



March 15, 2005  
GDP 05-0007

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

**Portsmouth Gaseous Diffusion Plant (PORTS)  
Docket No. 70-7002, Certificate No. GDP-2  
Transmittal of Revision 77 to Portsmouth Certification Application**

Dear Mr. Strosnider:

In accordance with 10 CFR 76, the United States Enrichment Corporation (USEC) hereby submits six (6) copies of Revision 77 (February 25, 2005) to USEC-02, Application for United States Nuclear Regulatory Commission Certification, Portsmouth Gaseous Diffusion Plant.

Revision 77 incorporates the Decommissioning Funding Program Description and the Depleted Uranium Management Plan changes that have been approved as documented in the NRC's letter dated January 25, 2005 (Reference 1).

Revision 77 also contains changes to the SAR Introduction that have been reviewed in accordance with 10 CFR 76.68 and have been determined not to require prior NRC approval. Revision bars are provided in the right-hand margin to identify the changes. Revision 77 was implemented February 25, 2005.

Should you have any questions regarding this matter, please contact Mark Smith at (301) 564-3244. There are no new commitments contained in this submittal.

Sincerely,

Steven A. Toelle  
Director, Nuclear Regulatory Affairs

NMSSO1

Mr. Jack R. Strosnider  
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Reference: 1. Letter from Gary S. Janosko (NRC) to Steven A. Toelle (USEC), Subject: Paducah Gaseous Diffusion Plant and Portsmouth Gaseous Diffusion Plant, Revisions to the Decommissioning Funding Program Description and Depleted Uranium Management Plan dated December 22, 2004 (TAC NOS. L52562 and L52563), dated January 25, 2005.

Enclosures: 1. Oath and Affirmation  
2. USEC-02, Application for United States Nuclear Regulatory Commission Certification, Portsmouth Gaseous Diffusion Plant, Revision 77, Copy Numbers 1 through 6.

cc: G. Janosko, NRC HQ	(w/o)
J. Henson, NRC Region II	USEC-02, Copy Nos. 21, 172
B. Bartlett, NRC Senior Resident Inspector - PGDP	USEC-02, Copy Nos. 22
D. Martin, NRC Project Manager - PGDP	(w/o)
D. Hartland, NRC Region II	(w/o)
R. DeVault (DOE)	USEC-02, Copy Nos. 24 through 28

Enclosure 1  
GDP 05-0007

Oath and Affirmation

## OATH AND AFFIRMATION

I, Steven A. Toelle, swear and affirm that I am the Director, Nuclear Regulatory Affairs of the United States Enrichment Corporation (USEC), that I am authorized by USEC to sign and file with the Nuclear Regulatory Commission Revision 77 (February 25, 2005) to USEC-02, Application for United States Nuclear Regulatory Commission Certification, Portsmouth Gaseous Diffusion Plant, as described in USEC Letter GDP 05-0007, that I am familiar with the contents thereof, and that the statements made and matters set forth therein are true and correct to the best of my knowledge, information, and belief.



Steven A. Toelle

On this 15th day of March, 2005, the person signing above personally appeared before me, is known by me to be the person whose name is subscribed to within the instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof I hereunto set my hand and official seal.



Janet Boothe, Notary Public  
State of Maryland, Howard County  
My commission expires June 1, 2007



Enclosure 2 to  
GDP 05-0007

USEC-02  
Application for the United States  
Nuclear Regulatory Commission Certification  
Portsmouth Gaseous Diffusion Plant  
Revision 77 (February 25, 2005)

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NUCLEAR REGULATORY COMMISSION CERTIFICATION  
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REMOVAL/INSERTION INSTRUCTIONS  
FEBRUARY 25, 2005 - REVISION 77**

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**Format and Content of the USEC Certification Application**

The Application contains a Safety Analysis Report (SAR), Technical Safety Requirements (TSRs), and programs, plans and other documents as described above. In accordance with 10 CFR 76.35(b), the Application also includes a plan prepared and approved by DOE for achieving compliance with respect to any areas of noncompliance with the NRC's regulations identified by USEC as of the date of this Application. The Compliance Plan provides an expanded description of the

areas of noncompliance, a justification for continued operation, a description of the plan of action to achieve compliance, and the schedule for completion of those actions, as applicable.

The Application is written in the present tense. The physical description of installed structures, systems and components (SSCs) in the Application is current as of June 1, 1995, except as described in Section 3.9, "Items Addressed by Compliance Plan." The programs, plans, procedures and other aspects of the facility's operations other than the SSCs are described as they will be when all Compliance Plan items are completed. Each section of the Application contains a subsection entitled "Items Addressed by Compliance Plan". This subsection describes those aspects of the program, plan or section topic that are not in full compliance with the Application. This subsection also contains a brief description of what is currently in place. Any section which does not have any related Compliance Plan states "None identified."

## **DEPLETED URANIUM MANAGEMENT PLAN**

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## 1.0 INTRODUCTION

Under 10 Code of Federal Regulations (CFR) 76.35(m), the United States Enrichment Corporation (USEC) is required, as part of its application for a certificate of compliance, to provide:

"A description of the program, as appropriate, for processing, management, and disposal of mixed and radioactive wastes and depleted uranium generated by operations. This description must be limited to processing, management, and disposal activities conducted during operation of the facilities while under lease to the Corporation. The application must also include a description of the waste streams generated by enrichment operations, annual volumes of depleted uranium and waste expected, identification of radioisotopes contained in the waste, physical and chemical forms of the depleted uranium and waste, plans for managing the depleted uranium and waste, and plans for ultimate disposition of the waste and depleted uranium before turnover of the facilities to the Department of Energy under the terms of the lease agreement between the United States Enrichment Corporation and the Department."

In accordance with 10 CFR 76.35(m), this plan describes USEC's program for the management and disposition of the depleted uranium (DU) produced as part of the enrichment activities at the Portsmouth (PORTS) and Paducah (PGDP) Gaseous Diffusion Plants (GDPs). USEC's program for the processing, management, and disposal of mixed and radioactive wastes is described in the Radioactive Waste Management Plan submitted as part of this application.

## 2.0 DEPLETED URANIUM PRODUCTION ESTIMATES

The production of depleted uranium will continue throughout the period that enrichment activities are conducted at the GDPs. The production rate of depleted uranium is a function of the demand for enriched uranium, the portion of that demand supplied by the Russian enriched uranium, and the operating mode of the plants (determined by power load, power costs, enrichment levels, and other factors). USEC's projected depleted uranium production estimates for both GDPs cover the period of the Nuclear Regulatory Commission (NRC) Certificate of Compliance. The estimates are provided in Table 1, along with the amount of depleted uranium that USEC is responsible for, taking into account the factors discussed in Section 3.0 below.

The funds set aside for the disposition of depleted uranium at the GDPs will be based on the actual production rates of depleted uranium at the plant during the period that the plant is operated under the USEC/DOE Lease Agreement. USEC's funding plan for the disposition of depleted uranium is described in the Decommissioning Funding Program Description submitted as part of this application.

### 3.0 MANAGEMENT AND DISPOSITION PLAN

The depleted uranium is currently being stored as solid uranium hexafluoride ( $UF_6$ ) in carbon steel cylinders at the GDP plant sites (cylinder storage is described in PGDP SAR Section 3.7.2 and PORTS SAR Section 3.2.4.4). The cylinders meet specific design requirements and special procedures and handling equipment are used for DU cylinder handling, movement, and stacking. USEC can continue to store depleted uranium in the solid state in these cylinders for an extended period without undue risk. In addition, cylinder inspections are conducted, as described below, to provide evidence of continued cylinder integrity.

The cylinders used for the storage of depleted uranium are inspected prior to being filled. After filling, the cylinder is cooled and then moved to a cylinder yard and stacked in place. After the cylinder is stacked in position, a baseline (initial) storage inspection is conducted at which point any damage to the cylinder is identified. If the cylinder is damaged, supervision is notified promptly and the damage evaluated for any actions required; the range of actions are to be commensurate with the cylinder damage. After the initial inspection, the cylinders are inspected every four years thereafter (except for any cylinders identified in the initial inspection as requiring a more frequent inspection); the condition of each cylinder is documented using a cylinder inspection data sheet.

Initial and quadrennial inspections are conducted on full cylinders that are normally single or double stacked. These inspections, conducted from ground level, with or without visual aids, are made using the following criteria:

- Cylinders positioned incorrectly (e.g., with valves in other than top center position); this often is an indication of potential stacking damage.
- Improperly stacked cylinders with potentially damaging contact (e.g., lifting lug resting on cylinder body, stiffening ring resting on stiffening ring, other criteria as described in the inspection procedure).
- Dents, bulges, cracks, metal loss, apparent by visual inspection, on the longitudinal and circumference welds.
- Dents, bulges, cracks, gouges, stacking damage, excessive scale or rust, apparent by visual inspection, on the cylinder shell.
- Bends, cracks or breaks from shell, impact damage, gouges, apparent by visual inspection, on the stiffening rings.
- Tears, dents, cracks, excessive scale or rust, or plugged weep hole, apparent by visual inspection, on the cylinder skirt (or valve protector).

Depleted uranium in the form of solid  $UF_6$  is suitable for conversion to other chemical forms. For example, the solid  $UF_6$  could be converted to  $U_3O_8$ ,  $UF_4$ , or uranium metal. There are a number of

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existing and potential uses for depleted uranium, including use in radiation shielding material, armor-piercing projectiles, and counterweights. It is possible that increased energy costs may make recovery of additional  $^{235}\text{U}$  from the depleted uranium economically feasible in the future and that other potential uses may also be identified. However, the conversion of the depleted uranium to one of these other forms in the near term could either foreclose other uses and disposition options because of the difficulty of processing some of these uranium compounds and the lack of processing facilities, or increase the cost of the ultimate disposition.

Moreover, the amount of depleted uranium that will be produced by USEC in the near term will be relatively small in comparison with the DOE's existing depleted uranium inventory. DOE is currently storing approximately 700,000 MTU of depleted uranium as solid  $\text{UF}_6$  in approximately 60,000 cylinders stored at various locations on the DOE portions of the GDP plant sites. USEC presently anticipates that the bulk of its inventory of depleted uranium will ultimately be dispositioned in the same manner as the larger DOE depleted uranium inventory.

In the meantime, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004. Table 1 reflects the transfer schedule.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement. The quantity of depleted uranium associated with this agreement is specified in Table 1.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium associated with the compensation for these services is specified in Table 1.

In addition to the foregoing outlets, USEC will, to the extent practicable, continue to market depleted uranium for uses in military applications, counterweights, and shielding applications. Efforts may also be made to develop other commercial uses that could include shielding for high-level waste storage and shipping casks, or multipurpose canisters being developed for the DOE high-level waste program.

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The remaining inventory will continue to be stored as solid  $UF_6$  until it can be processed in accordance with the disposition strategy established by DOE for its inventory.

The estimated cost of conversion and disposition of the depleted uranium is provided in the Decommissioning Funding Program, along with a description of the funding mechanisms that will be used to address USEC's funding liabilities.

#### **4.0 ITEMS ADDRESSED BY COMPLIANCE PLAN**

Section deleted.



**Table 1. Estimated amount of depleted uranium (DU) generated by USEC and its disposition, in metric tons uranium (MTU) for PORTS and PGDP combined.**

Year	DU Generated by USEC <sup>1</sup>	DU Transfers to DOE under 6/30/98 agreement <sup>4</sup>	DU Transfers to DOE under 6/17/02 agreement <sup>5</sup>	Other DU Transfers to DOE <sup>6</sup>	Estimated net cumulative USEC DU <sup>2</sup>
July 28, 1998- Dec. 31, 2003	-	-	-	-	17861 <sup>3</sup>
CY2004	6631 <sup>7</sup>	(8735)	(3315)	(3237)	9205
CY2005	5984	0	(1399)	(471)	13319
CY2006	7674	0	0	0	20993
CY2007	6292	0	0	0	27285
CY2008	5593	0	0	0	32878

Notes:

1. Projections are provided through the expiration date of the NRC Certificate of Compliance.
2. DOE retains liability for depleted uranium generated prior to USEC's privatization (July 28, 1998) per USEC Privatization Act (Public Law 104-134, Sec 3109, paragraph (a)(3)).
3. Reflects the cumulative amount of DU since USEC's privatization (July 28, 1998) for which USEC is responsible for disposition.
4. Total to be transferred to DOE is the quantity in 2026 48G cylinders.
5. Under the June 17, 2002 agreement, DOE will take possession of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 (July 1, 2002 through June 30, 2003) and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005.
6. Depleted uranium transfers to compensate USEC for incurred costs associated with DOE contract activities.
7. Includes 7 MTU returned from the former Starmet, CMI site.

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## 1.0 INTRODUCTION

As a condition of certification, 10 Code of Federal Regulations (CFR) 76.35(n) requires the United States Enrichment Corporation (USEC) to submit, as part of its application for an NRC certificate of compliance:

A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation.

Section 76.35(n) also requires USEC to establish financial surety arrangements to provide the requisite funding. The funding mechanism must ensure availability of funds for activities required to be completed both before and after the return of the gaseous diffusion plants to the Department of Energy (DOE) in accordance with the July 1, 1993 Lease Agreement between DOE and USEC (Lease Agreement). The funding program must also contain a basis for cost estimates used to establish funding levels, and means of adjusting such cost estimates and associated funding levels over the duration of the lease. Finally, USEC is not required to provide funding for "those aspects of decontamination and decommissioning . . . assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended."

In accordance with 10 CFR 76.35(n), USEC hereby submits a description of its program to ensure adequate funds are available for the disposal of waste and the disposition of depleted uranium generated at the GDP's and for which USEC is financially responsible under the Atomic Energy Act (AEA).

## 2.0 SCOPE OF USEC'S DECOMMISSIONING FINANCIAL RESPONSIBILITY

USEC began to operate the Paducah (PGDP) and Portsmouth (PORTS) plants on July 1, 1993, in accordance with the AEA, as amended, and the July 1, 1993 Lease Agreement. Prior to July 1, 1993, DOE operated the plants for about 40 years. Section 1403(d) of the AEA provides that "[t]he payment of any costs of decontamination and decommissioning . . . with respect to conditions existing before the transition date [July 1, 1993], in connection with property of the Department leased under subsection (a), shall remain the sole responsibility of the Department." Accordingly, USEC is not financially responsible for, and this Program Description does not provide funding assurance for, decontamination or decommissioning costs associated with any operations at the gaseous diffusion plants (GDPs) prior to July 1, 1993.

Furthermore, the GDPs, including the Leased Premises, will ultimately be decommissioned by DOE, which is solely responsible for the conduct of decontamination and decommissioning activities at the plant, and which also bears sole financial responsibility for the bulk of these activities. Section 4.6 of the Lease Agreement states that:

Except as provided in Section 4.5(c) of this Lease, the Department will be responsible for and will pay the costs of all Decontamination and Decommissioning, including the costs of Decontamination and Decommissioning of the Leased Premises, the Leased Personalty, any personal property found on the Leased Premises, regardless of ownership, and any Capital Improvement.

In addition, Section 4.3(b) of the Lease Agreement states that "[t]he Corporation shall be entitled, should it choose, to leave any of its personal property (including personal property contaminated by radioactive materials) on the Leased Premises at the end of the Lease Term for Decontamination and Decommissioning by the Department."

However, USEC does have certain specific financial responsibilities with respect to some of these activities. Under Section 4.4(c) of the Lease Agreement, USEC is "responsible for the ultimate treatment and disposal of any waste generated by the Corporation, and for which the Department is not responsible . . . ." Under this provision, USEC is financially responsible for, and this Program Description addresses, the disposal of low-level radioactive waste (LLRW) and "mixed" hazardous and radioactive waste generated by USEC at the GDPs after the date of privatization, July 28, 1998.<sup>1</sup>

In addition, as discussed above, Section 4.6 of the Lease Agreement provides that the Department will pay the costs of all decontamination and decommissioning, "[e]xcept as provided in Section 4.5(c) of this Lease . . . ." Section 4.5(c) authorizes USEC to remove any capital improvement at the GDPs, but "if such removal increases the costs of the Department for the Decontamination and Decommissioning

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<sup>1</sup> A more detailed description of USEC's plans to manage and dispose of LLRW and mixed waste generated at the GDPs is provided in the Radioactive Waste Management Program, which is included as part of each certificate of compliance application.

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of the Leased Premises to which any such Capital Improvement was attached, the Corporation will pay any such increase in Decontamination and Decommissioning costs." At this time, USEC does not anticipate removing any capital improvement from the plant site. Therefore, no financial assurance for Decontamination and Decommissioning cost increases arising out of such removal is currently being provided.

Finally, USEC is generating depleted uranium as a result of its operation of the GDPs. Section 3109(a)(3) of the USEC Privatization Act (passed April 1996) states that:

All liabilities arising out of the disposal of depleted uranium generated by the Corporation between July 1, 1993 and the privatization date shall become the direct liabilities of the Secretary [Secretary of Energy].

Therefore, this Program Description also describes USEC's funding program to ensure funds are available for the ultimate disposition of the depleted uranium generated by USEC's operations after July 28, 1998.<sup>2</sup>

As described in the Depleted Uranium Management Plan, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement.

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2 The Depleted Uranium Management Plan describes in greater detail USEC's plans for the management and disposition of depleted uranium.

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The quantity of depleted uranium associated with these agreements, and the transfer schedule for this material, is specified in Table 1 of the Depleted Uranium Management Plan.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium, and the transfer schedule for the depleted uranium associated with the compensation for these contracts, is specified in Table 1 of the Depleted Uranium Management Plan.

### 3.0 DECOMMISSIONING COST ESTIMATE

In accordance with 10 CFR 76.35(n), USEC has estimated the costs associated with the disposal of LLRW and mixed waste, and the disposition of depleted uranium generated by its operations at the GDPs. These costs are not considered decontamination and decommissioning costs, but rather production costs since they are incurred during the operation and maintenance of the plant. These cost estimates are cumulative, and are calculated one year in advance. The estimated cost for calendar year (CY) 2005 for the disposal of waste and for the disposition of depleted uranium generated by USEC at the GDPs is as follows:

Low Level and Mixed Waste	\$ 6.37 M
Depleted Uranium	\$42.80 M
Labor Cost	<u>\$ 0.50 M</u>
CY05 Cost	\$49.67 M

To account for uncertainties associated with either the estimated volumes or costs associated with the above cost estimates, a contingency factor of 10% is applied to the CY 05 cost. A 10% contingency is appropriate considering USEC's limited decontamination and decommissioning liability as described in the Decommissioning Funding Program Description (DFP), an annual review and update, as necessary, of the DFP cost estimate and the relative stability of the factors which are utilized to generate USEC's depleted uranium volume estimate, the disposal of which is the major contributor to USEC's decommissioning funding liability. After application of the 10% contingency, USEC's total projected decommissioning funding liability for calendar year 2005 is \$54.6 million.

The bases for these cost estimates are described below in their respective subsection. USEC's cost estimates will be reviewed annually and revised, as necessary, to reflect any change in USEC's projected liability.

#### 3.1 LOW LEVEL AND MIXED WASTE DISPOSAL

USEC generates many types of LLRW and mixed (hazardous and radioactive) waste at the GDPs, as described in the Radioactive Waste Management Program (RWMP) for each site. For the most part, all wastes are routinely treated on-site or treated and disposed of off-site as the wastes are generated. There are, however, a small number of mixed waste streams at PORTS for which no treatment and/or disposal option exists in the US. These wastes are authorized to be stored in Department of Energy permitted storage at PORTS under agreements with the appropriate state agencies. There is also a quantity of LLRW at each plant that will remain onsite at the end of CY 2005. At PGDP, the LLRW

does not meet the disposal facilities waste acceptance criteria as stored, while at PORTS, most of these wastes currently do not have a disposal option. These wastes are being stored in compliance with USEC's Certificate of Compliance. USEC's LLRW and mixed waste decommissioning liability is calculated as the sum of the liability associated with the cost of disposal of that amount of waste estimated to be generated during the calendar year plus the liability associated with the estimated amount of waste that remains in storage at the end of the calendar year. Cost of disposal includes disposal cost, container cost, and transportation costs.

Estimated waste generation volumes are based on historical waste generation for each plant. Each individual LLRW and mixed waste stream has a different estimated volume and a different disposal cost. For the year, the different volumes of waste generated and their disposal cost estimates are averaged to establish an average disposal cost. USEC's cost estimate is based on the weighted average cost to manage waste. The disposal cost estimate for each waste stream in the weighted average cost is based upon existing contract prices.

Based on historical information, the cost of containers for waste disposal is approximately 8.1% of the disposal cost. Historical information also shows that the transportation cost associated with waste is approximately 9.1% of the disposal costs.

Except for those mixed wastes and LLRW noted earlier that do not currently have a disposal outlet, USEC anticipates that its waste disposal activities will be such that LLRW and most mixed waste generated in any given year will be disposed of within that year, or shortly thereafter. USEC funds this disposal cost out of accrued cash generated from operations. The decommissioning liability associated with the waste that remains in storage at the end of the calendar year at each site will be calculated based on the estimated volume of waste in storage at the end of the calendar year.

### 3.1.1 Low Level Radioactive Waste Disposal

USEC anticipates generating a total of approximately 53,500 ft<sup>3</sup> of LLRW from routine operations and projects at the Paducah plant for calendar year 2005. USEC has assumed disposal of Paducah's LLRW at various commercial disposal facilities at an average weighted cost of \$23/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Paducah plant for calendar year 2005 is therefore estimated to be:

$$\text{Paducah LLRW: } 53,500 \text{ ft}^3 \times \$23/\text{ft}^3 = \$1.23 \text{ million for the year}$$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 17,250 ft<sup>3</sup> of LLRW from routine operations, projects and shutdown related activities. USEC has assumed disposal of Portsmouth's LLRW at various commercial disposal facilities at an average weighted cost of \$25/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

$$\text{Portsmouth LLRW: } 17,250 \text{ ft}^3 \times \$25/\text{ft}^3 = \$0.43 \text{ million for the year}$$

The cost of disposal of USEC's LLRW for CY 2005 is \$1.66 million.

### 3.1.2 Mixed Waste Disposal

USEC anticipates generating a total of approximately 350 ft<sup>3</sup> of mixed waste at the Paducah plant in calendar year 2005. The current average cost estimate for disposing of this mixed waste produced at Paducah is \$395/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Paducah plant for calendar year 2005 is therefore estimated to be:

Paducah Mixed Waste:  $350 \text{ ft}^3 \times \$395/\text{ft}^3 = \$0.14 \text{ million for the year}$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 310 ft<sup>3</sup> of mixed waste for CY 2005. The current average cost of disposal of such waste at Portsmouth is \$365/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

Portsmouth Mixed Waste:  $310 \text{ ft}^3 \times \$365/\text{ft}^3 = \$0.11 \text{ million for the year}$

The cost of disposal of USEC's mixed waste for CY 2005 is \$0.25 million.

### 3.1.3 Cost of Containers and Transportation

The cost of disposal of USEC's waste for CY 2005 has been estimated to be \$1.66 million for LLRW and \$0.25 million for mixed waste for a total of \$1.91 million. The estimated cost of containers for USEC's waste in CY 2005 is 8.1% of the cost of disposal.

Cost of containers: 8.1% of \$1.91 million or \$0.15 million.

The estimated cost of transportation for the disposal of USEC's waste in CY 2005 is estimated to be 9.1% of the cost of disposal.

Cost of transportation: 9.1% of \$1.91 million or \$0.17 million.

The total estimated cost associated with the containers and transportation necessary for the disposal of USEC's waste in CY 2005 is \$ 0.32 million.

### 3.1.4 Mixed Waste in Storage

As described earlier, there is an amount of mixed waste that will remain in storage at the end of CY 2005 at the Portsmouth plant. USEC estimates that 800 ft<sup>3</sup> of mixed waste will be in storage at the end of CY 2005. Due to the unknown future costs associated with these wastes an additional \$1,500/ft<sup>3</sup> may be necessary for disposal. The additional estimated cost associated with the disposal of this waste is:

Portsmouth mixed waste in storage:  $800 \text{ ft}^3 \times \$1,500/\text{ft}^3 = \$1.2 \text{ million}$

As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total estimated costs for the disposal of mixed waste in storage at the Portsmouth plant in CY 2005 is \$1.41 million.

### 3.1.5 Low-Level Radioactive Waste in Storage

As described earlier, there is an amount of LLRW that will remain in storage at the end of CY 2005. This waste will be disposed at a later date at an estimated cost of \$28/ft<sup>3</sup>. This disposal cost is determined based on the weighted average cost for this particular waste stream. At Paducah, this LLRW volume is estimated to be 16,000 ft<sup>3</sup>.

The disposal cost for this LLRW that will remain on site at Paducah at the end of CY 2005 is estimated to be:

Paducah LLRW in storage:  $16,000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.45 \text{ million}$ .

Likewise, at the Portsmouth Plant, USEC estimates that 3000 ft<sup>3</sup> of LLRW will remain on site at the end of CY 2005, and disposed at a later date. Therefore, the disposal cost for this LLRW that will remain on site at Portsmouth at the end of CY2005 is estimated to be:

Portsmouth LLRW in storage:  $3000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.08 \text{ million}$

In addition, 3000 ft<sup>3</sup> of LLRW for which USEC does not currently have a disposal outlet will remain in storage at Portsmouth. Due to the unknown future costs associated with disposal of this 3000 ft<sup>3</sup> of LLRW, an additional \$600 may be necessary for disposal. Therefore, the disposal cost for this LLRW that will remain in storage at Portsmouth at the end of CY 2005 is estimated to be:

Portsmouth LLRW in storage:  $3000 \text{ ft}^3 \times \$600/\text{ft}^3 = \$1.8 \text{ million}$

Therefore, the cost to dispose of the LLRW in storage in a subsequent calendar year is \$2.33 million. As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total cost for disposal of this LLRW in storage, including transportation and container costs, is estimated to be \$2.73 million.

### 3.2 Depleted Uranium Disposition

The estimate of decommissioning liability for depleted uranium is based on the generation of depleted uranium as described in the Depleted Uranium Management Plan. The current estimated cost for disposal of depleted uranium is estimated to be \$3.00 per kilogram of uranium (kgU). This cost for disposal is based upon the cost in the "Memorandum of Agreement between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium", dated June 30, 1998. USEC has compared this cost for disposal of depleted uranium against cost information from the DOE contract for the conversion facilities currently being constructed at Piketon, Ohio and Paducah, KY as well as the proposal to build and operate the uranium hexafluoride conversion facilities for DOE, submitted by the American Conversion Services (ACS) partnership, which included USEC. This proprietary ACS proposal was based on comprehensive cost projections developed by the partnership. The ACS proposal and the DOE conversion facilities cost information support the \$3.00 per kgU disposal cost for depleted uranium used in this plan. Based on the Depleted Uranium Management Plan, USEC's projected maximum liability at the end of calendar year 2005 for the disposition of depleted uranium generated by its Paducah and Portsmouth operations is 13.319 million kilograms (refer to Table 1 in the Depleted Uranium Management Plan).

Total processing cost for depleted uranium is then 13,319,000 kilograms of depleted uranium times \$3.00 per kilogram = \$39,957,000 or, after rounding, \$40.0M

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The above cost estimate includes processing as well as transportation and disposal of any by-product related to processing of the depleted uranium. To obtain the total cost associated with disposition of depleted uranium, the cost for transporting the depleted uranium to the processing facility must be included. The estimated cost associated with transporting USEC's depleted uranium liability for CY 2005 is estimated as follows:

$$\frac{(13,319,000 \text{ kgU})(\$1760/\text{cylinder}^*)}{(8400 \text{ kgU/cylinder})^{**}} = \$2,790,648 \text{ or } \$2.8\text{M}$$

\* Based on freight invoices to Starmet, CMI<sup>3</sup>

\*\*Approximate average kgU/cylinder, based on shipping weights

Therefore, USEC's total estimated liability for disposition of depleted uranium for CY 2005 is the sum of processing costs and transportation costs which equates to \$42.8M.

### 3.3 Labor Costs

To account for labor costs associated with disposal of USEC generated waste, USEC has included provisions for two crews (one for each facility) comprised of 1 supervisor, 3 laborers, 1 health physics technician and 1 engineer. Since disposal of waste is not a continuous process, the labor costs are calculated assuming the crews are available for a six-month duration, with the health physics technician and the engineer available for half of this duration (3 months duration). Labor costs were estimated based on the costs provided in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities," dated July 1998. Based on these assumptions, the labor costs associated with disposal of USEC generated waste is \$500,000 (\$250,000 per site).

## 4.0 REVIEW AND ADJUSTMENT OF DECOMMISSIONING COSTS AND FUNDING LEVELS

USEC will review the decommissioning cost estimates and associated funding levels over the duration of the lease and adjust them when necessary. These adjustments will take into account such factors as changes in volume and cost estimates, changes in plant conditions, and changes in expected decontamination and decommissioning procedures. USEC will conduct such reviews in October of each year.

## 5.0 DECOMMISSIONING FUNDING MECHANISM

USEC utilizes payment surety bond(s) and standby trust agreement(s) to ensure that sufficient funds will be available for waste disposal and depleted uranium disposition as set forth in this Program Description. The instruments are derived from Appendix A, NUREG-1757 Volume 3, "Consolidated NMSS Decommissioning Guidance, *Financial Assurance, Recordkeeping, and Timeliness*", dated September 2003. Non-executed versions are included in this Plan. Executed documents are submitted to the NRC for review as they are revised and reissued.

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<sup>3</sup>Associated with a previous demonstration project for processing USEC depleted uranium.



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**PAYMENT SURETY BOND - NON-EXECUTED VERSION**

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, MD 20817

Type of organization: Delaware Chartered Corporation

NRC certificate of compliance number: GDP-1 and GDP-2

Name and address of facilities: Paducah Gaseous Diffusion Plant  
Portsmouth Gaseous Diffusion Plant

Amount(s) for decommissioning  
activity guaranteed by this bond: Estimated at [insert amount]

Surety(ies) [name(s) and business address(es)]

Type of organization: [insert "proprietorship," "joint venture," "partnership" or "corporation"]

State of incorporation: \_\_\_\_\_ (if applicable)

Surety's qualification in jurisdiction where facility is located.

Surety's bond number \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Know all persons by these presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the U.S. Nuclear Regulatory Commission (herein called NRC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety; but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

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WHEREAS, the NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76, applicable to the Principal, which require that the holder of a certificate of compliance for a gaseous diffusion plant, or an applicant for a certificate of compliance for such a facility provide financial assurance that funds will be available when needed for those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of such a facility which are the financial responsibility of such holder or applicant (collectively, "decommissioning");

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of decommissioning of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility;

Or, if the Principal shall fund the standby trust fund in such amount(s) after an order to begin facility decommissioning is issued by the NRC or a U.S. district court or other court of competent jurisdiction;

Or, if the Principal shall provide alternative financial assurance and obtain the written approval of the NRC of such assurance, within 30 days after the date a notice of cancellation from the Surety(ies) is received by both the Principal and the NRC, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the NRC that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund established by the Principal with [name of trustee] pursuant to the Standby Trust Agreement dated [date].

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the NRC provided, however, that cancellation shall not occur during the 90 days beginning on the date of receipt of the notice of cancellation by both the Principal and the NRC, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the NRC and to Surety(ies) 90 days prior to the proposed date of termination, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond from the NRC.

If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

DFP-GDPs  
PGDP Rev. 86  
PORTS Rev. 70

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In Witness Whereof, the Principal and Surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Principal: United States Enrichment Corporation

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety(ies) above.]

Bond premium: \$ \_\_\_\_\_

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**STANDBY TRUST AGREEMENT - NON-EXECUTED VERSION**

TRUST AGREEMENT, the Agreement entered into as of [date] by and between the United States Enrichment Corporation, a Delaware chartered corporation, herein referred to as the "Grantor," and [name and address of a national bank or other Trustee acceptable to the U.S. Nuclear Regulatory Commission], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 76, certificate of compliance provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a surety bond to provide part of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a surety bond this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

**Section 1. Definitions.** As used in this Agreement:

- (a) The term "Decommissioning" means those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of the Paducah and Portsmouth Gaseous Diffusion Plant (GDPs) which are the financial responsibility of the Grantor.
- (b) The term "Grantor" means the United States Enrichment Corporation and any successors or assigns thereof.
- (c) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

**Section 2. Costs of Decommissioning.** This Agreement pertains to the costs of decommissioning the materials and activities identified in Certificate of Compliance Number GDP-1 and GDP-2 issued pursuant to 10 CFR Part 76.

**Section 3. Establishment of Fund.** The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

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Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

a. A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and

b. A certificate attesting to the following conditions:

(1)that decommissioning is proceeding pursuant to an NRC-approved plan.

(2)that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and

(3)that the NRC has been given 30 days' prior notice of the Grantor's intent to withdraw funds from the escrow fund.

No withdrawal from the fund can exceed 10 percent of the outstanding balance of the Fund unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor, or other persons as specified by the NRC, from the Fund for expenditures for required activities in such amount as the NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity

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and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poor's or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine

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certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, where so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the



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Trustee hereunder: Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC, and the present Trustee by certified mail 10 days before such changes becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the grantor's orders, requests, and instructions. If the NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, or the NRC, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instruction from the Grantor and/or the NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor, or the NRC, issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the United States.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST:

[Insert name of Grantor]  
[Signature of representative  
of Grantor]  
[Title]

[Title]  
[Seal]

[Insert name of Trustee]  
[Signature of representative  
of Trustee]  
[Title]

ATTEST:  
[Title]  
[Seal]

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February 25, 2005

United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

U.S. NUCLEAR  
REGULATORY  
COMMISSION  
CERTIFICATE OF  
COMPLIANCE NUMBER

GDP-1 and GDP-2

NAME AND  
ADDRESS OF  
LICENSEE

United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, Maryland 20817

3930 State Route 23/Perimeter Road  
Piketon, Ohio 45661

5600 Hobbs Road  
Paducah, Kentucky 42001

COST ESTIMATE FOR  
REGULATORY ASSURANCES  
DEMONSTRATED BY THIS  
AGREEMENT

[Insert amount of agreement]

The cost estimates listed here were submitted to the NRC on [insert date]

The Total Cost of decommissioning the GDP's, assuming no liability for decontamination, is as per the decommissioning cost estimate on file with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE B

AMOUNT:

AS EVIDENCED BY: Payment Surety Bond dated [insert date]  
[Insert name of Surety Bond holder and Surety Bond number] as on file  
with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE C

Trustee will be paid [insert amount] annually for services being provided under the standby trust agreement. This fee will apply whether or not payment has been made to the standby trust fund.

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**APPLICATION FOR UNITED STATES  
NUCLEAR REGULATORY COMMISSION CERTIFICATION  
PORTSMOUTH GASEOUS DIFFUSION PLANT  
REMOVAL/INSERTION INSTRUCTIONS  
FEBRUARY 25, 2005 - REVISION 77**

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<b>VOLUME 3</b>	
Depleted Uranium Management Plan Entire Plan	Depleted Uranium Management Plan Entire Plan
Decommissioning Funding Program Entire Plan	Decommissioning Funding Program Entire Plan

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Principal Officers

Mr. James R. Mellor  
Chairman and Chief Executive Officer

Ms. Lisa E. Gordon-Hagerty  
Executive Vice President and Chief Operating Officer

Mr. Russell B. Starkey, Jr.  
Vice President, Operations

Mr. James F. McDonnell  
Vice President and Chief Information & Security Officer

**Format and Content of the USEC Certification Application**

The Application contains a Safety Analysis Report (SAR), Technical Safety Requirements (TSRs), and programs, plans and other documents as described above. In accordance with 10 CFR 76.35(b), the Application also includes a plan prepared and approved by DOE for achieving compliance with respect to any areas of noncompliance with the NRC's regulations identified by USEC as of the date of this Application. The Compliance Plan provides an expanded description of the

areas of noncompliance, a justification for continued operation, a description of the plan of action to achieve compliance, and the schedule for completion of those actions, as applicable.

The Application is written in the present tense. The physical description of installed structures, systems and components (SSCs) in the Application is current as of June 1, 1995, except as described in Section 3.9, "Items Addressed by Compliance Plan." The programs, plans, procedures and other aspects of the facility's operations other than the SSCs are described as they will be when all Compliance Plan items are completed. Each section of the Application contains a subsection entitled "Items Addressed by Compliance Plan". This subsection describes those aspects of the program, plan or section topic that are not in full compliance with the Application. This subsection also contains a brief description of what is currently in place. Any section which does not have any related Compliance Plan states "None identified."

## **DEPLETED URANIUM MANAGEMENT PLAN**

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## 1.0 INTRODUCTION

Under 10 Code of Federal Regulations (CFR) 76.35(m), the United States Enrichment Corporation (USEC) is required, as part of its application for a certificate of compliance, to provide:

"A description of the program, as appropriate, for processing, management, and disposal of mixed and radioactive wastes and depleted uranium generated by operations. This description must be limited to processing, management, and disposal activities conducted during operation of the facilities while under lease to the Corporation. The application must also include a description of the waste streams generated by enrichment operations, annual volumes of depleted uranium and waste expected, identification of radioisotopes contained in the waste, physical and chemical forms of the depleted uranium and waste, plans for managing the depleted uranium and waste, and plans for ultimate disposition of the waste and depleted uranium before turnover of the facilities to the Department of Energy under the terms of the lease agreement between the United States Enrichment Corporation and the Department."

In accordance with 10 CFR 76.35(m), this plan describes USEC's program for the management and disposition of the depleted uranium (DU) produced as part of the enrichment activities at the Portsmouth (PORTS) and Paducah (PGDP) Gaseous Diffusion Plants (GDPs). USEC's program for the processing, management, and disposal of mixed and radioactive wastes is described in the Radioactive Waste Management Plan submitted as part of this application.

## 2.0 DEPLETED URANIUM PRODUCTION ESTIMATES

The production of depleted uranium will continue throughout the period that enrichment activities are conducted at the GDPs. The production rate of depleted uranium is a function of the demand for enriched uranium, the portion of that demand supplied by the Russian enriched uranium, and the operating mode of the plants (determined by power load, power costs, enrichment levels, and other factors). USEC's projected depleted uranium production estimates for both GDPs cover the period of the Nuclear Regulatory Commission (NRC) Certificate of Compliance. The estimates are provided in Table 1, along with the amount of depleted uranium that USEC is responsible for, taking into account the factors discussed in Section 3.0 below.

The funds set aside for the disposition of depleted uranium at the GDPs will be based on the actual production rates of depleted uranium at the plant during the period that the plant is operated under the USEC/DOE Lease Agreement. USEC's funding plan for the disposition of depleted uranium is described in the Decommissioning Funding Program Description submitted as part of this application.

### 3.0 MANAGEMENT AND DISPOSITION PLAN

The depleted uranium is currently being stored as solid uranium hexafluoride ( $UF_6$ ) in carbon steel cylinders at the GDP plant sites (cylinder storage is described in PGDP SAR Section 3.7.2 and PORTS SAR Section 3.2.4.4). The cylinders meet specific design requirements and special procedures and handling equipment are used for DU cylinder handling, movement, and stacking. USEC can continue to store depleted uranium in the solid state in these cylinders for an extended period without undue risk. In addition, cylinder inspections are conducted, as described below, to provide evidence of continued cylinder integrity.

The cylinders used for the storage of depleted uranium are inspected prior to being filled. After filling, the cylinder is cooled and then moved to a cylinder yard and stacked in place. After the cylinder is stacked in position, a baseline (initial) storage inspection is conducted at which point any damage to the cylinder is identified. If the cylinder is damaged, supervision is notified promptly and the damage evaluated for any actions required; the range of actions are to be commensurate with the cylinder damage. After the initial inspection, the cylinders are inspected every four years thereafter (except for any cylinders identified in the initial inspection as requiring a more frequent inspection); the condition of each cylinder is documented using a cylinder inspection data sheet.

Initial and quadrennial inspections are conducted on full cylinders that are normally single or double stacked. These inspections, conducted from ground level, with or without visual aids, are made using the following criteria:

- Cylinders positioned incorrectly (e.g., with valves in other than top center position); this often is an indication of potential stacking damage.
- Improperly stacked cylinders with potentially damaging contact (e.g., lifting lug resting on cylinder body, stiffening ring resting on stiffening ring, other criteria as described in the inspection procedure).
- Dents, bulges, cracks, metal loss, apparent by visual inspection, on the longitudinal and circumference welds.
- Dents, bulges, cracks, gouges, stacking damage, excessive scale or rust, apparent by visual inspection, on the cylinder shell.
- Bends, cracks or breaks from shell, impact damage, gouges, apparent by visual inspection, on the stiffening rings.
- Tears, dents, cracks, excessive scale or rust, or plugged weep hole, apparent by visual inspection, on the cylinder skirt (or valve protector).

Depleted uranium in the form of solid  $UF_6$  is suitable for conversion to other chemical forms. For example, the solid  $UF_6$  could be converted to  $U_3O_8$ ,  $UF_4$ , or uranium metal. There are a number of

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existing and potential uses for depleted uranium, including use in radiation shielding material, armor-piercing projectiles, and counterweights. It is possible that increased energy costs may make recovery of additional  $^{235}\text{U}$  from the depleted uranium economically feasible in the future and that other potential uses may also be identified. However, the conversion of the depleted uranium to one of these other forms in the near term could either foreclose other uses and disposition options because of the difficulty of processing some of these uranium compounds and the lack of processing facilities, or increase the cost of the ultimate disposition.

Moreover, the amount of depleted uranium that will be produced by USEC in the near term will be relatively small in comparison with the DOE's existing depleted uranium inventory. DOE is currently storing approximately 700,000 MTU of depleted uranium as solid  $\text{UF}_6$  in approximately 60,000 cylinders stored at various locations on the DOE portions of the GDP plant sites. USEC presently anticipates that the bulk of its inventory of depleted uranium will ultimately be dispositioned in the same manner as the larger DOE depleted uranium inventory.

In the meantime, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004. Table 1 reflects the transfer schedule.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement. The quantity of depleted uranium associated with this agreement is specified in Table 1.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium associated with the compensation for these services is specified in Table 1.

In addition to the foregoing outlets, USEC will, to the extent practicable, continue to market depleted uranium for uses in military applications, counterweights, and shielding applications. Efforts may also be made to develop other commercial uses that could include shielding for high-level waste storage and shipping casks, or multipurpose canisters being developed for the DOE high-level waste program.

The remaining inventory will continue to be stored as solid  $UF_6$  until it can be processed in accordance with the disposition strategy established by DOE for its inventory.

The estimated cost of conversion and disposition of the depleted uranium is provided in the Decommissioning Funding Program, along with a description of the funding mechanisms that will be used to address USEC's funding liabilities.

#### **4.0 ITEMS ADDRESSED BY COMPLIANCE PLAN**

Section deleted.

**Table 1. Estimated amount of depleted uranium (DU) generated by USEC and its disposition, in metric tons uranium (MTU) for PORTS and PGDP combined.**

Year	DU Generated by USEC <sup>1</sup>	DU Transfers to DOE under 6/30/98 agreement <sup>4</sup>	DU Transfers to DOE under 6/17/02 agreement <sup>5</sup>	Other DU Transfers to DOE <sup>6</sup>	Estimated net cumulative USEC DU <sup>2</sup>
July 28, 1998- Dec. 31, 2003	-	-	-	-	17861 <sup>3</sup>
CY2004	6631 <sup>7</sup>	(8735)	(3315)	(3237)	9205
CY2005	5984	0	(1399)	(471)	13319
CY2006	7674	0	0	0	20993
CY2007	6292	0	0	0	27285
CY2008	5593	0	0	0	32878

Notes:

1. Projections are provided through the expiration date of the NRC Certificate of Compliance.
2. DOE retains liability for depleted uranium generated prior to USEC's privatization (July 28, 1998) per USEC Privatization Act (Public Law 104-134, Sec 3109, paragraph (a)(3)).
3. Reflects the cumulative amount of DU since USEC's privatization (July 28, 1998) for which USEC is responsible for disposition.
4. Total to be transferred to DOE is the quantity in 2026 48G cylinders.
5. Under the June 17, 2002 agreement, DOE will take possession of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 (July 1, 2002 through June 30, 2003) and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005.
6. Depleted uranium transfers to compensate USEC for incurred costs associated with DOE contract activities.
7. Includes 7 MTU returned from the former Starmet, CMI site.

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## **DECOMMISSIONING FUNDING PROGRAM DESCRIPTION**



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## 1.0 INTRODUCTION

As a condition of certification, 10 Code of Federal Regulations (CFR) 76.35(n) requires the United States Enrichment Corporation (USEC) to submit, as part of its application for an NRC certificate of compliance:

A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation.

Section 76.35(n) also requires USEC to establish financial surety arrangements to provide the requisite funding. The funding mechanism must ensure availability of funds for activities required to be completed both before and after the return of the gaseous diffusion plants to the Department of Energy (DOE) in accordance with the July 1, 1993 Lease Agreement between DOE and USEC (Lease Agreement). The funding program must also contain a basis for cost estimates used to establish funding levels, and means of adjusting such cost estimates and associated funding levels over the duration of the lease. Finally, USEC is not required to provide funding for "those aspects of decontamination and decommissioning . . . assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended."

In accordance with 10 CFR 76.35(n), USEC hereby submits a description of its program to ensure adequate funds are available for the disposal of waste and the disposition of depleted uranium generated at the GDP's and for which USEC is financially responsible under the Atomic Energy Act (AEA).

## 2.0 SCOPE OF USEC'S DECOMMISSIONING FINANCIAL RESPONSIBILITY

USEC began to operate the Paducah (PGDP) and Portsmouth (PORTS) plants on July 1, 1993, in accordance with the AEA, as amended, and the July 1, 1993 Lease Agreement. Prior to July 1, 1993, DOE operated the plants for about 40 years. Section 1403(d) of the AEA provides that "[t]he payment of any costs of decontamination and decommissioning . . . with respect to conditions existing before the transition date [July 1, 1993], in connection with property of the Department leased under subsection (a), shall remain the sole responsibility of the Department." Accordingly, USEC is not financially responsible for, and this Program Description does not provide funding assurance for, decontamination or decommissioning costs associated with any operations at the gaseous diffusion plants (GDPs) prior to July 1, 1993.

Furthermore, the GDPs, including the Leased Premises, will ultimately be decommissioned by DOE, which is solely responsible for the conduct of decontamination and decommissioning activities at the plant, and which also bears sole financial responsibility for the bulk of these activities. Section 4.6 of the Lease Agreement states that:

Except as provided in Section 4.5(c) of this Lease, the Department will be responsible for and will pay the costs of all Decontamination and Decommissioning, including the costs of Decontamination and Decommissioning of the Leased Premises, the Leased Personalty, any personal property found on the Leased Premises, regardless of ownership, and any Capital Improvement.

In addition, Section 4.3(b) of the Lease Agreement states that "[t]he Corporation shall be entitled, should it choose, to leave any of its personal property (including personal property contaminated by radioactive materials) on the Leased Premises at the end of the Lease Term for Decontamination and Decommissioning by the Department."

However, USEC does have certain specific financial responsibilities with respect to some of these activities. Under Section 4.4(c) of the Lease Agreement, USEC is "responsible for the ultimate treatment and disposal of any waste generated by the Corporation, and for which the Department is not responsible . . . ." Under this provision, USEC is financially responsible for, and this Program Description addresses, the disposal of low-level radioactive waste (LLRW) and "mixed" hazardous and radioactive waste generated by USEC at the GDPs after the date of privatization, July 28, 1998.<sup>1</sup>

In addition, as discussed above, Section 4.6 of the Lease Agreement provides that the Department will pay the costs of all decontamination and decommissioning, "[e]xcept as provided in Section 4.5(c) of this Lease . . . ." Section 4.5(c) authorizes USEC to remove any capital improvement at the GDPs, but "if such removal increases the costs of the Department for the Decontamination and Decommissioning

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1 A more detailed description of USEC's plans to manage and dispose of LLRW and mixed waste generated at the GDPs is provided in the Radioactive Waste Management Program, which is included as part of each certificate of compliance application.

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of the Leased Premises to which any such Capital Improvement was attached, the Corporation will pay any such increase in Decontamination and Decommissioning costs." At this time, USEC does not anticipate removing any capital improvement from the plant site. Therefore, no financial assurance for Decontamination and Decommissioning cost increases arising out of such removal is currently being provided.

Finally, USEC is generating depleted uranium as a result of its operation of the GDPs. Section 3109(a)(3) of the USEC Privatization Act (passed April 1996) states that:

All liabilities arising out of the disposal of depleted uranium generated by the Corporation between July 1, 1993 and the privatization date shall become the direct liabilities of the Secretary [Secretary of Energy].

Therefore, this Program Description also describes USEC's funding program to ensure funds are available for the ultimate disposition of the depleted uranium generated by USEC's operations after July 28, 1998.<sup>2</sup>

As described in the Depleted Uranium Management Plan, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement.

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2 The Depleted Uranium Management Plan describes in greater detail USEC's plans for the management and disposition of depleted uranium.



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The quantity of depleted uranium associated with these agreements, and the transfer schedule for this material, is specified in Table 1 of the Depleted Uranium Management Plan.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium, and the transfer schedule for the depleted uranium associated with the compensation for these contracts, is specified in Table 1 of the Depleted Uranium Management Plan.

### 3.0 DECOMMISSIONING COST ESTIMATE

In accordance with 10 CFR 76.35(n), USEC has estimated the costs associated with the disposal of LLRW and mixed waste, and the disposition of depleted uranium generated by its operations at the GDPs. These costs are not considered decontamination and decommissioning costs, but rather production costs since they are incurred during the operation and maintenance of the plant. These cost estimates are cumulative, and are calculated one year in advance. The estimated cost for calendar year (CY) 2005 for the disposal of waste and for the disposition of depleted uranium generated by USEC at the GDPs is as follows:

Low Level and Mixed Waste	\$ 6.37 M
Depleted Uranium	\$42.80 M
Labor Cost	\$ 0.50 M
CY05 Cost	\$49.67 M

To account for uncertainties associated with either the estimated volumes or costs associated with the above cost estimates, a contingency factor of 10% is applied to the CY 05 cost. A 10% contingency is appropriate considering USEC's limited decontamination and decommissioning liability as described in the Decommissioning Funding Program Description (DFP), an annual review and update, as necessary, of the DFP cost estimate and the relative stability of the factors which are utilized to generate USEC's depleted uranium volume estimate, the disposal of which is the major contributor to USEC's decommissioning funding liability. After application of the 10% contingency, USEC's total projected decommissioning funding liability for calendar year 2005 is \$54.6 million.

The bases for these cost estimates are described below in their respective subsection. USEC's cost estimates will be reviewed annually and revised, as necessary, to reflect any change in USEC's projected liability.

#### 3.1 LOW LEVEL AND MIXED WASTE DISPOSAL

USEC generates many types of LLRW and mixed (hazardous and radioactive) waste at the GDPs, as described in the Radioactive Waste Management Program (RWMP) for each site. For the most part, all wastes are routinely treated on-site or treated and disposed of off-site as the wastes are generated. There are, however, a small number of mixed waste streams at PORTS for which no treatment and/or disposal option exists in the US. These wastes are authorized to be stored in Department of Energy permitted storage at PORTS under agreements with the appropriate state agencies. There is also a quantity of LLRW at each plant that will remain onsite at the end of CY 2005. At PGDP, the LLRW

does not meet the disposal facilities waste acceptance criteria as stored, while at PORTS, most of these wastes currently do not have a disposal option. These wastes are being stored in compliance with USEC's Certificate of Compliance. USEC's LLRW and mixed waste decommissioning liability is calculated as the sum of the liability associated with the cost of disposal of that amount of waste estimated to be generated during the calendar year plus the liability associated with the estimated amount of waste that remains in storage at the end of the calendar year. Cost of disposal includes disposal cost, container cost, and transportation costs.

Estimated waste generation volumes are based on historical waste generation for each plant. Each individual LLRW and mixed waste stream has a different estimated volume and a different disposal cost. For the year, the different volumes of waste generated and their disposal cost estimates are averaged to establish an average disposal cost. USEC's cost estimate is based on the weighted average cost to manage waste. The disposal cost estimate for each waste stream in the weighted average cost is based upon existing contract prices.

Based on historical information, the cost of containers for waste disposal is approximately 8.1% of the disposal cost. Historical information also shows that the transportation cost associated with waste is approximately 9.1% of the disposal costs.

Except for those mixed wastes and LLRW noted earlier that do not currently have a disposal outlet, USEC anticipates that its waste disposal activities will be such that LLRW and most mixed waste generated in any given year will be disposed of within that year, or shortly thereafter. USEC funds this disposal cost out of accrued cash generated from operations. The decommissioning liability associated with the waste that remains in storage at the end of the calendar year at each site will be calculated based on the estimated volume of waste in storage at the end of the calendar year.

### 3.1.1 Low Level Radioactive Waste Disposal

USEC anticipates generating a total of approximately 53,500 ft<sup>3</sup> of LLRW from routine operations and projects at the Paducah plant for calendar year 2005. USEC has assumed disposal of Paducah's LLRW at various commercial disposal facilities at an average weighted cost of \$23/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Paducah plant for calendar year 2005 is therefore estimated to be:

$$\text{Paducah LLRW: } 53,500 \text{ ft}^3 \times \$23/\text{ft}^3 = \$1.23 \text{ million for the year}$$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 17,250 ft<sup>3</sup> of LLRW from routine operations, projects and shutdown related activities. USEC has assumed disposal of Portsmouth's LLRW at various commercial disposal facilities at an average weighted cost of \$25/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

$$\text{Portsmouth LLRW: } 17,250 \text{ ft}^3 \times \$25/\text{ft}^3 = \$0.43 \text{ million for the year}$$

The cost of disposal of USEC's LLRW for CY 2005 is \$1.66 million.

### 3.1.2 Mixed Waste Disposal

USEC anticipates generating a total of approximately 350 ft<sup>3</sup> of mixed waste at the Paducah plant in calendar year 2005. The current average cost estimate for disposing of this mixed waste produced at Paducah is \$395/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Paducah plant for calendar year 2005 is therefore estimated to be:

$$\text{Paducah Mixed Waste: } 350 \text{ ft}^3 \times \$395/\text{ft}^3 = \$0.14 \text{ million for the year}$$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 310 ft<sup>3</sup> of mixed waste for CY 2005. The current average cost of disposal of such waste at Portsmouth is \$365/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

$$\text{Portsmouth Mixed Waste: } 310 \text{ ft}^3 \times \$365/\text{ft}^3 = \$0.11 \text{ million for the year}$$

The cost of disposal of USEC's mixed waste for CY 2005 is \$0.25 million.

### 3.1.3 Cost of Containers and Transportation

The cost of disposal of USEC's waste for CY 2005 has been estimated to be \$1.66 million for LLRW and \$0.25 million for mixed waste for a total of \$1.91 million. The estimated cost of containers for USEC's waste in CY 2005 is 8.1% of the cost of disposal.

$$\text{Cost of containers: } 8.1\% \text{ of } \$1.91 \text{ million or } \$0.15 \text{ million.}$$

The estimated cost of transportation for the disposal of USEC's waste in CY 2005 is estimated to be 9.1% of the cost of disposal.

$$\text{Cost of transportation: } 9.1\% \text{ of } \$1.91 \text{ million or } \$0.17 \text{ million.}$$

The total estimated cost associated with the containers and transportation necessary for the disposal of USEC's waste in CY 2005 is \$ 0.32 million.

### 3.1.4 Mixed Waste in Storage

As described earlier, there is an amount of mixed waste that will remain in storage at the end of CY 2005 at the Portsmouth plant. USEC estimates that 800 ft<sup>3</sup> of mixed waste will be in storage at the end of CY 2005. Due to the unknown future costs associated with these wastes an additional \$1,500/ft<sup>3</sup> may be necessary for disposal. The additional estimated cost associated with the disposal of this waste is:

$$\text{Portsmouth mixed waste in storage: } 800 \text{ ft}^3 \times \$1,500/\text{ft}^3 = \$1.2 \text{ million}$$

As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total estimated costs for the disposal of mixed waste in storage at the Portsmouth plant in CY 2005 is \$1.41 million.

### 3.1.5 Low-Level Radioactive Waste in Storage

As described earlier, there is an amount of LLRW that will remain in storage at the end of CY 2005. This waste will be disposed at a later date at an estimated cost of \$28/ft<sup>3</sup>. This disposal cost is determined based on the weighted average cost for this particular waste stream. At Paducah, this LLRW volume is estimated to be 16,000 ft<sup>3</sup>.

The disposal cost for this LLRW that will remain on site at Paducah at the end of CY 2005 is estimated to be:

$$\text{Paducah LLRW in storage: } 16,000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.45 \text{ million.}$$

Likewise, at the Portsmouth Plant, USEC estimates that 3000 ft<sup>3</sup> of LLRW will remain on site at the end of CY 2005, and disposed at a later date. Therefore, the disposal cost for this LLRW that will remain on site at Portsmouth at the end of CY2005 is estimated to be:

$$\text{Portsmouth LLRW in storage: } 3000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.08 \text{ million}$$

In addition, 3000 ft<sup>3</sup> of LLRW for which USEC does not currently have a disposal outlet will remain in storage at Portsmouth. Due to the unknown future costs associated with disposal of this 3000 ft<sup>3</sup> of LLRW, an additional \$600 may be necessary for disposal. Therefore, the disposal cost for this LLRW that will remain in storage at Portsmouth at the end of CY 2005 is estimated to be:

$$\text{Portsmouth LLRW in storage: } 3000 \text{ ft}^3 \times \$600/\text{ft}^3 = \$1.8 \text{ million}$$

Therefore, the cost to dispose of the LLRW in storage in a subsequent calendar year is \$2.33 million. As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total cost for disposal of this LLRW in storage, including transportation and container costs, is estimated to be \$2.73 million.

### 3.2 Depleted Uranium Disposition

The estimate of decommissioning liability for depleted uranium is based on the generation of depleted uranium as described in the Depleted Uranium Management Plan. The current estimated cost for disposal of depleted uranium is estimated to be \$3.00 per kilogram of uranium (kgU). This cost for disposal is based upon the cost in the "Memorandum of Agreement between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium", dated June 30, 1998. USEC has compared this cost for disposal of depleted uranium against cost information from the DOE contract for the conversion facilities currently being constructed at Piketon, Ohio and Paducah, KY as well as the proposal to build and operate the uranium hexafluoride conversion facilities for DOE, submitted by the American Conversion Services (ACS) partnership, which included USEC. This proprietary ACS proposal was based on comprehensive cost projections developed by the partnership. The ACS proposal and the DOE conversion facilities cost information support the \$3.00 per kgU disposal cost for depleted uranium used in this plan. Based on the Depleted Uranium Management Plan, USEC's projected maximum liability at the end of calendar year 2005 for the disposition of depleted uranium generated by its Paducah and Portsmouth operations is 13.319 million kilograms (refer to Table 1 in the Depleted Uranium Management Plan).

Total processing cost for depleted uranium is then 13,319,000 kilograms of depleted uranium times \$3.00 per kilogram = \$39,957,000 or, after rounding, \$40.0M

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The above cost estimate includes processing as well as transportation and disposal of any by-product related to processing of the depleted uranium. To obtain the total cost associated with disposition of depleted uranium, the cost for transporting the depleted uranium to the processing facility must be included. The estimated cost associated with transporting USEC's depleted uranium liability for CY 2005 is estimated as follows:

$$\frac{(13,319,000 \text{ kgU})(\$1760/\text{cylinder}^*)}{(8400 \text{ kgU/cylinder})^{**}} = \$2,790,648 \text{ or } \$2.8\text{M}$$

\* Based on freight invoices to Starmet, CMI<sup>3</sup>

\*\*Approximate average kgU/cylinder, based on shipping weights

Therefore, USEC's total estimated liability for disposition of depleted uranium for CY 2005 is the sum of processing costs and transportation costs which equates to \$42.8M.

### 3.3 Labor Costs

To account for labor costs associated with disposal of USEC generated waste, USEC has included provisions for two crews (one for each facility) comprised of 1 supervisor, 3 laborers, 1 health physics technician and 1 engineer. Since disposal of waste is not a continuous process, the labor costs are calculated assuming the crews are available for a six-month duration, with the health physics technician and the engineer available for half of this duration (3 months duration). Labor costs were estimated based on the costs provided in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities," dated July 1998. Based on these assumptions, the labor costs associated with disposal of USEC generated waste is \$500,000 (\$250,000 per site).

## 4.0 REVIEW AND ADJUSTMENT OF DECOMMISSIONING COSTS AND FUNDING LEVELS

USEC will review the decommissioning cost estimates and associated funding levels over the duration of the lease and adjust them when necessary. These adjustments will take into account such factors as changes in volume and cost estimates, changes in plant conditions, and changes in expected decontamination and decommissioning procedures. USEC will conduct such reviews in October of each year.

## 5.0 DECOMMISSIONING FUNDING MECHANISM

USEC utilizes payment surety bond(s) and standby trust agreement(s) to ensure that sufficient funds will be available for waste disposal and depleted uranium disposition as set forth in this Program Description. The instruments are derived from Appendix A, NUREG-1757 Volume 3, "Consolidated NMSS Decommissioning Guidance, *Financial Assurance, Recordkeeping, and Timeliness*", dated September 2003. Non-executed versions are included in this Plan. Executed documents are submitted to the NRC for review as they are revised and reissued.

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<sup>3</sup>Associated with a previous demonstration project for processing USEC depleted uranium.

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**PAYMENT SURETY BOND - NON-EXECUTED VERSION**

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, MD 20817

Type of organization: Delaware Chartered Corporation

NRC certificate of compliance number: GDP-1 and GDP-2

Name and address of facilities: Paducah Gaseous Diffusion Plant  
Portsmouth Gaseous Diffusion Plant

Amount(s) for decommissioning  
activity guaranteed by this bond: Estimated at [insert amount]

Surety(ies) [name(s) and business address(es)]

Type of organization: [insert "proprietorship," "joint venture," "partnership" or "corporation"]

State of incorporation: \_\_\_\_\_ (if applicable)

Surety's qualification in jurisdiction where facility is located.

Surety's bond number \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Know all persons by these presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the U.S. Nuclear Regulatory Commission (herein called NRC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety; but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

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WHEREAS, the NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76, applicable to the Principal, which require that the holder of a certificate of compliance for a gaseous diffusion plant, or an applicant for a certificate of compliance for such a facility provide financial assurance that funds will be available when needed for those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of such a facility which are the financial responsibility of such holder or applicant (collectively, "decommissioning");

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of decommissioning of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility;

Or, if the Principal shall fund the standby trust fund in such amount(s) after an order to begin facility decommissioning is issued by the NRC or a U.S. district court or other court of competent jurisdiction;

Or, if the Principal shall provide alternative financial assurance and obtain the written approval of the NRC of such assurance, within 30 days after the date a notice of cancellation from the Surety(ies) is received by both the Principal and the NRC, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the NRC that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund established by the Principal with [name of trustee] pursuant to the Standby Trust Agreement dated [date].

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the NRC provided, however, that cancellation shall not occur during the 90 days beginning on the date of receipt of the notice of cancellation by both the Principal and the NRC, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the NRC and to Surety(ies) 90 days prior to the proposed date of termination, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond from the NRC.

If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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In Witness Whereof, the Principal and Surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Principal: United States Enrichment Corporation.

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety(ies) above.]

Bond premium: \$ \_\_\_\_\_



DFP-GDPs  
PGDP Rev. 86  
PORTS Rev. 70

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**STANDBY TRUST AGREEMENT - NON-EXECUTED VERSION**

TRUST AGREEMENT, the Agreement entered into as of [date] by and between the United States Enrichment Corporation, a Delaware chartered corporation, herein referred to as the "Grantor," and [name and address of a national bank or other Trustee acceptable to the U.S. Nuclear Regulatory Commission], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 76, certificate of compliance provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a surety bond to provide part of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a surety bond this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

**Section 1. Definitions.** As used in this Agreement:

- (a) The term "Decommissioning" means those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of the Paducah and Portsmouth Gaseous Diffusion Plant (GDPs) which are the financial responsibility of the Grantor.
- (b) The term "Grantor" means the United States Enrichment Corporation and any successors or assigns thereof.
- (c) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

**Section 2. Costs of Decommissioning.** This Agreement pertains to the costs of decommissioning the materials and activities identified in Certificate of Compliance Number GDP-1 and GDP-2 issued pursuant to 10 CFR Part 76.

**Section 3. Establishment of Fund.** The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

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Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

a. A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and

b. A certificate attesting to the following conditions:

(1) that decommissioning is proceeding pursuant to an NRC-approved plan.

(2) that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and

(3) that the NRC has been given 30 days' prior notice of the Grantor's intent to withdraw funds from the escrow fund.

No withdrawal from the fund can exceed 10 percent of the outstanding balance of the Fund unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor, or other persons as specified by the NRC, from the Fund for expenditures for required activities in such amount as the NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity

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and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poor's or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine

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certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, where so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the

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Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC, and the present Trustee by certified mail 10 days before such changes become effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the grantor's orders, requests, and instructions. If the NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, or the NRC, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instruction from the Grantor and/or the NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor, or the NRC, issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the United States.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST:

[Insert name of Grantor]  
[Signature of representative  
of Grantor]  
[Title]

[Title]  
[Seal]

[Insert name of Trustee]  
[Signature of representative  
of Trustee]  
[Title]

ATTEST:  
[Title]  
[Seal]

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

U.S. NUCLEAR  
REGULATORY  
COMMISSION  
CERTIFICATE OF  
COMPLIANCE NUMBER

GDP-1 and GDP-2

NAME AND  
ADDRESS OF  
LICENSEE

United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, Maryland 20817

3930 State Route 23/Perimeter Road  
Piketon, Ohio 45661

5600 Hobbs Road  
Paducah, Kentucky 42001

COST ESTIMATE FOR  
REGULATORY ASSURANCES  
DEMONSTRATED BY THIS  
AGREEMENT

[Insert amount of agreement]

The cost estimates listed here were submitted to the NRC on [insert date]

The Total Cost of decommissioning the GDP's, assuming no liability for decontamination, is as per the decommissioning cost estimate on file with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_



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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE B

AMOUNT:

AS EVIDENCED BY: Payment Surety Bond dated [insert date]  
[Insert name of Surety Bond holder and Surety Bond number] as on file  
with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE C

Trustee will be paid [insert amount] annually for services being provided under the standby trust agreement. This fee will apply whether or not payment has been made to the standby trust fund.

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**APPLICATION FOR UNITED STATES  
NUCLEAR REGULATORY COMMISSION CERTIFICATION  
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**Depleted Uranium Management Plan  
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Principal Officers

Mr. James R. Mellor  
Chairman and Chief Executive Officer

Ms. Lisa E. Gordon-Hagerty  
Executive Vice President and Chief Operating Officer

Mr. Russell B. Starkey, Jr.  
Vice President, Operations

Mr. James F. McDonnell  
Vice President and Chief Information & Security Officer

**Format and Content of the USEC Certification Application**

The Application contains a Safety Analysis Report (SAR), Technical Safety Requirements (TSRs), and programs, plans and other documents as described above. In accordance with 10 CFR 76.35(b), the Application also includes a plan prepared and approved by DOE for achieving compliance with respect to any areas of noncompliance with the NRC's regulations identified by USEC as of the date of this Application. The Compliance Plan provides an expanded description of the

areas of noncompliance, a justification for continued operation, a description of the plan of action to achieve compliance, and the schedule for completion of those actions, as applicable.

The Application is written in the present tense. The physical description of installed structures, systems and components (SSCs) in the Application is current as of June 1, 1995, except as described in Section 3.9, "Items Addressed by Compliance Plan." The programs, plans, procedures and other aspects of the facility's operations other than the SSCs are described as they will be when all Compliance Plan items are completed. Each section of the Application contains a subsection entitled "Items Addressed by Compliance Plan". This subsection describes those aspects of the program, plan or section topic that are not in full compliance with the Application. This subsection also contains a brief description of what is currently in place. Any section which does not have any related Compliance Plan states "None identified."



## **DEPLETED URANIUM MANAGEMENT PLAN**

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## 1.0 INTRODUCTION

Under 10 Code of Federal Regulations (CFR) 76.35(m), the United States Enrichment Corporation (USEC) is required, as part of its application for a certificate of compliance, to provide:

"A description of the program, as appropriate, for processing, management, and disposal of mixed and radioactive wastes and depleted uranium generated by operations. This description must be limited to processing, management, and disposal activities conducted during operation of the facilities while under lease to the Corporation. The application must also include a description of the waste streams generated by enrichment operations, annual volumes of depleted uranium and waste expected, identification of radioisotopes contained in the waste, physical and chemical forms of the depleted uranium and waste, plans for managing the depleted uranium and waste, and plans for ultimate disposition of the waste and depleted uranium before turnover of the facilities to the Department of Energy under the terms of the lease agreement between the United States Enrichment Corporation and the Department."

In accordance with 10 CFR 76.35(m), this plan describes USEC's program for the management and disposition of the depleted uranium (DU) produced as part of the enrichment activities at the Portsmouth (PORTS) and Paducah (PGDP) Gaseous Diffusion Plants (GDPs). USEC's program for the processing, management, and disposal of mixed and radioactive wastes is described in the Radioactive Waste Management Plan submitted as part of this application.

## 2.0 DEPLETED URANIUM PRODUCTION ESTIMATES

The production of depleted uranium will continue throughout the period that enrichment activities are conducted at the GDPs. The production rate of depleted uranium is a function of the demand for enriched uranium, the portion of that demand supplied by the Russian enriched uranium, and the operating mode of the plants (determined by power load, power costs, enrichment levels, and other factors). USEC's projected depleted uranium production estimates for both GDPs cover the period of the Nuclear Regulatory Commission (NRC) Certificate of Compliance. The estimates are provided in Table 1, along with the amount of depleted uranium that USEC is responsible for, taking into account the factors discussed in Section 3.0 below.

The funds set aside for the disposition of depleted uranium at the GDPs will be based on the actual production rates of depleted uranium at the plant during the period that the plant is operated under the USEC/DOE Lease Agreement. USEC's funding plan for the disposition of depleted uranium is described in the Decommissioning Funding Program Description submitted as part of this application.

### 3.0 MANAGEMENT AND DISPOSITION PLAN

The depleted uranium is currently being stored as solid uranium hexafluoride ( $UF_6$ ) in carbon steel cylinders at the GDP plant sites (cylinder storage is described in PGDP SAR Section 3.7.2 and PORTS SAR Section 3.2.4.4). The cylinders meet specific design requirements and special procedures and handling equipment are used for DU cylinder handling, movement, and stacking. USEC can continue to store depleted uranium in the solid state in these cylinders for an extended period without undue risk. In addition, cylinder inspections are conducted, as described below, to provide evidence of continued cylinder integrity.

The cylinders used for the storage of depleted uranium are inspected prior to being filled. After filling, the cylinder is cooled and then moved to a cylinder yard and stacked in place. After the cylinder is stacked in position, a baseline (initial) storage inspection is conducted at which point any damage to the cylinder is identified. If the cylinder is damaged, supervision is notified promptly and the damage evaluated for any actions required; the range of actions are to be commensurate with the cylinder damage. After the initial inspection, the cylinders are inspected every four years thereafter (except for any cylinders identified in the initial inspection as requiring a more frequent inspection); the condition of each cylinder is documented using a cylinder inspection data sheet.

Initial and quadrennial inspections are conducted on full cylinders that are normally single or double stacked. These inspections, conducted from ground level, with or without visual aids, are made using the following criteria:

- Cylinders positioned incorrectly (e.g., with valves in other than top center position); this often is an indication of potential stacking damage.
- Improperly stacked cylinders with potentially damaging contact (e.g., lifting lug resting on cylinder body, stiffening ring resting on stiffening ring, other criteria as described in the inspection procedure).
- Dents, bulges, cracks, metal loss, apparent by visual inspection, on the longitudinal and circumference welds.
- Dents, bulges, cracks, gouges, stacking damage, excessive scale or rust, apparent by visual inspection, on the cylinder shell.
- Bends, cracks or breaks from shell, impact damage, gouges, apparent by visual inspection, on the stiffening rings.
- Tears, dents, cracks, excessive scale or rust, or plugged weep hole, apparent by visual inspection, on the cylinder skirt (or valve protector).

Depleted uranium in the form of solid  $UF_6$  is suitable for conversion to other chemical forms. For example, the solid  $UF_6$  could be converted to  $U_3O_8$ ,  $UF_4$ , or uranium metal. There are a number of



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existing and potential uses for depleted uranium, including use in radiation shielding material, armor-piercing projectiles, and counterweights. It is possible that increased energy costs may make recovery of additional  $^{235}\text{U}$  from the depleted uranium economically feasible in the future and that other potential uses may also be identified. However, the conversion of the depleted uranium to one of these other forms in the near term could either foreclose other uses and disposition options because of the difficulty of processing some of these uranium compounds and the lack of processing facilities, or increase the cost of the ultimate disposition.

Moreover, the amount of depleted uranium that will be produced by USEC in the near term will be relatively small in comparison with the DOE's existing depleted uranium inventory. DOE is currently storing approximately 700,000 MTU of depleted uranium as solid  $\text{UF}_6$  in approximately 60,000 cylinders stored at various locations on the DOE portions of the GDP plant sites. USEC presently anticipates that the bulk of its inventory of depleted uranium will ultimately be dispositioned in the same manner as the larger DOE depleted uranium inventory.

In the meantime, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004. Table 1 reflects the transfer schedule.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement. The quantity of depleted uranium associated with this agreement is specified in Table 1.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium associated with the compensation for these services is specified in Table 1.

In addition to the foregoing outlets, USEC will, to the extent practicable, continue to market depleted uranium for uses in military applications, counterweights, and shielding applications. Efforts may also be made to develop other commercial uses that could include shielding for high-level waste storage and shipping casks, or multipurpose canisters being developed for the DOE high-level waste program.

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The remaining inventory will continue to be stored as solid  $UF_6$  until it can be processed in accordance with the disposition strategy established by DOE for its inventory.

The estimated cost of conversion and disposition of the depleted uranium is provided in the Decommissioning Funding Program, along with a description of the funding mechanisms that will be used to address USEC's funding liabilities.

#### **4.0 ITEMS ADDRESSED BY COMPLIANCE PLAN**

Section deleted.

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**Table 1. Estimated amount of depleted uranium (DU) generated by USEC and its disposition, in metric tons uranium (MTU) for PORTS and PGDP combined.**

Year	DU Generated by USEC <sup>1</sup>	DU Transfers to DOE under 6/30/98 agreement <sup>4</sup>	DU Transfers to DOE under 6/17/02 agreement <sup>5</sup>	Other DU Transfers to DOE <sup>6</sup>	Estimated net cumulative USEC DU <sup>2</sup>
July 28, 1998- Dec. 31, 2003	-	-	-	-	17861 <sup>3</sup>
CY2004	6631 <sup>7</sup>	(8735)	(3315)	(3237)	9205
CY2005	5984	0	(1399)	(471)	13319
CY2006	7674	0	0	0	20993
CY2007	6292	0	0	0	27285
CY2008	5593	0	0	0	32878

Notes:

1. Projections are provided through the expiration date of the NRC Certificate of Compliance.
2. DOE retains liability for depleted uranium generated prior to USEC's privatization (July 28, 1998) per USEC Privatization Act (Public Law 104-134, Sec 3109, paragraph (a)(3)).
3. Reflects the cumulative amount of DU since USEC's privatization (July 28, 1998) for which USEC is responsible for disposition.
4. Total to be transferred to DOE is the quantity in 2026 48G cylinders.
5. Under the June 17, 2002 agreement, DOE will take possession of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 (July 1, 2002 through June 30, 2003) and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005.
6. Depleted uranium transfers to compensate USEC for incurred costs associated with DOE contract activities.
7. Includes 7 MTU returned from the former Starmet, CMI site.

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## **DECOMMISSIONING FUNDING PROGRAM DESCRIPTION**

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## 1.0 INTRODUCTION

As a condition of certification, 10 Code of Federal Regulations (CFR) 76.35(n) requires the United States Enrichment Corporation (USEC) to submit, as part of its application for an NRC certificate of compliance:

A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation.

Section 76.35(n) also requires USEC to establish financial surety arrangements to provide the requisite funding. The funding mechanism must ensure availability of funds for activities required to be completed both before and after the return of the gaseous diffusion plants to the Department of Energy (DOE) in accordance with the July 1, 1993 Lease Agreement between DOE and USEC (Lease Agreement). The funding program must also contain a basis for cost estimates used to establish funding levels, and means of adjusting such cost estimates and associated funding levels over the duration of the lease. Finally, USEC is not required to provide funding for "those aspects of decontamination and decommissioning . . . assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended."

In accordance with 10 CFR 76.35(n), USEC hereby submits a description of its program to ensure adequate funds are available for the disposal of waste and the disposition of depleted uranium generated at the GDP's and for which USEC is financially responsible under the Atomic Energy Act (AEA).

## 2.0 SCOPE OF USEC'S DECOMMISSIONING FINANCIAL RESPONSIBILITY

USEC began to operate the Paducah (PGDP) and Portsmouth (PORTS) plants on July 1, 1993, in accordance with the AEA, as amended, and the July 1, 1993 Lease Agreement. Prior to July 1, 1993, DOE operated the plants for about 40 years. Section 1403(d) of the AEA provides that "[t]he payment of any costs of decontamination and decommissioning . . . with respect to conditions existing before the transition date [July 1, 1993], in connection with property of the Department leased under subsection (a), shall remain the sole responsibility of the Department." Accordingly, USEC is not financially responsible for, and this Program Description does not provide funding assurance for, decontamination or decommissioning costs associated with any operations at the gaseous diffusion plants (GDPs) prior to July 1, 1993.

Furthermore, the GDPs, including the Leased Premises, will ultimately be decommissioned by DOE, which is solely responsible for the conduct of decontamination and decommissioning activities at the plant, and which also bears sole financial responsibility for the bulk of these activities. Section 4.6 of the Lease Agreement states that:

Except as provided in Section 4.5(c) of this Lease, the Department will be responsible for and will pay the costs of all Decontamination and Decommissioning, including the costs of Decontamination and Decommissioning of the Leased Premises, the Leased Personalty, any personal property found on the Leased Premises, regardless of ownership, and any Capital Improvement.

In addition, Section 4.3(b) of the Lease Agreement states that "[t]he Corporation shall be entitled, should it choose, to leave any of its personal property (including personal property contaminated by radioactive materials) on the Leased Premises at the end of the Lease Term for Decontamination and Decommissioning by the Department."

However, USEC does have certain specific financial responsibilities with respect to some of these activities. Under Section 4.4(c) of the Lease Agreement, USEC is "responsible for the ultimate treatment and disposal of any waste generated by the Corporation, and for which the Department is not responsible . . . ." Under this provision, USEC is financially responsible for, and this Program Description addresses, the disposal of low-level radioactive waste (LLRW) and "mixed" hazardous and radioactive waste generated by USEC at the GDPs after the date of privatization, July 28, 1998.<sup>1</sup>

In addition, as discussed above, Section 4.6 of the Lease Agreement provides that the Department will pay the costs of all decontamination and decommissioning, "[e]xcept as provided in Section 4.5(c) of this Lease . . . ." Section 4.5(c) authorizes USEC to remove any capital improvement at the GDPs, but "if such removal increases the costs of the Department for the Decontamination and Decommissioning

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<sup>1</sup> A more detailed description of USEC's plans to manage and dispose of LLRW and mixed waste generated at the GDPs is provided in the Radioactive Waste Management Program, which is included as part of each certificate of compliance application.

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of the Leased Premises to which any such Capital Improvement was attached, the Corporation will pay any such increase in Decontamination and Decommissioning costs." At this time, USEC does not anticipate removing any capital improvement from the plant site. Therefore, no financial assurance for Decontamination and Decommissioning cost increases arising out of such removal is currently being provided.

Finally, USEC is generating depleted uranium as a result of its operation of the GDPs. Section 3109(a)(3) of the USEC Privatization Act (passed April 1996) states that:

All liabilities arising out of the disposal of depleted uranium generated by the Corporation between July 1, 1993 and the privatization date shall become the direct liabilities of the Secretary [Secretary of Energy].

Therefore, this Program Description also describes USEC's funding program to ensure funds are available for the ultimate disposition of the depleted uranium generated by USEC's operations after July 28, 1998.<sup>2</sup>

As described in the Depleted Uranium Management Plan, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement.

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2 The Depleted Uranium Management Plan describes in greater detail USEC's plans for the management and disposition of depleted uranium.

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The quantity of depleted uranium associated with these agreements, and the transfer schedule for this material, is specified in Table 1 of the Depleted Uranium Management Plan.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium, and the transfer schedule for the depleted uranium associated with the compensation for these contracts, is specified in Table 1 of the Depleted Uranium Management Plan.

### 3.0 DECOMMISSIONING COST ESTIMATE

In accordance with 10 CFR 76.35(n), USEC has estimated the costs associated with the disposal of LLRW and mixed waste, and the disposition of depleted uranium generated by its operations at the GDPs. These costs are not considered decontamination and decommissioning costs, but rather production costs since they are incurred during the operation and maintenance of the plant. These cost estimates are cumulative, and are calculated one year in advance. The estimated cost for calendar year (CY) 2005 for the disposal of waste and for the disposition of depleted uranium generated by USEC at the GDPs is as follows:

Low Level and Mixed Waste	\$ 6.37 M
Depleted Uranium	\$42.80 M
Labor Cost	<u>\$ 0.50 M</u>
CY05 Cost	\$49.67 M

To account for uncertainties associated with either the estimated volumes or costs associated with the above cost estimates, a contingency factor of 10% is applied to the CY 05 cost. A 10% contingency is appropriate considering USEC's limited decontamination and decommissioning liability as described in the Decommissioning Funding Program Description (DFP), an annual review and update, as necessary, of the DFP cost estimate and the relative stability of the factors which are utilized to generate USEC's depleted uranium volume estimate, the disposal of which is the major contributor to USEC's decommissioning funding liability. After application of the 10% contingency, USEC's total projected decommissioning funding liability for calendar year 2005 is \$54.6 million.

The bases for these cost estimates are described below in their respective subsection. USEC's cost estimates will be reviewed annually and revised, as necessary, to reflect any change in USEC's projected liability.

#### 3.1 LOW LEVEL AND MIXED WASTE DISPOSAL

USEC generates many types of LLRW and mixed (hazardous and radioactive) waste at the GDPs, as described in the Radioactive Waste Management Program (RWMP) for each site. For the most part, all wastes are routinely treated on-site or treated and disposed of off-site as the wastes are generated. There are, however, a small number of mixed waste streams at PORTS for which no treatment and/or disposal option exists in the US. These wastes are authorized to be stored in Department of Energy permitted storage at PORTS under agreements with the appropriate state agencies. There is also a quantity of LLRW at each plant that will remain onsite at the end of CY 2005. At PGDP, the LLRW

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does not meet the disposal facilities waste acceptance criteria as stored, while at PORTS, most of these wastes currently do not have a disposal option. These wastes are being stored in compliance with USEC's Certificate of Compliance. USEC's LLRW and mixed waste decommissioning liability is calculated as the sum of the liability associated with the cost of disposal of that amount of waste estimated to be generated during the calendar year plus the liability associated with the estimated amount of waste that remains in storage at the end of the calendar year. Cost of disposal includes disposal cost, container cost, and transportation costs.

Estimated waste generation volumes are based on historical waste generation for each plant. Each individual LLRW and mixed waste stream has a different estimated volume and a different disposal cost. For the year, the different volumes of waste generated and their disposal cost estimates are averaged to establish an average disposal cost. USEC's cost estimate is based on the weighted average cost to manage waste. The disposal cost estimate for each waste stream in the weighted average cost is based upon existing contract prices.

Based on historical information, the cost of containers for waste disposal is approximately 8.1% of the disposal cost. Historical information also shows that the transportation cost associated with waste is approximately 9.1% of the disposal costs.

Except for those mixed wastes and LLRW noted earlier that do not currently have a disposal outlet, USEC anticipates that its waste disposal activities will be such that LLRW and most mixed waste generated in any given year will be disposed of within that year, or shortly thereafter. USEC funds this disposal cost out of accrued cash generated from operations. The decommissioning liability associated with the waste that remains in storage at the end of the calendar year at each site will be calculated based on the estimated volume of waste in storage at the end of the calendar year.

### 3.1.1 Low Level Radioactive Waste Disposal

USEC anticipates generating a total of approximately 53,500 ft<sup>3</sup> of LLRW from routine operations and projects at the Paducah plant for calendar year 2005. USEC has assumed disposal of Paducah's LLRW at various commercial disposal facilities at an average weighted cost of \$23/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Paducah plant for calendar year 2005 is therefore estimated to be:

Paducah LLRW:  $53,500 \text{ ft}^3 \times \$23/\text{ft}^3 = \$1.23 \text{ million for the year}$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 17,250 ft<sup>3</sup> of LLRW from routine operations, projects and shutdown related activities. USEC has assumed disposal of Portsmouth's LLRW at various commercial disposal facilities at an average weighted cost of \$25/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

Portsmouth LLRW:  $17,250 \text{ ft}^3 \times \$25/\text{ft}^3 = \$0.43 \text{ million for the year}$

The cost of disposal of USEC's LLRW for CY 2005 is \$1.66 million.

### 3.1.2 Mixed Waste Disposal

USEC anticipates generating a total of approximately 350 ft<sup>3</sup> of mixed waste at the Paducah plant in calendar year 2005. The current average cost estimate for disposing of this mixed waste produced at Paducah is \$395/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Paducah plant for calendar year 2005 is therefore estimated to be:

Paducah Mixed Waste:  $350 \text{ ft}^3 \times \$395/\text{ft}^3 = \$0.14 \text{ million for the year}$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 310 ft<sup>3</sup> of mixed waste for CY 2005. The current average cost of disposal of such waste at Portsmouth is \$365/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

Portsmouth Mixed Waste:  $310 \text{ ft}^3 \times \$365/\text{ft}^3 = \$0.11 \text{ million for the year}$

The cost of disposal of USEC's mixed waste for CY 2005 is \$0.25 million.

### 3.1.3 Cost of Containers and Transportation

The cost of disposal of USEC's waste for CY 2005 has been estimated to be \$1.66 million for LLRW and \$0.25 million for mixed waste for a total of \$1.91 million. The estimated cost of containers for USEC's waste in CY 2005 is 8.1% of the cost of disposal.

Cost of containers: 8.1% of \$1.91 million or \$0.15 million.

The estimated cost of transportation for the disposal of USEC's waste in CY 2005 is estimated to be 9.1% of the cost of disposal.

Cost of transportation: 9.1% of \$1.91 million or \$0.17 million.

The total estimated cost associated with the containers and transportation necessary for the disposal of USEC's waste in CY 2005 is \$ 0.32 million.

### 3.1.4 Mixed Waste in Storage

As described earlier, there is an amount of mixed waste that will remain in storage at the end of CY 2005 at the Portsmouth plant. USEC estimates that 800 ft<sup>3</sup> of mixed waste will be in storage at the end of CY 2005. Due to the unknown future costs associated with these wastes an additional \$1,500/ft<sup>3</sup> may be necessary for disposal. The additional estimated cost associated with the disposal of this waste is:

Portsmouth mixed waste in storage:  $800 \text{ ft}^3 \times \$1,500/\text{ft}^3 = \$1.2 \text{ million}$

As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total estimated costs for the disposal of mixed waste in storage at the Portsmouth plant in CY 2005 is \$1.41 million.



### 3.1.5 Low-Level Radioactive Waste in Storage

As described earlier, there is an amount of LLRW that will remain in storage at the end of CY 2005. This waste will be disposed at a later date at an estimated cost of \$28/ft<sup>3</sup>. This disposal cost is determined based on the weighted average cost for this particular waste stream. At Paducah, this LLRW volume is estimated to be 16,000 ft<sup>3</sup>.

The disposal cost for this LLRW that will remain on site at Paducah at the end of CY 2005 is estimated to be:

Paducah LLRW in storage:  $16,000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.45 \text{ million}$ .

Likewise, at the Portsmouth Plant, USEC estimates that 3000 ft<sup>3</sup> of LLRW will remain on site at the end of CY 2005, and disposed at a later date. Therefore, the disposal cost for this LLRW that will remain on site at Portsmouth at the end of CY2005 is estimated to be:

Portsmouth LLRW in storage:  $3000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.08 \text{ million}$

In addition, 3000 ft<sup>3</sup> of LLRW for which USEC does not currently have a disposal outlet will remain in storage at Portsmouth. Due to the unknown future costs associated with disposal of this 3000 ft<sup>3</sup> of LLRW, an additional \$600 may be necessary for disposal. Therefore, the disposal cost for this LLRW that will remain in storage at Portsmouth at the end of CY 2005 is estimated to be:

Portsmouth LLRW in storage:  $3000 \text{ ft}^3 \times \$600/\text{ft}^3 = \$1.8 \text{ million}$

Therefore, the cost to dispose of the LLRW in storage in a subsequent calendar year is \$2.33 million. As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total cost for disposal of this LLRW in storage, including transportation and container costs, is estimated to be \$2.73 million.

### 3.2 Depleted Uranium Disposition

The estimate of decommissioning liability for depleted uranium is based on the generation of depleted uranium as described in the Depleted Uranium Management Plan. The current estimated cost for disposal of depleted uranium is estimated to be \$3.00 per kilogram of uranium (kgU). This cost for disposal is based upon the cost in the "Memorandum of Agreement between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium", dated June 30, 1998. USEC has compared this cost for disposal of depleted uranium against cost information from the DOE contract for the conversion facilities currently being constructed at Piketon, Ohio and Paducah, KY as well as the proposal to build and operate the uranium hexafluoride conversion facilities for DOE, submitted by the American Conversion Services (ACS) partnership, which included USEC. This proprietary ACS proposal was based on comprehensive cost projections developed by the partnership. The ACS proposal and the DOE conversion facilities cost information support the \$3.00 per kgU disposal cost for depleted uranium used in this plan. Based on the Depleted Uranium Management Plan, USEC's projected maximum liability at the end of calendar year 2005 for the disposition of depleted uranium generated by its Paducah and Portsmouth operations is 13,319 million kilograms (refer to Table 1 in the Depleted Uranium Management Plan).

Total processing cost for depleted uranium is then 13,319,000 kilograms of depleted uranium times \$3.00 per kilogram = \$39,957,000 or, after rounding, \$40.0M

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The above cost estimate includes processing as well as transportation and disposal of any by-product related to processing of the depleted uranium. To obtain the total cost associated with disposition of depleted uranium, the cost for transporting the depleted uranium to the processing facility must be included. The estimated cost associated with transporting USEC's depleted uranium liability for CY 2005 is estimated as follows:

$$\frac{(13,319,000 \text{ kgU})(\$1760/\text{cylinder}^*)}{(8400 \text{ kgU/cylinder})^{**}} = \$2,790,648 \text{ or } \$2.8\text{M}$$

\* Based on freight invoices to Starmet, CMI<sup>3</sup>

\*\*Approximate average kgU/cylinder, based on shipping weights

Therefore, USEC's total estimated liability for disposition of depleted uranium for CY 2005 is the sum of processing costs and transportation costs which equates to \$42.8M.

### 3.3 Labor Costs

To account for labor costs associated with disposal of USEC generated waste, USEC has included provisions for two crews (one for each facility) comprised of 1 supervisor, 3 laborers, 1 health physics technician and 1 engineer. Since disposal of waste is not a continuous process, the labor costs are calculated assuming the crews are available for a six-month duration, with the health physics technician and the engineer available for half of this duration (3 months duration). Labor costs were estimated based on the costs provided in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities," dated July 1998. Based on these assumptions, the labor costs associated with disposal of USEC generated waste is \$500,000 (\$250,000 per site).

## 4.0 REVIEW AND ADJUSTMENT OF DECOMMISSIONING COSTS AND FUNDING LEVELS

USEC will review the decommissioning cost estimates and associated funding levels over the duration of the lease and adjust them when necessary. These adjustments will take into account such factors as changes in volume and cost estimates, changes in plant conditions, and changes in expected decontamination and decommissioning procedures. USEC will conduct such reviews in October of each year.

## 5.0 DECOMMISSIONING FUNDING MECHANISM

USEC utilizes payment surety bond(s) and standby trust agreement(s) to ensure that sufficient funds will be available for waste disposal and depleted uranium disposition as set forth in this Program Description. The instruments are derived from Appendix A, NUREG-1757 Volume 3, "Consolidated NMSS Decommissioning Guidance, *Financial Assurance, Recordkeeping, and Timeliness*", dated September 2003. Non-executed versions are included in this Plan. Executed documents are submitted to the NRC for review as they are revised and reissued.

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<sup>3</sup>Associated with a previous demonstration project for processing USEC depleted uranium.

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**PAYMENT SURETY BOND - NON-EXECUTED VERSION**

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, MD 20817

Type of organization: Delaware Chartered Corporation

NRC certificate of compliance number: GDP-1 and GDP-2

Name and address of facilities: Paducah Gaseous Diffusion Plant  
Portsmouth Gaseous Diffusion Plant

Amount(s) for decommissioning  
activity guaranteed by this bond: Estimated at [insert amount]

Surety(ies) [name(s) and business address(es)]

Type of organization: [insert "proprietorship," "joint venture," "partnership" or "corporation"]

State of incorporation: \_\_\_\_\_ (if applicable)

Surety's qualification in jurisdiction where facility is located.

Surety's bond number \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Know all persons by these presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the U.S. Nuclear Regulatory Commission (herein called NRC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety; but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

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WHEREAS, the NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76, applicable to the Principal, which require that the holder of a certificate of compliance for a gaseous diffusion plant, or an applicant for a certificate of compliance for such a facility provide financial assurance that funds will be available when needed for those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of such a facility which are the financial responsibility of such holder or applicant (collectively, "decommissioning");

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of decommissioning of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility;

Or, if the Principal shall fund the standby trust fund in such amount(s) after an order to begin facility decommissioning is issued by the NRC or a U.S. district court or other court of competent jurisdiction;

Or, if the Principal shall provide alternative financial assurance and obtain the written approval of the NRC of such assurance, within 30 days after the date a notice of cancellation from the Surety(ies) is received by both the Principal and the NRC, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the NRC that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund established by the Principal with [name of trustee] pursuant to the Standby Trust Agreement dated [date].

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the NRC provided, however, that cancellation shall not occur during the 90 days beginning on the date of receipt of the notice of cancellation by both the Principal and the NRC, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the NRC and to Surety(ies) 90 days prior to the proposed date of termination, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond from the NRC.

If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

DFP-GDPs  
PGDP Rev. 86  
PORTS Rev. 70

December 29, 2003

In Witness Whereof, the Principal and Surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Principal: United States Enrichment Corporation

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety(ies) above.]

Bond premium: \$ \_\_\_\_\_

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**STANDBY TRUST AGREEMENT - NON-EXECUTED VERSION**

TRUST AGREEMENT, the Agreement entered into as of [date] by and between the United States Enrichment Corporation, a Delaware chartered corporation, herein referred to as the "Grantor," and [name and address of a national bank or other Trustee acceptable to the U.S. Nuclear Regulatory Commission], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 76, certificate of compliance provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a surety bond to provide part of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a surety bond this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

**Section 1. Definitions.** As used in this Agreement:

- (a) The term "Decommissioning" means those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of the Paducah and Portsmouth Gaseous Diffusion Plant (GDPs) which are the financial responsibility of the Grantor.
- (b) The term "Grantor" means the United States Enrichment Corporation and any successors or assigns thereof.
- (c) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

**Section 2. Costs of Decommissioning.** This Agreement pertains to the costs of decommissioning the materials and activities identified in Certificate of Compliance Number GDP-1 and GDP-2 issued pursuant to 10 CFR Part 76.

**Section 3. Establishment of Fund.** The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

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Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

a. A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and

b. A certificate attesting to the following conditions:

(1)that decommissioning is proceeding pursuant to an NRC-approved plan.

(2)that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and

(3)that the NRC has been given 30 days' prior notice of the Grantor's intent to withdraw funds from the escrow fund.

No withdrawal from the fund can exceed 10 percent of the outstanding balance of the Fund unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor, or other persons as specified by the NRC, from the Fund for expenditures for required activities in such amount as the NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity



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and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poor's or Baa or higher by Moody's Investment Services; and

(c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

**Section 7. Commingling and Investment.** The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

**Section 8. Express Powers of Trustee.** Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine

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certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, where so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the

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Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC, and the present Trustee by certified mail 10 days before such changes become effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the grantor's orders, requests, and instructions. If the NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, or the NRC, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instruction from the Grantor and/or the NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor, or the NRC, issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the United States.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST:

[Insert name of Grantor]  
[Signature of representative  
of Grantor]  
[Title]

[Title]  
[Seal]

[Insert name of Trustee]  
[Signature of representative  
of Trustee]  
[Title]

ATTEST:  
[Title]  
[Seal]

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February 25, 2005

United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

U.S. NUCLEAR  
REGULATORY  
COMMISSION  
CERTIFICATE OF  
COMPLIANCE NUMBER

GDP-1 and GDP-2

NAME AND  
ADDRESS OF  
LICENSEE

United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, Maryland 20817

3930 State Route 23/Perimeter Road  
Piketon, Ohio 45661

5600 Hobbs Road  
Paducah, Kentucky 42001

COST ESTIMATE FOR  
REGULATORY ASSURANCES  
DEMONSTRATED BY THIS  
AGREEMENT

[Insert amount of agreement]

The cost estimates listed here were submitted to the NRC on [insert date]

The Total Cost of decommissioning the GDP's, assuming no liability for decontamination, is as per the decommissioning cost estimate on file with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE B

AMOUNT:

AS EVIDENCED BY: Payment Surety Bond dated [insert date]  
[Insert name of Surety Bond holder and Surety Bond number] as on file  
with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE C

Trustee will be paid [insert amount] annually for services being provided under the standby trust agreement. This fee will apply whether or not payment has been made to the standby trust fund.

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**APPLICATION FOR UNITED STATES  
NUCLEAR REGULATORY COMMISSION CERTIFICATION  
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Principal Officers

Mr. James R. Mellor  
Chairman and Chief Executive Officer

Ms. Lisa E. Gordon-Hagerty  
Executive Vice President and Chief Operating Officer

Mr. Russell B. Starkey, Jr.  
Vice President, Operations

Mr. James F. McDonnell  
Vice President and Chief Information & Security Officer

**Format and Content of the USEC Certification Application**

The Application contains a Safety Analysis Report (SAR), Technical Safety Requirements (TSRs), and programs, plans and other documents as described above. In accordance with 10 CFR 76.35(b), the Application also includes a plan prepared and approved by DOE for achieving compliance with respect to any areas of noncompliance with the NRC's regulations identified by USEC as of the date of this Application. The Compliance Plan provides an expanded description of the

areas of noncompliance, a justification for continued operation, a description of the plan of action to achieve compliance, and the schedule for completion of those actions, as applicable.

The Application is written in the present tense. The physical description of installed structures, systems and components (SSCs) in the Application is current as of June 1, 1995, except as described in Section 3.9, "Items Addressed by Compliance Plan." The programs, plans, procedures and other aspects of the facility's operations other than the SSCs are described as they will be when all Compliance Plan items are completed. Each section of the Application contains a subsection entitled "Items Addressed by Compliance Plan". This subsection describes those aspects of the program, plan or section topic that are not in full compliance with the Application. This subsection also contains a brief description of what is currently in place. Any section which does not have any related Compliance Plan states "None identified."

## **DEPLETED URANIUM MANAGEMENT PLAN**

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## 1.0 INTRODUCTION

Under 10 Code of Federal Regulations (CFR) 76.35(m), the United States Enrichment Corporation (USEC) is required, as part of its application for a certificate of compliance, to provide:

"A description of the program, as appropriate, for processing, management, and disposal of mixed and radioactive wastes and depleted uranium generated by operations. This description must be limited to processing, management, and disposal activities conducted during operation of the facilities while under lease to the Corporation. The application must also include a description of the waste streams generated by enrichment operations, annual volumes of depleted uranium and waste expected, identification of radioisotopes contained in the waste, physical and chemical forms of the depleted uranium and waste, plans for managing the depleted uranium and waste, and plans for ultimate disposition of the waste and depleted uranium before turnover of the facilities to the Department of Energy under the terms of the lease agreement between the United States Enrichment Corporation and the Department."

In accordance with 10 CFR 76.35(m), this plan describes USEC's program for the management and disposition of the depleted uranium (DU) produced as part of the enrichment activities at the Portsmouth (PORTS) and Paducah (PGDP) Gaseous Diffusion Plants (GDPs). USEC's program for the processing, management, and disposal of mixed and radioactive wastes is described in the Radioactive Waste Management Plan submitted as part of this application.

## 2.0 DEPLETED URANIUM PRODUCTION ESTIMATES

The production of depleted uranium will continue throughout the period that enrichment activities are conducted at the GDPs. The production rate of depleted uranium is a function of the demand for enriched uranium, the portion of that demand supplied by the Russian enriched uranium, and the operating mode of the plants (determined by power load, power costs, enrichment levels, and other factors). USEC's projected depleted uranium production estimates for both GDPs cover the period of the Nuclear Regulatory Commission (NRC) Certificate of Compliance. The estimates are provided in Table 1, along with the amount of depleted uranium that USEC is responsible for, taking into account the factors discussed in Section 3.0 below.

The funds set aside for the disposition of depleted uranium at the GDPs will be based on the actual production rates of depleted uranium at the plant during the period that the plant is operated under the USEC/DOE Lease Agreement. USEC's funding plan for the disposition of depleted uranium is described in the Decommissioning Funding Program Description submitted as part of this application.

### 3.0 MANAGEMENT AND DISPOSITION PLAN

The depleted uranium is currently being stored as solid uranium hexafluoride ( $UF_6$ ) in carbon steel cylinders at the GDP plant sites (cylinder storage is described in PGDP SAR Section 3.7.2 and PORTS SAR Section 3.2.4.4). The cylinders meet specific design requirements and special procedures and handling equipment are used for DU cylinder handling, movement, and stacking. USEC can continue to store depleted uranium in the solid state in these cylinders for an extended period without undue risk. In addition, cylinder inspections are conducted, as described below, to provide evidence of continued cylinder integrity.

The cylinders used for the storage of depleted uranium are inspected prior to being filled. After filling, the cylinder is cooled and then moved to a cylinder yard and stacked in place. After the cylinder is stacked in position, a baseline (initial) storage inspection is conducted at which point any damage to the cylinder is identified. If the cylinder is damaged, supervision is notified promptly and the damage evaluated for any actions required; the range of actions are to be commensurate with the cylinder damage. After the initial inspection, the cylinders are inspected every four years thereafter (except for any cylinders identified in the initial inspection as requiring a more frequent inspection); the condition of each cylinder is documented using a cylinder inspection data sheet.

Initial and quadrennial inspections are conducted on full cylinders that are normally single or double stacked. These inspections, conducted from ground level, with or without visual aids, are made using the following criteria:

- Cylinders positioned incorrectly (e.g., with valves in other than top center position); this often is an indication of potential stacking damage.
- Improperly stacked cylinders with potentially damaging contact (e.g., lifting lug resting on cylinder body, stiffening ring resting on stiffening ring, other criteria as described in the inspection procedure).
- Dents, bulges, cracks, metal loss, apparent by visual inspection, on the longitudinal and circumference welds.
- Dents, bulges, cracks, gouges, stacking damage, excessive scale or rust, apparent by visual inspection, on the cylinder shell.
- Bends, cracks or breaks from shell, impact damage, gouges, apparent by visual inspection, on the stiffening rings.
- Tears, dents, cracks, excessive scale or rust, or plugged weep hole, apparent by visual inspection, on the cylinder skirt (or valve protector).

Depleted uranium in the form of solid  $UF_6$  is suitable for conversion to other chemical forms. For example, the solid  $UF_6$  could be converted to  $U_3O_8$ ,  $UF_4$ , or uranium metal. There are a number of

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existing and potential uses for depleted uranium, including use in radiation shielding material, armor-piercing projectiles, and counterweights. It is possible that increased energy costs may make recovery of additional  $^{235}\text{U}$  from the depleted uranium economically feasible in the future and that other potential uses may also be identified. However, the conversion of the depleted uranium to one of these other forms in the near term could either foreclose other uses and disposition options because of the difficulty of processing some of these uranium compounds and the lack of processing facilities, or increase the cost of the ultimate disposition.

Moreover, the amount of depleted uranium that will be produced by USEC in the near term will be relatively small in comparison with the DOE's existing depleted uranium inventory. DOE is currently storing approximately 700,000 MTU of depleted uranium as solid  $\text{UF}_6$  in approximately 60,000 cylinders stored at various locations on the DOE portions of the GDP plant sites. USEC presently anticipates that the bulk of its inventory of depleted uranium will ultimately be dispositioned in the same manner as the larger DOE depleted uranium inventory.

In the meantime, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004. Table 1 reflects the transfer schedule.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement. The quantity of depleted uranium associated with this agreement is specified in Table 1.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium associated with the compensation for these services is specified in Table 1.

In addition to the foregoing outlets, USEC will, to the extent practicable, continue to market depleted uranium for uses in military applications, counterweights, and shielding applications. Efforts may also be made to develop other commercial uses that could include shielding for high-level waste storage and shipping casks, or multipurpose canisters being developed for the DOE high-level waste program.

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The remaining inventory will continue to be stored as solid  $UF_6$  until it can be processed in accordance with the disposition strategy established by DOE for its inventory.

The estimated cost of conversion and disposition of the depleted uranium is provided in the Decommissioning Funding Program, along with a description of the funding mechanisms that will be used to address USEC's funding liabilities.

#### **4.0 ITEMS ADDRESSED BY COMPLIANCE PLAN**

Section deleted.

**Table 1. Estimated amount of depleted uranium (DU) generated by USEC and its disposition, in metric tons uranium (MTU) for PORTS and PGDP combined.**

Year	DU Generated by USEC <sup>1</sup>	DU Transfers to DOE under 6/30/98 agreement <sup>4</sup>	DU Transfers to DOE under 6/17/02 agreement <sup>5</sup>	Other DU Transfers to DOE <sup>6</sup>	Estimated net cumulative USEC DU <sup>2</sup>
July 28, 1998- Dec. 31, 2003	-	-	-	-	17861 <sup>3</sup>
CY2004	6631 <sup>7</sup>	(8735)	(3315)	(3237)	9205
CY2005	5984	0	(1399)	(471)	13319
CY2006	7674	0	0	0	20993
CY2007	6292	0	0	0	27285
CY2008	5593	0	0	0	32878

Notes:

1. Projections are provided through the expiration date of the NRC Certificate of Compliance.
2. DOE retains liability for depleted uranium generated prior to USEC's privatization (July 28, 1998) per USEC Privatization Act (Public Law 104-134, Sec 3109, paragraph (a)(3)).
3. Reflects the cumulative amount of DU since USEC's privatization (July 28, 1998) for which USEC is responsible for disposition.
4. Total to be transferred to DOE is the quantity in 2026 48G cylinders.
5. Under the June 17, 2002 agreement, DOE will take possession of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 (July 1, 2002 through June 30, 2003) and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005.
6. Depleted uranium transfers to compensate USEC for incurred costs associated with DOE contract activities.
7. Includes 7 MTU returned from the former Starmet, CMI site.



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## **DECOMMISSIONING FUNDING PROGRAM DESCRIPTION**

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## 1.0 INTRODUCTION

As a condition of certification, 10 Code of Federal Regulations (CFR) 76.35(n) requires the United States Enrichment Corporation (USEC) to submit, as part of its application for an NRC certificate of compliance:

A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation.

Section 76.35(n) also requires USEC to establish financial surety arrangements to provide the requisite funding. The funding mechanism must ensure availability of funds for activities required to be completed both before and after the return of the gaseous diffusion plants to the Department of Energy (DOE) in accordance with the July 1, 1993 Lease Agreement between DOE and USEC (Lease Agreement). The funding program must also contain a basis for cost estimates used to establish funding levels, and means of adjusting such cost estimates and associated funding levels over the duration of the lease. Finally, USEC is not required to provide funding for "those aspects of decontamination and decommissioning . . . assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended."

In accordance with 10 CFR 76.35(n), USEC hereby submits a description of its program to ensure adequate funds are available for the disposal of waste and the disposition of depleted uranium generated at the GDP's and for which USEC is financially responsible under the Atomic Energy Act (AEA).



## 2.0 SCOPE OF USEC'S DECOMMISSIONING FINANCIAL RESPONSIBILITY

USEC began to operate the Paducah (PGDP) and Portsmouth (PORTS) plants on July 1, 1993, in accordance with the AEA, as amended, and the July 1, 1993 Lease Agreement. Prior to July 1, 1993, DOE operated the plants for about 40 years. Section 1403(d) of the AEA provides that "[t]he payment of any costs of decontamination and decommissioning . . . with respect to conditions existing before the transition date [July 1, 1993], in connection with property of the Department leased under subsection (a), shall remain the sole responsibility of the Department." Accordingly, USEC is not financially responsible for, and this Program Description does not provide funding assurance for, decontamination or decommissioning costs associated with any operations at the gaseous diffusion plants (GDPs) prior to July 1, 1993.

Furthermore, the GDPs, including the Leased Premises, will ultimately be decommissioned by DOE, which is solely responsible for the conduct of decontamination and decommissioning activities at the plant, and which also bears sole financial responsibility for the bulk of these activities. Section 4.6 of the Lease Agreement states that:

Except as provided in Section 4.5(c) of this Lease, the Department will be responsible for and will pay the costs of all Decontamination and Decommissioning, including the costs of Decontamination and Decommissioning of the Leased Premises, the Leased Personalty, any personal property found on the Leased Premises, regardless of ownership, and any Capital Improvement.

In addition, Section 4.3(b) of the Lease Agreement states that "[t]he Corporation shall be entitled, should it choose, to leave any of its personal property (including personal property contaminated by radioactive materials) on the Leased Premises at the end of the Lease Term for Decontamination and Decommissioning by the Department."

However, USEC does have certain specific financial responsibilities with respect to some of these activities. Under Section 4.4(c) of the Lease Agreement, USEC is "responsible for the ultimate treatment and disposal of any waste generated by the Corporation, and for which the Department is not responsible . . . ." Under this provision, USEC is financially responsible for, and this Program Description addresses, the disposal of low-level radioactive waste (LLRW) and "mixed" hazardous and radioactive waste generated by USEC at the GDPs after the date of privatization, July 28, 1998.<sup>1</sup>

In addition, as discussed above, Section 4.6 of the Lease Agreement provides that the Department will pay the costs of all decontamination and decommissioning, "[e]xcept as provided in Section 4.5(c) of this Lease . . . ." Section 4.5(c) authorizes USEC to remove any capital improvement at the GDPs, but "if such removal increases the costs of the Department for the Decontamination and Decommissioning

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1 A more detailed description of USEC's plans to manage and dispose of LLRW and mixed waste generated at the GDPs is provided in the Radioactive Waste Management Program, which is included as part of each certificate of compliance application.

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of the Leased Premises to which any such Capital Improvement was attached, the Corporation will pay any such increase in Decontamination and Decommissioning costs." At this time, USEC does not anticipate removing any capital improvement from the plant site. Therefore, no financial assurance for Decontamination and Decommissioning cost increases arising out of such removal is currently being provided.

Finally, USEC is generating depleted uranium as a result of its operation of the GDPs. Section 3109(a)(3) of the USEC Privatization Act (passed April 1996) states that:

All liabilities arising out of the disposal of depleted uranium generated by the Corporation between July 1, 1993 and the privatization date shall become the direct liabilities of the Secretary [Secretary of Energy].

Therefore, this Program Description also describes USEC's funding program to ensure funds are available for the ultimate disposition of the depleted uranium generated by USEC's operations after July 28, 1998.<sup>2</sup>

As described in the Depleted Uranium Management Plan, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC-generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement.

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2 The Depleted Uranium Management Plan describes in greater detail USEC's plans for the management and disposition of depleted uranium.

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The quantity of depleted uranium associated with these agreements, and the transfer schedule for this material, is specified in Table 1 of the Depleted Uranium Management Plan.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium, and the transfer schedule for the depleted uranium associated with the compensation for these contracts, is specified in Table 1 of the Depleted Uranium Management Plan.

### 3.0 DECOMMISSIONING COST ESTIMATE

In accordance with 10 CFR 76.35(n), USEC has estimated the costs associated with the disposal of LLRW and mixed waste, and the disposition of depleted uranium generated by its operations at the GDPs. These costs are not considered decontamination and decommissioning costs, but rather production costs since they are incurred during the operation and maintenance of the plant. These cost estimates are cumulative, and are calculated one year in advance. The estimated cost for calendar year (CY) 2005 for the disposal of waste and for the disposition of depleted uranium generated by USEC at the GDPs is as follows:

Low Level and Mixed Waste	\$ 6.37 M
Depleted Uranium	\$42.80 M
Labor Cost	<u>\$ 0.50 M</u>
CY05 Cost	\$49.67 M

To account for uncertainties associated with either the estimated volumes or costs associated with the above cost estimates, a contingency factor of 10% is applied to the CY 05 cost. A 10% contingency is appropriate considering USEC's limited decontamination and decommissioning liability as described in the Decommissioning Funding Program Description (DFP), an annual review and update, as necessary, of the DFP cost estimate and the relative stability of the factors which are utilized to generate USEC's depleted uranium volume estimate, the disposal of which is the major contributor to USEC's decommissioning funding liability. After application of the 10% contingency, USEC's total projected decommissioning funding liability for calendar year 2005 is \$54.6 million.

The bases for these cost estimates are described below in their respective subsection. USEC's cost estimates will be reviewed annually and revised, as necessary, to reflect any change in USEC's projected liability.

#### 3.1 LOW LEVEL AND MIXED WASTE DISPOSAL

USEC generates many types of LLRW and mixed (hazardous and radioactive) waste at the GDPs, as described in the Radioactive Waste Management Program (RWMP) for each site. For the most part, all wastes are routinely treated on-site or treated and disposed of off-site as the wastes are generated. There are, however, a small number of mixed waste streams at PORTS for which no treatment and/or disposal option exists in the US. These wastes are authorized to be stored in Department of Energy permitted storage at PORTS under agreements with the appropriate state agencies. There is also a quantity of LLRW at each plant that will remain onsite at the end of CY 2005. At PGDP, the LLRW

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does not meet the disposal facilities waste acceptance criteria as stored, while at PORTS, most of these wastes currently do not have a disposal option. These wastes are being stored in compliance with USEC's Certificate of Compliance. USEC's LLRW and mixed waste decommissioning liability is calculated as the sum of the liability associated with the cost of disposal of that amount of waste estimated to be generated during the calendar year plus the liability associated with the estimated amount of waste that remains in storage at the end of the calendar year. Cost of disposal includes disposal cost, container cost, and transportation costs.

Estimated waste generation volumes are based on historical waste generation for each plant. Each individual LLRW and mixed waste stream has a different estimated volume and a different disposal cost. For the year, the different volumes of waste generated and their disposal cost estimates are averaged to establish an average disposal cost. USEC's cost estimate is based on the weighted average cost to manage waste. The disposal cost estimate for each waste stream in the weighted average cost is based upon existing contract prices.

Based on historical information, the cost of containers for waste disposal is approximately 8.1% of the disposal cost. Historical information also shows that the transportation cost associated with waste is approximately 9.1% of the disposal costs.

Except for those mixed wastes and LLRW noted earlier that do not currently have a disposal outlet, USEC anticipates that its waste disposal activities will be such that LLRW and most mixed waste generated in any given year will be disposed of within that year, or shortly thereafter. USEC funds this disposal cost out of accrued cash generated from operations. The decommissioning liability associated with the waste that remains in storage at the end of the calendar year at each site will be calculated based on the estimated volume of waste in storage at the end of the calendar year.

### 3.1.1 Low Level Radioactive Waste Disposal

USEC anticipates generating a total of approximately 53,500 ft<sup>3</sup> of LLRW from routine operations and projects at the Paducah plant for calendar year 2005. USEC has assumed disposal of Paducah's LLRW at various commercial disposal facilities at an average weighted cost of \$23/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Paducah plant for calendar year 2005 is therefore estimated to be:

$$\text{Paducah LLRW: } 53,500 \text{ ft}^3 \times \$23/\text{ft}^3 = \$1.23 \text{ million for the year}$$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 17,250 ft<sup>3</sup> of LLRW from routine operations, projects and shutdown related activities. USEC has assumed disposal of Portsmouth's LLRW at various commercial disposal facilities at an average weighted cost of \$25/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

$$\text{Portsmouth LLRW: } 17,250 \text{ ft}^3 \times \$25/\text{ft}^3 = \$0.43 \text{ million for the year}$$

The cost of disposal of USEC's LLRW for CY 2005 is \$1.66 million.

### 3.1.2 Mixed Waste Disposal

USEC anticipates generating a total of approximately 350 ft<sup>3</sup> of mixed waste at the Paducah plant in calendar year 2005. The current average cost estimate for disposing of this mixed waste produced at Paducah is \$395/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Paducah plant for calendar year 2005 is therefore estimated to be:

Paducah Mixed Waste:  $350 \text{ ft}^3 \times \$395/\text{ft}^3 = \$0.14 \text{ million for the year}$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 310 ft<sup>3</sup> of mixed waste for CY 2005. The current average cost of disposal of such waste at Portsmouth is \$365/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

Portsmouth Mixed Waste:  $310 \text{ ft}^3 \times \$365/\text{ft}^3 = \$0.11 \text{ million for the year}$

The cost of disposal of USEC's mixed waste for CY 2005 is \$0.25 million.

### 3.1.3 Cost of Containers and Transportation

The cost of disposal of USEC's waste for CY 2005 has been estimated to be \$1.66 million for LLRW and \$0.25 million for mixed waste for a total of \$1.91 million. The estimated cost of containers for USEC's waste in CY 2005 is 8.1% of the cost of disposal.

Cost of containers: 8.1% of \$1.91 million or \$0.15 million.

The estimated cost of transportation for the disposal of USEC's waste in CY 2005 is estimated to be 9.1% of the cost of disposal.

Cost of transportation: 9.1% of \$1.91 million or \$0.17 million.

The total estimated cost associated with the containers and transportation necessary for the disposal of USEC's waste in CY 2005 is \$ 0.32 million.

### 3.1.4 Mixed Waste in Storage

As described earlier, there is an amount of mixed waste that will remain in storage at the end of CY 2005 at the Portsmouth plant. USEC estimates that 800 ft<sup>3</sup> of mixed waste will be in storage at the end of CY 2005. Due to the unknown future costs associated with these wastes an additional \$1,500/ft<sup>3</sup> may be necessary for disposal. The additional estimated cost associated with the disposal of this waste is:

Portsmouth mixed waste in storage:  $800 \text{ ft}^3 \times \$1,500/\text{ft}^3 = \$1.2 \text{ million}$

As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total estimated costs for the disposal of mixed waste in storage at the Portsmouth plant in CY 2005 is \$1.41 million.

### 3.1.5 Low-Level Radioactive Waste in Storage

As described earlier, there is an amount of LLRW that will remain in storage at the end of CY 2005. This waste will be disposed at a later date at an estimated cost of \$28/ft<sup>3</sup>. This disposal cost is determined based on the weighted average cost for this particular waste stream. At Paducah, this LLRW volume is estimated to be 16,000 ft<sup>3</sup>.

The disposal cost for this LLRW that will remain on site at Paducah at the end of CY 2005 is estimated to be:

Paducah LLRW in storage:  $16,000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.45 \text{ million}$ .

Likewise, at the Portsmouth Plant, USEC estimates that 3000 ft<sup>3</sup> of LLRW will remain on site at the end of CY 2005, and disposed at a later date. Therefore, the disposal cost for this LLRW that will remain on site at Portsmouth at the end of CY2005 is estimated to be:

Portsmouth LLRW in storage:  $3000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.08 \text{ million}$

In addition, 3000 ft<sup>3</sup> of LLRW for which USEC does not currently have a disposal outlet will remain in storage at Portsmouth. Due to the unknown future costs associated with disposal of this 3000 ft<sup>3</sup> of LLRW, an additional \$600 may be necessary for disposal. Therefore, the disposal cost for this LLRW that will remain in storage at Portsmouth at the end of CY 2005 is estimated to be:

Portsmouth LLRW in storage:  $3000 \text{ ft}^3 \times \$600/\text{ft}^3 = \$1.8 \text{ million}$

Therefore, the cost to dispose of the LLRW in storage in a subsequent calendar year is \$2.33 million. As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total cost for disposal of this LLRW in storage, including transportation and container costs, is estimated to be \$2.73 million.

### 3.2 Depleted Uranium Disposition

The estimate of decommissioning liability for depleted uranium is based on the generation of depleted uranium as described in the Depleted Uranium Management Plan. The current estimated cost for disposal of depleted uranium is estimated to be \$3.00 per kilogram of uranium (kgU). This cost for disposal is based upon the cost in the "Memorandum of Agreement between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium", dated June 30, 1998. USEC has compared this cost for disposal of depleted uranium against cost information from the DOE contract for the conversion facilities currently being constructed at Piketon, Ohio and Paducah, KY as well as the proposal to build and operate the uranium hexafluoride conversion facilities for DOE, submitted by the American Conversion Services (ACS) partnership, which included USEC. This proprietary ACS proposal was based on comprehensive cost projections developed by the partnership. The ACS proposal and the DOE conversion facilities cost information support the \$3.00 per kgU disposal cost for depleted uranium used in this plan. Based on the Depleted Uranium Management Plan, USEC's projected maximum liability at the end of calendar year 2005 for the disposition of depleted uranium generated by its Paducah and Portsmouth operations is 13.319 million kilograms (refer to Table 1 in the Depleted Uranium Management Plan).

Total processing cost for depleted uranium is then 13,319,000 kilograms of depleted uranium times \$3.00 per kilogram = \$39,957,000 or, after rounding, \$40.0M

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The above cost estimate includes processing as well as transportation and disposal of any by-product related to processing of the depleted uranium. To obtain the total cost associated with disposition of depleted uranium, the cost for transporting the depleted uranium to the processing facility must be included. The estimated cost associated with transporting USEC's depleted uranium liability for CY 2005 is estimated as follows:

$$\frac{(13,319,000 \text{ kgU})(\$1760/\text{cylinder}^*)}{(8400 \text{ kgU/cylinder})^{**}} = \$2,790,648 \text{ or } \$2.8\text{M}$$

\* Based on freight invoices to Starmet, CMI<sup>3</sup>

\*\*Approximate average kgU/cylinder, based on shipping weights

Therefore, USEC's total estimated liability for disposition of depleted uranium for CY 2005 is the sum of processing costs and transportation costs which equates to \$42.8M.

### 3.3 Labor Costs

To account for labor costs associated with disposal of USEC generated waste, USEC has included provisions for two crews (one for each facility) comprised of 1 supervisor, 3 laborers, 1 health physics technician and 1 engineer. Since disposal of waste is not a continuous process, the labor costs are calculated assuming the crews are available for a six-month duration, with the health physics technician and the engineer available for half of this duration (3 months duration). Labor costs were estimated based on the costs provided in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities," dated July 1998. Based on these assumptions, the labor costs associated with disposal of USEC generated waste is \$500,000 (\$250,000 per site).

## 4.0 REVIEW AND ADJUSTMENT OF DECOMMISSIONING COSTS AND FUNDING LEVELS

USEC will review the decommissioning cost estimates and associated funding levels over the duration of the lease and adjust them when necessary. These adjustments will take into account such factors as changes in volume and cost estimates, changes in plant conditions, and changes in expected decontamination and decommissioning procedures. USEC will conduct such reviews in October of each year.

## 5.0 DECOMMISSIONING FUNDING MECHANISM

USEC utilizes payment surety bond(s) and standby trust agreement(s) to ensure that sufficient funds will be available for waste disposal and depleted uranium disposition as set forth in this Program Description. The instruments are derived from Appendix A, NUREG-1757 Volume 3, "Consolidated NMSS Decommissioning Guidance, *Financial Assurance, Recordkeeping, and Timeliness*", dated September 2003. Non-executed versions are included in this Plan. Executed documents are submitted to the NRC for review as they are revised and reissued.

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<sup>3</sup>Associated with a previous demonstration project for processing USEC depleted uranium.

December 29, 2003

**PAYMENT SURETY BOND - NON-EXECUTED VERSION**

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, MD 20817

Type of organization: Delaware Chartered Corporation

NRC certificate of compliance number: GDP-1 and GDP-2

Name and address of facilities: Paducah Gaseous Diffusion Plant  
Portsmouth Gaseous Diffusion Plant

Amount(s) for decommissioning  
activity guaranteed by this bond: Estimated at [insert amount]

Surety(ies) [name(s) and business address(es)]

Type of organization: [insert "proprietorship," "joint venture," "partnership" or "corporation"]

State of incorporation: \_\_\_\_\_ (if applicable)

Surety's qualification in jurisdiction where facility is located.

Surety's bond number \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Know all persons by these presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the U.S. Nuclear Regulatory Commission (herein called NRC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety; but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.



December 29, 2003

WHEREAS, the NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76, applicable to the Principal, which require that the holder of a certificate of compliance for a gaseous diffusion plant, or an applicant for a certificate of compliance for such a facility provide financial assurance that funds will be available when needed for those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of such a facility which are the financial responsibility of such holder or applicant (collectively, "decommissioning");

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of decommissioning of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility;

Or, if the Principal shall fund the standby trust fund in such amount(s) after an order to begin facility decommissioning is issued by the NRC or a U.S. district court or other court of competent jurisdiction;

Or, if the Principal shall provide alternative financial assurance and obtain the written approval of the NRC of such assurance, within 30 days after the date a notice of cancellation from the Surety(ies) is received by both the Principal and the NRC, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the NRC that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund established by the Principal with [name of trustee] pursuant to the Standby Trust Agreement dated [date].

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the NRC provided, however, that cancellation shall not occur during the 90 days beginning on the date of receipt of the notice of cancellation by both the Principal and the NRC, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the NRC and to Surety(ies) 90 days prior to the proposed date of termination, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond from the NRC.

If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

DFP-GDPs  
PGDP Rev. 86  
PORTS Rev. 70

December 29, 2003

In Witness Whereof, the Principal and Surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Principal: United States Enrichment Corporation

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety(ies) above.]

Bond premium: \$ \_\_\_\_\_

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PGDP Rev. 86  
PORTS Rev. 70

December 29, 2003

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PSB-4

December 29, 2003

**STANDBY TRUST AGREEMENT - NON-EXECUTED VERSION**

TRUST AGREEMENT, the Agreement entered into as of [date] by and between the United States Enrichment Corporation, a Delaware chartered corporation, herein referred to as the "Grantor," and [name and address of a national bank or other Trustee acceptable to the U.S. Nuclear Regulatory Commission], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 76, certificate of compliance provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a surety bond to provide part of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a surety bond this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

**Section 1. Definitions.** As used in this Agreement:

- (a) The term "Decommissioning" means those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of the Paducah and Portsmouth Gaseous Diffusion Plant (GDPs) which are the financial responsibility of the Grantor.
- (b) The term "Grantor" means the United States Enrichment Corporation and any successors or assigns thereof.
- (c) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

**Section 2. Costs of Decommissioning.** This Agreement pertains to the costs of decommissioning the materials and activities identified in Certificate of Compliance Number GDP-1 and GDP-2 issued pursuant to 10 CFR Part 76.

**Section 3. Establishment of Fund.** The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

December 29, 2003

Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

a. A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and

b. A certificate attesting to the following conditions:

(1) that decommissioning is proceeding pursuant to an NRC-approved plan;

(2) that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and

(3) that the NRC has been given 30 days' prior notice of the Grantor's intent to withdraw funds from the escrow fund.

No withdrawal from the fund can exceed 10 percent of the outstanding balance of the Fund unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor, or other persons as specified by the NRC, from the Fund for expenditures for required activities in such amount as the NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity

and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poor's or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

**Section 7. Commingling and Investment.** The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

**Section 8. Express Powers of Trustee.** Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine

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certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, where so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the

Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC, and the present Trustee by certified mail 10 days before such changes becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the grantor's orders, requests, and instructions. If the NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, or the NRC, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instruction from the Grantor and/or the NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor, or the NRC, issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the United States.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.



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IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST:

[Insert name of Grantor]  
[Signature of representative  
of Grantor]  
[Title]

[Title]  
[Seal]

[Insert name of Trustee]  
[Signature of representative  
of Trustee]  
[Title]

ATTEST:  
[Title]  
[Seal]

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February 25, 2005

United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

U.S. NUCLEAR  
REGULATORY  
COMMISSION  
CERTIFICATE OF  
COMPLIANCE NUMBER

GDP-1 and GDP-2

NAME AND  
ADDRESS OF  
LICENSEE

United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, Maryland 20817

3930 State Route 23/Perimeter Road  
Piketon, Ohio 45661

5600 Hobbs Road  
Paducah, Kentucky 42001

COST ESTIMATE FOR  
REGULATORY ASSURANCES  
DEMONSTRATED BY THIS  
AGREEMENT

[Insert amount of agreement]

The cost estimates listed here were submitted to the NRC on [insert date]

The Total Cost of decommissioning the GDP's, assuming no liability for decontamination, is as per the decommissioning cost estimate on file with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE B

AMOUNT:

AS EVIDENCED BY: Payment Surety Bond dated [insert date]

[Insert name of Surety Bond holder and Surety Bond number] as on file  
with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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Standby Trust Agreement

SCHEDULE C

Trustee will be paid [insert amount] annually for services being provided under the standby trust agreement. This fee will apply whether or not payment has been made to the standby trust fund.

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**APPLICATION FOR UNITED STATES  
NUCLEAR REGULATORY COMMISSION CERTIFICATION  
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**Depleted Uranium Management Plan  
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**Depleted Uranium Management Plan  
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**Principal Officers**

**Mr. James R. Mellor**  
**Chairman and Chief Executive Officer**

**Ms. Lisa E. Gordon-Hagerty**  
**Executive Vice President and Chief Operating Officer**

**Mr. Russell B. Starkey, Jr.**  
**Vice President, Operations**

**Mr. James F. McDonnell**  
**Vice President and Chief Information & Security Officer**

**Format and Content of the USEC Certification Application**

The Application contains a Safety Analysis Report (SAR), Technical Safety Requirements (TSRs), and programs, plans and other documents as described above. In accordance with 10 CFR 76.35(b), the Application also includes a plan prepared and approved by DOE for achieving compliance with respect to any areas of noncompliance with the NRC's regulations identified by USEC as of the date of this Application. The Compliance Plan provides an expanded description of the

areas of noncompliance, a justification for continued operation, a description of the plan of action to achieve compliance, and the schedule for completion of those actions, as applicable.

The Application is written in the present tense. The physical description of installed structures, systems and components (SSCs) in the Application is current as of June 1, 1995, except as described in Section 3.9, "Items Addressed by Compliance Plan." The programs, plans, procedures and other aspects of the facility's operations other than the SSCs are described as they will be when all Compliance Plan items are completed. Each section of the Application contains a subsection entitled "Items Addressed by Compliance Plan". This subsection describes those aspects of the program, plan or section topic that are not in full compliance with the Application. This subsection also contains a brief description of what is currently in place. Any section which does not have any related Compliance Plan states "None identified."

## **DEPLETED URANIUM MANAGEMENT PLAN**

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## 1.0 INTRODUCTION

Under 10 Code of Federal Regulations (CFR) 76.35(m), the United States Enrichment Corporation (USEC) is required, as part of its application for a certificate of compliance, to provide:

"A description of the program, as appropriate, for processing, management, and disposal of mixed and radioactive wastes and depleted uranium generated by operations. This description must be limited to processing, management, and disposal activities conducted during operation of the facilities while under lease to the Corporation. The application must also include a description of the waste streams generated by enrichment operations, annual volumes of depleted uranium and waste expected, identification of radioisotopes contained in the waste, physical and chemical forms of the depleted uranium and waste, plans for managing the depleted uranium and waste, and plans for ultimate disposition of the waste and depleted uranium before turnover of the facilities to the Department of Energy under the terms of the lease agreement between the United States Enrichment Corporation and the Department."

In accordance with 10 CFR 76.35(m), this plan describes USEC's program for the management and disposition of the depleted uranium (DU) produced as part of the enrichment activities at the Portsmouth (PORTS) and Paducah (PGDP) Gaseous Diffusion Plants (GDPs). USEC's program for the processing, management, and disposal of mixed and radioactive wastes is described in the Radioactive Waste Management Plan submitted as part of this application.

## 2.0 DEPLETED URANIUM PRODUCTION ESTIMATES

The production of depleted uranium will continue throughout the period that enrichment activities are conducted at the GDPs. The production rate of depleted uranium is a function of the demand for enriched uranium, the portion of that demand supplied by the Russian enriched uranium, and the operating mode of the plants (determined by power load, power costs, enrichment levels, and other factors). USEC's projected depleted uranium production estimates for both GDPs cover the period of the Nuclear Regulatory Commission (NRC) Certificate of Compliance. The estimates are provided in Table 1, along with the amount of depleted uranium that USEC is responsible for, taking into account the factors discussed in Section 3.0 below.

The funds set aside for the disposition of depleted uranium at the GDPs will be based on the actual production rates of depleted uranium at the plant during the period that the plant is operated under the USEC/DOE Lease Agreement. USEC's funding plan for the disposition of depleted uranium is described in the Decommissioning Funding Program Description submitted as part of this application.

### 3.0 MANAGEMENT AND DISPOSITION PLAN

The depleted uranium is currently being stored as solid uranium hexafluoride ( $UF_6$ ) in carbon steel cylinders at the GDP plant sites (cylinder storage is described in PGDP SAR Section 3.7.2 and PORTS SAR Section 3.2.4.4). The cylinders meet specific design requirements and special procedures and handling equipment are used for DU cylinder handling, movement, and stacking. USEC can continue to store depleted uranium in the solid state in these cylinders for an extended period without undue risk. In addition, cylinder inspections are conducted, as described below, to provide evidence of continued cylinder integrity.

The cylinders used for the storage of depleted uranium are inspected prior to being filled. After filling, the cylinder is cooled and then moved to a cylinder yard and stacked in place. After the cylinder is stacked in position, a baseline (initial) storage inspection is conducted at which point any damage to the cylinder is identified. If the cylinder is damaged, supervision is notified promptly and the damage evaluated for any actions required; the range of actions are to be commensurate with the cylinder damage. After the initial inspection, the cylinders are inspected every four years thereafter (except for any cylinders identified in the initial inspection as requiring a more frequent inspection); the condition of each cylinder is documented using a cylinder inspection data sheet.

Initial and quadrennial inspections are conducted on full cylinders that are normally single or double stacked. These inspections, conducted from ground level, with or without visual aids, are made using the following criteria:

- Cylinders positioned incorrectly (e.g., with valves in other than top center position); this often is an indication of potential stacking damage.
- Improperly stacked cylinders with potentially damaging contact (e.g., lifting lug resting on cylinder body, stiffening ring resting on stiffening ring, other criteria as described in the inspection procedure).
- Dents, bulges, cracks, metal loss, apparent by visual inspection, on the longitudinal and circumference welds.
- Dents, bulges, cracks, gouges, stacking damage, excessive scale or rust, apparent by visual inspection, on the cylinder shell.
- Bends, cracks or breaks from shell, impact damage, gouges, apparent by visual inspection, on the stiffening rings.
- Tears, dents, cracks, excessive scale or rust, or plugged weep hole, apparent by visual inspection, on the cylinder skirt (or valve protector).

Depleted uranium in the form of solid  $UF_6$  is suitable for conversion to other chemical forms. For example, the solid  $UF_6$  could be converted to  $U_3O_8$ ,  $UF_4$ , or uranium metal. There are a number of

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existing and potential uses for depleted uranium, including use in radiation shielding material, armor-piercing projectiles, and counterweights. It is possible that increased energy costs may make recovery of additional  $^{235}\text{U}$  from the depleted uranium economically feasible in the future and that other potential uses may also be identified. However, the conversion of the depleted uranium to one of these other forms in the near term could either foreclose other uses and disposition options because of the difficulty of processing some of these uranium compounds and the lack of processing facilities, or increase the cost of the ultimate disposition.

Moreover, the amount of depleted uranium that will be produced by USEC in the near term will be relatively small in comparison with the DOE's existing depleted uranium inventory. DOE is currently storing approximately 700,000 MTU of depleted uranium as solid  $\text{UF}_6$  in approximately 60,000 cylinders stored at various locations on the DOE portions of the GDP plant sites. USEC presently anticipates that the bulk of its inventory of depleted uranium will ultimately be dispositioned in the same manner as the larger DOE depleted uranium inventory.

In the meantime, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC"), dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004. Table 1 reflects the transfer schedule.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC"), dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement. The quantity of depleted uranium associated with this agreement is specified in Table 1.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium associated with the compensation for these services is specified in Table 1.

In addition to the foregoing outlets, USEC will, to the extent practicable, continue to market depleted uranium for uses in military applications, counterweights, and shielding applications. Efforts may also be made to develop other commercial uses that could include shielding for high-level waste storage and shipping casks, or multipurpose canisters being developed for the DOE high-level waste program.

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The remaining inventory will continue to be stored as solid  $UF_6$  until it can be processed in accordance with the disposition strategy established by DOE for its inventory.

The estimated cost of conversion and disposition of the depleted uranium is provided in the Decommissioning Funding Program, along with a description of the funding mechanisms that will be used to address USEC's funding liabilities.

#### **4.0 ITEMS ADDRESSED BY COMPLIANCE PLAN**

Section deleted.

**Table 1. Estimated amount of depleted uranium (DU) generated by USEC and its disposition, in metric tons uranium (MTU) for PORTS and PGDP combined.**

Year	DU Generated by USEC <sup>1</sup>	DU Transfers to DOE under 6/30/98 agreement <sup>4</sup>	DU Transfers to DOE under 6/17/02 agreement <sup>5</sup>	Other DU Transfers to DOE <sup>6</sup>	Estimated net cumulative USEC DU <sup>2</sup>
July 28, 1998- Dec. 31, 2003	-	-	-	-	17861 <sup>3</sup>
CY2004	6631 <sup>7</sup>	(8735)	(3315)	(3237)	9205
CY2005	5984	0	(1399)	(471)	13319
CY2006	7674	0	0	0	20993
CY2007	6292	0	0	0	27285
CY2008	5593	0	0	0	32878

Notes:

1. Projections are provided through the expiration date of the NRC Certificate of Compliance.
2. DOE retains liability for depleted uranium generated prior to USEC's privatization (July 28, 1998) per USEC Privatization Act (Public Law 104-134, Sec 3109, paragraph (a)(3)).
3. Reflects the cumulative amount of DU since USEC's privatization (July 28, 1998) for which USEC is responsible for disposition.
4. Total to be transferred to DOE is the quantity in 2026 48G cylinders.
5. Under the June 17, 2002 agreement, DOE will take possession of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 (July 1, 2002 through June 30, 2003) and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005.
6. Depleted uranium transfers to compensate USEC for incurred costs associated with DOE contract activities.
7. Includes 7 MTU returned from the former Starmet, CMI site.

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## **DECOMMISSIONING FUNDING PROGRAM DESCRIPTION**

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## 1.0 INTRODUCTION

As a condition of certification, 10 Code of Federal Regulations (CFR) 76.35(n) requires the United States Enrichment Corporation (USEC) to submit, as part of its application for an NRC certificate of compliance:

A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation.

Section 76.35(n) also requires USEC to establish financial surety arrangements to provide the requisite funding. The funding mechanism must ensure availability of funds for activities required to be completed both before and after the return of the gaseous diffusion plants to the Department of Energy (DOE) in accordance with the July 1, 1993 Lease Agreement between DOE and USEC (Lease Agreement). The funding program must also contain a basis for cost estimates used to establish funding levels, and means of adjusting such cost estimates and associated funding levels over the duration of the lease. Finally, USEC is not required to provide funding for "those aspects of decontamination and decommissioning . . . assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended."

In accordance with 10 CFR 76.35(n), USEC hereby submits a description of its program to ensure adequate funds are available for the disposal of waste and the disposition of depleted uranium generated at the GDP's and for which USEC is financially responsible under the Atomic Energy Act (AEA).

## 2.0 SCOPE OF USEC'S DECOMMISSIONING FINANCIAL RESPONSIBILITY

USEC began to operate the Paducah (PGDP) and Portsmouth (PORTS) plants on July 1, 1993, in accordance with the AEA, as amended, and the July 1, 1993 Lease Agreement. Prior to July 1, 1993, DOE operated the plants for about 40 years. Section 1403(d) of the AEA provides that "[t]he payment of any costs of decontamination and decommissioning . . . with respect to conditions existing before the transition date [July 1, 1993], in connection with property of the Department leased under subsection (a), shall remain the sole responsibility of the Department." Accordingly, USEC is not financially responsible for, and this Program Description does not provide funding assurance for, decontamination or decommissioning costs associated with any operations at the gaseous diffusion plants (GDPs) prior to July 1, 1993.

Furthermore, the GDPs, including the Leased Premises, will ultimately be decommissioned by DOE, which is solely responsible for the conduct of decontamination and decommissioning activities at the plant, and which also bears sole financial responsibility for the bulk of these activities. Section 4.6 of the Lease Agreement states that:

Except as provided in Section 4.5(c) of this Lease, the Department will be responsible for and will pay the costs of all Decontamination and Decommissioning, including the costs of Decontamination and Decommissioning of the Leased Premises, the Leased Personalty, any personal property found on the Leased Premises, regardless of ownership, and any Capital Improvement.

In addition, Section 4.3(b) of the Lease Agreement states that "[t]he Corporation shall be entitled, should it choose, to leave any of its personal property (including personal property contaminated by radioactive materials) on the Leased Premises at the end of the Lease Term for Decontamination and Decommissioning by the Department."

However, USEC does have certain specific financial responsibilities with respect to some of these activities. Under Section 4.4(c) of the Lease Agreement, USEC is "responsible for the ultimate treatment and disposal of any waste generated by the Corporation, and for which the Department is not responsible . . . ." Under this provision, USEC is financially responsible for, and this Program Description addresses, the disposal of low-level radioactive waste (LLRW) and "mixed" hazardous and radioactive waste generated by USEC at the GDPs after the date of privatization, July 28, 1998.<sup>1</sup>

In addition, as discussed above, Section 4.6 of the Lease Agreement provides that the Department will pay the costs of all decontamination and decommissioning, "[e]xcept as provided in Section 4.5(c) of this Lease . . . ." Section 4.5(c) authorizes USEC to remove any capital improvement at the GDPs, but "if such removal increases the costs of the Department for the Decontamination and Decommissioning

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1 A more detailed description of USEC's plans to manage and dispose of LLRW and mixed waste generated at the GDPs is provided in the Radioactive Waste Management Program, which is included as part of each certificate of compliance application.

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of the Leased Premises to which any such Capital Improvement was attached, the Corporation will pay any such increase in Decontamination and Decommissioning costs." At this time, USEC does not anticipate removing any capital improvement from the plant site. Therefore, no financial assurance for Decontamination and Decommissioning cost increases arising out of such removal is currently being provided.

Finally, USEC is generating depleted uranium as a result of its operation of the GDPs. Section 3109(a)(3) of the USEC Privatization Act (passed April 1996) states that:

All liabilities arising out of the disposal of depleted uranium generated by the Corporation between July 1, 1993 and the privatization date shall become the direct liabilities of the Secretary [Secretary of Energy].

Therefore, this Program Description also describes USEC's funding program to ensure funds are available for the ultimate disposition of the depleted uranium generated by USEC's operations after July 28, 1998.<sup>2</sup>

As described in the Depleted Uranium Management Plan, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement.

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<sup>2</sup> The Depleted Uranium Management Plan describes in greater detail USEC's plans for the management and disposition of depleted uranium.

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The quantity of depleted uranium associated with these agreements, and the transfer schedule for this material, is specified in Table 1 of the Depleted Uranium Management Plan.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium, and the transfer schedule for the depleted uranium associated with the compensation for these contracts, is specified in Table 1 of the Depleted Uranium Management Plan.

### 3.0 DECOMMISSIONING COST ESTIMATE

In accordance with 10 CFR 76.35(n), USEC has estimated the costs associated with the disposal of LLRW and mixed waste, and the disposition of depleted uranium generated by its operations at the GDPs. These costs are not considered decontamination and decommissioning costs, but rather production costs since they are incurred during the operation and maintenance of the plant. These cost estimates are cumulative, and are calculated one year in advance. The estimated cost for calendar year (CY) 2005 for the disposal of waste and for the disposition of depleted uranium generated by USEC at the GDPs is as follows:

Low Level and Mixed Waste	\$ 6.37 M
Depleted Uranium	\$42.80 M
Labor Cost	<u>\$ 0.50 M</u>
CY05 Cost	\$49.67 M

To account for uncertainties associated with either the estimated volumes or costs associated with the above cost estimates, a contingency factor of 10% is applied to the CY 05 cost. A 10% contingency is appropriate considering USEC's limited decontamination and decommissioning liability as described in the Decommissioning Funding Program Description (DFP), an annual review and update, as necessary, of the DFP cost estimate and the relative stability of the factors which are utilized to generate USEC's depleted uranium volume estimate, the disposal of which is the major contributor to USEC's decommissioning funding liability. After application of the 10% contingency, USEC's total projected decommissioning funding liability for calendar year 2005 is \$54.6 million.

The bases for these cost estimates are described below in their respective subsection. USEC's cost estimates will be reviewed annually and revised, as necessary, to reflect any change in USEC's projected liability.

#### 3.1 LOW LEVEL AND MIXED WASTE DISPOSAL

USEC generates many types of LLRW and mixed (hazardous and radioactive) waste at the GDPs, as described in the Radioactive Waste Management Program (RWMP) for each site. For the most part, all wastes are routinely treated on-site or treated and disposed of off-site as the wastes are generated. There are, however, a small number of mixed waste streams at PORTS for which no treatment and/or disposal option exists in the US. These wastes are authorized to be stored in Department of Energy permitted storage at PORTS under agreements with the appropriate state agencies. There is also a quantity of LLRW at each plant that will remain onsite at the end of CY 2005. At PGDP, the LLRW



does not meet the disposal facilities waste acceptance criteria as stored, while at PORTS, most of these wastes currently do not have a disposal option. These wastes are being stored in compliance with USEC's Certificate of Compliance. USEC's LLRW and mixed waste decommissioning liability is calculated as the sum of the liability associated with the cost of disposal of that amount of waste estimated to be generated during the calendar year plus the liability associated with the estimated amount of waste that remains in storage at the end of the calendar year. Cost of disposal includes disposal cost, container cost, and transportation costs.

Estimated waste generation volumes are based on historical waste generation for each plant. Each individual LLRW and mixed waste stream has a different estimated volume and a different disposal cost. For the year, the different volumes of waste generated and their disposal cost estimates are averaged to establish an average disposal cost. USEC's cost estimate is based on the weighted average cost to manage waste. The disposal cost estimate for each waste stream in the weighted average cost is based upon existing contract prices.

Based on historical information, the cost of containers for waste disposal is approximately 8.1% of the disposal cost. Historical information also shows that the transportation cost associated with waste is approximately 9.1% of the disposal costs.

Except for those mixed wastes and LLRW noted earlier that do not currently have a disposal outlet, USEC anticipates that its waste disposal activities will be such that LLRW and most mixed waste generated in any given year will be disposed of within that year, or shortly thereafter. USEC funds this disposal cost out of accrued cash generated from operations. The decommissioning liability associated with the waste that remains in storage at the end of the calendar year at each site will be calculated based on the estimated volume of waste in storage at the end of the calendar year.

### 3.1.1 Low Level Radioactive Waste Disposal

USEC anticipates generating a total of approximately 53,500 ft<sup>3</sup> of LLRW from routine operations and projects at the Paducah plant for calendar year 2005. USEC has assumed disposal of Paducah's LLRW at various commercial disposal facilities at an average weighted cost of \$23/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Paducah plant for calendar year 2005 is therefore estimated to be:

$$\text{Paducah LLRW: } 53,500 \text{ ft}^3 \times \$23/\text{ft}^3 = \$1.23 \text{ million for the year}$$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 17,250 ft<sup>3</sup> of LLRW from routine operations, projects and shutdown related activities. USEC has assumed disposal of Portsmouth's LLRW at various commercial disposal facilities at an average weighted cost of \$25/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

$$\text{Portsmouth LLRW: } 17,250 \text{ ft}^3 \times \$25/\text{ft}^3 = \$0.43 \text{ million for the year}$$

The cost of disposal of USEC's LLRW for CY 2005 is \$1.66 million.

### 3.1.2 Mixed Waste Disposal

USEC anticipates generating a total of approximately 350 ft<sup>3</sup> of mixed waste at the Paducah plant in calendar year 2005. The current average cost estimate for disposing of this mixed waste produced at Paducah is \$395/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Paducah plant for calendar year 2005 is therefore estimated to be:

Paducah Mixed Waste:  $350 \text{ ft}^3 \times \$395/\text{ft}^3 = \$0.14 \text{ million for the year}$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 310 ft<sup>3</sup> of mixed waste for CY 2005. The current average cost of disposal of such waste at Portsmouth is \$365/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

Portsmouth Mixed Waste:  $310 \text{ ft}^3 \times \$365/\text{ft}^3 = \$0.11 \text{ million for the year}$

The cost of disposal of USEC's mixed waste for CY 2005 is \$0.25 million.

### 3.1.3 Cost of Containers and Transportation

The cost of disposal of USEC's waste for CY 2005 has been estimated to be \$1.66 million for LLRW and \$0.25 million for mixed waste for a total of \$1.91 million. The estimated cost of containers for USEC's waste in CY 2005 is 8.1% of the cost of disposal.

Cost of containers: 8.1% of \$1.91 million or \$0.15 million.

The estimated cost of transportation for the disposal of USEC's waste in CY 2005 is estimated to be 9.1% of the cost of disposal.

Cost of transportation: 9.1% of \$1.91 million or \$0.17 million.

The total estimated cost associated with the containers and transportation necessary for the disposal of USEC's waste in CY 2005 is \$ 0.32 million.

### 3.1.4 Mixed Waste in Storage

As described earlier, there is an amount of mixed waste that will remain in storage at the end of CY 2005 at the Portsmouth plant. USEC estimates that 800 ft<sup>3</sup> of mixed waste will be in storage at the end of CY 2005. Due to the unknown future costs associated with these wastes an additional \$1,500/ft<sup>3</sup> may be necessary for disposal. The additional estimated cost associated with the disposal of this waste is:

Portsmouth mixed waste in storage:  $800 \text{ ft}^3 \times \$1,500/\text{ft}^3 = \$1.2 \text{ million}$

As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total estimated costs for the disposal of mixed waste in storage at the Portsmouth plant in CY 2005 is \$1.41 million.

### 3.1.5 Low-Level Radioactive Waste in Storage

As described earlier, there is an amount of LLRW that will remain in storage at the end of CY 2005. This waste will be disposed at a later date at an estimated cost of \$28/ft<sup>3</sup>. This disposal cost is determined based on the weighted average cost for this particular waste stream. At Paducah, this LLRW volume is estimated to be 16,000 ft<sup>3</sup>.

The disposal cost for this LLRW that will remain on site at Paducah at the end of CY 2005 is estimated to be:

$$\text{Paducah LLRW in storage: } 16,000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.45 \text{ million.}$$

Likewise, at the Portsmouth Plant, USEC estimates that 3000 ft<sup>3</sup> of LLRW will remain on site at the end of CY 2005, and disposed at a later date. Therefore, the disposal cost for this LLRW that will remain on site at Portsmouth at the end of CY2005 is estimated to be:

$$\text{Portsmouth LLRW in storage: } 3000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.08 \text{ million}$$

In addition, 3000 ft<sup>3</sup> of LLRW for which USEC does not currently have a disposal outlet will remain in storage at Portsmouth. Due to the unknown future costs associated with disposal of this 3000 ft<sup>3</sup> of LLRW, an additional \$600 may be necessary for disposal. Therefore, the disposal cost for this LLRW that will remain in storage at Portsmouth at the end of CY 2005 is estimated to be:

$$\text{Portsmouth LLRW in storage: } 3000 \text{ ft}^3 \times \$600/\text{ft}^3 = \$1.8 \text{ million}$$

Therefore, the cost to dispose of the LLRW in storage in a subsequent calendar year is \$2.33 million. As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total cost for disposal of this LLRW in storage, including transportation and container costs, is estimated to be \$2.73 million.

### 3.2 Depleted Uranium Disposition

The estimate of decommissioning liability for depleted uranium is based on the generation of depleted uranium as described in the Depleted Uranium Management Plan. The current estimated cost for disposal of depleted uranium is estimated to be \$3.00 per kilogram of uranium (kgU). This cost for disposal is based upon the cost in the "Memorandum of Agreement between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium", dated June 30, 1998. USEC has compared this cost for disposal of depleted uranium against cost information from the DOE contract for the conversion facilities currently being constructed at Piketon, Ohio and Paducah, KY as well as the proposal to build and operate the uranium hexafluoride conversion facilities for DOE, submitted by the American Conversion Services (ACS) partnership, which included USEC. This proprietary ACS proposal was based on comprehensive cost projections developed by the partnership. The ACS proposal and the DOE conversion facilities cost information support the \$3.00 per kgU disposal cost for depleted uranium used in this plan. Based on the Depleted Uranium Management Plan, USEC's projected maximum liability at the end of calendar year 2005 for the disposition of depleted uranium generated by its Paducah and Portsmouth operations is 13.319 million kilograms (refer to Table 1 in the Depleted Uranium Management Plan).

Total processing cost for depleted uranium is then 13,319,000 kilograms of depleted uranium times \$3.00 per kilogram = \$39,957,000 or, after rounding, \$40.0M

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The above cost estimate includes processing as well as transportation and disposal of any by-product related to processing of the depleted uranium. To obtain the total cost associated with disposition of depleted uranium, the cost for transporting the depleted uranium to the processing facility must be included. The estimated cost associated with transporting USEC's depleted uranium liability for CY 2005 is estimated as follows:

$$\frac{(13,319,000 \text{ kgU})(\$1760/\text{cylinder}^*)}{(8400 \text{ kgU/cylinder})^{**}} = \$2,790,648 \text{ or } \$2.8\text{M}$$

\* Based on freight invoices to Starmet, CMP<sup>3</sup>

\*\* Approximate average kgU/cylinder, based on shipping weights

Therefore, USEC's total estimated liability for disposition of depleted uranium for CY 2005 is the sum of processing costs and transportation costs which equates to \$42.8M.

### 3.3 Labor Costs

To account for labor costs associated with disposal of USEC generated waste, USEC has included provisions for two crews (one for each facility) comprised of 1 supervisor, 3 laborers, 1 health physics technician and 1 engineer. Since disposal of waste is not a continuous process, the labor costs are calculated assuming the crews are available for a six-month duration, with the health physics technician and the engineer available for half of this duration (3 months duration). Labor costs were estimated based on the costs provided in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities," dated July 1998. Based on these assumptions, the labor costs associated with disposal of USEC generated waste is \$500,000 (\$250,000 per site).

## 4.0 REVIEW AND ADJUSTMENT OF DECOMMISSIONING COSTS AND FUNDING LEVELS

USEC will review the decommissioning cost estimates and associated funding levels over the duration of the lease and adjust them when necessary. These adjustments will take into account such factors as changes in volume and cost estimates, changes in plant conditions, and changes in expected decontamination and decommissioning procedures. USEC will conduct such reviews in October of each year.

## 5.0 DECOMMISSIONING FUNDING MECHANISM

USEC utilizes payment surety bond(s) and standby trust agreement(s) to ensure that sufficient funds will be available for waste disposal and depleted uranium disposition as set forth in this Program Description. The instruments are derived from Appendix A, NUREG-1757 Volume 3, "Consolidated NMSS Decommissioning Guidance, *Financial Assurance, Recordkeeping, and Timeliness*", dated September 2003. Non-executed versions are included in this Plan. Executed documents are submitted to the NRC for review as they are revised and reissued.

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<sup>3</sup>Associated with a previous demonstration project for processing USEC depleted uranium.

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**PAYMENT SURETY BOND - NON-EXECUTED VERSION**

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, MD 20817

Type of organization: Delaware Chartered Corporation

NRC certificate of compliance number: GDP-1 and GDP-2

Name and address of facilities: Paducah Gaseous Diffusion Plant  
Portsmouth Gaseous Diffusion Plant

Amount(s) for decommissioning  
activity guaranteed by this bond: Estimated at [insert amount]

Surety(ies) [name(s) and business address(es)]

Type of organization: [insert "proprietorship," "joint venture," "partnership" or "corporation"]

State of incorporation: \_\_\_\_\_ (if applicable)

Surety's qualification in jurisdiction where facility is located.

Surety's bond number \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Know all persons by these presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the U.S. Nuclear Regulatory Commission (herein called NRC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety; but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

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WHEREAS, the NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76, applicable to the Principal, which require that the holder of a certificate of compliance for a gaseous diffusion plant, or an applicant for a certificate of compliance for such a facility provide financial assurance that funds will be available when needed for those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of such a facility which are the financial responsibility of such holder or applicant (collectively, "decommissioning");

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of decommissioning of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility;

Or, if the Principal shall fund the standby trust fund in such amount(s) after an order to begin facility decommissioning is issued by the NRC or a U.S. district court or other court of competent jurisdiction;

Or, if the Principal shall provide alternative financial assurance and obtain the written approval of the NRC of such assurance, within 30 days after the date a notice of cancellation from the Surety(ies) is received by both the Principal and the NRC, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the NRC that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund established by the Principal with [name of trustee] pursuant to the Standby Trust Agreement dated [date].

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the NRC provided, however, that cancellation shall not occur during the 90 days beginning on the date of receipt of the notice of cancellation by both the Principal and the NRC, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the NRC and to Surety(ies) 90 days prior to the proposed date of termination, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond from the NRC.

If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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In Witness Whereof, the Principal and Surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Principal: United States Enrichment Corporation

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety(ies) above.]

Bond premium: \$ \_\_\_\_\_

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**STANDBY TRUST AGREEMENT - NON-EXECUTED VERSION**

TRUST AGREEMENT, the Agreement entered into as of [date] by and between the United States Enrichment Corporation, a Delaware chartered corporation, herein referred to as the "Grantor," and [name and address of a national bank or other Trustee acceptable to the U.S. Nuclear Regulatory Commission], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 76, certificate of compliance provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a surety bond to provide part of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a surety bond this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

**Section 1. Definitions.** As used in this Agreement:

- (a) The term "Decommissioning" means those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of the Paducah and Portsmouth Gaseous Diffusion Plant (GDPs) which are the financial responsibility of the Grantor.
- (b) The term "Grantor" means the United States Enrichment Corporation and any successors or assigns thereof.
- (c) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

**Section 2. Costs of Decommissioning.** This Agreement pertains to the costs of decommissioning the materials and activities identified in Certificate of Compliance Number GDP-1 and GDP-2 issued pursuant to 10 CFR Part 76.

**Section 3. Establishment of Fund.** The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

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Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

a. A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and

b. A certificate attesting to the following conditions:

(1)that decommissioning is proceeding pursuant to an NRC-approved plan.

(2)that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and

(3)that the NRC has been given 30 days' prior notice of the Grantor's intent to withdraw funds from the escrow fund.

No withdrawal from the fund can exceed 10 percent of the outstanding balance of the Fund unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor, or other persons as specified by the NRC, from the Fund for expenditures for required activities in such amount as the NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity

and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poor's or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine

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certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, where so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the

Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC, and the present Trustee by certified mail 10 days before such changes becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the grantor's orders, requests, and instructions. If the NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, or the NRC, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instruction from the Grantor and/or the NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor, or the NRC, issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the United States.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST:

[Insert name of Grantor]  
[Signature of representative  
of Grantor]  
[Title]

[Title]  
[Seal]

[Insert name of Trustee]  
[Signature of representative  
of Trustee]  
[Title]

ATTEST:  
[Title]  
[Seal]

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February 25, 2005

United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

U.S. NUCLEAR  
REGULATORY  
COMMISSION  
CERTIFICATE OF  
COMPLIANCE NUMBER

GDP-1 and GDP-2

NAME AND  
ADDRESS OF  
LICENSEE

United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, Maryland 20817

3930 State Route 23/Perimeter Road  
Piketon, Ohio 45661

5600 Hobbs Road  
Paducah, Kentucky 42001

COST ESTIMATE FOR  
REGULATORY ASSURANCES  
DEMONSTRATED BY THIS  
AGREEMENT

[Insert amount of agreement]

The cost estimates listed here were submitted to the NRC on [insert date]

The Total Cost of decommissioning the GDP's, assuming no liability for decontamination, is as per the decommissioning cost estimate on file with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE B

AMOUNT:

AS EVIDENCED BY: Payment Surety Bond dated [insert date]  
[Insert name of Surety Bond holder and Surety Bond number] as on file  
with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_



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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE C

Trustee will be paid [insert amount] annually for services being provided under the standby trust agreement. This fee will apply whether or not payment has been made to the standby trust fund.

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**APPLICATION FOR UNITED STATES  
NUCLEAR REGULATORY COMMISSION CERTIFICATION  
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**Depleted Uranium Management Plan**  
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Principal Officers

Mr. James R. Mellor  
Chairman and Chief Executive Officer

Ms. Lisa E. Gordon-Hagerty  
Executive Vice President and Chief Operating Officer

Mr. Russell B. Starkey, Jr.  
Vice President, Operations

Mr. James F. McDonnell  
Vice President and Chief Information & Security Officer

**Format and Content of the USEC Certification Application**

The Application contains a Safety Analysis Report (SAR), Technical Safety Requirements (TSRs), and programs, plans and other documents as described above. In accordance with 10 CFR 76.35(b), the Application also includes a plan prepared and approved by DOE for achieving compliance with respect to any areas of noncompliance with the NRC's regulations identified by USEC as of the date of this Application. The Compliance Plan provides an expanded description of the

areas of noncompliance, a justification for continued operation, a description of the plan of action to achieve compliance, and the schedule for completion of those actions, as applicable.

The Application is written in the present tense. The physical description of installed structures, systems and components (SSCs) in the Application is current as of June 1, 1995, except as described in Section 3.9, "Items Addressed by Compliance Plan." The programs, plans, procedures and other aspects of the facility's operations other than the SSCs are described as they will be when all Compliance Plan items are completed. Each section of the Application contains a subsection entitled "Items Addressed by Compliance Plan". This subsection describes those aspects of the program, plan or section topic that are not in full compliance with the Application. This subsection also contains a brief description of what is currently in place. Any section which does not have any related Compliance Plan states "None identified."

## **DEPLETED URANIUM MANAGEMENT PLAN**



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## 1.0 INTRODUCTION

Under 10 Code of Federal Regulations (CFR) 76.35(m), the United States Enrichment Corporation (USEC) is required, as part of its application for a certificate of compliance, to provide:

"A description of the program, as appropriate, for processing, management, and disposal of mixed and radioactive wastes and depleted uranium generated by operations. This description must be limited to processing, management, and disposal activities conducted during operation of the facilities while under lease to the Corporation. The application must also include a description of the waste streams generated by enrichment operations, annual volumes of depleted uranium and waste expected, identification of radioisotopes contained in the waste, physical and chemical forms of the depleted uranium and waste, plans for managing the depleted uranium and waste, and plans for ultimate disposition of the waste and depleted uranium before turnover of the facilities to the Department of Energy under the terms of the lease agreement between the United States Enrichment Corporation and the Department."

In accordance with 10 CFR 76.35(m), this plan describes USEC's program for the management and disposition of the depleted uranium (DU) produced as part of the enrichment activities at the Portsmouth (PORTS) and Paducah (PGDP) Gaseous Diffusion Plants (GDPs). USEC's program for the processing, management, and disposal of mixed and radioactive wastes is described in the Radioactive Waste Management Plan submitted as part of this application.

## 2.0 DEPLETED URANIUM PRODUCTION ESTIMATES

The production of depleted uranium will continue throughout the period that enrichment activities are conducted at the GDPs. The production rate of depleted uranium is a function of the demand for enriched uranium, the portion of that demand supplied by the Russian enriched uranium, and the operating mode of the plants (determined by power load, power costs, enrichment levels, and other factors). USEC's projected depleted uranium production estimates for both GDPs cover the period of the Nuclear Regulatory Commission (NRC) Certificate of Compliance. The estimates are provided in Table 1, along with the amount of depleted uranium that USEC is responsible for, taking into account the factors discussed in Section 3.0 below.

The funds set aside for the disposition of depleted uranium at the GDPs will be based on the actual production rates of depleted uranium at the plant during the period that the plant is operated under the USEC/DOE Lease Agreement. USEC's funding plan for the disposition of depleted uranium is described in the Decommissioning Funding Program Description submitted as part of this application.

### 3.0 MANAGEMENT AND DISPOSITION PLAN

The depleted uranium is currently being stored as solid uranium hexafluoride ( $UF_6$ ) in carbon steel cylinders at the GDP plant sites (cylinder storage is described in PGDP SAR Section 3.7.2 and PORTS SAR Section 3.2.4.4). The cylinders meet specific design requirements and special procedures and handling equipment are used for DU cylinder handling, movement, and stacking. USEC can continue to store depleted uranium in the solid state in these cylinders for an extended period without undue risk. In addition, cylinder inspections are conducted, as described below, to provide evidence of continued cylinder integrity.

The cylinders used for the storage of depleted uranium are inspected prior to being filled. After filling, the cylinder is cooled and then moved to a cylinder yard and stacked in place. After the cylinder is stacked in position, a baseline (initial) storage inspection is conducted at which point any damage to the cylinder is identified. If the cylinder is damaged, supervision is notified promptly and the damage evaluated for any actions required; the range of actions are to be commensurate with the cylinder damage. After the initial inspection, the cylinders are inspected every four years thereafter (except for any cylinders identified in the initial inspection as requiring a more frequent inspection); the condition of each cylinder is documented using a cylinder inspection data sheet.

Initial and quadrennial inspections are conducted on full cylinders that are normally single or double stacked. These inspections, conducted from ground level, with or without visual aids, are made using the following criteria:

- Cylinders positioned incorrectly (e.g., with valves in other than top center position); this often is an indication of potential stacking damage.
- Improperly stacked cylinders with potentially damaging contact (e.g., lifting lug resting on cylinder body, stiffening ring resting on stiffening ring, other criteria as described in the inspection procedure).
- Dents, bulges, cracks, metal loss, apparent by visual inspection, on the longitudinal and circumference welds.
- Dents, bulges, cracks, gouges, stacking damage, excessive scale or rust, apparent by visual inspection, on the cylinder shell.
- Bends, cracks or breaks from shell, impact damage, gouges, apparent by visual inspection, on the stiffening rings.
- Tears, dents, cracks, excessive scale or rust, or plugged weep hole, apparent by visual inspection, on the cylinder skirt (or valve protector).

Depleted uranium in the form of solid  $UF_6$  is suitable for conversion to other chemical forms. For example, the solid  $UF_6$  could be converted to  $U_3O_8$ ,  $UF_4$ , or uranium metal. There are a number of

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existing and potential uses for depleted uranium, including use in radiation shielding material, armor-piercing projectiles, and counterweights. It is possible that increased energy costs may make recovery of additional  $^{235}\text{U}$  from the depleted uranium economically feasible in the future and that other potential uses may also be identified. However, the conversion of the depleted uranium to one of these other forms in the near term could either foreclose other uses and disposition options because of the difficulty of processing some of these uranium compounds and the lack of processing facilities, or increase the cost of the ultimate disposition.

Moreover, the amount of depleted uranium that will be produced by USEC in the near term will be relatively small in comparison with the DOE's existing depleted uranium inventory. DOE is currently storing approximately 700,000 MTU of depleted uranium as solid  $\text{UF}_6$  in approximately 60,000 cylinders stored at various locations on the DOE portions of the GDP plant sites. USEC presently anticipates that the bulk of its inventory of depleted uranium will ultimately be dispositioned in the same manner as the larger DOE depleted uranium inventory.

In the meantime, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004. Table 1 reflects the transfer schedule.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement. The quantity of depleted uranium associated with this agreement is specified in Table 1.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium associated with the compensation for these services is specified in Table 1.

In addition to the foregoing outlets, USEC will, to the extent practicable, continue to market depleted uranium for uses in military applications, counterweights, and shielding applications. Efforts may also be made to develop other commercial uses that could include shielding for high-level waste storage and shipping casks, or multipurpose canisters being developed for the DOE high-level waste program.



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The remaining inventory will continue to be stored as solid  $UF_6$  until it can be processed in accordance with the disposition strategy established by DOE for its inventory.

The estimated cost of conversion and disposition of the depleted uranium is provided in the Decommissioning Funding Program, along with a description of the funding mechanisms that will be used to address USEC's funding liabilities.

#### **4.0 ITEMS ADDRESSED BY COMPLIANCE PLAN**

Section deleted.

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**Table 1. Estimated amount of depleted uranium (DU) generated by USEC and its disposition, in metric tons uranium (MTU) for PORTS and PGDP combined.**

Year	DU Generated by USEC <sup>1</sup>	DU Transfers to DOE under 6/30/98 agreement <sup>4</sup>	DU Transfers to DOE under 6/17/02 agreement <sup>5</sup>	Other DU Transfers to DOE <sup>6</sup>	Estimated net cumulative USEC DU <sup>2</sup>
July 28, 1998- Dec. 31, 2003	-	-	-	-	17861 <sup>3</sup>
CY2004	6631 <sup>7</sup>	(8735)	(3315)	(3237)	9205
CY2005	5984	0	(1399)	(471)	13319
CY2006	7674	0	0	0	20993
CY2007	6292	0	0	0	27285
CY2008	5593	0	0	0	32878

Notes:

1. Projections are provided through the expiration date of the NRC Certificate of Compliance.
2. DOE retains liability for depleted uranium generated prior to USEC's privatization (July 28, 1998) per USEC Privatization Act (Public Law 104-134, Sec 3109, paragraph (a)(3)).
3. Reflects the cumulative amount of DU since USEC's privatization (July 28, 1998) for which USEC is responsible for disposition.
4. Total to be transferred to DOE is the quantity in 2026 48G cylinders.
5. Under the June 17, 2002 agreement, DOE will take possession of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 (July 1, 2002 through June 30, 2003) and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005.
6. Depleted uranium transfers to compensate USEC for incurred costs associated with DOE contract activities.
7. Includes 7 MTU returned from the former Starmet, CMI site.

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## **DECOMMISSIONING FUNDING PROGRAM DESCRIPTION**

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## 1.0 INTRODUCTION

As a condition of certification, 10 Code of Federal Regulations (CFR) 76.35(n) requires the United States Enrichment Corporation (USEC) to submit, as part of its application for an NRC certificate of compliance:

A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation.

Section 76.35(n) also requires USEC to establish financial surety arrangements to provide the requisite funding. The funding mechanism must ensure availability of funds for activities required to be completed both before and after the return of the gaseous diffusion plants to the Department of Energy (DOE) in accordance with the July 1, 1993 Lease Agreement between DOE and USEC (Lease Agreement). The funding program must also contain a basis for cost estimates used to establish funding levels, and means of adjusting such cost estimates and associated funding levels over the duration of the lease. Finally, USEC is not required to provide funding for "those aspects of decontamination and decommissioning . . . assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended."

In accordance with 10 CFR 76.35(n), USEC hereby submits a description of its program to ensure adequate funds are available for the disposal of waste and the disposition of depleted uranium generated at the GDP's and for which USEC is financially responsible under the Atomic Energy Act (AEA).

## 2.0 SCOPE OF USEC'S DECOMMISSIONING FINANCIAL RESPONSIBILITY

USEC began to operate the Paducah (PGDP) and Portsmouth (PORTS) plants on July 1, 1993, in accordance with the AEA, as amended, and the July 1, 1993 Lease Agreement. Prior to July 1, 1993, DOE operated the plants for about 40 years. Section 1403(d) of the AEA provides that "[t]he payment of any costs of decontamination and decommissioning . . . with respect to conditions existing before the transition date [July 1, 1993], in connection with property of the Department leased under subsection (a), shall remain the sole responsibility of the Department." Accordingly, USEC is not financially responsible for, and this Program Description does not provide funding assurance for, decontamination or decommissioning costs associated with any operations at the gaseous diffusion plants (GDPs) prior to July 1, 1993.

Furthermore, the GDPs, including the Leased Premises, will ultimately be decommissioned by DOE, which is solely responsible for the conduct of decontamination and decommissioning activities at the plant, and which also bears sole financial responsibility for the bulk of these activities. Section 4.6 of the Lease Agreement states that:

Except as provided in Section 4.5(c) of this Lease, the Department will be responsible for and will pay the costs of all Decontamination and Decommissioning, including the costs of Decontamination and Decommissioning of the Leased Premises, the Leased Personalty, any personal property found on the Leased Premises, regardless of ownership, and any Capital Improvement.

In addition, Section 4.3(b) of the Lease Agreement states that "[t]he Corporation shall be entitled, should it choose, to leave any of its personal property (including personal property contaminated by radioactive materials) on the Leased Premises at the end of the Lease Term for Decontamination and Decommissioning by the Department."

However, USEC does have certain specific financial responsibilities with respect to some of these activities. Under Section 4.4(c) of the Lease Agreement, USEC is "responsible for the ultimate treatment and disposal of any waste generated by the Corporation, and for which the Department is not responsible . . . ." Under this provision, USEC is financially responsible for, and this Program Description addresses, the disposal of low-level radioactive waste (LLRW) and "mixed" hazardous and radioactive waste generated by USEC at the GDPs after the date of privatization, July 28, 1998.<sup>1</sup>

In addition, as discussed above, Section 4.6 of the Lease Agreement provides that the Department will pay the costs of all decontamination and decommissioning, "[e]xcept as provided in Section 4.5(c) of this Lease . . . ." Section 4.5(c) authorizes USEC to remove any capital improvement at the GDPs, but "if such removal increases the costs of the Department for the Decontamination and Decommissioning

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1 A more detailed description of USEC's plans to manage and dispose of LLRW and mixed waste generated at the GDPs is provided in the Radioactive Waste Management Program, which is included as part of each certificate of compliance application.

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of the Leased Premises to which any such Capital Improvement was attached, the Corporation will pay any such increase in Decontamination and Decommissioning costs." At this time, USEC does not anticipate removing any capital improvement from the plant site. Therefore, no financial assurance for Decontamination and Decommissioning cost increases arising out of such removal is currently being provided.

Finally, USEC is generating depleted uranium as a result of its operation of the GDPs. Section 3109(a)(3) of the USEC Privatization Act (passed April 1996) states that:

All liabilities arising out of the disposal of depleted uranium generated by the Corporation between July 1, 1993 and the privatization date shall become the direct liabilities of the Secretary [Secretary of Energy].

Therefore, this Program Description also describes USEC's funding program to ensure funds are available for the ultimate disposition of the depleted uranium generated by USEC's operations after July 28, 1998.<sup>2</sup>

As described in the Depleted Uranium Management Plan, USEC has established agreements with the DOE that affect USEC's liability associated with the disposal of depleted uranium generated by USEC. These agreements are the "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 and the "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002.

The "Memorandum of Agreement Between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium," dated June 30, 1998 provides for the transfer to DOE of 2,026 48G cylinders containing approximately 16,674,000 Kg of depleted uranium generated by USEC's operations. In accordance with the agreement, USEC has made the required full payment of over \$50M to DOE, covering the entire quantity of depleted uranium to be transferred. Therefore, the liability to dispose of the full amount of USEC's depleted uranium specified in the agreement now rests with DOE, further reducing the quantity of depleted uranium to be ultimately disposed of by USEC. Within these major parameters of the agreement, USEC and DOE have also agreed to implement the actual transfer of the material on a schedule covering the period of FY 1999 through 2004.

The "Agreement Between the U.S. Department of Energy ("DOE") and USEC Inc. ("USEC")," dated June 17, 2002, provides, in part, for the DOE taking title of depleted uranium from USEC operations during USEC's fiscal years 2002 and 2003 and one-half the amount of depleted uranium generated during USEC's fiscal years 2004 and 2005. Therefore, as a result of this June 17, 2002 agreement, USEC's liability associated with the disposal of USEC generated depleted uranium has been reduced by the quantity of depleted uranium specified in this June 17, 2002 agreement.

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2 The Depleted Uranium Management Plan describes in greater detail USEC's plans for the management and disposition of depleted uranium.

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The quantity of depleted uranium associated with these agreements, and the transfer schedule for this material, is specified in Table 1 of the Depleted Uranium Management Plan.

In addition to USEC's enrichment operations, USEC also performs contract work for the DOE and DOE contractors at the Portsmouth and Paducah Plants. To compensate USEC for incurred costs associated with these contracts, DOE has taken title to depleted uranium further reducing USEC's liability for the disposal of depleted uranium. The quantity of depleted uranium, and the transfer schedule for the depleted uranium associated with the compensation for these contracts, is specified in Table 1 of the Depleted Uranium Management Plan.

### 3.0 DECOMMISSIONING COST ESTIMATE

In accordance with 10 CFR 76.35(n), USEC has estimated the costs associated with the disposal of LLRW and mixed waste, and the disposition of depleted uranium generated by its operations at the GDPs. These costs are not considered decontamination and decommissioning costs, but rather production costs since they are incurred during the operation and maintenance of the plant. These cost estimates are cumulative, and are calculated one year in advance. The estimated cost for calendar year (CY) 2005 for the disposal of waste and for the disposition of depleted uranium generated by USEC at the GDPs is as follows:

Low Level and Mixed Waste	\$ 6.37 M
Depleted Uranium	\$42.80 M
Labor Cost	<u>\$ 0.50 M</u>
CY05 Cost	\$49.67 M

To account for uncertainties associated with either the estimated volumes or costs associated with the above cost estimates, a contingency factor of 10% is applied to the CY 05 cost. A 10% contingency is appropriate considering USEC's limited decontamination and decommissioning liability as described in the Decommissioning Funding Program Description (DFP), an annual review and update, as necessary, of the DFP cost estimate and the relative stability of the factors which are utilized to generate USEC's depleted uranium volume estimate, the disposal of which is the major contributor to USEC's decommissioning funding liability. After application of the 10% contingency, USEC's total projected decommissioning funding liability for calendar year 2005 is \$54.6 million.

The bases for these cost estimates are described below in their respective subsection. USEC's cost estimates will be reviewed annually and revised, as necessary, to reflect any change in USEC's projected liability.

#### 3.1 LOW LEVEL AND MIXED WASTE DISPOSAL

USEC generates many types of LLRW and mixed (hazardous and radioactive) waste at the GDPs, as described in the Radioactive Waste Management Program (RWMP) for each site. For the most part, all wastes are routinely treated on-site or treated and disposed of off-site as the wastes are generated. There are, however, a small number of mixed waste streams at PORTS for which no treatment and/or disposal option exists in the US. These wastes are authorized to be stored in Department of Energy permitted storage at PORTS under agreements with the appropriate state agencies. There is also a quantity of LLRW at each plant that will remain onsite at the end of CY 2005. At PGDP, the LLRW

does not meet the disposal facilities waste acceptance criteria as stored, while at PORTS, most of these wastes currently do not have a disposal option. These wastes are being stored in compliance with USEC's Certificate of Compliance. USEC's LLRW and mixed waste decommissioning liability is calculated as the sum of the liability associated with the cost of disposal of that amount of waste estimated to be generated during the calendar year plus the liability associated with the estimated amount of waste that remains in storage at the end of the calendar year. Cost of disposal includes disposal cost, container cost, and transportation costs.

Estimated waste generation volumes are based on historical waste generation for each plant. Each individual LLRW and mixed waste stream has a different estimated volume and a different disposal cost. For the year, the different volumes of waste generated and their disposal cost estimates are averaged to establish an average disposal cost. USEC's cost estimate is based on the weighted average cost to manage waste. The disposal cost estimate for each waste stream in the weighted average cost is based upon existing contract prices.

Based on historical information, the cost of containers for waste disposal is approximately 8.1% of the disposal cost. Historical information also shows that the transportation cost associated with waste is approximately 9.1% of the disposal costs.

Except for those mixed wastes and LLRW noted earlier that do not currently have a disposal outlet, USEC anticipates that its waste disposal activities will be such that LLRW and most mixed waste generated in any given year will be disposed of within that year, or shortly thereafter. USEC funds this disposal cost out of accrued cash generated from operations. The decommissioning liability associated with the waste that remains in storage at the end of the calendar year at each site will be calculated based on the estimated volume of waste in storage at the end of the calendar year.

### 3.1.1 Low Level Radioactive Waste Disposal

USEC anticipates generating a total of approximately 53,500 ft<sup>3</sup> of LLRW from routine operations and projects at the Paducah plant for calendar year 2005. USEC has assumed disposal of Paducah's LLRW at various commercial disposal facilities at an average weighted cost of \$23/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Paducah plant for calendar year 2005 is therefore estimated to be:

$$\text{Paducah LLRW: } 53,500 \text{ ft}^3 \times \$23/\text{ft}^3 = \$1.23 \text{ million for the year}$$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 17,250 ft<sup>3</sup> of LLRW from routine operations, projects and shutdown related activities. USEC has assumed disposal of Portsmouth's LLRW at various commercial disposal facilities at an average weighted cost of \$25/ft<sup>3</sup>. The disposal cost for LLRW generated by USEC at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

$$\text{Portsmouth LLRW: } 17,250 \text{ ft}^3 \times \$25/\text{ft}^3 = \$0.43 \text{ million for the year}$$

The cost of disposal of USEC's LLRW for CY 2005 is \$1.66 million.

### 3.1.2 Mixed Waste Disposal

USEC anticipates generating a total of approximately 350 ft<sup>3</sup> of mixed waste at the Paducah plant in calendar year 2005. The current average cost estimate for disposing of this mixed waste produced at Paducah is \$395/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Paducah plant for calendar year 2005 is therefore estimated to be:

$$\text{Paducah Mixed Waste: } 350 \text{ ft}^3 \times \$395/\text{ft}^3 = \$0.14 \text{ million for the year}$$

Likewise at the Portsmouth plant, USEC anticipates generating a total of approximately 310 ft<sup>3</sup> of mixed waste for CY 2005. The current average cost of disposal of such waste at Portsmouth is \$365/ft<sup>3</sup>. The disposal cost for this mixed waste generated at the Portsmouth plant for calendar year 2005 is therefore estimated to be:

$$\text{Portsmouth Mixed Waste: } 310 \text{ ft}^3 \times \$365/\text{ft}^3 = \$0.11 \text{ million for the year}$$

The cost of disposal of USEC's mixed waste for CY 2005 is \$0.25 million.

### 3.1.3 Cost of Containers and Transportation

The cost of disposal of USEC's waste for CY 2005 has been estimated to be \$1.66 million for LLRW and \$0.25 million for mixed waste for a total of \$1.91 million. The estimated cost of containers for USEC's waste in CY 2005 is 8.1% of the cost of disposal.

$$\text{Cost of containers: } 8.1\% \text{ of } \$1.91 \text{ million or } \$0.15 \text{ million.}$$

The estimated cost of transportation for the disposal of USEC's waste in CY 2005 is estimated to be 9.1% of the cost of disposal.

$$\text{Cost of transportation: } 9.1\% \text{ of } \$1.91 \text{ million or } \$0.17 \text{ million.}$$

The total estimated cost associated with the containers and transportation necessary for the disposal of USEC's waste in CY 2005 is \$ 0.32 million.

### 3.1.4 Mixed Waste in Storage

As described earlier, there is an amount of mixed waste that will remain in storage at the end of CY 2005 at the Portsmouth plant. USEC estimates that 800 ft<sup>3</sup> of mixed waste will be in storage at the end of CY 2005. Due to the unknown future costs associated with these wastes an additional \$1,500/ft<sup>3</sup> may be necessary for disposal. The additional estimated cost associated with the disposal of this waste is:

$$\text{Portsmouth mixed waste in storage: } 800 \text{ ft}^3 \times \$1,500/\text{ft}^3 = \$1.2 \text{ million}$$

As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total estimated costs for the disposal of mixed waste in storage at the Portsmouth plant in CY 2005 is \$1.41 million.

### 3.1.5 Low-Level Radioactive Waste in Storage

As described earlier, there is an amount of LLRW that will remain in storage at the end of CY 2005. This waste will be disposed at a later date at an estimated cost of \$28/ft<sup>3</sup>. This disposal cost is determined based on the weighted average cost for this particular waste stream. At Paducah, this LLRW volume is estimated to be 16,000 ft<sup>3</sup>.

The disposal cost for this LLRW that will remain on site at Paducah at the end of CY 2005 is estimated to be:

$$\text{Paducah LLRW in storage: } 16,000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.45 \text{ million.}$$

Likewise, at the Portsmouth Plant, USEC estimates that 3000 ft<sup>3</sup> of LLRW will remain on site at the end of CY 2005, and disposed at a later date. Therefore, the disposal cost for this LLRW that will remain on site at Portsmouth at the end of CY2005 is estimated to be:

$$\text{Portsmouth LLRW in storage: } 3000 \text{ ft}^3 \times \$28/\text{ft}^3 = \$0.08 \text{ million}$$

In addition, 3000 ft<sup>3</sup> of LLRW for which USEC does not currently have a disposal outlet will remain in storage at Portsmouth. Due to the unknown future costs associated with disposal of this 3000 ft<sup>3</sup> of LLRW, an additional \$600 may be necessary for disposal. Therefore, the disposal cost for this LLRW that will remain in storage at Portsmouth at the end of CY 2005 is estimated to be:

$$\text{Portsmouth LLRW in storage: } 3000 \text{ ft}^3 \times \$600/\text{ft}^3 = \$1.8 \text{ million}$$

Therefore, the cost to dispose of the LLRW in storage in a subsequent calendar year is \$2.33 million. As previously described in Section 3.1.3, the estimated cost for containers and transportation for this LLRW is 8.1 percent and 9.1 percent, respectively. Therefore, the total cost for disposal of this LLRW in storage, including transportation and container costs, is estimated to be \$2.73 million.

### 3.2 Depleted Uranium Disposition

The estimate of decommissioning liability for depleted uranium is based on the generation of depleted uranium as described in the Depleted Uranium Management Plan. The current estimated cost for disposal of depleted uranium is estimated to be \$3.00 per kilogram of uranium (kgU). This cost for disposal is based upon the cost in the "Memorandum of Agreement between the United States Department of Energy and the United States Enrichment Corporation Relating to Depleted Uranium", dated June 30, 1998. USEC has compared this cost for disposal of depleted uranium against cost information from the DOE contract for the conversion facilities currently being constructed at Piketon, Ohio and Paducah, KY as well as the proposal to build and operate the uranium hexafluoride conversion facilities for DOE, submitted by the American Conversion Services (ACS) partnership, which included USEC. This proprietary ACS proposal was based on comprehensive cost projections developed by the partnership. The ACS proposal and the DOE conversion facilities cost information support the \$3.00 per kgU disposal cost for depleted uranium used in this plan. Based on the Depleted Uranium Management Plan, USEC's projected maximum liability at the end of calendar year 2005 for the disposition of depleted uranium generated by its Paducah and Portsmouth operations is 13,319 million kilograms (refer to Table 1 in the Depleted Uranium Management Plan).

Total processing cost for depleted uranium is then 13,319,000 kilograms of depleted uranium times \$3.00 per kilogram = \$39,957,000 or, after rounding, \$40.0M



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The above cost estimate includes processing as well as transportation and disposal of any by-product related to processing of the depleted uranium. To obtain the total cost associated with disposition of depleted uranium, the cost for transporting the depleted uranium to the processing facility must be included. The estimated cost associated with transporting USEC's depleted uranium liability for CY 2005 is estimated as follows:

$$\frac{(13,319,000 \text{ kgU})(\$1760/\text{cylinder}^*)}{(8400 \text{ kgU/cylinder})^{**}} = \$2,790,648 \text{ or } \$2.8\text{M}$$

\* Based on freight invoices to Starmet, CMI<sup>3</sup>

\*\*Approximate average kgU/cylinder, based on shipping weights

Therefore, USEC's total estimated liability for disposition of depleted uranium for CY 2005 is the sum of processing costs and transportation costs which equates to \$42.8M.

### 3.3 Labor Costs

To account for labor costs associated with disposal of USEC generated waste, USEC has included provisions for two crews (one for each facility) comprised of 1 supervisor, 3 laborers, 1 health physics technician and 1 engineer. Since disposal of waste is not a continuous process, the labor costs are calculated assuming the crews are available for a six-month duration, with the health physics technician and the engineer available for half of this duration (3 months duration). Labor costs were estimated based on the costs provided in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities," dated July 1998. Based on these assumptions, the labor costs associated with disposal of USEC generated waste is \$500,000 (\$250,000 per site).

## 4.0 REVIEW AND ADJUSTMENT OF DECOMMISSIONING COSTS AND FUNDING LEVELS

USEC will review the decommissioning cost estimates and associated funding levels over the duration of the lease and adjust them when necessary. These adjustments will take into account such factors as changes in volume and cost estimates, changes in plant conditions, and changes in expected decontamination and decommissioning procedures. USEC will conduct such reviews in October of each year.

## 5.0 DECOMMISSIONING FUNDING MECHANISM

USEC utilizes payment surety bond(s) and standby trust agreement(s) to ensure that sufficient funds will be available for waste disposal and depleted uranium disposition as set forth in this Program Description. The instruments are derived from Appendix A, NUREG-1757 Volume 3, "Consolidated NMSS Decommissioning Guidance, *Financial Assurance, Recordkeeping, and Timeliness*", dated September 2003. Non-executed versions are included in this Plan. Executed documents are submitted to the NRC for review as they are revised and reissued.

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<sup>3</sup>Associated with a previous demonstration project for processing USEC depleted uranium.

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**PAYMENT SURETY BOND - NON-EXECUTED VERSION**

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, MD 20817

Type of organization: Delaware Chartered Corporation

NRC certificate of compliance number: GDP-1 and GDP-2

Name and address of facilities: Paducah Gaseous Diffusion Plant  
Portsmouth Gaseous Diffusion Plant

Amount(s) for decommissioning  
activity guaranteed by this bond: Estimated at [insert amount]

Surety(ies) [name(s) and business address(es)]

Type of organization: [insert "proprietorship," "joint venture," "partnership" or "corporation"]

State of incorporation: \_\_\_\_\_ (if applicable)

Surety's qualification in jurisdiction where facility is located.

Surety's bond number \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Know all persons by these presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the U.S. Nuclear Regulatory Commission (herein called NRC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety; but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

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WHEREAS, the NRC, an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76, applicable to the Principal, which require that the holder of a certificate of compliance for a gaseous diffusion plant, or an applicant for a certificate of compliance for such a facility provide financial assurance that funds will be available when needed for those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of such a facility which are the financial responsibility of such holder or applicant (collectively, "decommissioning");

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of decommissioning of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility;

Or, if the Principal shall fund the standby trust fund in such amount(s) after an order to begin facility decommissioning is issued by the NRC or a U.S. district court or other court of competent jurisdiction;

Or, if the Principal shall provide alternative financial assurance and obtain the written approval of the NRC of such assurance, within 30 days after the date a notice of cancellation from the Surety(ies) is received by both the Principal and the NRC, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the NRC that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund established by the Principal with [name of trustee] pursuant to the Standby Trust Agreement dated [date].

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the NRC provided, however, that cancellation shall not occur during the 90 days beginning on the date of receipt of the notice of cancellation by both the Principal and the NRC, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the NRC and to Surety(ies) 90 days prior to the proposed date of termination, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond from the NRC.

If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

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In Witness Whereof, the Principal and Surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Principal: United States Enrichment Corporation.

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety(ies) above.]

Bond premium: \$ \_\_\_\_\_

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**STANDBY TRUST AGREEMENT - NON-EXECUTED VERSION**

TRUST AGREEMENT, the Agreement entered into as of [date] by and between the United States Enrichment Corporation, a Delaware chartered corporation, herein referred to as the "Grantor," and [name and address of a national bank or other Trustee acceptable to the U.S. Nuclear Regulatory Commission], the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 76. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 76, certificate of compliance provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a surety bond to provide part of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a surety bond this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

**Section 1. Definitions.** As used in this Agreement:

- (a) The term "Decommissioning" means those aspects of the ultimate disposal of waste and disposition of depleted uranium, decontamination and decommissioning of the Paducah and Portsmouth Gaseous Diffusion Plant (GDPs) which are the financial responsibility of the Grantor.
- (b) The term "Grantor" means the United States Enrichment Corporation and any successors or assigns thereof.
- (c) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

**Section 2. Costs of Decommissioning.** This Agreement pertains to the costs of decommissioning the materials and activities identified in Certificate of Compliance Number GDP-1 and GDP-2 issued pursuant to 10 CFR Part 76.

**Section 3. Establishment of Fund.** The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

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Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

a. A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and

b. A certificate attesting to the following conditions:

(1)that decommissioning is proceeding pursuant to an NRC-approved plan.

(2)that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and

(3)that the NRC has been given 30 days' prior notice of the Grantor's intent to withdraw funds from the escrow fund.

No withdrawal from the fund can exceed 10 percent of the outstanding balance of the Fund unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor, or other persons as specified by the NRC, from the Fund for expenditures for required activities in such amount as the NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity

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and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poor's or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

**Section 7. Commingling and Investment.** The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

**Section 8. Express Powers of Trustee.** Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine



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certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, where so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

**Section 9. Taxes and Expenses.** All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

**Section 10. Annual Valuation.** After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

**Section 11. Advice of Counsel.** The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

**Section 12. Trustee Compensation.** The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C.)

**Section 13. Successor Trustee.** Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the

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Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC, and the present Trustee by certified mail 10 days before such changes becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the grantor's orders, requests, and instructions. If the NRC issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, or the NRC, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instruction from the Grantor and/or the NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor, or the NRC, issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the United States.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

DFP-GDPs  
PGDP Rev. 86  
PORTS Rev. 70

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IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST:

[Insert name of Grantor]  
[Signature of representative  
of Grantor]  
[Title]

[Title]  
[Seal]

[Insert name of Trustee]  
[Signature of representative  
of Trustee]  
[Title]

ATTEST:  
[Title]  
[Seal]

DFP-GDPs  
PGDP Rev. 94  
PORTS Rev. 77

February 25, 2005

United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

U.S. NUCLEAR  
REGULATORY  
COMMISSION  
CERTIFICATE OF  
COMPLIANCE NUMBER

GDP-1 and GDP-2

NAME AND  
ADDRESS OF  
LICENSEE

United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, Maryland 20817

3930 State Route 23/Perimeter Road  
Piketon, Ohio 45661

5600 Hobbs Road  
Paducah, Kentucky 42001

COST ESTIMATE FOR  
REGULATORY ASSURANCES  
DEMONSTRATED BY THIS  
AGREEMENT

[Insert amount of agreement]

The cost estimates listed here were submitted to the NRC on [insert date]

The Total Cost of decommissioning the GDP's, assuming no liability for decontamination, is as per the decommissioning cost estimate on file with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

DFP-GDPs  
PGDP Rev. 94  
PORTS Rev. 77

February 25, 2005

United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE B

AMOUNT:

AS EVIDENCED BY: Payment Surety Bond dated [insert date]  
[Insert name of Surety Bond holder and Surety Bond number] as on file  
with the NRC.

United States Enrichment Corporation \_\_\_\_\_

Trustee \_\_\_\_\_

DFP-GDPs  
PGDP Rev. 86  
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United States Enrichment Corporation  
Standby Trust Agreement

SCHEDULE C

Trustee will be paid [insert amount] annually for services being provided under the standby trust agreement. This fee will apply whether or not payment has been made to the standby trust fund.

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