

Talking Points

Unmonitored Release from Browns Ferry Condensate Storage Tank

January 10, 2008

- On Wednesday, water in an underground tunnel that overflowed from a storage tank at Browns Ferry was determined to contain radioactive tritium following analysis by chemists at TVA's lab in Muscle Shoals.
- The tank overflowed earlier this week when a level switch malfunctioned. The tank's overflow piping directed the water to a sump in the tunnel as designed. Due to the amount of overflow, the sump overflowed into the condensate pipe tunnel that is located under the turbine building.
- Due to the design of the tunnel, some contaminated water may have seeped from the tunnel into the ground.
- TVA notified state and local officials of the potential onsite underground leakage in accordance with an industry initiative that ensures communities are made aware of even minor incidents related to groundwater.
- The water sample obtained from the underground sample point located closest to the tunnel following the tank overflow showed no measurable tritium radioactivity. (Minimum measurable activity is 270 picocuries/liter)

Supplemental information

- TVA and the nuclear industry adopted an initiative (the Nuclear Energy Institute coordinated its development) to enhance groundwater protection around nuclear power plants.
- The industry's groundwater protection initiative ensures states and communities are promptly informed of even minor incidents that are not significant enough to be promptly reported to the NRC.
- TVA sites have long-standing programs to monitor for radioactivity for both off-site and on-site locations. These programs are subject to oversight by the Nuclear Regulatory Commission.

Q&A

- *Why can't you determine if contaminated water leaked underground or why do you think there is a spill to the ground?*

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The tunnel is several hundred feet long and the expansion joints in it could leak. Data from the underground sample points used to monitor the groundwater have identified contamination in the area onsite under the plant from previous spills.

- *What are you doing to prevent this and fix the tunnel leaks?*

Browns Ferry has been making arrangements to bring in specialty contractors to propose repair options and provide their cost estimates. Engineering work for the repair of the expansion joints was completed last year.

Because the area is a controlled high radiation area not normally accessible for routine inspection, remotely monitored video cameras were installed to provide visual monitoring capabilities of the tunnel. In fact, the source of the water that caused the sump high level alarm was first identified using the installed video system.

- *How much water overflowed?*

About 11,000 gallons of water overflowed into the sump and tunnel before it was discovered, stopped and pumped to the plant's radioactive wastewater system.

- *How much radioactivity was measured in the samples?*

The initial measurement normally done on water samples showed no gamma radioactivity above the minimum detectable levels. Subsequent analysis by the offsite TVA laboratory showed about 2 million picocuries per liter.

(a picocurie is 1/1,000,000,000,000 - one trillionth of a curie).

Thus there was about 2 millionths of a curie per liter of radioactivity.

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