USEC
A Global Energy Company

Lisa E. Gordon-Hagerty
Executive Vice President
& Chief Operating Officer

301-564-3311 phone
301-564-3202 fax

August 23, 2004
AET 04-0022

Mr. Jack Strosnider
Director, Office of Nuclear Material Safety and Safeguards
Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

American Centrifuge Plant
Docket Number 70-7004
Submittal of the License Application for the American Centrifuge Plant

Dear Mr. Strosnider:

USEC Inc. (USEC) is pleased to submit one copy (as required by 10 *Code of Federal Regulations* [CFR] 70.21(a)(1)) of an application for a license to construct and operate a uranium enrichment facility in Piketon, Ohio (the "American Centrifuge Plant" or "ACP") and to possess and use special nuclear, source and by-product material in the American Centrifuge Plant in accordance with the *Atomic Energy Act* of 1954, as amended, 10 CFR Parts 70, 40 and 30, and other applicable laws and regulations. We are hopeful, given the familiarity that the NRC gained through the recently completed licensing process for the American Centrifuge Demonstration Facility ("Lead Cascade"), the review can be accomplished in as expeditious a manner as possible.

Introduction to the American Centrifuge Plant

The ACP will be a uranium enrichment facility, utilizing American Centrifuge technology to enrich uranium hexafluoride up to 10-weight percent uranium-235 (U-235). USEC is responsible for the design, fabrication, installation, operation, maintenance, modification and testing of the ACP and is the applicant for a license for a term of 30 years from the start of operations.

The ACP is the third and final step in the overall demonstration and deployment plan for American Centrifuge technology. The commercial deployment of American Centrifuge technology by USEC will help ensure that the United States will continue to maintain a reliable and economic domestic supply of enriched uranium for the nuclear industry. The American Centrifuge represents advancements to technology developed and demonstrated previously by the

NMSS01
Q004
AX45

USEC Inc.
6903 Rockledge Drive, Bethesda, MD 20817-1818
Telephone 301-564-3200 Fax 301-564-3201 www.usec.com

Note: CD has been removed from submittal.
MF

U.S. Department of Energy (DOE). On January 12, 2004, USEC announced its decision to site the ACP in Piketon, Ohio, which is also the location of USEC's Lead Cascade that was recently licensed by the NRC. The ACP will use the same technology used in the Lead Cascade. USEC seeks a license for the ACP with an initial capacity of 3.5 million separative work units (SWU) annually.

Pre-Application Meetings

In a letter dated January 27, 2004, (Reference 1) USEC informed the NRC of its intent to submit a license application for the ACP in August 2004. Subsequently, on April 15, 2004, the NRC conducted the first pre-application meeting with USEC to discuss the license application scope, content, and schedule for submittal. At that meeting, USEC identified that the ACP license application was being developed based on information developed for USEC's Lead Cascade and reviewed by the NRC in connection with granting a license for the Lead Cascade. In this regard, many of the Lead Cascade safety and safeguards programs and plans were utilized in developing those same programs and plans for the ACP. Moreover, the Integrated Safety Analysis (ISA) methodology used for the ACP is the same methodology that was used for the Lead Cascade. Based on the utilization of appropriate information from the Lead Cascade license application, USEC anticipates that there will be several areas where the ACP licensing review will be greatly facilitated by the NRC's previous review and acceptance of the license application for the Lead Cascade. At the April 15 meeting, the NRC agreed that its Lead Cascade review will add significant efficiencies to the ACP review. USEC acknowledges the NRC's comments that preparation of an Environmental Impact Statement for the ACP instead of an Environmental Assessment and the conduct of a mandatory hearing for the ACP may affect the ACP review schedule.

A second pre-application meeting was held on July 14, 2004, to discuss nuclear criticality validation for uranium enriched between 5 and 10 percent U-235. In addition, a telephone conference call was held on July 27, 2004, to discuss USEC's plans for submission of financial qualification information in the ACP license application. USEC believes the pre-application meetings have provided a mutual benefit to USEC and the NRC staff by helping the NRC to understand USEC's plans and help USEC understand NRC's expectations.

License Application

USEC has undertaken a disciplined approach to ensure the completeness of the license application. This approach involved a multi-step review process to ensure that the application conforms to applicable NRC regulatory requirements and applicable NRC guidance documents. This process was modeled after the process utilized to prepare the Lead Cascade license application. First, Subject Matter Experts (SMEs) developed the information in the individual chapters of the license application. Next, a multi-disciplinary Technical Review Team reviewed the assembled

chapters and provided comments for resolution by the SMEs. Finally, an Independent Review Team made up of internal and external experts in the regulatory and licensing processes completed a detailed review of the application. As a result of this process, USEC believes that the license application complies with the applicable regulatory requirements in 10 CFR Part 70, *Domestic Licensing of Special Nuclear Material* and the guidance in NUREG-1520 (Reference 2).

Environmental Report

In support of the application and as required by 10 CFR 70.21(h) and 10 CFR 51.66, USEC also submits herewith one copy of an Environmental Report for the ACP. American Centrifuge technology is modular, and as USEC envisions the potential for expansion beyond 3.5 million SWU annual capacity, the Environmental Report for the ACP examines the potential environmental impact of up to 7 million SWU per year. This will allow efficiencies to be incorporated into future licensing or environmental permitting processes in the event that USEC requests a license amendment to expand the ACP beyond its initial 3.5 million SWU per year capacity. The Environmental Report has been similarly reviewed for completeness and USEC believes that it complies with applicable regulatory requirements in 10 CFR Part 51, *Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions* and the guidance in NUREG-1748 (Reference 3).

Integrated Safety Analysis

A key element supporting the ACP license application is the ISA Summary. The ISA Summary complies with the applicable regulatory requirements in 10 CFR 70 Subpart H, *Additional Requirements for Certain Licensees Authorized to Possess a Critical Mass of Special Nuclear Material* and the guidance in NUREG-1513 (Reference 4).

Details regarding the design and operation of the ACP are contained in the ISA Summary. Various aspects of the American Centrifuge technology employed in the ACP are proprietary to USEC and would be beneficial to a competitor. In addition, the DOE classifies a significant portion of centrifuge technology up to the Secret-Restricted Data level. To facilitate NRC review, USEC has placed proprietary information in a separate addendum to the ISA Summary and all classified information in two classified appendices. Classified information is transmitted in accordance with U.S. Government requirements. Additionally, the ISA Summary contains Export Controlled Information as determined by guidelines provided by the DOE. Therefore, USEC respectfully requests that the ISA Summary be withheld from public disclosure pursuant to 10 CFR 2.390. USEC is submitting the ISA Summary, and the proprietary and classified portions of the ISA Summary to the NRC under separate covers.

Plans, Programs and Other Documents

The Quality Assurance Program Description, Emergency Plan and the Decommissioning Funding Plan for the ACP are included with the submittal of the license application. In accordance with NRC regulations, the Fundamental Nuclear Materials Control Plan (FNMCP) and Security Program are proprietary documents and again, USEC requests that they be withheld pursuant to 10 CFR 2.390. Consequently, USEC is providing the NRC with an FNMCP and Security Program for the ACP under separate covers.

Additional and Future Actions

USEC stands ready to assist the NRC in any way possible in its initial administrative review of the American Centrifuge License Application. Further, we are fully committed to support any NRC requests for additional information during the administrative review and subsequent technical review periods. In this regard, we are enclosing CD-ROM versions of the attached documents which may prove helpful during this process. The CD-ROM is in text-searchable format to facilitate the NRC review and the development of the Safety Evaluation Report and Environmental Impact Statement that will accompany issuance of the ACP license.

Should you have any questions regarding this application, please do not hesitate to contact me or Peter J. Miner at 301-564-3470. Thank you for your continued support as USEC embarks on the commercial deployment of the American Centrifuge Plant.

Sincerely,

Lisa E. Gordon-Hagerty

cc: J. Giitter, NRC HQ
Y. Faraz, NRC HQ
L. Brown, DOE HQ
L. Clark, DOE ORO

Enclosures:

- License Application for the American Centrifuge Plant (1 copy)
- Environmental Report for the American Centrifuge Plant (1 copy)
- Quality Assurance Program Description for the American Centrifuge Plant (1 copy)
- Emergency Plan for the American Centrifuge Plant (1 copy)
- Decommissioning Funding Plan for the American Centrifuge Plant (1 copy)
- CD-ROM containing above documents (1 copy)

References:

1. Letter from Steven A. Toelle (USEC) to Martin J. Virgilio (NRC), "Intent to Submit a License Application for the American Centrifuge Plant (ACP)," dated January 27, 2004.

2. NUREG-1520, *Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility*, March 2002.

3. NUREG-1748, *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs*, August 2003.

4. NUREG-1513, *Integrated Safety Analysis Guidance Document*, May 2001.