



July 12, 2011
AET 11-0035

ATTN: Document Control Desk
Ms. Catherine Haney, Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

**American Centrifuge Plant and Lead Cascade Facility
Docket Numbers 70-7004 and 70-7003; License Numbers SNM-2011 and SNM-7003
Response To Request For Additional Information Regarding Request To Review Proposed
Change To The License Application For The American Centrifuge Lead Cascade Facility
And Decommissioning Funding Plan And License Application For The American
Centrifuge Plant For The Use Of Calibration Sources (TAC NO. L33144)**

Dear Ms. Haney,

This letter responds to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) relating to USEC Inc.'s request to possess and use radioactive sources for the American Centrifuge Lead Cascade Facility (Lead Cascade) under the American Centrifuge Plant (ACP) License.

On June 3, 2011 (Reference 1) USEC Inc. requested NRC approval to utilize the ACP Materials License in lieu of the previously authorized United States Enrichment Corporation Portsmouth Gaseous Diffusion Plant NRC Certificate of Compliance for possession and use of source and byproduct material calibration sources needed to support ongoing operations at the Lead Cascade. NRC's letter dated June 28, 2011 (Reference 2), transmitted RAIs relating to the proposed changes to the ACP Decommissioning Funding Plan.

Enclosure 1 of this letter provides USEC's response to the RAIs.

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If you have any questions regarding this matter, please contact me at (301) 564-3470 or Terry Sensue at (740) 897-2412.

Sincerely,



Peter J. Miner
Director, Regulatory and Quality Assurance

Enclosures: As Stated

cc:

J. Calle – NRC RII	D. Hartland – NRC RII
J. Downs – NRC HQ	O. Siurano – NRC HQ
B. Smith – NRC HQ	

References:

1. USEC letter AET 11-0032, from P.J. Miner (USEC Inc.) to Catherine Haney (NRC) regarding Submittal of Revision to License Application for the American Centrifuge Lead Cascade Facility and License Application and Decommissioning Funding Plan for the American Centrifuge Plant, dated June 3, 2011
2. NRC letter from O. Siurano-Perez to P.J. Miner regarding Request for Additional Information Regarding Request To Review Proposed Change To The License Application For The American Centrifuge Lead Cascade Facility And Decommissioning Funding Plan And License Application For The American Centrifuge Plant For The Use Of Calibration Sources (TAC NO. L33144) dated June 28, 2011

Enclosure 1 of AET 11-0035

Response to Request for Additional Information

**Information contained within
does not contain
Export Controlled Information**

**Reviewer: R.S. Lykowski
Date: 7/1/2011**

The response to the RAIs does not alter the justification or significance determination as presented in Enclosure 1 of AET 11-0032.

NRC RAI 1:

Clarify the basis of the sealed source disposal cost estimate [10 CFR 30.35(e)]

10 CFR 30.35(e), in part, states that "[e] Each decommissioning funding plan must contain a cost estimate for decommissioning..." USEC updated its cost estimate to include the estimated cost for disposal of several sealed sources. However, NUREG-1757, Volume 3, Appendix A.3.1 states that "labor estimates, material costs, and other factors of the cost estimate should have a clear and reasonable basis." In this regard, the staff requests a basis for the estimated cost of sealed source disposal stated in Table C3.14 and C3.18 (e.g. the source of the costs).

USEC Response:

The disposal cost estimate for sealed sources is based on the number of sealed sources that the Lead Cascade will need for calibration and instrument checks. The cost estimate was based on 11 components (sealed sources) being needed for the Lead Cascade which is identified in the revised ACP License Application Table 10.2-1, and ACP Decommissioning Funding Plan Table 3.4(A) contained in Enclosure 3 of Reference 1. Also, the ACP Decommissioning Funding Table C3.5 was revised to provide the number of components needed, dimensions of the component, and total volume of the 11 components measured in cubic feet (ft³). The total volume of the 11 components is less than half of one ft³.

As the volume of the 11 components is less than half of one ft³, the disposal volume identified in ACP Decommissioning Funding Table C3.14 will not change. Existing information within [D¹] of Table C3.14 identifies the unit cost for "Miscellaneous Total Compacted Equipment Solid Waste," which the sealed radiological sources are categorized as, as \$44.20/ft³. As the unit cost would provide an insignificant incremental cost for disposing of the 11 components, USEC Inc. used an estimate value of \$5,000 per shipment to calculate the disposal cost. This estimated cost of a shipment is based on the average cost for United States Enrichment Corporation to ship waste as a result of gas centrifuge enrichment plant cleanup work, with a markup 16.08% for inflation based upon Implicit Price Deflator of the Gross Domestic Product Index from 2004 to 2011. Packaging, Shipping and Waste Disposal was included in the disposal cost estimate of the 11 components and included profile development/approval, two separate shipment paths, and transportation cost. These two shipments are estimated to be \$10,000 (2 x \$5,000 per shipment). An additional cost of \$2,559 was estimated for material handling markups which includes labor and materials. Material handling markups were based on 25.59% of the estimated cost of a shipment based on established site financial overheads. This gives a total cost of \$12,559 (\$10,000 + \$2,559) for Packaging, Shipping and Waste Disposal of the 11 components stated in bullet 8 on Table C3.14.

The Packaging, Shipping and Waste Disposal of the 11 components from Table C3.14 was utilized to develop the total cost for disposal in Table C3.18 note 6 as shown below:

Total cost for disposal of sources = Packaging, Shipping and Waste Disposal Cost, G&A Cost (6%), Contractor Profit (15%) and Contingency (25%) [$\$12,559 + \$754 + \$1,997 + \$3,827 = \$19,137$] which is included in the costs listed above.

USEC Inc. believes that this estimate is very conservative in accounting for the disposal of these sources and provides a bounding estimate for the costs.

NRC RAI 2: Confirm that no salvage value is taken in the estimate for any residual value of the sealed sources [NUREG-1757, Volume 3, Appendix A.3.1.3]

Section 10.2.5 of the Decommissioning Funding Plan (DFP) states that “no credit is taken for salvage value in the DFP.” Please confirm that this statement applies to the sealed sources that USEC requests to include in its license.

USEC Response:

This statement does apply to USEC Inc.’s request (Reference 1) for disposal of 11 radioactive sources. Accordingly, USEC Inc. confirms that no credit is taken for salvage value in the DFP.