

Harris Tritium Concern Talking Points (4/1/2009)

Q. Where was the tritiated water discovered?

A. On April 1, 2009, the results of an ongoing hydrology study being conducted by Harris Nuclear Plant as part of the voluntary NEI Industry Groundwater Protection Initiative revealed that a pipe leak in the buried Cooling Tower Blowdown line was releasing water containing tritium into the surrounding soil. Water containing tritium was discovered in a manhole near the pipe. The leak rate has not been determined but it appears to be small. The Cooling Tower Blowdown line is used for liquid effluent dilution as part of permitted, releases that are within regulatory limits. The permitted liquid effluent release point is the discharge from the Cooling Tower Blowdown line into Harris Lake. The location of the manhole is on a peninsula surrounded on three sides by Harris Lake. The closest property boundary to the site of the leak is 1.79 miles away. All leaking water appears to be contained within the site boundary, and based on studies performed by an independent hydrologist, offsite migration is not anticipated.

Q. When was the tritium discovered?

A. The tritium was discovered during routine monitoring in December, 2008. Once it was determined there were low levels of tritium in the area, Progress Energy hired an independent hydrologist to pinpoint the source of the tritium. The licensee received the hydrologist's report the week of March 30, 2009.

Q. What are the highest levels found by the licensee?

A. The tritium limit for safe drinking water is set at 20,000 picocuries per liter by the EPA. Progress Energy reported that the maximum tritium activity level discovered on the Harris property was 2,120 picocuries per liter, well below the EPA safe drinking water standard.

Q. Where did the tritium originate? How did it get into the cooling tower blowdown discharge pipe?

A. The pipe that discharges water from the cooling tower back into Harris Lake has developed a small leak, and is releasing water containing low levels of tritium in the surrounding soil. The licensee has not yet identified the exact source of the leak, but plans to continue efforts to locate and correct the source of the leak.

Q. Can those elevated levels of tritium migrate into any public drinking water supplies?

A. Two recent independent hydrogeology studies (2006 and 2009) indicate the groundwater around HNP would not affect public drinking water. The area around the HNP plant was excavated during construction and the backfill area acts as a "bowl" which controls the movement of groundwater. The studies indicate that water in this area would likely flow Southeast towards Harris Lake.

Q. Does Harris Lake contain tritium?

A. Harris Lake does contain tritium. Tritium levels in the lake are around 7000 picocuries per liter, well below the EPA safe drinking water standard. Harris Lake is a man-made lake, built and owned by Progress Energy. This lake is the approved, permitted release point for

1-3

discharges supporting plant operations. Therefore some low levels of tritium would be expected in the water being released through the blowdown line..

Q. How many wells did the licensee drill and where are they?

A. As part of the investigation, nine new monitoring wells were installed. Of these wells, five of them showed tritium values from 350 to 1,450 picocuries per liter. The two wells closest to the manhole had the highest values. In addition, the wells showed limited migration of the water. For example, a 30 foot deep well located about 20 feet from the cooling tower blowdown pipe manhole did not indicate tritium. Water inside the manhole had tritium levels of 2,120 picocuries per liter. The tritiated water seems to be confined to the area immediately surrounding the pipe.

Q. Is the licensee still pumping water through the pipe?

A. Yes. The line is the plant's approved method for discharging water that is within regulatory limits into Harris Lake. The licensee is continuing to monitor the leak and determining the appropriate corrective actions.

Q. When was the NRC aware of the situation?

A. The NRC was informed of the results of the hydrologist's report the week of March 30, 2009 and was aware of the discovery of the tritium in December 2008.

Q. What is the NRC doing in response to this issue?

A. The NRC is reviewing the results of the Progress Energy Report documenting the results of the hydrological study at the Shearon Harris Plant. The two NRC inspectors permanently assigned to the Harris site have been monitoring licensee actions at the site and inspecting Progress Energy's actions to identify and correct the source of the leak in the cooling tower blowdown piping. Technical experts in the NRC's Region II office in Atlanta, GA, are reviewing the details of the report to verify that Progress Energy is in compliance with federal regulations and that there is no risk to the public.