

**From:** <gary.hoover@srs.gov>  
**To:** "Mark Notich" <mdn@nrc.gov>  
**Date:** 10/11/2007 7:46:59 AM  
**Subject:** FYI: Tritium in Wells (Duke Energy & 'Barnwell')

Mark,

FYI.

Gary

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TheState.com

Tritium level high in water at S.C. plant

Radioactive material at Catawba nuclear site  
above EPA safe-drinking standard

By SAMMY FRETWELL

State and federal authorities are investigating the discovery of radioactive tritium in groundwater at a Duke Energy nuclear power plant in York County.

Tritium was detected at twice the Environmental Protection Agency's safe drinking water standard in a test well on the Catawba nuclear site, according to an incident report filed this week with the Nuclear Regulatory Commission.

The S.C. Department of Health and Environmental Control plans to test private wells near the plant to see if any show levels of the radioactive material, agency officials said Wednesday. Testing will occur in the Bethel Community of York County.

"We want to know whether any tritium is in the groundwater used by wells outside of the plant's boundary," DHEC's Patrick Walker said.

Tritium is a radioactive material produced by nuclear power plants and weapons complexes. It isn't considered as toxic as other radioactive pollutants, such as plutonium, but tritium can increase a person's chances of developing cancer.

It also can foreshadow the eventual flow of more toxic radioactive materials in groundwater, said David Lochbaum, a nuclear safety expert with the Union of Concerned Scientists in Washington.

Strontium was found in groundwater at a New York nuclear plant about six months after tritium was discovered, Lochbaum said, referring to the discovery during the past two years.

Lochbaum, who tracks nuclear power plant safety issues, said it's too early to say how substantial the contamination is at Catawba. NRC spokesman Roger Hannah said the agency has no reason to believe it is

public health threat, at least for now.

Duke Energy found the leak in York County while testing groundwater in the area of the nuclear plant, according to the NRC. It was the only one of 30 test wells to show tritium levels above the EPA's standard of 20,000 picocuries per liter.

"We don't know the source; that is part of the investigation," said Duke Energy spokeswoman Valerie Patterson.

Tritium contamination has been a concern in South Carolina and across the country recently because of leaks at other nuclear plants and from Barnwell County's low-level nuclear waste landfill. The Barnwell site takes nuclear refuse from atomic power plants.

Lochbaum praised Duke for checking the groundwater. The groundwater check is part of a national initiative by the nuclear industry to identify problems in the wake of leaks at other power plants.

One plant in the Midwest leaked tritium for an extended period before it was discovered. The Catawba plant has had at least three leaks of radioactive material since 1992, according to a report Lochbaum compiled. Most nuclear plants have had some sort of leak since their inception, he said.

In South Carolina, Lochbaum noted nearly 50 "groundwater events," including leaks, at the state's four nuclear plant sites.

Reach Fretwell at (803) 771-8537.

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Barnwell tests on agenda

After two months of questions about a leaking nuclear garbage dump, state regulators will try to explain why Barnwell County residents aren't in danger of drinking polluted water.

The S.C. Department of Health and Environmental Control will hold a reception and public meeting tonight for people living near Chem-Nuclear's 36-year-old atomic waste landfill at Snelling.

Agency officials, criticized for not making public the extent of pollution at the site, say they will go over the results of tests they say show drinking water around the landfill is safe from radioactive contamination.

The reception starts at 6:30 at the S.C. Advanced Technology Park off S.C. 64 in Snelling.

DHEC records, obtained by The State for an Aug. 19 story, show more than 30 monitoring wells at the landfill with tritium levels that exceed the Environmental Protection Agency's safe drinking water standard. The 36-year-old landfill is scheduled to close to the nation next summer. Site operator Chem-Nuclear's attempt to keep it operating past 2008 failed in the Legislature.

## IS THE WATER SAFE?

What we know: Late this summer, the agency tested private wells near the landfill. It found 34 of 39 were free of tritium contamination; the remainder had small amounts.

What we don't know. DHEC's August tests do not guarantee the wells will remain free of tritium contamination — or contamination by other, more dangerous pollutants.

## WHO KNEW?

What DHEC disclosed. DHEC told lawmakers that caps placed on the landfill's closed burial trenches were working to decrease tritium pollution in groundwater. The agency called the site safe.

What DHEC didn't say: The agency never said that more than 30 monitoring wells beneath the Barnwell County landfill were polluted at levels above a federal safe drinking water standard.

Could lay people understand the information DHEC released?

What was available: Below is an example of information DHEC long made available to the public. It shows the results of monitoring at test wells but does not show their locations or explain how to read the results.

What was withheld: This 2006 plume map, sealed from public view until The State newspaper asked for it last spring, shows the average concentrations of tritium and the location of monitoring wells at the Chem-Nuclear landfill.

**Hearing Identifier:** Vogtle\_Public  
**Email Number:** 679

**Mail Envelope Properties** (47299C72.HQGWDO01.TWGWPO04.200.200000F.1.AC910.1)

**Subject:** FYI: Tritium in Wells (Duke Energy & 'Barnwell')  
**Creation Date:** 10/11/2007 7:46:59 AM  
**From:** <gary.hoover@srs.gov>

**Created By:** gary.hoover@srs.gov

**Recipients**  
"Mark Notich" <mdn@nrc.gov>

**Post Office**  
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<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	5610	10/11/2007 7:46:59 AM
TEXT.htm	6855	11/1/2007 9:29:22 AM
Mime.822	18394	11/1/2007 9:29:22 AM

**Options**  
**Priority:** Standard  
**Reply Requested:** No  
**Return Notification:** None  
None

**Concealed Subject:** No  
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