NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

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No. 06-072 May 26, 2006

NRC CONTINUES MONITORING, OVERSIGHT OF GROUNDWATER CONTAMINATION AT NUCLEAR POWER PLANTS

The Nuclear Regulatory Commission continues to address the instances of contaminated groundwater at nuclear power plants in Illinois and New York and is ensuring that plant operators take appropriate corrective actions. Although all available information continues to show public health and safety are unaffected by these instances, the agency is addressing concerns about unintended releases of radioactive material, even in non-hazardous amounts.

Most U.S. commercial nuclear reactors release liquid effluents containing some radioactive material in a controlled manner. These controlled releases are conducted in accordance with strict regulatory limits. These limits ensure any radiation dose that could be received by a member of the public is a small fraction of normal background radiation. In a few cases contaminated water has leaked into groundwater at nuclear power plants migrating off the plant site. None of these cases has affected public health and safety.

The agency's Region III office, in Lisle, Ill., began inspections of potential tritium-related issues at all operating nuclear power plants in Illinois, as well as the previously shut down Zion facility. The agency's Region I office, in King of Prussia, Pa., has also inspected groundwater contamination at the Indian Point facility in Buchanan, N.Y. These inspections are in addition to the routine examination of effluent and environmental monitoring programs done at all nuclear power reactors under the Reactor Oversight Process. The NRC staff continues to analyze groundwater samples with the affected plants to verify the effectiveness of licensees' analytical methods. Affected states have also been verifying the sample results.

As is the normal practice, the agency is making public its inspection reports and any resulting enforcement actions that may be taken. This includes recent results from NRC's inspection of the Braidwood Nuclear Power Plant located near Braidwood, Ill., that are available on the NRC Web site at : http://adamswebsearch.nrc.gov/dologin.htm by entering ML061450522. The NRC's inspection at Braidwood determined that public health and safety has not been, nor is likely to be, adversely affected by historical leaks of water with very low levels of tritium. However, preliminary findings indicate that Exelon had failed to adequately evaluate the radiological hazards associated with leaks from the circulating water blowdown line vacuum breakers and to assess the resultant environmental impact between 1996 and 2005. Specifically, the licensee did not perform adequate, timely radiological evaluations following the historical leaks which impacted their ability to assess the environmental

impact from the releases and to mitigate the releases; did not account for the potential impact on the public; and did not adequately control licensed material.

In addition, the NRC has established a task force to evaluate the inadvertent, unmonitored releases, as well as the regulatory requirements associated with the structures, systems, and components from which the releases emanated. The task force will recommend improvements that may be applicable to the agency, the industry or both. This task force is scheduled to complete its review in late summer 2006. The latest available information on tritium issues can be accessed at this address: http://www.nrc.gov/reactors/operating/ops-experience/grndwtr-contam-tritium.html .

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