August 26, 2010

The Honorable Edward J. Markey
Chairman, Subcommittee on Energy
and the Environment
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your July 15, 2010, letter regarding your concern with the discovery of tritium in groundwater monitoring wells at Pilgrim nuclear power plant and your broader concern with buried piping systems at all such facilities.

Through its groundwater monitoring program, Entergy Nuclear Operations (Entergy or the licensee) discovered elevated concentrations of tritium in samples from one of its monitoring wells in May 2010. An early July 2010 sample from this monitoring well indicated levels of about 25,000 picocuries/liter (pCi/l), although more recent sampling indicates that the concentration has been reduced to half that level (12,600 pCi/l on July 22, 2010). While the early July 2010 sample was above the U.S. Environmental Protection Agency drinking water standard for tritium (20,000 pCi/l), the NRC confirmed that drinking water is not derived from groundwater in this area.

As a result of this discovery, the licensee is taking a number of actions to determine the source of the tritiated water and the cause of the fluctuation in measured concentrations. These include the installation of several additional groundwater monitoring wells, the use of ground-penetrating radar to identify new monitoring well locations and guided wave and other testing methods to determine the structural integrity of underground piping systems, and the installation of transducers in monitoring wells to enhance groundwater characterization. The NRC's Region I staff has kept the State agencies, including Massachusetts Department of Public Health and Massachusetts Emergency Management Agency, informed of its regulatory oversight activities.

Based on information reviewed to date, the groundwater contamination at Pilgrim has not resulted in any public health and safety consequence. As a result, the contamination and the licensee's response are outside the scope of the NRC's normal inspection, oversight and enforcement processes. Nevertheless, NRC resident inspectors and region-based inspectors have been closely monitoring the licensee's plans, process, and progress in determining the cause and source of the contamination. The NRC will continue to follow the licensee's performance closely to assure conformance with regulatory requirements and that public health and safety are maintained.

Regarding your broader concern with buried piping at nuclear power plants, since I last wrote to you on June 17, 2009, a number of actions have taken place and continue to occur. The NRC established an internal Groundwater Task Force charged with reviewing the agency's oversight in the area of groundwater protection from radiological effluents. The Task Force, whose final report was issued in June 2010 and enclosed with this letter, made a number of recommendations that fall into four broad categories: (1) reassessing the NRC's regulatory framework to better include groundwater protection, (2) maintaining the barriers designed to confine tritium and other licensed material, (3) creating more reliable NRC responses, and (4) strengthening trust. A senior management review group has been established to decide how best to act upon the conclusions and recommendations contained in the final report.

Licensees will be performing an increased number of inspections of buried pipes to satisfy both license renewal commitments and the objectives of the industry's Buried Piping Integrity Initiative. In the near term, the NRC anticipates that the increase in excavation and inspection could increase the frequency of discovery of degraded buried piping. This increased activity will provide additional opportunities to repair degrading underground pipes before they leak and an earlier indication of leaks if they occur.

I am confident that the activities outlined above provide a framework within which we can effectively address the concerns raised about degradation of buried piping at nuclear power plants. If you need any additional information, please feel free to contact me or have your staff contact Ms. Rebecca Schmidt, Director of our Office of Congressional Affairs.

Sincerely,

/RA/

Gregory B. Jaczko

Enclosure:
As stated