USEC
A Global Energy Company

February 13, 2006
AET 06-0028

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 Additional Information for the American Centrifuge Plant (TAC Nos. L32306, L32307, and L32308)

Dear Mr. Strosnider:

Pursuant to Reference 1, USEC Inc. (USEC) hereby submits to the U.S. Nuclear Regulatory Commission planned changes for Chapter 3.0 of the License Application for the American Centrifuge Plant (ACP) related to the seismic analysis 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.

In addition, planned changes for the Integrated Safety Analysis Summary for the ACP have been determined to contain Export Controlled Information; therefore, are being submitted by USEC letter AET 06-0029.

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

Sincerely,

S. A. Toelle

Steven A. Toelle
Director, Regulatory Affairs

cc: Y. Faraz, NRC HQ
B. Smith, NRC HQ
R. Wescott, NRC HQ

Enclosure: As Stated

Reference:

1. NRC Memorandum from Y. Faraz to J.R. Gitter (NRC) regarding January 25, 2006, Telephone Conference Summary: USEC Inc. Seismic and Geotechnical Issues, dated February 7, 2006.

NMSS01

Enclosure 1 of AET 06-0028

Planned Changes to the License Application for the American Centrifuge Plant

and actions are required to fulfill the IROFS functions. IROFS boundaries are defined using CMP-3601-0001, "IROFS Boundary Determination Plan."

Information contained within does not contain Export Controlled Information

3.4 Seismic Specifications

Reviewer: G. Peed
Date: 02/13/06

Seismic specifications for the ACP design are based on the risks and potential consequences from seismic events involving the primary facilities. This approach results in two criteria being applied depending upon whether or not the normal operations therein involve liquid UF_6. Facilities where liquid UF_6 operations occur are required to withstand the forces resulting from a 10,000-year return period seismic event. All other facilities are required to withstand the forces resulting from a 1,000-year return period seismic event because UF_6 operations therein involve UF_6 in either gas or solid form.

The X-3346 Feed and Customer Services Building Customer Services Area is designed to withstand a 10,000-year return period seismic event for the Piketon, Ohio area. This correlates to a conservative assumption of 0.48 gravity Peak Ground Acceleration (PGA) (Reference 13). This PGA value was estimated using International Building Code seismic methodology. The corresponding vertical earthquake ground motion is two-thirds of the horizontal ground motion or 0.32 gravity PGA.

The X-2232C Interconnecting Process Piping; X-3001 and X-3002 Process Buildings; X-3012 Process Support Building; X-3346 Feed and Customer Services Building Feed Area; X-3346A Feed and Product Shipping and Receiving Building; X-3356 Product and Tails Withdrawal Building; X-7725 Recycle/Assembly Facility; X-7726 Centrifuge Training and Test Facility; and X-7727H Interplant Transfer Corridor are designed to withstand a 1,000-year return period seismic event for the Piketon, Ohio area. This correlates to a conservative assumption of 0.15 gravity PGA (Reference 12). The corresponding vertical earthquake ground motion is 0.1 gravity PGA.

IROFS structures, systems, and components required to function in response to seismic events are constructed and/or installed to withstand the forces stated above. Non-IROFS structures, systems, and components are constructed and/or installed, as necessary, to ensure they cannot adversely affect IROFS structures, systems, and components.

Seismic response spectra for the ACP have been developed by Engineering Consulting Services (Reference 13). That response spectra will be used to perform dynamic analyses of the X-3346 Feed and Customer Services Building Customer Services Area to ensure it can withstand a 10,000-year return period event. Engineering Consulting Services also evaluated the Beavers Study (Reference 14) to determine if the study was still adequate for use in justifying the design and construction of existing primary facilities to withstand a 1,000-year return period event. Engineering Consulting Services developed response spectra for the 1,000-year return period event that closely matched the Beavers response spectra and concluded the Beavers Study was suitable for continued use as stated above. The response spectra developed by Engineering Consulting Services or Beavers will be used to perform dynamic analyses of the other primary facilities (i.e., X-2232C, X-3001, X-3002, X-3012, X-3346 Feed Area, X-3346A, X-3356, X-7725,

X-7726, and X-7727H) to ensure they can withstand a 1,000-year return period event at a minimum. These analyses will ensure that the primary facilities are adequately designed to prevent collapse of the structures during major seismic events and ensure the subsequent release of licensed material in a manner that could cause the 10 CFR 70.61 performance requirements to be exceeded is highly unlikely.

3.5 References

1. LA-3605-0003, Integrated Safety Analysis Summary for the American Centrifuge Plant

2. NUREG-1513, *Integrated Safety Analysis Guidance Document*, U. S. Nuclear Regulatory Commission, Office of Nuclear Material Safety and Safeguards, Washington, DC, May 2001

3. NUREG-1520, *Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility*, U. S. Nuclear Regulatory Commission, Office of Nuclear Material Safety and Safeguards, Washington, DC, January 2002

4. 40 CFR Part 68, *Risk Management Programs for Chemical Accidental Release Prevention*, U. S. Environmental Protection Agency, Washington, DC

5. 29 CFR 1910.119, *Process Safety Management (PSM) of Highly Hazardous Chemicals*, Occupational Safety and Health Administration, Washington, DC, 1991

6. 40 CFR 355, *Emergency Planning and Notification*, U. S. Environmental Protection Agency, Washington, DC

7. DOE-HDBK-3010-94, *Airborne Release Fractions and Respirable Fractions for Use with DOE Non-Reactor Nuclear Facilities*, U. S. Department of Energy, Washington, DC, 1994

8. NUREG/CR-6410, *Nuclear Fuel Cycle Facility Accident Analysis Handbook*, U. S. Nuclear Regulatory Commission, Washington DC, March 1998

9. Current AIHA ERPGs (2004), http://www.aiha.org/Committees/documents/erpglevels.pdf

10. USEC-02, Application for United States Nuclear Regulatory Commission Certification, Portsmouth Gaseous Diffusion Plant, Safety Analysis Report, Volume 2, Section 4.2

11. R. A. Just, "Report on Toxicological Studies Concerning Exposures to UF_6 and UF_6 Hydrolysis Products," K/D-5573, Rev. 1, Martin Marietta Energy Systems, Inc., Oak Ridge Gaseous Diffusion Plant, Oak Ridge, TN, July 1984

12. ORO-EP-120, *Seismic Design Criteria for the Gas Centrifuge Enrichment Plant – GCEP*, Department of Energy, Oak Ridge Operations Office, Office of the Deputy Manager for Enrichment Expansion Projects, Oak Ridge, TN, December 1978

13. Report of Site-Specific Seismic Study, USEC American Centrifuge, Piketon, Ohio, Prepared by Engineering Consulting Services, LLC, ECS Project No. 14-03046, January 2006

14. Beavers, J. E., Manrod, W. E., and Stoddart, W. C., K/BD-1025/R1, "Recommended Seismic Hazards Levels for Oak Ridge, Tennessee; Paducah, Kentucky; Fernald, Ohio; and Portsmouth, Ohio," U.S. Department of Energy Reservations, Union Carbide Corporation – Nuclear Division, Oak Ridge, TN, 37830, December 1982