

32459/9905



August 18, 2008  
GDP 08-0020

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

**Portsmouth Gaseous Diffusion Plant (PORTS)  
Docket No. 70-7002, Certificate No. GDP-2  
Certificate Amendment Request- Revision of Technical Safety Requirement (TSR)  
Table 3.2.2-1, On-Site Functional Staffing Requirements**

Dear Mr. Weber:

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 the Portsmouth Gaseous Diffusion Plant (PORTS). This Certificate Amendment Request (CAR) proposes to revise TSR Table 3.2.2-1.

This change is being made as the result of the transition from a "Cold Standby" to a "Cold Shutdown" activity condition that is subsequently following the shutdown of the PORTS LEU enrichment operations in 2001. The change involves the elimination of the requirement to have an operator stationed at all times in a cascade building when all building cell operating equipment is in a shutdown condition.

There are no new commitments contained in this submittal. Any questions related to this submittal should be directed to me at (301) 564-3250.

Sincerely,

Steven A. Toelle  
Director, Regulatory Affairs

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- Enclosures:
1. Oath and Affirmation
  2. United States Enrichment Corporation (USEC), Certificate Amendment Request, Revision of Technical Safety Requirement Table 3.2.2-1, On-Site Functional Staffing Requirements, Detailed Description and Justification
  3. Certificate Amendment Request, Portsmouth Gaseous Diffusion Plant, Letter GDP 08-0020, Removal /Insertion Instructions
  4. United States Enrichment Corporation (USEC), Certificate Amendment Request, Revision of Technical Safety Requirement Table 3.2.2-1, On-Site Functional Staffing Requirements, Significance Determination

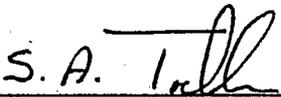
cc: D. Hartland, Sr. Fuel Facility Inspector, NRC Region II  
J. Henson, Chief, Fuel Facility Branch 2, NRC Region II  
✓ M. Raddatz, NRC Project Manager, NRC HQ

**Enclosure 1**  
**GDP 08-0020**

**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 Portsmouth Gaseous Diffusion Plant addressing the revision to the Technical Safety Requirement Table 3.2.2-1, On-Site Functional Staffing Requirements as described in USEC letter GDP 08-0020, 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 18<sup>th</sup> day of August 2008, 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 acknowledge that he executed the same for the purposes therein contained.

In witness hereof I hereunto set my hand and official seal.

  
\_\_\_\_\_  
Rita Peak, Notary Public  
State of Maryland, Montgomery County  
My commission expires December 1, 2009

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Revision of Technical Safety Requirement Table 3.2.2-1  
On-Site Functional Staffing Requirements  
Detailed Description and Justification**

**Description of Change**

The staffing level for an assigned operator per building in X-326, X-330, X-333 remains unchanged for the listed Modes of operation unless the condition of Note 10 is met.

Facility	Mode/Operation	Staffing Requirements
X-326,X-330,X-333	II,III,IV,V,VI	1 assigned Operator per building <sup>10</sup>

A new Note 10 is added to the table as follows:

<sup>10</sup> An assigned operator is not required in a building if all cell equipment is in "Shutdown; Mode VI"

**Background Information:**

The PORTS LEU enrichment operations were ceased by USEC in 2001. At that time, equipment sufficient to allow for a stand alone enrichment capacity of 3 million SWU per year was placed in a "Cold Standby" activity condition. "Cold Standby" is defined as a process condition such that the 3 million SWU LEU capacity could be re-established in approximately 18 months. In 2006 DOE provided direction to USEC to transition from a "Cold Standby" to a "Cold Shutdown" condition with the ultimate goal being to place associated "Cold Standby" equipment in a more permanent shutdown condition and to cease performing the surveillance and maintenance activities that were previously required. The transition from "Cold Standby" to "Cold Shutdown" primarily affects only the X-330 and X-333 process facilities.

At the conclusion of the transition to "Cold Shutdown", all gaseous UF<sub>6</sub> will have been removed from the cascade process equipment to a UF<sub>6</sub> "negative" level; the Recirculating Cooling Water (RCW) and Lube Oil will have been drained and isolated from the equipment; and the equipment buffered with plant dry air. In addition, all solid uranium deposits will have been reduced to quantities below an individually always safe mass.

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This process condition does not require continuous or frequent routine monitoring due to its passive condition. The primary process support systems (Seal Exhaust, Cold Recovery, Wet Air Evacuation, Freezer Sublimers, Booster Stations, Process Piping Systems) will also have been shutdown and evacuated of gaseous UF<sub>6</sub> and "negatives" obtained. The only remaining systems important to safety that will continue to be operable will be the Criticality Accident Alarm System (CAAS) and the High Pressure Fire Water System (HPFWS).

**Justification of the Change:**

The proposed change to TSR Table 3.2.2-1 is to provide an allowance that no operator is required to be in the cascade facility at all times when the entire facility cell equipment is in a shutdown condition. The inclusion of Mode VI, Shutdown was originally included in the applicable Mode/Operation due to the fact that the Modes are applied at the cell level and therefore even if there were numerous cells shutdown there remained a need for an operator's presence in support of the facility's on going operations.

This proposed allowance has no adverse effect on safety in that when all of the cell equipment is shutdown and evacuated of its hazardous materials and in a stable condition, there are no TSR safety functions that require operator presence, action or surveillance. The operator actions required in the Accident Analysis and TSRs which involve the shutdown, i.e., placing in a safe condition, of the cell equipment in the event of an accident initiating event or condition are now no longer required. Once in the "Cold Shutdown" condition the only cascade TSRs still applicable are the CAAS. This specific allowance when all the cell equipment is shutdown does not preclude other TSR Modes requiring the presence of an operator. For example, should a cell treatment (Mode IV) be initiated in the X-333 facility after having fully transitioned into "Cold Shutdown" an operator would be required to be present in the building at all times while in Mode IV. The only remaining safety related SSCs that are intended to be continually in operation are the CAAS and HPFWS. Actuations of these systems are monitored in the Plant Control Facility (PCF) for the CAAS and in the Fire Department Headquarters for flow/low pressure for which no operator actions are required. Any surveillances required by the NCS (nuclear criticality safety) program or SAR can be performed by an operator as an assigned "round" without the operator being continually present in the building.

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The proposed change does not present any new or different potential for accident initiation, prevention or mitigation with respect to the GDP certified operations and activities as described in the SAR.

<b>Certificate Amendment Request Portsmouth Gaseous Diffusion Plant Letter GDP 08-0020 Removal/Insertion Instructions</b>	
<b>Remove Pages</b>	<b>Insert Pages</b>
<b>APPLICATION FOR UNITED STATES NUCLEAR REGULATORY COMMISSION CERTIFICATION TECHNICAL SAFETY REQUIREMENTS VOLUME 4</b>	
<b>TSR Table 3.2.2-1 Page 3.0-4</b>	<b>TSR Table 3.2.2-1 Page 3.0-4</b>

SECTION 3.0 ADMINISTRATIVE CONTROLS

Table 3.2.2-1. On-site Functional Staffing Requirements<sup>6</sup>

Facility	Mode/Operation	Staffing Requirements
X-342, X-343, X-344	II, IV, V, VI	1 assigned Operator per building and 1 assigned individual in the building or surrounding cylinder yard
ERP, LAW, TAILS	II, III	1 assigned Operator per Building 1 assigned Operator per corresponding ACR 4, 1, 2 (this can be the same operator that satisfies Cascade Modes II, III, IV, V, VII)
X-300	At all times	1 assigned Operator and 1 Power Operator
X-300/PSS	At all times	1 <sup>3</sup>
X-300/APSS	At all times	1 <sup>1, 9</sup>
X-326, X-330, X-333	II, III, IV, V, VII	1 assigned Operator each per ACR 1, 2, 3, 4, 6
X-326, X-330, X-333	II, III, IV, V, VI	1 assigned Operator per building <sup>10</sup>
Freezer/Sublimers X-333	I, II	1 assigned Operator <sup>4</sup>
Freezer/Sublimers X-333	III	1 assigned Operator <sup>5</sup>
Cold Recovery X-330/X-333	III, IV, V	1 assigned Operator per building
Radiation Protection	At all times	1 <sup>1</sup>
Utility Operations	At all times	4 <sup>1</sup>
Power Operations	At all times	2 <sup>1, 8</sup>
X-705	Calciner Mode III	1 assigned Operator
Fire Brigade	At all times	4 <sup>2</sup>
Process Services/ Mass Spectrometry Analytical Functions	At all times	2 <sup>1, 7, 1</sup>
Protective Force	At all times	4 <sup>1</sup>

<sup>1</sup> These individuals are not tied to a particular duty station and are only required to be on site.

<sup>2</sup> Fire Brigade members making a run to deliver an individual to a local hospital are considered to be on duty and available.

<sup>3</sup> If the PSS needs to leave the X-300, a designee can be assigned in accordance with TSR 3.1.3.

<sup>4</sup> Operators must be within confines of building and may have other duties assigned.

<sup>5</sup> This can be the same operator assigned when F/S is in Modes I and II.

<sup>6</sup> Staffing may be less than the minimum requirement listed for a period of a time not to exceed four hours in order to accommodate unexpected absence of on-duty shift members provided immediate action is taken to restore the shift manning requirements to within the minimum requirements. ACRs 1, 2, 3, 4, and 6 plus the PSS position shall be manned in all applicable modes.

<sup>7</sup> Staff will not be on-site unless analytical support is required.

<sup>8</sup> Staff may be reduced to 1 individual if Cascade "Product" and "Tails" withdrawal streams are not established.

<sup>9</sup> APSS may provide temporary relief to X-300 assigned operator.

<sup>10</sup> An assigned operator is not required in a building if all cell equipment is in "Shutdown; Mode VI."

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On-Site Functional Staffing Requirements  
Significance Determination**

The United States Enrichment Corporation (USEC) has reviewed the proposed changes 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

There are no conditions to the Certificate of Compliance for operation of the Portsmouth Gaseous Diffusion Plant (GDP-2) that pertain to the specific TSR affected by this change. Thus, the proposed change has no significant impact on any 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. The proposed change to the required minimum staffing associated with the Process Buildings would only be applicable when all of the  $UF_6$  processing equipment is shutdown and residual  $UF_6$  is removed. While some nonvolatile uranium compounds will be present in small quantities (relative to the equipment operating inventories) distributed on the interior equipment surfaces, the deposits are stable and do not require operator monitoring or actions to maintain a stable condition. Thus, the proposed change does not involve any change to the plant safety analysis or to the safety controls. The proposed change does not introduce any new accident initiating events from operations or activities in the GDP NRC Certified facilities or operations. The proposed change does not affect the probability of an uncontrolled release of radioactive material or of a criticality in facilities or operations governed by the NRC Certificate of Compliance. The SSCs relied upon to prevent occurrence of an accident previously evaluated in the SAR will continue to meet, as required, the current SAR envelope requirements for availability and reliability. The TSRs will continue to be met as required for plant 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

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scenarios or accident initiating events. Therefore, the overall potential for an accident involving these operations is unchanged, and the probability of a previously evaluated SAR accident is not increased.

4. No New or Different Type of Accident

The proposed change will not create any new failure modes or create initiating events that are different than previously evaluated. As noted, all of the UF<sub>6</sub> processing equipment will be shutdown and thus require no operator action or monitoring for process control or prevention of accidents. Accordingly, no new types of accidents are created by this change.

5. No Significant Reduction in Margins of Safety

The proposed change has no impact on the TSRs in Section 2 or on any of the program requirements in TSR Section 3, other than the minimum staffing. The requirements of the TSRs in Section 2 governing the operation of the plant will continue to be met at all times as required for the operating mode. No margins of safety are impacted as defined in the supporting bases documents for any TSR.

6. No Significant Decrease in the Effectiveness of the Plant's Safety and Safeguards Or Security Programs and Plans

The TSR minimum staffing change does not affect, directly or indirectly the plant's safety and safeguards or security programs and plans contained in the Certification Application. The changes to the TSR as they relate to minimum staffing do not impact any programmatic controls, requirements or surveillances. Therefore, the effectiveness of these programs and plans is not decreased by this change.

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

This change does not alter any approved plant operation or physical condition nor any of the accident analysis assumptions. There is no increase in the probability of occurrence or consequences of a previously evaluated accident or malfunction of equipment important to safety. There are no new accident initiators, increase in hazardous materials or waste streams. The specific minimum staffing change being proposed has no impact on security issues. Consequently, this change does

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not result in undue risk to public health and safety, the environment, or to the common defense and security.

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

The proposed change does not involve any physical change to the plant or plant operations that could change the types or the amounts of any 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.

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

The proposed change does not significantly increase the probability or consequences of a UF<sub>6</sub> release. The proposed change will not effect the radiological protection program description or the actions in place to minimize occupational exposures. Therefore, there is no increase in individual or cumulative occupational radiation exposure as a result of this change.

10. No Significant Construction Impact

This change does not involve any construction activities. Therefore, there are no significant construction impacts associated with this change.