

## John White - Updated groundwater results

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*J. White*  
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**To:** <jrw1@nrc.gov>  
**Date:** 10/23/2006 12:55 PM  
**Subject:** Updated groundwater results  
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John,

Attached is an advanced copy of the groundwater investigation update. The sample results suggest that concentrations of both H3 and Sr-90 are decreasing on site. As you know we are doing a low flow pump test this week and should have some indication of the feasibility of a pump and release program for H3 sometime soon. The demineralizer in operation at IP1 appears to be resulting in lower Sr-90 concentrations. This will go out to the stakeholders, probably today.

I was out of the office last Friday, so this update is a little later than I expected

Kathy McMullin  
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in accordance with the Freedom of Information  
Act, exemptions 4  
FOIA- 2007-0080

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## Indian Point Energy Center Status Report

October 23, 2006

### Operational Status

IP2 is currently at 100% reactor power; the unit has been on line for 61 days and Unit 3 is operating at 100% reactor power and has been on-line for 94 days.

### Groundwater Investigation

*Sample results show decrease in levels of radioactivity*

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Entergy has received sample data from monitoring wells located south and west of Unit 1 and near the [REDACTED]. These wells were tested as part of the groundwater investigation into the extent of contamination at Indian Point.

The table below shows the results for tritium. As you can see from the table, in almost every case the concentration of tritium has dropped from the early spring to the late summer and fall samples. Levels have dropped by a factor of 2 to 5. During this same period, the volume of water collected in the IP2 collection box has also decreased. The results suggest that less tritium is entering the groundwater.

ID	Location	Date	Tritium Results (pCi/L)
MW-33	IP2 transformer yard	7/3/06	264,000
		8/30/06	115,000
MW-34	IP2 transformer yard	2/3/06	224,000
		8/24/06	66,900
MW-35	IP2 transformer yard	2/16/06	90,400
		6/26/06	17,400
MW-36*	Near discharge canal (multi-level samples)	3/23-24/06	55,200 – 26,800
		8/2/06	14,100-24,500
MW-37*	Near discharge canal (multi-level samples)	2/06-3/06	19,000-34,000
		6/27/06	44,000-8,000

- *For wells from which samples are collected from different elevation, a range of values is shown. The earlier sample date represents the highest concentration found at that location/elevation.*

ID	Location	Date	Sr-90 (pCi/L)
MW-42	Adjacent to IP1	4/7/06	110-73.7
		9/18/06	9.8-20.5
MW-45	South of IP1 near IP3	6/12/06	1.02
		9/13/06	ND
MW-46	IP3 transformer yard	8/4/06	ND
		9/13/06	ND
MW-49	Near discharge canal (multi-level sample)	3/22/06	19.4-18.4
		8/28/06	2.5-8.3
MW-50*	Near discharge canal (multi-level sample)	3/06-5/06	19.5-25
		8/28/06	1.2-1.3

The decrease in Strontium concentration is most likely the result of the dimineralizer that was installed in the [REDACTED]. The dimineralizer has reduced Sr-90 concentration in the pool by 98%. This source term reduction has yielded sample results with drops in Sr-90 concentration by

2/4

While these sample results are encouraging in that they represent reductions in the concentration of contaminants on site, Entergy is conducting additional sampling and tests to refine the groundwater model. A test is being conducted this month to determine the feasibility of pumping groundwater from the area near IP2. The two phase pump test, a 1-day and 3-day test, will extract water from Recovery Well-1, located in the [REDACTED]. The results of the test will determine whether that technique can be used to arrest the spread of tritium.

### Educational Outreach

Entergy Nuclear Northeast provides customized outreach education programs for schools, youth groups, and civic organizations. The topics we cover include Emergency Planning, Understanding Radiation, Nuclear Fuel and a general overview of the operations of Indian Point Energy Center. If you would like a brochure or are interested in scheduling a program, contact IPEC Communications at 914-271-7441.

If you have any questions or need clarification of the information provided, please contact Kathy McMullin, manager of communications, Indian Point Energy Center, at 914-271-7132.