



November 23, 2010  
GDP 10-1044

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

**Paducah Gaseous Diffusion Plant (PGDP)  
Docket No. 70-7001, Certificate No. GDP-1  
Submittal of NRC Form 327, "Special Nuclear Material (SNM) and Source Material (SM)  
Physical Inventory Summary Report"**

INFORMATION TRANSMITTED HEREWITH IS PROTECTED FROM PUBLIC  
DISCLOSURE AS CONFIDENTIAL COMMERCIAL OR FINANCIAL  
INFORMATION AND/OR TRADE SECRETS PURSUANT TO  
10 CFR 2.390(d)(1)

Dear Ms. Haney:

As required by 10 CFR 74.17(a) and the Fundamental Nuclear Material Control Plan (FNMCP), the United States Enrichment Corporation (USEC) is submitting to the United States Nuclear Regulatory Commission (NRC) the annual SNM and SM Physical Inventory Summary Report for the Paducah Gaseous Diffusion Plant. These Form 327 documents in Enclosures 1 through 5 cover the annual inventory period stated therein.

**Enclosure 1** includes Annual Normal Uranium inventory.

**Enclosure 2** includes Annual Low Enriched Uranium (LEU) inventory.

- The Annual Low Enriched Adjusted Inventory Difference (AID) for uranium and <sup>235</sup>U were outside of the Limit of Error of the Inventory Difference (LEID); however, both were within the FNMCP Warning limits. A management tracking report (ATRC-10-3241) was filed to document this issue and initiate an investigation.

**Enclosure 3** includes Annual Depleted Uranium inventory.

- The Annual Depleted AID for uranium was outside the Significant (Alarm) ID limit (3\*SEID). A management tracking report (ATRC-10-3241) was filed to document this issue and initiate an investigation.

United States Enrichment Corporation  
Paducah Gaseous Diffusion Plant  
P.O. Box 1410, Paducah, KY 42002

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Ms. Catherine Haney  
November 23, 2010  
GDP 10-1044, Page 2

**Enclosure 4** includes Annual Cascade inventory.

**Enclosure 5** includes Annual Total Plant inventory.

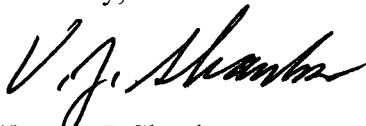
Enclosures 1 through 5 contain information concerning USEC's material control and accounting program for special nuclear material at the plant. As such, Enclosures 1 through 5 contain confidential commercial or financial information that is exempt from public disclosure pursuant to 10 CFR 2.390(d)(1). USEC hereby requests that Enclosures 1 through 5 be withheld from public disclosure based on 10 CFR 2.390(d)(1), which states, in part:

“The following information is considered commercial or financial information within the meaning of § 9.17(a)(4) of this chapter and is subject to disclosure only in accordance with the provisions of § 9.19 of this chapter.

- (1) Correspondence and reports to or from the NRC which contain information or records concerning a licensee's or applicant's physical protection, classified matter protection, or material control and accounting program for special nuclear material not otherwise designated as Safeguards Information or classified as National Security Information or Restricted Data.”

There are no new commitments contained in this submittal. Should you have any questions or comments on the enclosed information, please contact Jere Bracey at (270) 441-5928.

Sincerely,



Vernon J. Shanks  
Manager, Regulatory Affairs

Enclosures: As Stated

cc: J. Henson, Chief, Fuel Facility Inspection Branch 2, NRC Region II  
T. Liu, NRC Project Manager PGDP, NRC-HQ  
M. Miller, NRC Senior Resident Inspector, PGDP  
T. Pham, NRC Senior Safeguards Analysis, NRC-HQ