



November 1, 2001  
GDP 01-0173

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

**Paducah Gaseous Diffusion Plant (PGDP)  
Docket No. 71-6553, Certificate No. 6553  
Proposed Changes to the Paducah Tiger Overpack Safety Analysis Report**

Dear Mr. Virgilio:

The United States Enrichment Corporation (USEC) herein submits for NRC review and approval a change to KY-665, Revision 1, "Safety Analysis Report on the 'Paducah Tiger' Protective Overpack for 10-Ton Cylinders of Uranium Hexafluoride." This report is incorporated by reference in Certificate of Compliance No. 6553 for the Paducah Tiger Overpack (PTO). As a result, USEC requests that the NRC issue a revision to Certificate of Compliance No. 6553.

The proposed change to the PTO Safety Analysis Report (SAR) is associated with the revision of the General Information Section. Enclosure 1 to this letter provides a detailed description of the change. The actual revised PTO SAR pages are provided in Enclosure 2 with the Removal/Insertion Instructions.

Any questions regarding this matter should be directed to Mark Smith at (301) 564-3244. There are no new commitments contained in this submittal.

Sincerely,

S. A. Toelle

Steven A. Toelle  
Director, Nuclear Regulatory Affairs

*NMSS01 Public*

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- Enclosures:
1. United States Enrichment Corporation (USEC), Detailed Description of the Changes to KY-665, "Safety Analysis Report on the "Paducah Tiger" Protective Overpack for 10-Ton Cylinders of Uranium Hexafluoride," Revision 1.
  2. United States Enrichment Corporation (USEC) Certificate Amendment Request, Paducah Gaseous Diffusion Plant, Letter GDP 01-0173 Removal/Insertion Instructions.

cc: P. Hiland, NRC Region III Office  
B. Bartlett, NRC Resident Inspector - PGDP  
D. Hartland, NRC Resident Inspector – PORTS  
H. Astwood, NRC Project Manager – PGDP  
D. Martin, NRC Project Manager – PORTS

**United States Enrichment Corporation (USEC)  
Detailed Description of the Changes to  
KY-665, "Safety Analysis Report on the 'Paducah Tiger' Protective Overpack for  
10-Ton Cylinders of Uranium Hexafluoride," Revision 1**

Description of Change

This change is proposed to revise general information that is no longer applicable. Therefore, USEC has determined that a change to the Paducah Tiger Overpack (PTO) Safety Analysis Report (SAR) is needed. Specifically, changes are proposed to the PTO Safety Analysis Report Revision 1 Section 1.0, "General Information" to clarify that the Portsmouth Gaseous Diffusion Plant no longer further enriches PGDP product material and to provide more concise wording of the information contained in this Section.

Reason for Change

In June, 2001 Portsmouth Gaseous Diffusion Plant discontinued enrichment operations. Therefore, the description in the PTO Safety Analysis Report that referred to Portsmouth Plant further enriching the UF<sub>6</sub> to the levels required for fuel fabrication is no longer valid.

Justification of the Change

The justification for this change is to ensure that the overview provided in the "General Information" Section reflects current operating practices.

**United States Enrichment Corporation (USEC)  
Certificate Amendment Request  
Paducah Gaseous Diffusion Plant  
Letter GDP 01-0173**

**Removal/Insertion Instructions**

<b>Remove Page</b>	<b>Insert Page</b>
<b>PTO SAR</b>	
ix, 1.1	ix, 1.1

**REVISION LOG**

<b>Date</b>	<b>Change</b>	<b>Description</b>
7/15/99	REV 1	Initial Issue. Complete Revision of all pages.
5/02/00	A	Revised Sections 3.5.1.1, 3.5.6, 4.2.2 and 7.1.2 to increase the amount of residual UF <sub>6</sub> allowed for shipment in the overpack.
7/12/00	B	Revised Sections 1.1, 1.2.1.9, and 2.1.2 to allow for the shipment of W. H. Stewart Company cylinders in the overpack.
9/18/00	C	Revised Sections 1.2.1.9, and 7.0 to allow for one round-trip shipment of cylinder PT0225 which does not have a water capacity stamped on the nameplate.
<b>RAC 01C060 (R0)</b>	D	Revised Section 1.0 to delete the reference to the Portsmouth Plant and to provide more concise wording of the information contained in this Section.

[Note: The Request for Application Change (RAC) number identified above for the Proposed Change D will be replaced by the approval date upon approval and issuance.]

## **1.0 GENERAL INFORMATION**

The Paducah Gaseous Diffusion Plant enriches uranium hexafluoride ( $\text{UF}_6$ ) which is contained in large steel cylinders when not in process. Cylinders containing enriched material may be shipped to other facilities authorized to receive special nuclear material.

The large steel cylinders used to ship the  $\text{UF}_6$  in conjunction with the Paducah Tiger Overpack (PTO) are Model 48X 10-ton  $\text{UF}_6$  cylinders (48X cylinders). During shipment, the PTO encases the 48X cylinder to provide thermal, puncture, and impact protection.

The PTO with the 48X cylinder is referred to as a package and is shipped by either truck or rail. The package is a Type AF radioactive material package with a maximum shipping weight of 40,000 pounds, which meets the requirements specified in 10 CFR 71.73. The transport index required for criticality safety purposes is 0.0.