

# NORTH COUNTY NEWS

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## **NRC approves of Entergy groundwater plan**

*By Abby Luby*

### ***Agency OKs clean up efforts at Indian Point***

Contaminated radioactive water leaking from the Indian Point Nuclear Power Plants is under control. That's what Entergy, the plant's owner, told the Nuclear Regulatory Commission at a hearing Tuesday night.

The NRC, the nation's nuclear watchdog agency, gave passing grades to Entergy for its program handling the contaminated water that has been leaching into the groundwater around the Buchanan based plant for almost 20 years.

Water laced with the cancer-causing radioactive isotope Strontium-90 has been leaking from the Indian Point Unit 1 spent fuel pool since the 1990s. Tritium, a different radioactive isotope that also causes cancer, has been leaking from Unit 2 since 2005.

On Tuesday night, the NRC held a meeting to publicly evaluate Entergy's performance in tracking and stopping the leaks that have amassed into two underground plumes that are as deep as 175 feet. The contamination has been streaming into the Hudson River.

The major leak is coming from the Unit 1 spent fuel pool. Unit 1 has been shut down since 1974, but the pool still holds irradiated spent fuel.

"Unit 1 has been leaking about 35 to 70 gallons a day of Strontium-90 since the mid-1990s," said Don Mayer, director of special projects at Entergy. "Unit 2 has been leaking tritium since 2005 at about 35 gallons a day."

Entergy announced that it will remove and transfer all of the spent fuel in the Unit 1 spent-fuel pool to five storage casks stored at an open paved area near the reactors. The target date to complete the transfer is Dec. 31.

"We're essentially terminating the source of the groundwater contamination from that location," said Mayer. "The Strontium-90 in Unit 1 has already been reduced. We have installed enhanced demineralization which has reduced the Strontium and other nuclides by more than 98 percent. That means that less is

going into the Hudson River.”

Most of the audience was Entergy officials, NRC staff, researchers and about 50 people from the general public. The four-hour meeting was held at Colonial Terrace in Cortlandt Manor.

Mayer said that Entergy has a long-term monitoring plan that will test water from several monitoring wells every three months. It will issue a public report on the monitoring only once a year. Jim Noggle, a senior health physicist with the NRC who researched Entergy’s remediation plan said the NRC is not asking Entergy to spell out its long-term monitoring plan.

“The plan still needs to be developed, but the kind of detailed questions we are asking will lead Entergy to do detailed reports,” he said.

Additional NRC inspectors have been added to the resident inspector team at Indian Point to specifically study the groundwater contamination.

“Studying the contamination is not really part of our oversight,” said NRC spokesperson Neil Sheehan. “The NRC is trying to get a rule implemented to include groundwater contamination and leak detections for all nuclear power plants, but the rule is still in the process of being discussed.”

Last year Entergy discovered a pinhole-sized tear in the stainless steel liner of the spent fuel pool in Unit 2. Divers were sent down to explore the pool but could only inspect about 40 percent of the liner.

“We are hoping that the one pinhole is the cause of the leak,” said Sheehan.

“But Entergy has increased the number of wells around the reactor which should indicate if it is the cause.”

Over the past two years Entergy has dug over 40 monitoring wells in attempts to figure out where the leaks were coming from. Claiming that the source of the leaks is solely from Unit 1 and 2 spent fuel pools Mayer said, “There are no other leaks that we’ve been able to identify. We have enough monitoring wells to tell us if there is a new leak, and if there is we could take action quickly.”

Entergy’s plan to dry up the underground plumes is known as “monitor natural attenuation” which means just keeping an eye on the plumes to see if they diminish after emptying the Unit 1 pool.

Critical of that approach was Mark Jacobs, a member of the Indian Point Safe Energy Coalition, an organization that is seeking to shutter the plant.

“My summary of natural attenuation means that Entergy is saying it is done,” he said. “That’s a pretty convenient plan for them and it’s not acceptable to me.”

Jacobs also attacked the NRC for favoring Entergy’s plan for leak remediation and not assuring public safety and health.

“You, the NRC, is looking at a plan given by the owner of the plant and the owner has mixed motives,” Jacobs said. “On the one hand they do care about public safety, but on the other they have a mandate to protect the profits for their stockholders. Because of that, Entergy’s plan could be one that cuts corners.”

Phil Musegaas, of the environmental group Riverkeeper said, "We do not agree that sampling groundwater monitoring wells is sufficient to constitute a long-term monitoring program."

Musegaas wanted to know if Hudson River fish were sampled for strontium-90. "Is it true that the plant has been releasing strontium-90 into the environment for the last 27 years without sampling the fish for it?" he asked.

Mayer didn't directly answer Musegaas' question but told him that although sampling was required from the 1960s to the 1980s, the NRC removed the requirement in the 1990s because only a small fraction of strontium-90 was released at the power plants and it wasn't a public concern.

Entergy tested the fish in the summer of 2006 together with the New York State DEC. The results showed no contamination in the samples taken near the plant and 90 miles upstream, according to the utility company. At the meeting, both Entergy and the NRC agreed that the levels of tritium and strontium-90 leaking into the Hudson River were extremely minimal.

A few years ago, about 3 million gallons of titrated water leaked into the groundwater at the Braidwood Nuclear power plants in Illinois, contaminating drinking systems for several communities.

Mayer assured those at the meeting that Entergy's monitoring showed no impact to public health or safety from the ground water contamination at Indian Point.

"We aren't seeing any contamination in off-site wells or reservoirs and no contaminants attributable to the plant have been detected in the Hudson River water or fish," he said.