

February 15, 2006

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-RIII-06-004

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region III staff on this date.

Facility

Dresden 2 and 3  
Exelon Generation Co.  
Morris, Illinois  
Docket: 50-237 and 50-249  
License: DPR-19; DPR-25  
Byron 1 and 2  
Exelon Generation Co.  
Byron, Illinois  
Docket: 50-454 and 50-455  
License: NPF-37; NPF-66

Licensee Emergency Classification

Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

SUBJECT: TRITIUM LEAKAGE

DESCRIPTION:

On February 10, 2006, Exelon's Dresden Station informed the resident inspectors and Region III (Chicago) that elevated levels of tritium (the radioactive isotope of hydrogen) had been measured in a monitoring well located near underground piping. The piping in the area goes from the condensate storage tank (CST) to the High Pressure Coolant Injection (HPCI) system. The pipe is located onsite.

In 2004, leakage was discovered in the CST to HPCI supply line pipe. The pipe is 175 feet long; the licensee replaced approximately 75 feet of piping where leaks had been identified in 2004. The licensee suspects that the current leak is in the 100 feet of piping that was not replaced at that time.

The sample result on February 11, 2006, was 486,000 picocuries per liter (pCi/L), on February 12, 2006, was 529,000 pCi/L, on February 13, 2006, was 680,000 pCi/L, and on February 14, 2006, was 540,000 pCi/L.

The pipe was isolated on February 11, 2006. The licensee plans to drain the pipe. The licensee had planned to replace the pipe in June 2006, but is considering an adjustment to the schedule for replacement.

Also, on February 10, 2006, Exelon's Byron Station informed the resident inspectors and Region III (Chicago) that elevated levels of tritium in water had been identified in several vacuum breaker vaults located along the discharge piping.

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This piping is on plant property. The piping is approximately 2.5 miles long normally carrying non-radioactive circulating water to the Rock River. The discharge pipe is also used for planned liquid radioactive effluent releases with effluent mixing with the discharge water. The licensee is pursuing installation of monitoring wells adjacent to the piping to determine if tritium has migrated from the vaults.

The licensee sampled water in 5 vaults along the pipeline. The tritium concentrations ranged from 256 pCi/L to 86,000 pCi/L.

Resident inspectors and Region III staff are monitoring the licensee's activities. Based on current information, the effects of the leakage are localized to the immediate area.

The licensee is issuing a news release regarding the tritium issues at Braidwood, Byron, and Dresden and announcing program for tritium assessment at all 10 of the Exelon Nuclear Generating sites.

The State of Illinois has been notified. The information in this preliminary notification has been reviewed with licensee management and is current as of 9 a.m. on February 15, 2006.