

June 30, 2004

Mr. J. Morris Brown, Vice President, Operations
United States Enrichment Corporation
2 Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: AMENDMENT 03 - PADUCAH GASEOUS DIFFUSION PLANT - CHANGE
TO SAFETY ANALYSIS REPORT TABLE 1-4, AUTHORIZED USES OF
NRC-REGULATED MATERIALS (TAC L52560)

Dear Mr. Brown:

In accordance with your application dated June 18, 2004, 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 Report (SAR) Table 1-4, "Authorized Uses of NRC-Regulated Materials," is revised to add an additional line to Part A, "Source Material Element 92." The change adds item No. 13 to Part A as follows:

13. Receipt, storage, inspection and acceptance of two cylinders containing depleted uranium hexafluoride (UF₆) from the former Starmet CMI site.

Accordingly, Condition 8 is revised to include the date of June 18, 2004.

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.

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

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 (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>).

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 03

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

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

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CLOSES TAC NO. L52560

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ENCLOSURE 1

Compliance Evaluation Report

DOCKET NUMBER: 70-7001

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

SUBJECT: COMPLIANCE EVALUATION REPORT: APPLICATION DATED
JUNE 18, 2004, REVISION OF SAFETY ANALYSIS REPORT
TABLE 1-4 TO ADD ITEM 13 TO PART A (TAC L52560)

PROPOSED CHANGES

By letter dated June 18, 2004, the United States Enrichment Corporation (USEC) submitted a certificate amendment request (CAR) regarding the Certificate of Compliance for the Paducah Gaseous Diffusion Plant (Paducah GDP). The U. S. Nuclear Regulatory Commission (NRC) has reviewed USEC's request. USEC's request would change Safety Analysis Report (SAR) Table 1-4, "Authorized Uses of NRC-Regulated Materials," to add an additional line to Part A, "Source Material Element 92." The change would add item No. 13 to Part A as follows:

13. Receipt, storage, inspection and acceptance of two cylinders containing depleted uranium hexafluoride (UF₆) from the former Starmet CMI site.

The change to the SAR would allow USEC to receive two cylinders of depleted uranium (DU) hexafluoride (UF₆) from the former Starmet CMI site in Barnwell, SC. The U.S. Environmental Protection Agency (EPA) has requested that USEC remove the cylinders as soon as possible as part of remediation of the Starmet site.

BACKGROUND

In the past, USEC disposed of some of its inventory of DU by transferring it to Starmet CMI under contract. Two 48Y (14-ton) cylinders partially filled with DU are currently at the Starmet site. The majority, but not all, of the contents of these two cylinders is of USEC origin. These cylinders were generated by "heeling out" approximately 515 cylinders of DU before Starmet ceased operation in late 2001. USEC has been requested to remove the two cylinders from the Starmet site as part of an "Administrative Order On Consent For Removal Action" from the EPA. USEC has agreed to remove the two cylinders and take back the DU but requires the proposed amendment in order to receive, inspect, sample, and store the two cylinders at the Paducah GDP.

DISCUSSION

USEC states that the two 48Y cylinders will: (1) be inspected prior to shipment from the Starmet site to ensure the cylinders meet ANSI N14.1 requirements, and used as prescribed in procedure USEC-651; (2) meet the same safety function requirements as other cylinders processed at the Paducah GDP; and (3) be handled and processed in the same manner, and in

accordance with the same SAR requirements, Technical Safety Requirements (TSRs), and Nuclear Criticality Safety (NCS) requirements and procedures that are currently used to process similar UF6 cylinders.

The material in the cylinders will be received, sampled, analyzed, controlled and accounted for in accordance with the requirements of the Fundamental Nuclear Materials Control Plan (FNMCP). The two cylinders will be handled as a non-routine material flow as provided for by the FNMCP.

Starmet CMI records indicate a net weight of DU of 8,891 pounds in Cylinder No. 1 and 13,540 pounds in Cylinder No. 2; the combined documented weight is 22,431 pounds. USEC's review of Starmet's processing records indicates that approximately 20,052 pounds of DU is from USEC tails shipped to Starmet for processing. USEC states that approximately 1,927 pounds is from Starmet processing of cylinders from the U.S. Department of Energy (DOE), and the remaining material, 763 pounds is from Cameco. USEC also states that Starmet records indicate the Cameco material is from Russian tails received by Cameco as part of a contract to provide feed to one of its European customers.

USEC states that the processing records indicate a total weight of DU added to the cylinders of 22,742 pounds, and that tolerances associated with scale calibration introduced some weighing error each time heels were emptied into the cylinders. As a result, there will be a difference between the total weight of DU in the cylinders indicated by the process records and the weight of the heels in the cylinders when they are weighed prior to shipping. The final shipper's cylinder weights will be determined after calibration of the cylinder scale at the Starmet site.

USEC has verified that the weight of DU in the two cylinders can be added to the Paducah GDP inventory without exceeding the applicable possession limit. USEC has also considered the potential impact of the additional DU on USEC's Depleted Uranium Management Plan and Decommissioning Funding Program Description (DFP) and determined the impact to be insignificant in view of USEC's 2004 DU inventory and associated dispositioning costs. The staff notes that the DFP must be reviewed annually in any event, and revised appropriately.

Based on the above, the staff concludes that USEC's request will not result in an unacceptable increase in either the consequences or probability of occurrence of any potential accident, any potential radioactive effluents, or any occupational or environmental radiation exposure, and is in compliance with all applicable requirements and should be approved.

ENVIRONMENTAL REVIEW

Issuance of the requested amendment to Certificate of Compliance GDP-1 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 or warranted for the proposed action.

CONCLUSION

Based on review and evaluation of the information provided by USEC in its request dated June 18, 2004, the NRC staff finds the proposed revision provides adequate protection of public health, safety and safeguards, and concludes that it is acceptable and should be approved.

The Region II inspection staff has been consulted and has expressed no objection to this proposed action.

Principal Contributor

Dan E. Martin, FCLB