United States Enrichment Corporation

A Centrus Energy Corp. Subsidiary

October 8, 2014 GDP 14-1041

Attention: Document Control Desk Ms. Catherine Haney Director, Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission 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 SNM and SM Physical Inventory Summary Report for the Paducah Gaseous Diffusion Plant. The Form 327 document in Enclosure 1 covers the bimonthly inventory period stated therein.

The dynamic, regulatory inventory for this period resulted in a uranium and 235U inventory difference (line 9) that exceeded the alarm (significant) ID problem limit (3xSEID) in the gain direction. No material was actually fed or withdrawn from the physical cascade because it is shut down; however, the cascade account is still charged with a receipt or shipment if an item is remeasured or waste drums are removed from the cascade account.

As required by our FNMCP, an extensive investigation was conducted, however no issues were identified. Waste material in the Cascade account has slowly built up over prior inventory periods and is currently in the process of being removed as part of transition activities. Removal of this material is most likely the cause of the ID. If measured discards (line 4) were factored out, the Uranium and the U235 adjusted ID would both be within the warning limits. Details of the investigation are documented as ATRC-14-0709 in the plant's tracking system.

Enclosure 1 contains information concerning USEC's material control and accounting program for special nuclear material at the plant. As such, Enclosure 1 contains confidential commercial or financial information that is exempt from public disclosure pursuant to 10 CFR 2.390(d)(1).



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USEC hereby requests that Enclosure 1 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.

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 Darrin English at (270) 441-6182.

Sincerely,

Vernon J. Shanks

Manager, Regulatory Affairs

David C. Stadler for

Enclosure: As Stated

cc: T. Pham, NRC Senior Safeguards Analysis, NRC-HQ

O. Siurano-Perez, NRC Project Manager PGDP, NRC-HQ

M. Sykes, Chief, Fuel Facility Inspection Project Branch 2, NRC Region II