![USEC - A Global Energy Company]

June 20, 2006
AET 06-0081

Mr. Jack R. 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 Planned Changes to the License Application for the American Centrifuge Plant
(TAC Nos. L32306, L32307, and L32308)

Dear Mr. Strosnider:

Pursuant to requests from the U.S. Nuclear Regulatory Commission (NRC) staff on June 16, 2006, USEC Inc. hereby submits planned changes related to the topic of Nuclear Criticality Safety for the License Application as Enclosure 1 of this letter. These planned changes will be finalized and submitted to the NRC in the next revision of the License Application and supporting documents.

If you have any questions regarding this matter, please contact Peter J. Miner at (301) 564-3470.

Sincerely,
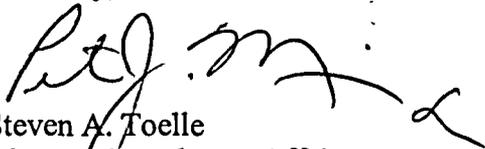
Steven A. Toelle
Director, Regulatory Affairs

cc: S. Echols, NRC HQ
B. Smith, NRC HQ
C. Tripp, NRC HQ

Enclosure: As Stated

Enclosure 1 of AET 06-0081

Planned Changes to the License Application for the American Centrifuge Plant

Prior to implementing changes to processes based on calculations requiring extension to the validated area of applicability as determined in the validation report, NRC review and approval shall be obtained. The request for NRC review and approval shall include a description of the change, the reason that such a change is needed, and the method used to extend the area of applicability.

The methodology used in a validation report involves statistical analysis to determine the bias and bias uncertainty for the critical experiments included in the validation. Guidance from NUREG/CR-6698, *Guide for Validation of Nuclear Criticality Safety Calculational Methodology*, is used to perform the validation. The upper safety limit is computed by subtracting the absolute value of the bias, the bias uncertainty, and the minimum margin of subcriticality from unity. Positive bias is not credited. The exact statistical technique used to obtain the bias and bias uncertainty depends on the specific validation report. The techniques used in Reference 11 included the lower tolerance limit or the lower tolerance band for normally distributed data and a non-parametric technique for non-normally distributed data.

The computer codes and cross sections used in performing k_{eff} calculations are maintained in accordance with a configuration control plan. Quarterly, or prior to use, one of the following is performed: a bit-by-bit comparison of the production version of the software (executable modules and data libraries) versus an archived production version; or a comparison of the output from all validation cases versus archived output of all validation cases from the original validation performed when the production version was installed to ensure no changes in the calculated k_{eff} for the validation cases.

Changes to the hardware or software are evaluated in accordance with 10 CFR 70.72 change requirements. Some changes are expected to result in changes to the calculational algorithm and will require a new validation. Such changes include revisions to the software used to calculate reactivity, updates to the cross section libraries, changes to the operating system kernel, changes to the central processing unit, or changes to the motherboard. Other changes are not expected to result in changes to the calculational algorithm and will require only that the validation cases be re-run and compared to the original results. Such changes include increasing the available RAM, changing a hard drive, graphics card, network interface card, or other peripheral. In the Microsoft Windows environment, periodic changes to components of the operating system are common as Microsoft issues updates or patches to the platform. Also, installation and modification of software not used to calculate reactivity will be performed to support day-to-day business needs. These minor changes are not expected to impact any reactivity calculations, but to ensure this, a verification of the validation cases will be performed at least quarterly as described above.

The System Administrator, a NCS engineer, is responsible for controlling access to the software.

Information contained within
does not contain
Export Controlled Information

Reviewer: D. Hupp
Date: ___06/20/06___