April 28, 2009

Mr. Peter J. Miner, Director
Regulatory Affairs and Quality Assurance
USEC Inc.
6903 Rockledge Dr.
Bethesda, MD 20817-1818

SUBJECT: REVISED DECOMMISSIONING FUNDING PLAN FOR THE AMERICAN CENTRIFUGE PLANT–REQUEST FOR ADDITIONAL INFORMATION (TAC L32476)

Dear Mr. Miner:

I am responding to your letter dated November 17, 2008 (AET 08-0083), in which you submitted a revised Decommissioning Funding Plan (DFP) as part of a license amendment request regarding feed and withdrawal system design changes associated with the American Centrifuge Plant in Piketon, Ohio (ACP).

Our review of the DFP has identified additional information that is needed before final action can be taken on your license amendment request. The additional information specified in the enclosure should be provided to us within 30 days from the date of this letter. Please reference TAC number L32476 for this action in your response.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR), Section 2.390 of the NRC's Rules of Practice, a copy of this letter will be available electronically from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions regarding this letter, please contact me at (301) 492-3232, or by email at james.downs@nrc.gov.

Sincerely,

/RA/
James R. Downs
Uranium Enrichment Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Enclosure:
American Centrifuge Plant Revised Decommissioning Funding Plan
Request for Additional Information

Docket No.: 70-7004
License No.: SNM-2011

cc: Terry Sensue

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American Centrifuge Plant
Revised Decommissioning Funding Plan –
Request for Additional Information

USEC Inc. (USEC) submitted an updated Decommissioning Funding Plan (DFP) dated November 2008 for its proposed American Centrifuge Plant (ACP). Construction of the ACP will commence, following issuance of a license by the NRC, at the U.S. Department of Energy reservation in Piketown, Ohio. The updated DFP includes a number of proposed changes from the DFP submitted previously, which contained cost estimates as of calendar year 2006. Total decommissioning cost, including tails disposal, is estimated in the 2008 DFP as $1,274.2 M, compared to $1,353.7 M in the 2006 DFP, or a reduction of approximately $79.4 M.

The following changes made in the 2008 DFP are not adequately explained in the submission.

Waste Disposal Costs
Table C3.14 addresses liquid radioactive waste from machine disassembly, compacted solid waste, and low-level contaminated waste such as scarified yard materials/debris. However, certain waste materials resulting from the conversion of DUF_6 to DU, such as hydrogen fluoride, do not appear to be addressed in the DFP. Section 2.0 of the DFP suggests that "revenue/avoided disposal cost from the sale of conversion products (e.g., hydrogen fluoride)" might be identified in the future. NRC guidance, however, disallows the use of salvage value as a credit in decommissioning cost estimates. The DFP should discuss whether all waste materials anticipated from the conversion process are accounted for in the cost estimate without any credits for salvage value, and if not how any such wastes would be managed and the estimated costs of such waste management.

Reliance on 2006 Estimate of Tails Disposal Costs for Conversion of DUF_6 to DU
Section 2 of the DFP explains that the DFP relies as the basis for the 2008 estimated DOE costs to disposition DUF_6 on a report prepared in July 2005 by LMI Government Consulting and redacted in January 2006. The 2008 DFP increases the estimated unit cost for tails disposition from $2.69/kgU in 2006 dollars to $4.95/kgU in 2008 dollars. Although the DFP states that USEC's "examination of the available information" is the basis for the estimate and USEC "believes the unit cost of $4.95/kgU is a reasonable depleted uranium disposal unit cost" and "should be viewed as the conservative upper bound" it does not describe the analysis used by USEC to reach those conclusions. The DFP should discuss that analysis, and identify whether the costs estimated in the report remain accurate, have been escalated to account for inflation, or require escalation.

Reduction in Annual Tails Despite Increase in Annual SWU at Full Production
The DFP explains that the ACP is expected to produce 3.8 million separative work units (SWU) annually at full capacity (the DFP in Table C3.19 uses the more precise figure of 3.828 million SWU annually). This represents an increase from the 2006 estimated production of the ACP of 3.5 million SWU annually at full production. However, the DFP also estimates that the annual production of DUF_6 tails at full production will be approximately 8,400 Metric Tons (MT). This represents a reduction from the estimated annual production of tails in the 2006 DFP, which was estimated at 9,520 MT. In notes to Table C3.19 the DFP indicates that the tails assay will be 0.30 wt % U^{235} which represents a reduction in the tails assay from 0.35% used in 2006. However, the use of the Weight Conversion Factor, Tails Material Conversion Factor, and Tails Purity factor presented in the notes to obtain the estimates for DUF_6 generated and DU generated is not clearly explained in the DFP. In a separate communication to the NRC, USEC explained that the reduction in the tails estimate was due to a shortened production life of the plant and a reduction in the anticipated assay from 0.35 to 0.30, while full operation at 3.8 M SWU rather than 3.5 M SWU would lead to a slight increase in tails. The combination of these factors seem to explain the overall reduction in the total amount of tails,

however, the notes to Table C3.19 should be expanded to clearly explain these results more fully, especially because the tails estimate also affects the estimated number of tails cylinders required.

Cost Adjustment Factor for 2008 Costs

The DFP makes use of both current cost estimates and costs adjusted from 2006 to 2008. It correctly provides current cost information obtained from the selected third parties (Energy Solutions, Clive, UT and Diversified Scientific Services, Oak Ridge, TN) for low-level contaminated waste disposal, including packaging, sampling, and transportation. Equipment supply costs reported in Table C3.15, in contrast, are adjusted using an inflation factor based on annual Implicit Price Deflator indices that is described in a note to the table. However, the precise factor used cannot be determined from the note. In order to check the order of magnitude of this factor, an estimated factor was developed by dividing the basic "unadjusted" cost-price index (CPI) index for June 2008 by the same index for August 2006. In addition, the 2008 unit costs in Table C3.15 were divided by their 2006 equivalents. The CPI-based factor is 1.07, which compares quite closely to the implicit factors calculated from the unit costs in Table C3.15, which range from 1.05 to 1.06. To ensure that the adjustment factor used in the 2008 DFP is accurate, however, the note to Table C3.15 should be expanded to include an explanation of how the Implicit Price Deflator indices listed in the note were used and the escalation factor or factors that were obtained from them.

Minor Grammatical Issues

There are several instances in Section 2 (General Information) of the DFP that refer that USEC "seeks a license", "seeks authorization to operate", and "intends to utilize a surety bond." Given that this revision is occurring after the issuance of the license, it is recommended that USEC revise this and any similar language accordingly.