



March 15, 2011
GDP 11-0002

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

**Paducah Gaseous Diffusion Plant (PGDP)
Docket No. 70-7001, Certificate No. GDP-1
Certificate Amendment Request (CAR) – Revise Technical Safety Requirements (TSR) 2.6.4.1a
and 2.6.4.1b Applicability**

Dear Ms. Haney:

In accordance with 10 CFR 76.45, the United States Enrichment Corporation (USEC) hereby submits a request for amendment to the Certificate of Compliance for PGDP. This Certificate Amendment Request (CAR) proposes to revise TSR 2.6.4.1, Criticality Accident Alarm System (Non-Cascade Facilities).

Enclosure 1 contains the Oath and Affirmation Statement. Enclosure 2 provides a detailed description and justification for the proposed change. Enclosure 3 is a copy of the revised TSR page associated with this request for NRC approval. Enclosure 4 contains the basis for USEC's determination that the proposed changes associated with this CAR are not significant.

The proposed change deletes the C-728 Motor Cleaning Facility from the Applicability table of TSR 2.6.4.1a, which is also used for TSR 2.6.4.1b applicability. The C-728 facility has not been used as a motor cleaning facility since USEC began operations in 1993. However, it had been used in the past to store potentially fissile materials. This proposed TSR applicability change is being made as the result of a planned plant change that transitions the C-728 facility from a USEC-leased status to a Department of Energy (DOE)-retained, or de-leased, status. As a de-leased facility, C-728 will not contain any NRC-regulated materials or operations. The facility is currently empty awaiting turnover to DOE.

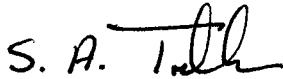
C-728 was originally included in the applicability of TSRs 2.6.4.1a and 2.6.4.1b due to its past use as a fissile material storage area. The basis statements for TSRs 2.6.4.1a and 2.6.4.1b are not being changed by this activity because the CAAS equipment in C-728 is not affected by this de-leasing effort. USEC will continue to maintain the C-728 slaved horn and beacons because the affected area is within the 12-rad boundary for NRC-regulated fissile operations in C-720 and must continue to have CAAS alarm audibility.

USEC requests NRC review of this CAR as soon as practical. It is requested that the amendment become effective immediately.

Ms. Catherine Haney
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Should you have any questions related to this submittal, please contact me at (301) 564-3250. There are no new commitments contained in this submittal.

Sincerely,

A handwritten signature in black ink, appearing to read "S. A. Toelle". The signature is fluid and cursive, with a prominent horizontal stroke at the end.

Steven A. Toelle
Director, Regulatory Affairs

Enclosures:

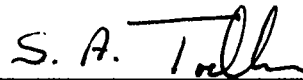
1. Oath and Affirmation
2. United States Enrichment Corporation (USEC), Certificate Amendment Request, Revise Technical Safety Requirements (TSR) 2.6.4.1a and 2.6.4.1b Applicability
3. Certificate Amendment Request, Paducah Gaseous Diffusion Plant, Letter GDP 11-0002, Removal/Insertion Instructions
4. United States Enrichment Corporation (USEC), Certificate Amendment Request, Revise Technical Safety Requirements (TSR) 2.6.4.1a and 2.6.4.1b Applicability, Significance Determination

cc: J. Calle, NRC Region II Office
M. Miller, NRC Sr. Resident Inspector - PGDP
T. Liu, NRC Project Manager - HQ

Enclosure 1
GDP 11-0002
Oath and Affirmation

OATH AND AFFIRMATION

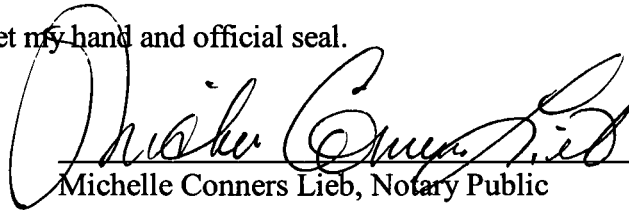
I, Steven A. Toelle, swear and affirm that I am the Director, Regulatory Affairs of the United States Enrichment Corporation (USEC), that I am authorized by USEC to sign and file with the Nuclear Regulatory Commission this Certificate Amendment Request for the Paducah Gaseous Diffusion Plant addressing revisions to the Technical Safety Requirements contained in USEC letter GDP 11-0002, 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, 2011, the individual 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.



Michelle Connors Lieb, Notary Public
Commonwealth of Kentucky, McCracken County
My commission expires March 17, 2011

Enclosure 2
GDP 11-0002

USEC-01
Certificate Amendment Request
Revise Technical Safety Requirements (TSR) 2.6.4.1a and 2.6.4.1b Applicability
Detailed Description and Justification of the Changes

**United States Enrichment Corporation (USEC)
 Certificate Amendment Request
 Revise Technical Safety Requirements (TSR) 2.6.4.1a and 2.6.4.1b Applicability
 Detailed Description and Justification of the Changes**

Description of Change

The applicability statement and associated table for TSR 2.6.4.1a, which is also used in the applicability of TSR 2.6.4.1b, will be revised to remove the C-728 Motor Cleaning Facility.

The changes shown below are for TSR 2.6.4.1. New wording is shown as underlined and deleted wording is shown as a ~~strikeout~~. For clarity, only the affected portions of the TSR are shown below. The complete revised TSR page is shown in Enclosure 3, page 2.6-3. Changes on the Enclosure 3 page are noted with revision bars in the right hand margin.

TSR 2.6.4.1, Criticality Accident Alarm System

LCO 2.6.4.1a: Criticality accident detection shall be operable.

APPLICABILITY: In areas, equipment, or processes in the facilities listed in the table below which contain greater than 700 grams of ²³⁵U at an enrichment greater than or equal to 1.0 wt % ²³⁵U.

Building/Facility Number	Building/Facility Name and/or Function	CAAS Cluster
C-400	Cleaning Building	D, E
C-409	Stabilization Building	P, AE
C-710	Technical Services Building	AM, AN, AP, AQ, AR
C-720	Maintenance and Stores Buildings	AL
C-720-C	Converter Shop Addition	AL
C-728	Motor Cleaning Facility	AL
C-746-Q-1	High Assay Waste Storage	AD

Reason for the Changes

As discussed above, the proposed change will delete the C-728 Motor Cleaning Facility from the Applicability table of TSR 2.6.4.1a, which is also used for TSR 2.6.4.1b applicability. This change is being made as the result of the planned transition of the C-728 Motor Cleaning Facility from a USEC-leased to a DOE-retained facility. The C-728 facility has not been used as a motor cleaning facility since USEC began operations in 1993. However, it has been used in the past to store potentially fissile materials. Once de-leased, no NRC-regulated activities will be conducted in the facility.

Justification of the Changes

The C-728 facility was originally used to clean electric motors, including the large motors used to power enrichment cascade compressors. The facility has not been used as a motor cleaning facility since USEC began operations in 1993. However, it has been used in the past to store potentially fissile materials. No fissile material operations are presently conducted in C-728. The facility currently contains less than 700 grams of ^{235}U at an enrichment level greater than or equal to 1.0 wt % ^{235}U (i.e.: C-728 does meet TSR applicability). Once de-leased, no NRC-regulated activities will be conducted in the facility. At the present time, DOE does not plan to use the facility for fissile material operations. Any future use of the facility by DOE for fissile material operations will be separately evaluated when, and if, such operations are proposed for the facility.

Since the affected area around C-728 is within the 12-rad boundary for NRC-regulated fissile material operations in C-720, USEC will continue to own the criticality accident alarm system (CAAS) components in C-728 (horns and rotating beacons slaved to the C-720 CAAS) and will continue to operate, maintain, and perform appropriate TSR testing and surveillances. The C-728 horns and beacons will continue to be part of the overall gaseous diffusion plant system and be subject to PGDP procedures governing CAAS operation, maintenance, and alarm response.

The return of the C-728 Motor Cleaning Facility to the DOE, including the associated regulatory oversight, will not affect the PGDP safety basis by either increasing the possibility of occurrence or consequences of a previously evaluated accident or malfunction of equipment important to safety, introduction of any new accident initiators or malfunctions of equipment important to safety or the reduction of the margin of safety as defined in the TSRs.

Enclosure 3
GDP 11-0002

USEC-01
Certificate Amendment Request
Revise Technical Safety Requirements (TSR) 2.6.4.1a and 2.6.4.1b Applicability
Removal/Insertion Instructions

Certificate Amendment Request Paducah Gaseous Diffusion Plant Letter GDP 11-0002 Removal/Insertion Instructions	
Remove Pages	Insert Pages
APPLICATION FOR UNITED STATES NUCLEAR REGULATORY COMMISSION CERTIFICATION VOLUME 4	
TSR Section 2.6 Page 2.6-3	TSR Section 2.6 Page 2.6-3

SECTION 2.6 SPECIFIC TSRs FOR CAAS (NON-CASCADE FACILITIES)

2.6.4 GENERAL LIMITING CONDITIONS FOR OPERATION

2.6.4.1 CRITICALITY ACCIDENT ALARM SYSTEM

LCO 2.6.4.1a: Criticality accident detection shall be operable.

APPLICABILITY: In areas, equipment, or processes in the facilities listed in the table below which contain greater than 700 grams of ^{235}U at an enrichment greater than or equal to 1.0 wt % ^{235}U .

Building/Facility Number	Building/Facility Name and/or Function	CAAS Cluster
C-400	Cleaning Building	D, E
C-409	Stabilization Building	P, AE
C-710	Technical Services Building	AM, AN, AP, AQ, AR
C-720	Maintenance and Stores Buildings	AL
C-720-C	Converter Shop Addition	AL
C-746-Q-1	High Assay Waste Storage	AD

Enclosure 4
GDP 11-0002

USEC-01
Certificate Amendment Request
Revise Technical Safety Requirements (TSR) 2.6.4.1a and 2.6.4.1b Applicability
Significance Determination

Enclosure 4
GDP 11-0002

USEC-01
United States Enrichment Corporation (USEC)
Certificate Amendment Request
Revise Technical Safety Requirements (TSR) 2.6.4.1a and 2.6.4.1b Applicability
Significance Determination

The United States Enrichment Corporation (USEC) has reviewed the proposed change associated with this certificate amendment request and provides the following Significance Determination for consideration.

1. No Significant Change to Any Conditions to the Certificate of Compliance
None of the Conditions to the Certificate of Compliance specifically address the subject TSR section that is being revised. Thus, the proposed change will have no impact on any of the Conditions to the Certificate of Compliance.
2. No Significant Change to Any Condition of the Approved Compliance Plan
All Compliance Plan Issues have been closed. As a result, the conditions specified in the Compliance Plan are no longer in effect. Thus, this proposed revision does not represent a significant change to any condition of the Approved Compliance Plan.
3. No Significant Increase in the Probability of Occurrence or Consequences of Previously Evaluated Accidents
The proposed change does not increase the probability of occurrence of previously evaluated accidents, especially a nuclear criticality. The C-728 facility does not presently contain any fissile material operations. The proposed change does not involve any change to the plant safety analysis or to the safety controls. The proposed change does not affect the probability of an uncontrolled release of radioactive material or of a criticality event in facilities or operations under NRC regulatory authority. The SSCs relied upon to prevent the occurrence of accidents previously evaluated in the SAR will continue to meet current SAR requirements for availability and reliability. The TSRs will continue to be met as required for GDP operations. Thus, the proposed change does not affect the probability of occurrence of an accident previously described in the SAR since it does not introduce any new or different potential accident scenarios or accident initiating events. Therefore, the overall potential for an accident involving these operations is unchanged, and the proposed changes will not result in a significant increase in the probability of occurrence or consequences of previously evaluated accidents.
4. No New or Different Type of Accident
The proposed change does not affect the essential controls for any scenario in the accident analysis. The proposed change does not create any new failure modes or create initiating

events that are different than previously evaluated in the SAR. Therefore, the proposed change will not create a new or different type of accident.

5. No Significant Reduction in Margins of Safety

The proposed change to TSR 2.6.4.1 removes C-728 from the TSR's applicability since the de-leased facility will not contain any NRC-regulated materials or operations. The proposed change has no impact on any margins of safety specified in the accident analysis or the TSRs' bases. The operation and maintenance of the CAAS will remain unchanged. The approved CAAS design and as-built installation of the CAAS remains unchanged. Therefore, the proposed changes do not reduce any TSR margins of safety.

6. No Significant Decrease in the Effectiveness of Any Programs or Plans Contained in the Certificate Application

The proposed change to TSR 2.6.4.1 to remove C-728 from the TSR's applicability does not impact or change any programs or plans in the certificate application. Therefore, the proposed changes will not decrease the effectiveness of any programs or plans contained in the Certificate Application.

7. The Proposed Changes do not Result in Undue Risk to 1) Public Health and Safety, 2) Common Defense and Security, and 3) the Environment

As discussed in items 3 and 4, the proposed change does not result in a condition that increases in the probability of occurrence or consequences of any previously analysis accident or result in a new, or different, type of accident. The proposed change does not impact USEC-generated effluents or the programs and plans in place that implement physical security, protection of classified matter, transportation security, or special nuclear material accountability. Therefore, the proposed change to the TSR will not pose any undue risk to the public health and safety, common defense and security, or the environment.

8. No Change in the Types or Significant Increase in the Amounts of Any Effluents that May be Released Off-Site

The proposed change does not involve any physical change to the plant or changes to plant operations that could change the types or increase the amounts of any USEC-generated effluents that may be released offsite. Therefore, the proposed change does not change the type or significantly increase the amount of effluents that may be released offsite associated with NRC-regulated operations at PGDP.

9. No Significant Increase in Individual or Cumulative Occupational Radiation Exposure

The proposed change to the TSR will not affect the radiological protection program description or the actions in place to minimize occupational exposures. Therefore, there is no significant increase in individual or cumulative occupational radiation exposure as a result of the proposed changes.

10. No Significant Construction Impact

These proposed changes will not require any construction. The proposed change to TSR 2.6.4.1 has no construction impact. Therefore, since there is no construction, there are no significant construction impacts associated with the proposed changes.