Nimitz, Ronald

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Subject:	

Nimitz, Ronald Monday, June 08, 2009 2:47 PM Conte, Richard White, John OC tritium

Importance:

High

Background:

In the course of work pertaining to Emergency Service Water pump cable replacement, on April 15, 2009, Oyster Creek identified water containing tritium inside the Emergency Service Water (ESW) cable vault which is located in the vicinity of the intake structure. The water was pump out and collected in 55-gallon drums. Sampling and analysis of the water for gamma emitters and tritium determined a tritium concentration of 102,000 pCi/l. No other radionuclides were detected. In accordance with its agreement with the New Jersey Department of Environmental Protection (NJ-DEP) to report any tritium contaminated water condition, exceeding 2000 pCi/l, that could potentially affect the environment, Exelon informed the NJ-DEP, and the NRC in accordance with 10 CFR 50.72 for a notification to another government agency.

The licensee established an Adverse Condition Monitoring Plan to sample ground water monitoring wells in the vicinity. The sampling of ground water monitoring wells in the vicinity of the cable vault and Condensate Storage Tank (CST) indicated tritium concentration of up to 6 million pCI/I. New monitoring wells were installed and the licensee's geo-hydrology contractor developed plume maps for the licensee. The NRC is reviewing the information

The licensee subsequently identified and repaired two leaking lines within the condensate transfer system near the CST. Inspection and testing of the CST did not identify leakage from the CST. Tritium levels have show a decrease since the repair but the licensee continues to excavate an additional line in the area to check for leakage.

No tritium was detected in the intake canal, discharge canal, or at the Route 9 Bridge. The licensee has performed bounding dose calculations and identified dose to be a small fraction (<1%) of 10 CFR 50 Appendix I ALARA criteria.