned of a problem with the Y2K compliance program at Indian Point Unit 2 that was described in the November 17, 1999 Licensee Event Report (LER) 1999-019-00. According to the LER, on October 28, 1999, operators at Indian Point Unit 2 discovered that an alarm system contained incorrect tolerance limits for control rod positioning. A subsequent analysis of the problem determined that a computer program responsible for setting this limit had been disabled as part of the Y2K-compliance program. Although the LER indicated that the plant operated safely, an alarm system, which helps prevent damage to the reactor core, was inadvertently disabled for over 6 months.

I am troubled by this incident for two reasons. First, the disabled system involved an alarm program that ensures the control rods are correctly positioned in the reactor core. The control rods, which are an integral part of the safety system, regulate the nuclear chain-reaction. If it proceeds too quickly, the position of the control rods can be adjusted to slow down the fission process. Since these elements regulate the nuclear fission process in the core, they are vital to safe operation of the plant. Any deviation beyond the safe limits could lead to an uncontrolled reaction resulting in damage to the fissionable nuclear fuel. Only an unrelated plant shutdown alerted the operators at Indian Point to the problem. Luckily, the rod positions never deviated beyond the actual tolerance limits. Luck, however, should not be the basis for safeguarding our nuclear power plants and providing Y2K compliance.

Second, the NRC indicated in a July 7,1999 press release that Indian Point Unit 2 reported all safety-related computer systems were "Y2K compliant" as described in Generic Letter 98-01. However, it is now clear that during the process of upgrading computer systems some necessary computer programs were mistakenly disabled. The fact that the Y2K compliance plan adopted by Indian Point Unit 2 to prevent Y2K problems introduced new ones raises questions regarding the nature and adequacy of the NRC's oversight of Y2K compliance by its licensees.

The situation at Indian Point Unit 2 suggests the need for a more thorough independent verification of the licensees' programs to attain compliance in their computer systems. As you

know, I previously have suggested independent verification and validation of licensees' Y2K-readiness programs in a letter dated March 10, 1999 to then Chairman Jackson. Dr. Rona Stillman, Chief Scientist for Computers and Telecommunications of the GAO, also stressed the importance of independent verification and validation in a March 6, 1998 letter to David Meyer, Chief of the Rules and Directive Branch of the NRC Division of Administrative Services. The NRC response, which was provided in a letter from former Chairman Jackson on May 3, 1999, indicated the NRC does not believe independent verification is necessary. In light of the problems at Indian Point, an independent review may be able to identify problems or errors that have been overlooked by the licensees as they attempt to meet the deadline imposed by the new year.

In the remaining days before the start of the new millennium, I urge the NRC to thoroughly review the methods used by the licensees to ensure Y2K compliance. In particular, I encourage the following specific actions:

1. If software systems were disabled to ensure Y2K compliance at plants other than Indian Point Unit 2, the NRC should review those programs and ensure that required systems were not inadvertently disabled,

2. The NRC should review any plants that use a similar system to PROTEUS, the computer system used at Indian Point Unit 2, to ensure that they have not followed the mistake at Indian Point and disabled the control rod position alarm system, and

3. The NRC should encourage independent verification and validation of the Y2K procedures used by the licensees at all nuclear facilities.

The safe operation of nuclear plants is vital. Unfortunately, the Indian Point Unit 2 incident demonstrates that problems may still exist even at nuclear facilities believed to be Y2K compliant. In addition, this incident emphasizes the need for independent oversight of the nuclear industry's Y2K readiness. In the time remaining before January 1, 2000, I encourage the NRC to act quickly to ensure that any Y2K-related problems do not occur at our nation's commercial nuclear power plants.

Sincerely,

Edward J. Markey