January 22, 2014

Frans Timmermans
Minister of Foreign Affairs
2500 EB Den Haag
Netherlands

Re: Netherlands Not Fulfilling Pledge from 2012 Nuclear Security Summit

Dear Mr. Foreign Minister,

As host of the 2014 Nuclear Security Summit, your country has a special responsibility to demonstrate leadership in reducing nuclear risks and vulnerabilities. In this light, it is especially troubling that the Netherlands is failing to fulfill its main commitment from the preceding summit: to eliminate use of highly enriched uranium (HEU) from its medical-isotope production industry by 2015.

At the 2012 Nuclear Security Summit, the Netherlands signed an agreement with the United States, Belgium, and France, in which the four parties "reaffirm their determination to support conversion of European production industries to non-HEU-based processes by 2015."[1]

Last month, however, a representative of Netherlands-based Mallinckrodt Pharmaceuticals revealed to a meeting of the White House Office of Science and Technology Policy that the company is not progressing toward fulfilling this commitment by converting from HEU to low-enriched uranium (LEU) for the targets used to produce medical isotopes by the end of 2015.

Were that commitment to be fulfilled, the last U.S. export of HEU for Mallinckrodt would occur in 2014. Instead, Mallinckrodt says that it "will likely require HEU shipments throughout 2015 and 2016."[2] This represents a two-year delay on a conversion program that the Netherlands originally committed to complete in less than three years.

Making matters worse, some of the excuses cited by Mallinckrodt for the delay are implausible. For example, Mallinckrodt says that "we have faced reactor shutdowns which are causing further delays" in the conversion program.[3] While it is true that one reactor, the HFR-Petten, has faced shutdowns, there are two other reactors that Mallinckrodt routinely uses to irradiate targets and that

[1] "Belgium-France-Netherlands-United States Joint Statement: Minimization of HEU and the Reliable Supply of Medical Radioisotopes," White House, Office of the Press Secretary, March 26, 2012, http://www.whitehouse.gov/the-press-office/2012/03/26/belgium-france-netherlands-united-states-joint-statement-minimization-he. See also, Alan J. Kuperman, "Quadripartite Agreement," in *Nuclear Terrorism and Global Security: The Challenge of Phasing out Highly Enriched Uranium*, ed. Alan J. Kuperman (New York and Abingdon: Routledge, 2013), pp. 92-94.

[2] Roy W. Brown, Director, Strategic Alliances, Mallinckrodt Pharmaceuticals, "Mo-99 Supply Update & LEU Conversion Project Status," Mo-99 Stakeholder's Meeting, Office of Science and Technology Policy, Washington, DC, December 11, 2013, Slide 4, http://blogs.utexas.edu/nppp/files/2014/01/Mallinckrodt_OSTP-Meeting-12-11-2013.pdf.

[3] *Ibid*., Slide 3.

the company also could use for development of LEU targets.[4] Therefore, "reactor shutdowns" are no excuse for delay in the conversion program.

A more plausible reason for delay is Mallinckrodt's claim that it has confronted technical hurdles in developing the technology to process irradiated LEU targets to extract and purify Mo-99. Such hurdles are typical during the conversion process, but have been overcome by other producers in Argentina and South Africa, with U.S. financial assistance as necessary.

In this light, it is especially disturbing that Mallinckrodt has refused U.S. government offers of financial and technical assistance to expedite the conversion process. The U.S. Department of Energy's presentation at the same meeting indicates that it has offered such financial assistance.[5] However, that presentation also indicates that Mallinckrodt has not accepted such support, unlike producers of medical isotopes in Belgium and South Africa.[6] If Mallinckrodt accepted such U.S. support, the company would be able to work simultaneously on ensuring production and converting to LEU targets.

Thus, Mallinckrodt's delay in fulfilling your country's commitment to eliminate use of HEU and to convert to LEU targets by 2015 is very heavily the company's own fault – for refusing U.S. assistance to expedite conversion.

It would be a grave embarrassment for your country at the forthcoming summit if the Netherlands were not perceived as doing everything possible to meet its commitment from the preceding summit. Accordingly, we urge you to prevail on Mallinckrodt – prior to the summit – to accept the offer of financial and technical assistance from the U.S. government and to cooperate fully with the U.S. government to expedite the company's conversion process.

Thank you for your urgent consideration of our request.

Sincerely,

Alan J. Kuperman, Ph. D.
Nuclear Proliferation Prevention Project
University of Texas at Austin
akuperman@mail.utexas.edu

Frank von Hippel, Ph.D.
Senior Research Physicist, and Professor of Public and International Affairs emeritus
Program on Science and Global Security, Princeton University

Edwin Lyman, Ph.D.
Senior Scientist, Global Security Program
Union of Concerned Scientists

[4] The BR-2 Reactor in Belgium, and Maria Research Reactor in Poland.

[5] U.S. Department of Energy, "Implementing the American Medical Isotopes Production Act," Mo-99 Stakeholder's Meeting, Office of Science and Technology Policy, Washington, DC, December 11, 2013, Slide 8 cites this as "21.2.94.2.4 Mallinckrodt Conversion Support," http://blogs.utexas.edu/nppp/files/2014/01/NNSA-Presentation_OSTP-Meeting-12-11-2013.pdf.

[6] *Ibid*., Slide 19.