Summary Statement of Alice C. Williams
Deputy Associate Administrator for Infrastructure and Environment
National Nuclear Security Administration
U. S. Department of Energy
Before the
Committee on Energy and Commerce
Subcommittee on Environment and Hazardous Materials

June 22, 2007

Chairman Wynn, Ranking Member Shimkus, and Members of the Subcommittee, I am providing you a summary of my testimony on the Department of Energy's (DOE) management of its stockpile of mercury located at the National Nuclear Security Administration (NNSA) Y-12 National Security Complex in Oak Ridge, Tennessee. My testimony is summarized as follows:

- The approximately 1,206 metric tons of surplus mercury that is owned by NNSA is in safe, secure storage at the Y-12 Nuclear Security Complex in Oak Ridge, Tennessee.
- The Department of Energy has no plans to sell its stockpile of surplus mercury.
- Continuing to store NNSA's stockpile of mercury at our Y-12 facility or identifying an alternate storage location ensures that the mercury will not be released to the global environment thereby minimizing mercury emissions and reducing contaminant levels of this toxic chemical in the environment.

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Chairman Wynn, Ranking Member Shimkus, and Members of the Subcommittee, thank you for the opportunity to discuss the Department of Energy's (DOE) management of its stockpile of mercury located at the National Nuclear Security Administration (NNSA) Y-12 National Security Complex in Oak Ridge, Tennessee. NNSA was established in 2000 as a separate organized agency within the U.S. Department of Energy responsible for enhancing national security through the military application of nuclear energy. NNSA maintains and enhances the safety, security, reliability and performance of the U.S. nuclear weapons stockpile; works to reduce global danger from weapons of mass destruction; provides the U.S. Navy with safe and effective nuclear propulsion; and responds to nuclear and radiological emergencies in the United States and abroad.

Presently, the stockpile of surplus mercury owned by NNSA is in safe, secure storage at the Y-12 National Security Complex and the Department has no plans to sell it. The mercury in storage was originally acquired by the Atomic Energy Commission in the 1950s and 1960s for the separation of lithium isotopes. The Cold War production of enriched lithium required millions of pounds of mercury. In 1963, the Y-12 lithium separation and enrichment program was shut down, and over the next several years the production process was dismantled and mercury was recovered. The mercury, some

owned by the Department of Defense (DOD) and some by the Department of Energy, was placed in storage at Y-12. Over time, a significant quantity of the mercury was sold leaving 1,206 metric tons of the NNSA-owned mercury still in storage; the last time DOE sold mercury was in 1994. This is the single largest inventory of mercury in the DOE complex. The DOD-owned mercury stored at Y-12 was transferred to a DOD storage facility in 2005.

In the 1970's the NNSA mercury inventory was transferred from existing seamed flasks to new seamless flasks, each of which can hold about 76 pounds of mercury. Approximately 35,000 flasks, which are made of 3-L carbon steel and sealed with a threaded pipe plug, are stored in groups of 45 on wooden pallets. The pallets are stored up to three high in a single-story, solid block wall construction building that is used only for mercury storage. The building is approximately 150 feet by 90 feet and has a concrete floor that is sealed with a leak-proof coating. A 6 to 8-inch dike exists around the outer edge of the building to contain any material that could be released in the event of a spill. In other words, the building is constructed to be environmentally protective. In addition, the building is equipped with an automatic dry-pipe (water supply) fire suppression system and portable fire extinguishers. The building is located within security fences and boundaries as well as within the Perimeter Intrusion, Detection, and Assessment System at Y-12.

Continuous air monitoring and periodic visual inspections of the storage building are performed on a routine basis. The air monitoring is conducted at two locations near the

storage building and includes monitoring airborne mercury vapor--measured concentrations are well below the current environmental and occupational health standards for inhalation exposure to mercury vapor. The visual inspections are performed on a quarterly basis for fire safety and to observe for leaks or abnormal conditions. There is no history of a flask that has leaked and the condition of the flasks appears good at this time.

Providing for long-term storage of mercury at the Y-12 National Security Complex will be costly. It has been estimated that storing the mercury for the next 40 years at Y-12 could cost about $42 million. The costs are related to maintenance of the building such as installing a new roof; reflasking if it is determined that the flasks storing the mercury have deteriorated significantly; air monitoring; visual inspections; security of the building; and facility management.

Following the decision by the Defense Nuclear Stockpile Center in 1994 to halt the sale of mercury, NNSA began to explore its options for the disposition of the surplus mercury at Y-12. One of these options was to sell the surplus mercury which resulted in the preparation of a draft Environmental Assessment (EA). The EA, which tiered from DOD's *Final Mercury Management Environmental Impact Statement*, analyzed the environmental impacts of several alternatives related to the management of mercury. Before the draft EA was finalized, NNSA decided in December 2006, to continue to store the surplus stockpile of mercury at the Y-12 site. This decision was based on several factors which included:

- Mercury's known toxicity to living organisms and its mobility in the biosphere.

- Continued global efforts to reduce the use of elemental mercury in developing countries.

- The policies of other countries (e.g. the countries that make up the European Union) support long-term storage of elemental mercury.

At this time we believe that continuing to store NNSA's stockpile of mercury at our Y-12 National Security Complex or identifying an alternate storage location is the right thing to do. It ensures that the mercury will not be released to the global environment thereby minimizing mercury emissions and reducing contamination levels in the environment of this toxic chemical.

This concludes my statement. I will be pleased to respond to your questions.