



June 7, 2010  
GDP 10-0026

Ms. 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)  
Administrative Guideline For The Individual Worker To Allow 26 Hours In Any 48-Hour  
Period**

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 3.2.2, Facility Staff.

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 SAR and TSR pages 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 will increase the administrative guideline for the individual work hours in any 48-hour period from 24 hours to 26 hours. The proposed change will be identical to work hour limits presented in 10 CFR 26.205(d)(1)(ii), *Work hour controls*.

USEC requests NRC review of this CAR as soon as practical. The amendment should become effective 30 days after issuance.

N 10501

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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,

S. A. Toelle

Steven A. Toelle  
Director, Regulatory Affairs

Enclosures:

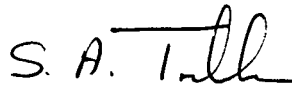
1. Oath and Affirmation
2. United States Enrichment Corporation (USEC), Certificate Amendment Request, Revise Technical Safety Requirements (TSR) Administrative Guideline For The Individual Worker To Allow 26 Hours In Any 48-Hour Period
3. Certificate Amendment Request, Paducah Gaseous Diffusion Plant, Letter GDP 10-0023, Removal/Insertion Instructions
4. United States Enrichment Corporation (USEC), Certificate Amendment Request, Revise Technical Safety Requirements (TSR) Administrative Guideline For The Individual Worker To Allow 26 Hours In Any 48-Hour Period, Significance Determination

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

Enclosure 1  
GDP 10-0026  
Oath and Affirmation

OATH AND AFFIRMATION


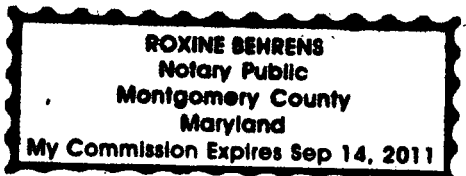
I, Steven A. Toelle, swear and affirm that I am the Director, Regulatory Affairs of the United States Enrichment Corporation (USEC), that I am authorized by USEC to sign and file with the Nuclear Regulatory Commission this Certificate Amendment Request for the Paducah Gaseous Diffusion Plant addressing revisions to the Technical Safety Requirements contained in USEC letter GDP 10-0026, 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 7th day of June, 2010, 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.



Roxine Behrens, Notary Public  
State of Maryland, Montgomery County  
My commission expires September 14, 2011

Enclosure 2  
GDP 10-0026

USEC-01  
Certificate Amendment Request  
Revise Technical Safety Requirements (TSR) Administrative Guideline For The Individual  
Worker To Allow 26 Hours In Any 48-Hour Period

**United States Enrichment Corporation (USEC)  
Certificate Amendment Request  
Revise Technical Safety Requirements (TSR) Administrative Guideline For The Individual  
Worker To Allow 26 Hours In Any 48-Hour Period  
Detailed Description and Justification of the Changes**

**Description of Change**

The working hours for facility staff that perform safety functions (e.g., operators, health physics personnel, maintenance personnel) are limited by administrative controls delineated in TSR 3.2.2, Facility Staff. The guidance provided in TSR 3.2.2 Section b.2 specifies that an individual worker should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time. Any deviation from this guideline requires advance authorization by the General Manager or his designee, in accordance with approved administrative procedures and with documentation of the basis for granting the deviation. Routine deviation from the guidelines is not authorized. The proposed change to TSR 3.2.2 will increase the administrative guideline for the individual work hours in any 48-hour period from 24 hours to 26 hours.

The changes shown below are for TSR 3.2.2. New wording is shown as underlined and deleted wording is shown as a strikethrough. For clarity, only the affected portions of the TSR are shown below. The complete revised TSR page is shown in Enclosure 3, page 3.0-3. The changes on Enclosure 3 pages are noted with revision bars in the right hand margin.

**TSR 3.2.2, Facility Staff**

TSR 3.2.2, Facility Staff, Section b. will be changed to increase the administrative guideline for the individual work hours in any 48-hour period from 24 hours to 26 hours. For clarity, only the revised portion of the TSR is shown. The complete revised TSR page is shown in Enclosure 3, page 3.0-3.

**3.2.2 FACILITY STAFF**

- a. Minimum staffing requirements for each facility are shown in Table 3.2.2-1. These staffing levels do not apply under conditions requiring facility evacuation.
- b. Administrative procedures shall be developed, implemented, and maintained to limit the working hours of facility staff who perform safety functions (e.g., operators, health physics personnel, maintenance personnel), in accordance with the following guidelines.

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have personnel work an 8-hour or 12-hour workday [i.e., a nominal 40-hour (can be as much as 48 hours) work week]. In the event that overtime must be used on a temporary basis, the following guidelines shall be used:

1. An individual should not be permitted to work more than 16 straight hours, excluding shift turnover;

2. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than ~~24~~ 26 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time;
3. A break of at least 8 hours should be allowed between work periods; the 8 hours may include shift turnover;
4. Except during outage periods, the use of overtime should be considered on an individual basis, and not for the entire staff on a shift.

Any deviation from the above guidelines shall be authorized in advance by the General Manager or his designee, in accordance with approved administrative procedures and with documentation of the basis for granting the deviation. Routine deviation from the above guidelines is not authorized.

Management will assess on a monthly basis the application of overtime for facility staff that performs safety functions to ensure consistency with the overtime guidelines stated above.

### **Reason for the Changes**

As discussed above, the proposed change will increase the administrative guideline for individual work hours in any 48-hour period from 24 hours to 26 hours. During the normal work schedule for workers on shift work who work 12 hour shifts, the current 24-hour guideline limit for work hours worked in any 48-hour period can be exceeded if an individual is needed to stay past the normal end of shift for a number of emergent reasons (briefings, training, etc.). The logistics of obtaining advance approval and procedural administrative requirements for the deviations are an administrative burden on the workers and management. Increasing the maximum hours that can be worked in any 48-hour period to 26 hours will decrease the number of deviations required at PGDP.

### **Justification of the Changes**

The current administrative controls specified in TSR 3.2.2, Section b, for limitations for the working hours of facility staff who perform safety functions (e.g., operators, health physics personnel, maintenance personnel) is based on the guidance that was delineated in Generic Letter No. 82-12, Nuclear Power Plant Staff Working Hours (GL 82-12). GL 82-12 specified that an individual should not be allowed to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period (all excluding shift turnover time). When 10 CFR 26 was revised and issued in 2008, it included a section on managing fatigue that incorporated, with limited modifications, the work hour guidelines in GL 82-12. The revised 10 CFR 26, Fitness for Duty Programs, specifically 10 CFR 26.205, Work Hours Section (d)(1) includes the following:

“(d) *Work hour controls.* Licensees shall control the work hours of individuals who are subject to this section.

(1) Except as permitted in § 26.207, licensees shall ensure that any individual’s work hours do not exceed the following limits:

(i) 16 work hours in any 24-hour period;

- (ii) 26 work hours in any 48-hour period; and
- (iii) 72 work hours in any 7-day period.”

The limits were changed to allow an individual to work 26 hours in any 48-hour period. This change accommodates the fact that most facilities are now routinely working 12-hour shifts, rather than 8-hour shifts, as was the case when GL 82-12 was published. At that time, the basis for the 24-hour limit was to permit a worker to work one 16-hour double shift, followed by an 8-hour break, and then start another 8-hour shift at the worker's normal starting time, but only in very unusual circumstances. With the majority of facilities now routinely working 12-hour shifts, the rule increases the maximum work hours in a 48-hour period from 24 to 26 hours to decrease the burden on facilities by accommodating situations in which a worker's relief is delayed or similar circumstances. See Federal Register Vol. 73, No. 62, March 31, 2008, page 17131.

The proposed change to TSR 3.2.2 is consistent with the current guidelines of 10 CFR 26.205 to limit a worker to maximum of 26 hours in any 48-hour period. Approved deviations per administrative procedures are required prior to exceeding this and the other guidelines.



Enclosure 3  
GDP 10-0026  
3 Pages Total

Enclosure 3  
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USEC-01  
Certificate Amendment Request  
Revise Technical Safety Requirements (TSR) Administrative Guideline For The Individual  
Worker To Allow 26 Hours In Any 48-Hour Period  
Removal/Insertion Instructions

<b>Certificate Amendment Request Paducah Gaseous Diffusion Plant Letter GDP 10-0023 Removal/Insertion Instructions</b>	
<b>Remove Pages</b>	<b>Insert Pages</b>
<b>APPLICATION FOR UNITED STATES NUCLEAR REGULATORY COMMISSION CERTIFICATION VOLUME 4</b>	
<b>TSR Section 3.0 Page 3.0-3</b>	<b>TSR Section 3.0 Page 3.0-3</b>

## SECTION 3.0 ADMINISTRATIVE CONTROLS

- b. Individuals who perform training, health physics, quality assurance, nuclear criticality safety, and/or other safety functions shall have sufficient organizational freedom to ensure their independence from operating pressures.

### 3.2.2 FACILITY STAFF

- a. Minimum staffing requirements for each facility are shown in Table 3.2.2-1. These staffing levels do not apply under conditions requiring facility evacuation.
- b. Administrative procedures shall be developed, implemented, and maintained to limit the working hours of facility staff who perform safety functions (e.g., operators, health physics personnel, maintenance personnel), in accordance with the following guidelines.

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have personnel work an 8-hour or 12-hour workday [i.e., a nominal 40-hour (can be as much as 48 hours) work week]. In the event that overtime must be used on a temporary basis, the following guidelines shall be used:

1. An individual should not be permitted to work more than 16 straight hours, excluding shift turnover;
2. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 26 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time;
3. A break of at least 8 hours should be allowed between work periods; the 8 hours may include shift turnover;
4. Except during outage periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Any deviation from the above guidelines shall be authorized in advance by the General Manager or his designee, in accordance with approved administrative procedures and with documentation of the basis for granting the deviation. Routine deviation from the above guidelines is not authorized.

Management will assess on a monthly basis the application of overtime for facility staff who perform safety functions to ensure consistency with the overtime guidelines stated above.

Enclosure 4  
GDP 10-0026

USEC-01  
Certificate Amendment Request  
Revise Technical Safety Requirements (TSR) Administrative Guideline For The Individual  
Worker To Allow 26 Hours In Any 48-Hour Period  
Significance Determination

**United States Enrichment Corporation (USEC)  
Certificate Amendment Request  
Revise Technical Safety Requirements (TSR) The Administrative Guideline For The Individual  
Worker To Allow 26 Hours In Any 48-Hour Period  
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

None of the accidents previously evaluated in the certificate application accident analysis will be specifically affected by the proposed change to increase the administrative guidelines for individual worker hours in any 48-hour period from 24 hours to 26 hours. As discussed in the Justification section of Enclosure 2 to this letter, the proposed change is consistent with the guidance provided by the NRC in 10 CFR 26.205, Work hours. The proposed change to increase the administrative guideline for individual worker hours in any 48-hour period from 24 hours to 26 hours will have no impact on any of the accidents evaluated in the accident analysis. Based on the above, 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 3.2.2 to increase the administrative limitations on individual work hours will have no impact on any margins of safety specified in the accident analysis or TSR basis. 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 3.2.2 work hour limitations 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

Due to the fact that there is no significant increase in the probability or consequences of any accident previously analyzed and no new or different type of accident, as discussed in items 3 and 4 above, there will be no undue risk to the public health and safety due to the proposed changes. In addition, the proposed changes will have no impact on plant effluents or on the programs and plans in place to implement physical security, protection of classified matter, transportation security, or special nuclear material accountability. Therefore, the proposed changes to the SAR and 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 changes do not involve any physical change to the plant or changes to plant operations that could change the types or increase the amounts of any effluents that may be released offsite. Therefore, the proposed changes do not change the type or significantly increase the amount of effluents that may be released offsite.

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

The proposed change to the TSRs 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 3.2.2 work hours has no construction impact. Therefore, since there is no construction, there are no significant construction impacts associated with the proposed changes.