

September 6, 2005

Mr. Russell Starkey, Vice President, Operations
United States Enrichment Corporation
2 Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: AMENDMENT 05 - PADUCAH GASEOUS DIFFUSION PLANT - CHANGE TO
SAFETY ANALYSIS REPORT TABLE 1-4 (TAC NO. L52567)

Dear Mr. Brown:

In accordance with your application dated June 17, 2005, and pursuant to Part 76 to Title 10 of the Code of Federal Regulations, Certificate of Compliance GDP-1 is hereby amended. Specifically, Safety Analysis Table 1-4 is revised, and Technical Safety Requirements (TSRs) 2.2.4.3 and 2.3.4.7 are modified to correct a typographical error.

Accordingly, Condition 8 and Condition 9 are revised to include the date of June 17, 2005.

All other conditions of Certificate of Compliance GDP-1 shall remain the same.

This amendment is effective as of the date of this letter.

Enclosed are copies of the revised Certificate of Compliance and the staff's Compliance Evaluation Report that describes the basis for the staff's review and conclusion.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

R. Starkey

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If there are any questions regarding this action, please contact the Project Manager, Dan E. Martin, by telephone at (301) 415-7254, or by email at dem1@nrc.gov.

Sincerely,

/RA/

Gary S. Janosko, Chief
Fuel Cycle Facilities Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket: 70-7001
Certificate: GDP-1
Amendment 05

Enclosures: 1. Compliance Evaluation Report
2. Certificate of Compliance GDP-1

cc: Steven A. Toelle, USEC-Headquarters
Randall M. DeVault, DOE-Oak Ridge
Steve Penrod, Paducah

R. Starkey

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cc: Steven A. Toelle, USEC-Headquarters
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Steve Penrod, Paducah

Closes TAC NO. L52567

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DOCKET NUMBER: 70-7001

CERTIFICATE HOLDER: United States Enrichment Corporation
Paducah Gaseous Diffusion Plant
Paducah, KY

SUBJECT: COMPLIANCE EVALUATION REPORT: CERTIFICATE
AMENDMENT REQUEST DATED JUNE 17, 2005, REVISION OF
SAFETY ANALYSIS TABLE 1-4 AND TECHNICAL SAFETY
REQUIREMENTS 2.2.4.3 AND 2.3.4.7 AT THE PADUCAH
GASEOUS DIFFUSION PLANT (TAC No. L52567)

PROPOSED CHANGES

This certificate amendment request (CAR) was submitted by letter dated June 17, 2005, to the U. S. Nuclear Regulatory Commission (NRC). The principal purpose of this request is to change Safety Analysis Report (SAR) Table 1-4, "Authorized uses of NRC-regulated materials," to clarify that the Paducah Gaseous Diffusion Plant (PGDP), operated by the United States Enrichment Corporation (USEC), is permitted to enrich depleted uranium as well as natural uranium. This would be accomplished by making minor changes to Table 1-4, Part A, Source Material, Element 92, as follows:

A.2 would be revised to delete the word "natural," which has the unintended effect of limiting enrichment operations to "natural" uranium.

A.3 would be revised to add the text "...and uranium depleted in U-235 generated from domestic gaseous diffusion plant operations," to the end of the current statement permitting "receipt, storage, inspection, and acceptance sampling of cylinders containing natural or recycled uranium."

A.4 would be revised to add "assay" and "shipment" as authorized uses for cylinders of natural and depleted uranium.

Additionally, A.14 would be added, to allow processing at the PGDP of the depleted uranium from the Portsmouth GDP produced as a result of activities at Portsmouth allowed by Amendment 3 to Certificate of Compliance GDP-2, i.e., processing of four off-specification cylinders from the U. S. Department of Energy (DOE). The new A.14 would read as follows:

"A.14 Receipt, storage, inspection, acceptance sampling, and enrichment of one cylinder containing depleted uranium derived from four off-specification cylinders transferred from DOE to USEC."

Technical Safety Requirements (TSRs) 2.2.4.3 and 2.3.4.7 would also be revised to correct a typographical error, by eliminating a reference to non-existent TSR 1.6.6.2d and replacing it with a reference to the correct TSR, TSR 1.6.2.2d.

DISCUSSION

The changes sought by USEC would clarify that USEC may receive and enrich depleted uranium (DU) produced by domestic enrichment facilities. This would enable USEC to introduce domestically produced DU into the cascade as feed material. USEC states that its enrichment operations involve enrichment of source material uranium starting at any U-235 content that is economic and is not limited to only natural uranium. USEC points out that the specification for acceptability of uranium to be introduced into the cascade is stated in footnote “b” to table 1-4, and does not discriminate against DU.¹ USEC notes that the change is consistent with SAR Section 3.1.3, which states “The UF6 feed to the cascade may range in assay from partially depleted material up to and including the plant assay limit.”

It is noted that the cascade, by definition, contains, processes, and enriches material that is depleted in U-235 content at all times, whether or not the original feed material was of natural or depleted enrichment. Therefore, there is no safety concern with USEC’s proposal to allow introduction of DU to the cascade as feed material. Also, USEC’s proposed changes would limit the introduction of DU to the cascade to DU produced from domestic enrichment operations, barring the processing of foreign-origin DU. This change is consistent with USEC’s mission, operating procedures, and all requirements of 10 CFR Part 76. The staff therefore finds it to be acceptable.

The additional change to Table 1-4, the addition of new A.14, merely allows the processing at the PGDP of one cylinder of DU from the Portsmouth plant, that was derived from processing of four off-specification cylinders from DOE. There is no safety concern with this proposal, and it is limited to the single cylinder of DU material now at Portsmouth. This material is of foreign origin, but has previously been accepted by USEC, with NRC permission. The staff believes this proposal is acceptable.

The final change proposed only corrects long-standing typographical errors to TSRs 2.2.4.3 and 2.3.4.7. The staff has reviewed this change and finds it acceptable.

ENVIRONMENTAL REVIEW

Approval of this amendment is subject to the categorical exclusion provided in 10 CFR 51.22(c)(19) and will not have a significant impact on the human environment. Therefore, in accordance with 10 CFR 51.22(b), neither an environmental assessment nor an environmental impact statement is required for the proposed action.

¹ Footnote “b” states that “Uranium to be fed to the cascade will meet the requirements of ASTM Standard C996, ‘Standard Specification for Uranium Hexafluoride Enriched to Less Than 5% U-235,’ or ASTM Standard C787, ‘Standard Specification for Uranium Hexafluoride for Enrichment’ for reprocessed UF6....”

CONCLUSION

Based on its review and evaluation of the information provided by USEC in its CAR, dated June 17, 2005, the NRC staff finds that the proposed revisions to the Paducah SAR and TSRs are acceptable, are in compliance with the requirements of 10 CFR Part 76, and should be approved.

Principal Contributor:

Dan E. Martin

ENCLOSURE 2

Certificate of Compliance