**Mendiola, Doris**

**Subject:** FW: Dkt ID NRC-2010-0302
**Attachments:** 2010 11 01 NYS ltr (Dkt ID NRC-2010-0302).pdf

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**From:** John Sipos [mailto:John.Sipos@ag.ny.gov]
**Sent:** Tuesday, November 02, 2010 11:47 AM
**To:** Bladey, Cindy
**Subject:** Dkt ID NRC-2010-0302

9/23/2010
75FR57987
(7)

Dear Ms. Bladey:

Attached please find comments submitted in Docket ID NRC-2010-0302. A paper copy also has been sent to you via U.S. Mail.

Please contact me if you have any difficulty opening the attachment.

Thank you.

John Sipos
Assistant Attorney General
State of New York



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**STATE OF NEW YORK**
**OFFICE OF THE ATTORNEY GENERAL**

ANDREW M. CUOMO
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

November 1, 2010

Cindy Bladey, Chief
Rules, Announcements, & Directives Branch
Nuclear Regulatory Commission, TWB-05-B01M
11555 Rockville Pike
Rockville, Maryland 20852-2738

Re: Comments on Groundwater Task Force Report;
Docket ID NRC-2010-0302, 75 Fed. Reg. 57987

Dear Ms. Bladey:

The State of New York submits the following evaluation of the Groundwater Task Force Report.

The Groundwater Task Force Report,[1] the accompanying list of leaks,[2] and associated website titled "Buried Reactor Pipes and Tritium"[3] contain inaccuracies and omissions. Given that one of the objectives of the task force is to strengthen trust and improve communication, the Task Force Report should be revised to correct the inaccuracies and reissued.

The Groundwater Task Force Report, list of leaks, and the associated website are inaccurate for the following reasons:

1. The report, list of leaks, and webpage are incomplete because they focus primarily on only one particular radionuclide, tritium. Radionuclides other than tritium have leaked from reactors, but the list and the main report (p. 1-8) do not acknowledge such incidents. For example, Indian Point has leaked

[1] Groundwater Task Force Final Report, June 2010, ML101740509.
[2] This document is entitled "List of Historical Leaks and Spills at U.S. Commercial Nuclear Power Plants," Rev. 6, (Sept. 14, 2010) ML101270439.
[3] The webpage is entitled "Buried Reactor Pipes and Tritium" and is available at http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/buried-pipes-tritium.html. It is also accessible through NRC's homepage http://www.nrc.gov/ and (as of today) is the first link under "Key Topics."

strontium-90, cesium-137, cobalt-60, and nickel-63 into the environment. In addition, during the recent public meeting, NRC Staff acknowledged that the presence of tritium is often a precursor to the detection of other radionculides in the groundwater.[4] By focusing on tritium, the list, webpage, and report present an inaccurately narrow discussion of the issue.

2. The main report (p. 1-7), list of leaks, and webpage are also incomplete because they focus on leaks of tritium from "buried" pipes and do not acknowledge that radionuclides have also leaked into the environment from "underground" pipes and spent fuel pools. For example, at Indian Point, the Unit 1 Spent Fuel Pool and the Unit 2 Spent Fuel Pool each leaked radionuclides into the groundwater for several years and produced separate subsurface plumes of radionuclides. By focusing on "buried" pipes, the report presents an inaccurately narrow discussion of the issue.

3. The report and accompanying list of leaks are also incomplete because they fail to list all the subsurface leaks that have occurred at each reactor, the duration of each such leak, and the concentration of the radionuclide detected in samples.

   The report and its Appendix A (p. A-6 to A-8) do not disclose the concentrations of strontium-90, cesium-137, cobalt-60, nickel-63, and tritium detected in the groundwater at Indian Point between the beginning of 2005 and the end of 2008. NRC Staff is aware of at least some of the concentration results at Indian Point,[5] but the main report does not provide this information. The Staff is also aware of concentration results from other facilities, but the main report does not present this information.[6]

   The report and list do not reflect all the leaks that have occurred at each licensed reactor. For example, the list reported only one leak for each "site,"

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[4] Transcript, Public Meeting on Groundwater Protection, pp. 120-21 (Oct. 4, 2010) ML102861795.

[5] According to a 2006 Information Notice, "In September 2005, the licensee identified leakage of contaminated water from cracks in the [Indian Point] Unit 2 spent fuel pool (SFP), and subsequently discovered tritium contaminated ground water, about 200,000 pCi/L, in a monitoring well located in the Unit 2 transformer yard." *See* IN-2006-13 at 3 (July 10, 2006) ML060540038. "Onsite groundwater tritium concentrations have been measured as high as about 600,000 pCi/L in the immediate vicinity of the [Indian Point] Unit 2 SFP." *Id.* On February 27, 2006, a sample showed tritium contamination levels of 30,000 pCi/L at a location close to the Hudson River. *See* Indian Point Nuclear Generating Unit 2 – NRC Special Inspection Report No. 05000247/2005011 (March 16, 2007) ML060750842.

[6] As the preamble to the list of leaks acknowledges, of the 65 sites with operating reactors, "Records indicate 37 of these sites have had leaks or spills that involved tritium in excess of 20,000 pCi/L at some time during their operating history. Fifteen sites are currently reporting tritium, from a leak or spill, in excess of 20,000 pCi/L." Leaks and Spills of Tritium at U.S. Commercial Nuclear Power Plants, Rev. 6, NRC, p. 2 (Sept. 14, 2010) ML101270439.

thus masking the extent of the issue where more than one leak has occurred at sites having multiple reactors, such as Indian Point, which has three reactors. Similarly, the list apparently seeks to report only the leak associated with the highest reported concentration result and thereby masks the extent of leaks at a reactor where there have been multiple leaks with concentration levels below the single historical maximum concentration result. By way of example, in April 2007, a steam line between Indian Point Unit 2 and Unit 3 released tritium, which seeped upward and vented through the soil and aerosolized as steam into the atmosphere; however, this event is not reflected in the list of leaks.[7]

One commenter noted that some operators have agreed to participate in a voluntary industry organized initiative concerning buried pipes and tanks. Despite the participation of Indian Point and other facilities in that initiative, radionculide leaks to State groundwater resources continue.

Since the Indian Point and Braidwood leaks were disclosed in 2005, NRC has prepared or received various reports on subsurface leaks at various nuclear facilities.[8] The recent Groundwater Task Force report does not integrate the information from those other reports or the longer-term historical record. Rather, the report seems determined to look at only a narrow slice of the issue: leaks of (1) tritium from (2) buried pipes that were reported (3) between September 2006 and June 2010. The State is concerned that by limiting the scope of its analysis in the various ways identified in this letter, the Groundwater Task Force Report, the list of leaks, and the webpage minimize and under-report the extent of radionuclide leaks to groundwater.

To ensure an accurate record, NRC should revise the Groundwater Task Force Report and any associated material lists and so-called "fact sheets" concerning the release of radionuclides to groundwater to reflect the full extent of the phenomena at Indian Point and other facilities.

Sincerely,

s/

John J. Sipos
Assistant Attorney General

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[7] The list of leaks also does not report leaks that occurred at reactors that have ceased producing power, such as Connecticut Yankee. This omission also results in an underrepresentation of groundwater leak incidents.

[8] *See, e.g.*, Liquid Radioactive Release Lessons Learned Task Force Final Report, (September 1, 2006) ML062650312.