Tritium Leak Timeline

Chuck Phillips

I was notified by the licensee shortly before labor day 2004. I don't remember the exact day although I believe it was in August. I was given a detailed briefing as to what was found, where it was found, and the concentrations. I was also told about the concentration of tritium in the condensate storage tanks themselves. The tanks themselves were less than 10M pCi/L. I contacted the Region. I also spoke with Wayne Slawinski. I believe the licensee had already contacted him before I did. What I understood from Wayne was that the licensee had not exceeded any release limits and that the event was not reportable and no federal regulations were violated.

The licensee had stopped sampling the small wells near the underground piping for a significant period of time. It was not known for how long the pipe had been leaking and how much water had leaked out.

I was updated daily on the status of the sampling and the excavation with a more detailed briefing on about a weekly basis.

The State was notified. The licensee notified the residents of the homes surrounding the station property on more than one occasion and offered to sample their wells. The licensee sampled some residents wells. I don't believe they found any Tritium or at least nothing above background. The licensee also held an open house in their training building for the local residents along with representatives of the State EPA. The licensee also planned to contract a hydrology study to determine the direction of the flow of the water underground. This was completed after I left in February 2005. The results of the study were that ground water flows north toward the river.

2004 Tritium Leak

August 26, tritium sampling result indicated 6.13E+6 pCi/L.

August 26, the licensee began increased sampling.

Beginning of September, the licensee began excavating area to locate and repair leak.

October 14, pressurized suspect piping. However, did not locate leak. Therefore, the licensee decided to replace approximately 75 feet of the HPCI suction piping.

November 29, HPCI realigned back to CST.

December 8, 2004, an ACE determined that the primary cause for the failure of the HPCI suction piping was due to the degradation of the moisture barrier wrapping. Deficiencies with the cathodic protection system was also identified as a contributing factor.

Per the licensee's business plan, the remaining old piping, approximately 100 feet) was scheduled for replacement in June 2006.

C/4

2006 Tritium Leak

January 3, 2006, well E-3 showed tritium level of 5000 pCi/L.

The licensee resampled on January 19, well E-3 increased to 89, 000 pCi/L. As a result, the licensee went to increased sampling.

January 31, well E-3 indicated 90,000 pCi/L.

February 10, well E-3 indicated tritium levels of 476,000 and 486,000 pCi/L. As a result, the licensee increased sampling, to a daily basis, for seven wells in the vicinity of the suspect piping plus an additional 5 - 9 wells.

February 16, the licensee began excavating in the vicinity of well E-3.

February 16, the inspectors observed the licensee's well sampling activity.

March 3, the licensee completed shoring of the excavation site.

March 3 or 4, the licensee will pressurize the HPCI suction piping to determine the location of the leak. The licensee plans to replace all the HPCI suction, HPCI return, and CST cross-tie piping regardless if the leak location is definitively identified by the testing.

The licensee conducted G-Scan testing on approximately 70 feet of the LPCI (which is located in the same areas as the HPCI suction and return) piping did not indicate any signs of piping wall reduction. The licensee is still considering the remaining 100 feet of piping for testing.