BEFORE THE UNITED STATES INTERNATIONAL TRADE COMMISSION

LOW ENRICHED URANIUM FROM FRANCE
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TESTIMONY OF
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Good morning. My name is Phil Sewell, and I am Senior Vice President and Chief Development Officer at USEC Inc. I appreciate and welcome this opportunity to speak with you today on this important matter. By way of background, I have been with USEC since its formation in 1993. Prior to that time, I held a number of positions in the U.S. Department of Energy's Uranium Enrichment Enterprise, including Deputy Assistant Secretary for Uranium Enrichment, where I ran DOE's uranium enrichment operations.

Though I will be happy to address any aspect of our business, my purpose in testifying today is to discuss the importance and status of the American Centrifuge project and to describe the serious repercussions to USEC if the antidumping order on LEU from France was terminated. I will also briefly address some of the wholly inaccurate statements Areva makes in its pre-hearing submission with respect to USEC's importation of Russian SWU.

Before discussing the ACP, I would like to give the Commission a brief historical overview of our company.

I. Background on USEC

USEC was formed in 1993 as a wholly-owned government corporation whose mission was to produce and sell low enriched uranium, or LEU, from enrichment facilities in Paducah, Kentucky, and Portsmouth, Ohio. These enrichment facilities were originally constructed by the U.S. government in the early 1950s to produce weapons-grade enriched uranium, and beginning in 1969, supplied U.S. and foreign utilities with commercial nuclear fuel. In 1998, USEC was privatized, and we are now a publicly traded corporation.

USEC ceased enrichment at the Portsmouth plant in 2001. This was an extremely difficult decision and it affected a number of good, hard-working people, but the market place could not support operation of two facilities and USEC had no other choice.

From 1993 until the end of May this year, USEC operated the Paducah plant using U.S. technology to produce LEU for fueling commercial nuclear power plants in the United States and around the world. For more than 50 years, the Paducah plant provided a reliable source of nuclear fuel. However, the gaseous diffusion process used in this facility required significant amounts of electricity to produce LEU. Over the past decade, USEC took steps to improve operations at the

Paducah plant and the facility had been running at peak efficiency in recent years. These efforts, however, could not overcome the inherent costs of the substantial amounts of electricity required by the gaseous diffusion technology in the face of aggressively priced competition from foreign competitors.

A more advanced and less energy-intensive uranium enrichment process using gas centrifuge was needed, and, as I will discuss momentarily, USEC turned to developing and deploying the only U.S.-owned centrifuge-based technology—the American Centrifuge Plant Project or "ACP." To remain in the LEU market, USEC must transition to centrifuge technology as quickly as possible.

I would like the Commission to understand that, while enrichment at Paducah ceased a few months ago, USEC continues to rely on inventories produced at Paducah to meet its obligations to its customers. That U.S.-produced LEU is being delivered to U.S. utilities today and we expect to continue delivering U.S.-produced LEU for several more years. Therefore, the production at Paducah is providing continuity and is important in assisting in our transition to the ACP. USEC also continues to perform other work at the Paducah facility to ensure the timely delivery of U.S. low enriched uranium to customers and fabricators.

II. American Centrifuge

I'd now like to discuss the American Centrifuge Project. I will address five points:

1. the background of the ACP,
2. the advantages the ACP has over all other centrifuge technologies in the world,
3. how the ACP is reinvigorating U.S. manufacturing,
4. why the ACP is essential to U.S. energy security and national security, and
5. the status of our financing efforts.

My colleague, Dan Rogers—who is the General Manager at the ACP—will discuss where we are on the specific operations at the plant.

A. Background of the ACP

In 2001, USEC began an ambitious program to demonstrate and deploy an advanced centrifuge enrichment technology originally developed by the DOE. The ultimate goal of this program, called American Centrifuge, was to deploy a new enrichment plant to replace the Paducah facility. It remains the only project underway involving an American technology for uranium enrichment. The French antidumping order was and is important to our ability to pursue this project.

The American Centrifuge is based on a technology originally developed by the U.S. government. From the early 1960s to 1985, the U.S. government developed advanced centrifuge technology (including an advanced design that is the basis for USEC's American Centrifuge design) and began initial steps towards its deployment in Ohio, at the site of the former GDP. The U.S. Department of

Energy invested more than $3 billion in then-current dollars to develop the centrifuge technology, built approximately 1,500 machines and accumulated more than 10 million machine hours of run time. However, in 1985, the U.S government terminated the program in favor of continuing to rely on gaseous diffusion, which at that time was capable of meeting 100% of U.S. needs, and continuing research on laser based technology that ultimately was abandoned. Among the reasons for DOE's decision was that the outlook for nuclear power at that time was not as promising as once forecasted.

The world has clearly changed since 1985, and today, projections for nuclear power in the United States and around the world, while less robust than before the incident in Fukushima, Japan in 2011, have grown and show anticipated growth over the next several decades. Among the reasons for this growth are the environmental benefits of nuclear power, which does not produce greenhouse gases. For this reason, USEC has made investments of $2.5 billion in the American Centrifuge project. I repeat—investments of $*2.5 billion.*

B. The advantages the ACP has over other centrifuge technologies

The two most significant advantages of centrifuge technology generally over diffusion technology are its much lower energy requirements and the modular architecture of separation production. This means much lower costs, as well as flexible and continuous deployment. This is true of both our ACP and the

Areva/Urenco centrifuge technology. I refer to it as the Areva/Urenco technology because, as you may know, all centrifuge plants constructed by Areva and Urenco share the same technology and they have a joint venture called ETC dedicated to producing their centrifuges.

The ACP is technically superior to other centrifuges technologies in at least two respects. First, our AC100 machine is designed so that we can replace individual machines from a cascade, for example for repair or upgrade, while still allowing the cascade to remain in operation. The individual Areva/Urenco machines used in their cascade are not replaced in the manner ours can be. Second, and perhaps the most dramatic evidence of the superiority of the USEC technology, is that our AC100 machine has demonstrated performance levels of 350 SWU per machine per year. This makes the performance of USEC machines more than *four times* greater than the latest Areva/Urenco machines.

C. The ACP is reinvigorating U.S. manufacturing

The AC100 has been developed, engineered and assembled in the United States and accordingly, the development of the AC100 also has contributed to invigorating the U.S. industrial base. Because of the highly sensitive, and in some cases classified, nature of the components of the AC100, USEC has had to fund the construction, refurbishment and/or retooling of facilities in the United States to make key components. This manufacturing capability simply did not exist in the

United States—USEC created it and funded it. These investments in turn have provided significant employment and economic benefits to communities and companies in a number of U.S. states. My colleague Dan Rogers will go into this in more detail, but I can tell you that the project now is responsible for approximately 1000 U.S. jobs and USEC anticipates that in the future the project will create nearly 8,000 jobs in the United States during construction. The manufacturing activities of the full American Centrifuge plant also will help re-establish a high-technology U.S. infrastructure for producing nuclear-grade components and support systems.

D. The ACP is essential to U.S. energy security and national security

The American Centrifuge Plant's planned output of low enriched uranium will be equal to about one-fourth of the fuel requirements for the commercial power reactors in the United States, which provide approximately 20% of the U.S. electricity supply today. The American Centrifuge Plant is designed to ensure that the United States has a capacity using U.S. technology, and not simply a plant located here that uses foreign technology, produces LEU subject to foreign government restriction and is subject to foreign control.

Ensuring that the United States continues to produce fuel using U.S. technology also is vitally important from a national security perspective. Today, enriched uranium produced with U.S. technology is required to fabricate fuel for

reactors that produce tritium. Tritium is a radioactive isotope of hydrogen and is an essential component of several national defense applications, which I am happy to explain in detail if you like.

All foreign enriched uranium and all uranium enriched with foreign technology, including in the United States, is subject to treaty obligations with foreign governments that prevent its use for weapons purposes. Therefore, the enriched uranium needed to make the fuel to produce tritium for weapons purposes must be produced in the United States using U.S. technology. DOE currently has a supply of qualifying LEU to produce tritium for approximately 10 years. Beyond that, no facility other than the ACP can produce enriched uranium for tritium production in the future. Given the development, permitting and construction time required to deploy a new qualifying enrichment facility, and the lack of any other U.S. technology alternative, the ACP is the only commercial solution to address this critical deficiency in America's national defense infrastructure.

The importance of U.S. enrichment technology extends beyond the need for materials to serve military needs, however. It also encompasses Foreign Policy. Having a domestic enrichment capability based on U.S. technology is vitally important to ensure that the United States continues to have a "seat at the table" in influencing non-proliferation policies of other nations, including by allowing the United States to offer other countries nuclear fuel supplies in order to deter these

countries from pursuing their own enrichment technology or from buying from countries whose proliferation policies are not as strict.

E. The status of the ACP financing efforts

Areva's pre-hearing brief tries to make a lot out of the financial and technical difficulties USEC has endured in order to get the ACP to commercial deployment. As an aside, I note that Areva itself has essentially abandoned its planned Eagle Rock facility because it has experienced its own financing difficulties, although it continues to aggressively expand capacity in France. Make no mistake—these are massively capital-intensive, highly-sophisticated plants that must be executed in a safe and reliable way. Yes, we have had some delays and, no, we are not where we would have wanted to be at this point. However, we are fully committed to deploy the ACP in America, so as to supply our customers with fuel produced with U.S technology.

This is exactly why the Commission should not terminate this order—we must complete this project to ensure that the United States continues to have a domestic producer using U.S. technology. Dan Rogers will expand on some of this, but I will now tell you where are with respect to our current progress.

USEC has a construction and operating license issued by the U.S. Nuclear Regulatory Commission (NRC). Although, due to delays in financing, USEC has not been able to commence deployment of the full plant, we have an ongoing

program that is achieving remarkable results. In 2012, DOE and USEC agreed to a program to deploy and demonstrate a full 120-machine cascade that could eventually be part of the commercial plant. I submit to you that the government's 80% share of funding for this program is a clear acknowledgement by DOE and Congress that the American Centrifuge is important for the United States' national and energy security, as it would provide a domestic source of enriched uranium for decades to come that is free of obligations to foreign governments.

The 120-machine cascade built by USEC under the program, which a team from the Commission was able to see first-hand, uses the same AC100 centrifuges that will be used in the full commercial plant. These 120 machines are running on gas today in preparation for the full demonstration of commercial cascade production by the end of this year. The program is subject to a number of technical milestones and performance indicators. As Dan will explain in detail, USEC has completed six out of the nine milestones and has a plan in place to achieve the remainder by the end of 2013.

In the last quarter of this year, USEC will operate these machines in a cascade configuration to confirm the technical readiness of the American Centrifuge technology for commercial deployment. At the end of the program, the cascade will have accumulated 20 years' worth of run time, and we expect to submit an updated application for a DOE loan guarantee that will allow us to

complete deployment of the plant. To get that guarantee, we have to provide both a strong technical record of the technology and a strong plan to commercialize the output of the plant based on long-term contracts. This plan depends upon a stable market with fair and competitive pricing.

We will have the necessary technical record. The open question is the commercialization plan. Commercialization will begin even while construction is ongoing. As I mentioned earlier, the technology is modular, and USEC plans to add groups of centrifuge cascades to production as it builds the plant. This will allow USEC to begin production before construction is complete and to produce increasing amounts of low enriched uranium through plant completion.

The commercialization plan depends upon a strong backlog of long-term contracts. My colleague John Donelson will explain this is more detail, but you should understand that the market conditions that exist now (and that could be influenced by revocation of the antidumping order on French LEU) will determine whether USEC can obtain the contracts it needs for this plan. If USEC cannot secure those contracts, there will be no financial basis to proceed with the plant.

Obviously, any plan faces challenges. However, the issue today is whether the Commission will permit anti-competitive dumping to stand in the way of achieving that plan, recognizing that the failure of that plan will mean that U.S. technology may never be deployed commercially if we cannot get the ACP built.

If the plant is not built, then, frankly, not only my company but this nation's national security and energy security would be at grave risk.

The French Antidumping Order was fundamental in USEC's ability to pursue the ACP, beginning in 2001, and we have done our best to pursue this program to our fullest ability since that time, notwithstanding difficult challenges in the market, including the recent incident at Fukushima. Yet precisely because we face those challenges, we need assurance at least that dumping will not be allowed to resume, so that we can see this critical project through.

III. The Role of USEC in Imports from Russia

Areva makes a number of claims in its brief with respect to USEC's role in the importation and sale of Russian SWU. I know quite a bit about this program and have been involved in every aspect of it since inception. I'd like to set a couple of things straight. First, USEC is not just reselling Russian SWU in the United States or, as Areva says, "serving the market solely as an importer." This is factually incorrect. As I mentioned earlier, USEC is selling LEU from its own production and inventories to its US customers. Additionally, while USEC certainly does have a contract for Russian SWU, much of this will be delivered to foreign utilities due to restrictions on imports of Russian SWU imposed by U.S. law.

Second, Areva claims that USEC's contract with TENEX, the Russian entity, "obligates" USEC to import Russian SWU into the United States. Again, this is not true. Like the HEU contract (so-called Megatons-to Megawatts), which was an important part of our business, the new Russian contract is part of our portfolio of supply and important to our transition. Please understand, however, that it is a source of supply that is *directed primarily at foreign customers* due to the quota in the U.S. Market.

Areva's claims on these points are wholly inaccurate and should be ignored.

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Thank you for your time, and we greatly appreciate your consideration of this matter which is so important to my company. I am happy to answer any questions you might have.