## STATE OF VERMONT PUBLIC SERVICE BOARD

Investigation into (1) whether Entergy Nuclear Vermont	)	Docket No. 7600
Yankee, LLC, and Entergy Nuclear Operations, Inc.,	)	
(collectively, "Entergy VY"), should be required to cease	)	
operations at the Vermont Yankee Nuclear Power Station,	)	
or take other ameliorative actions, pending completion of	)	
repairs to stop releases of radionuclides, radioactive	)	
materials, and, potentially, other non-radioactive materials	)	
into the environment; (2) whether good cause exists to	)	
modify or revoke the 30 V.S.A. § 231 Certificate of Public	)	
Good issued to Entergy VY; and (3) whether any penalties	)	
should be imposed on Entergy VY for any identified	)	
violations of Vermont statutes or Board orders related to	)	
the releases	)	

## **SWORN AFFIDAVIT OF JEFFERY A. HARDY**

Jeffery A. Hardy, being duly sworn, states as follows:

- 1. My name is Jeffery A. Hardy.
- 2. I am employed by Entergy Nuclear Operations, Inc. ("ENO"), at the Vermont Yankee Nuclear Power Station (the "VY Station") as Chemistry Manager.
- 3. In my capacity as Chemistry Manager, I have personal knowledge regarding (i) the groundwater-monitoring program at the VY Station, (ii) the recent detection of low levels of tritium in groundwater wells GZ-24 and GZ-6, (iii) the efforts of ENO and Entergy Nuclear Vermont Yankee, LLC ("ENVY" and, together with ENO, "Entergy VY") to identify the source of the tritium found in these monitoring wells and (iv) Entergy VY's interactions with government regulators, the Vermont Department of Public Service ("DPS"), the Vermont Department of Health ("DOH") and the U.S. Nuclear Regulatory Commission ("NRC") to identify and address the source of the tritium that has been detected in these wells.

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- 4. Pursuant to the Board's order dated February 7, 2011, I submitted affidavits on February 11, 2011, February 25, 2011, March 11, 2011, March 25, 2011, and April 8, 2011 describing Entergy VY's investigation into the source of tritium detected in groundwater monitoring wells GZ-24 and GZ-6. Today's affidavit serves as the next biweekly status update, as ordered by the Board.
- 5. Tritium levels in samples taken from groundwater monitoring well GZ-24 in the last two weeks have remained below detectable levels. Tritium levels in samples taken from groundwater monitoring well GZ-6 in the last two weeks have also generally been below detectable levels. On one occasion, a sample taken from GZ-6 showed a concentration measuring 847 pci/L. Samples are taken Monday through Friday from both GZ-24 and GZ-6.
- As described in my affidavit of February 11, 2011, Entergy VY implemented an Action Plan to identify the source of the elevated levels of tritium in groundwater monitoring well GZ-24. As described in my previous affidavits, Entergy VY has identified six lines as potential sources. Five of those six lines have undergone pressure testing. Test results to date do not indicate any gross loss of integrity of the pipes. Entergy VY is undergoing preparations with outside experts in order to conduct confirmatory tracer gas testing. The tests are tentatively scheduled for late April into early May.
- Entergy VY completed a boroscopic inspection and pressure test on the fifth line,
  RW-187 Standby Gas Treatment System Drain Line ("RW-187") on April 1,
  2011. The test results did not indicate any gross loss of integrity of RW-187.

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Entergy VY is also preparing RW-187 for confirmatory tracer gas testing, which

is tentatively scheduled for early May.

8. As previously reported, Entergy VY was focused on an investigation plan for the

sixth line, RW-233 Drain Line from AOG Sump ("RW-233"). Based on a

thorough analysis, Entergy VY has concluded that isolation of RW-233 for the

purposes of conducting tracer gas testing or pressure testing is not practical.

Because RW-233 is rarely in use and is not necessary for the operation of the

plant, Entergy VY is now preparing to take it out of service. As stated in my

affidavit of March 11, 2011, it is possible that RW-233 was a legacy source for

the tritium levels seen in GZ-24. Retiring RW-233 will ensure that it cannot

contribute to any detectable levels of tritium.

9. Entergy VY continues to provide communications every business day of all

applicable sample results to the Department of Public Service, the Vermont

Department of Health and the Nuclear Regulatory Commission.

10. Entergy VY also continues to hold weekly, governmental-stakeholder conference

calls to provide updates on Entergy VY's investigation progress.

Date: April 21, 2011

Name: Jeffery A. Hardy

Title: Chemistry Manager

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STATE OF VERMONT COUNTY OF <u>windlam</u>, SS.

On this <u>21</u> day of April, 2011, before me, personally appeared feffery Hardy and made oath to the truth of the foregoing on his own personal knowledge.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Before me,

Notary Public

My commission expires:  $\frac{2-10-15}{2}$ 

