March 17, 2004

Steven A. Toelle
Director, Nuclear Regulatory Affairs
United States Enrichment Corporation
6903 Rockledge Drive
Bethesda, MD 20817-1818

Dear Mr. Toelle,

We received your letter of September 29, 2003, and the attached response to U.S. Nuclear Regulatory Commission (NRC) Bulletin 2003-003 (BL-2003-003), "Potentially Defective 1-Inch Valves for Uranium Hexafluoride Cylinders." NRC has reviewed your response and approves, in part, your proposals for alternative actions relative to the handling of UF_6 cylinders with valves manufactured by the Hunt Valve Company. NRC is aware that the United States Enrichment Corporation (USEC) has a large number of uninstalled Hunt valves in stores. NRC also recognizes the practical considerations arising from USEC's role in utilizing the downblended UF_6 produced from highly enriched Russian uranium.

NRC approves USEC's proposal for installing and using Hunt 1-inch valves currently in USEC stores, on USEC-owned cylinders that will be filled with depleted UF_6 and then placed in storage indefinitely. Prior to installation and usage, these valves must pass a seat leakage test in accordance with ANSI Standard N14.1 (ref. Requested Action **B** of BL-2003-003). NRC's approval is conditioned on USEC's agreement to withdraw from further use any Hunt valves that initially fail the seat leakage test. This approval is provided in consideration that the incremental risk of continuing to install Hunt valves on cylinders for storage of depleted UF_6 is small as compared to the current risk of the depleted UF_6 cylinders already stored onsite. Also, NRC expects that any safety implications of having Hunt valves on stored cylinders containing depleted UF_6 will be taken into consideration, along with other safety issues, when plans are completed to convert the depleted UF_6 to a more stable oxide form in preparation for final disposition. NRC notes that U.S. Department of Transportation (DOT) regulations still need to be met upon eventual shipment of the depleted UF_6 off-site. NRC does not approve installing Hunt valves currently in USEC stores on cylinders for uses other than storage of depleted UF_6.

NRC approves USEC's proposal for continuing to use UF_6 cylinders with Hunt valves already installed (as of the date of this letter), provided that the cylinders are not shipped off-site while containing more than heel quantities of UF_6 (ref. Requested Action **C** of BL-2003-003). Cylinders received from Russia containing downblended UF_6 are excepted from this shipping restriction, as described below. NRC's approval is conditioned on the following: (1) cylinders containing depleted UF_6 and not subjected to further processing may be stored onsite indefinitely, (2) a cylinder containing natural or enriched UF_6 may be used for on-site processing or storage, provided that the cylinder's 5-year hydrostatic testing date has not expired, after which time the valve must be replaced with a valve that meets ANSI Standard N14.1 and that is manufactured by a supplier currently on USEC's Approved Supplier List, consistent with the cylinder's normal wash cycle according to current procedures and requirements, and (3) cylinders with Hunt valves installed, containing natural or enriched UF_6, once emptied, must not be refilled with natural or enriched UF_6 after the end of the 12-month transition period described

in BL-2003-003, until the valve is replaced with one that meets ANSI Standard N14.1 and that is manufactured by a supplier currently on USEC's Approved Supplier List.

NRC approves, in part, your proposal for continuing to ship cylinders with Hunt valves installed for a period of 36 months from the date of issuance of BL-2003-003, when filled with downblended Russian UF_6. This applies to cylinders that are stored upon receipt and not subjected to further processing at USEC before reshipment to a fuel manufacturing facility. However, empty or nitrogen-filled cylinders not yet shipped to Russia must be shipped only with valves installed that meet ANSI Standard N14.1 and are manufactured by a supplier currently on USEC's Approved Supplier List. This condition is effective within 30 days after receipt of this letter (ref. Requested Action **D** of BL-2003-003). This condition should serve to gradually reduce the number of cylinders with Hunt valves that remain in the "Megatons to Megawatts" program.

NRC notes that shipment of cylinders containing only heel quantities of UF_6 (ref. Requested Action **D** of BL-2003-003) is regulated by DOT and not NRC. Thus, NRC neither approves nor disapproves your proposal for shipping UF_6 cylinders containing only heels, with Hunt valves installed.

NRC's approval of USEC's alternative proposals are contingent upon USEC's preparing written documentation of the additional controls it proposes to put in place for identifying, tracking, and handling affected cylinders to ensure proper implementation of its planned storing, handling, and shipping requirements. The documentation should be made readily available to USEC operations personnel and be available for NRC inspection at the affected USEC sites.

NRC notes that USEC's alternative proposals for processing and shipping UF_6 cylinders with Hunt valves installed extend significantly beyond the requested actions contained in NRC Bulletin 2003-003. Effective administration of the USEC-proposed actions will require careful controls to ensure that implementation of these proposals are executed as planned.

Please note that although NRC has approved certain provisions for extending the time that cylinders with Hunt valves may be shipped, the U.S. Department of Transportation (DOT) independently regulates shipments of UF_6, and has specific requirements for the valves on UF_6 cylinders to meet ANSI Standard N14.1. Transport of UF_6 cylinders must still meet the applicable DOT regulations.

If you have any further questions, please contact Lance Lessler, of my staff, at (301) 415-8144.

Sincerely,

/RA/

Robert C. Pierson, Director
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No. 70-7003

cc: James Curtiss, W&S
Peter Miner, USEC
William Szymanski, DOE
Rod Krich, LES
Rick Boyle, DOT
Dan Minter, SODI
Randall DeVault, DOE-Oak Ridge
Carol O'Claire, EMA
Roger Suppes, Ohio Dept. of Health

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