

# NEWS RELEASE

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## CONNECTICUT YANKEE COOLING FANS PASS NOISE TEST

HADDAM NECK, Connecticut, July 9, 1998. -- Noise tests conducted this week by Connecticut Yankee Atomic Power Company have confirmed that neighbors of the Connecticut Yankee (CY) nuclear power plant will not be able to hear the four cooling fans recently installed on the roof of the plant's Spent Fuel Pool Building.

The fans were installed as part of a new system to cool the water in the fuel pool where CY's used nuclear fuel is stored. The current system, which uses cooling water taken from the Connecticut River will be disconnected when the new system is fully operational.

\*Sensitivity to our neighbors' comfort and convenience played a key role in the type of system we chose,\* said Russ Mellor, VP of Operations & Decommissioning. \*We wanted the quietest fans possible and we were able to work with the manufacturer during the design phase last year to ensure that noise pollution would not be an issue.\*

An independent noise measurement expert was sent this week to four residential locations less than a mile from the plant to measure the sound levels when all four fans were operating. Background noise levels were measured when the fans were off to provide a baseline. The testing equipment was unable to detect the fan noise above background noise at all four locations. The noise testing expert also confirmed that sound emitted from the fans is in full compliance with the State of Connecticut Department of Environmental Protection's stringent nighttime noise limit of 51 decibels.

\*We're very pleased with the results of this week's test. We'll be decommissioning for another six to seven years and we want to be sure our neighbors are not inconvenienced in any way by our work,\* added Mellor.

### **Background Information: Spent Fuel Pool Cooling System**

The new cooling system currently being installed at the CY nuclear plant is part of a program to isolate the spent fuel pool from the rest of the plant to ensure safe storage of used fuel during the decommissioning process. All electrical and mechanical systems that support fuel storage will eventually be independent of other plant systems. This project, called \*The Spent Nuclear Fuel Pool Island,\* does not involve moving buildings or the fuel.

CY's 1019 used fuel assemblies are stored in a steel and concrete reinforced pool inside the Spent Fuel Pool Building. The water serves as a shield from the radiation emitted by the fuel and is also used to cool the fuel assemblies, which give off thermal heat. Currently water from the Connecticut River is pumped through a piping system that passes through a heat exchanger in the Spent Fuel Pool Building. The heat exchanger transfers heat, from a separate piping system carrying warm fuel pool water, to the pipes carrying the water from the Connecticut River. The river water is returned and cooler water is pumped in again. The water in the two piping systems are remain sealed in separate piping systems and do not mix.

The new cooling system is an air-cooled system that eliminates the need for cooling water taken from the river. In the air-cooled system the same cooling water is continually pumped through the pipes that pass through the heat exchanger inside the Spent Fuel Pool Building. Since the water is in a closed piping system and not returned to the river, it must be cooled in another way. The new system uses four fans that blow air over the pipes carrying the water. In addition, a separate system sprays water on the pipes which aids cooling through evaporation. Once this system is completely installed, only two fans will typically be running at the same time.

### **Background Information: Decibel Levels**

Intensity of sound is measured in decibels ranging from 0, the faintest sound the human ear can detect, to over 180, the noise at a rocket pad during launch. Normal conversation is approximately 60 decibels. A lawn mower or truck traffic is about 90 decibels. CY's cooling fans are 85 decibels standing on the roof of the Spent Fuel Pool Building five feet away from the fans. The decibel level drops into the high 70's at ground level near the Spent Fuel Pool Building and is not detectable above background noise at the site fence. The decibel level of the four off-site testing locations, with or without the new fans operating, ranged from the high 30's to the mid 40's depending upon location.

The intensity of the fan noise is caused by fan speed, the angle of the blades that rotate inside the fan housing, and the number of fans being used. CY chose a slower fan speed -- 900 revolutions per minute (RPM), a 5 degree blade pitch, and a system that only required four 60-inch diameter fans. Another New England nuclear facility recently installed a fan

system using 18, 36-inch diameter fans with a higher fan speed (1800 RPM) and a greater blade angle (15 to 20 degrees). As a result, that facility has been experiencing greater than anticipated noise levels since the fans were installed.