



June 6, 2008
GDP 08-0018

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
Transmittal of Revision 90 to Portsmouth Certification Application**

Dear Mr. Weber:

In accordance with 10 CFR 76, the United States Enrichment Corporation (USEC) hereby submits six (6) copies of Revision 90 (May 22, 2008) to USEC-02, Application for United States Nuclear Regulatory Commission Certification, Portsmouth Gaseous Diffusion Plant. Revision 90 incorporates changes to the X-326 Technical Safety Requirements (TSR) Section 2.7.3.5, Cell Treatment Monitoring that were previously submitted for your review in accordance with 10 CFR 76.45 and were approved as Amendment 8 to the Certificate of Compliance, GDP-2, in your letter dated May 30, 2008 (TAC No. 32409).

Revision 90 was effective May 22, 2008 and revision bars are provided in the right-hand margin to identify changes.

Should you have any questions regarding this matter, please contact me at (301) 564-3250. There are no new commitments contained in this submittal.

Sincerely,

Steven A. Toelle
Director, Regulatory Affairs

References: 1. Letter from Robert C. Pierson (NRC) to Steven A. Toelle (USEC), Amendment 8, Portsmouth Gaseous Diffusion Plant, Change to Portsmouth Gaseous Diffusion Plant Technical Safety Requirements (TSR) Section 2.7 dated May 30, 2008 (TAC 32409).

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- Enclosures:
1. Oath and Affirmation
 2. USEC-02, Application for United States Nuclear Regulatory Commission Certification, Portsmouth Gaseous Diffusion Plant, Revision 90, Copy Numbers 1 through 6.

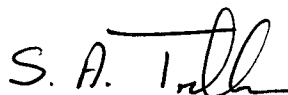
cc:	R. Pierson, NRC HQ	(w/o)
	J. Henson, NRC Region II	USEC-02, Copy Nos. 21, 172
	M. Miller, NRC Resident Inspector, PGDP	USEC-02, Copy No. 22
	M. Raddatz, NRC Project Manager	(w/o)
	D. Hartland, NRC Region II	(w/o)
	R. DeVault (DOE)	USEC-02, Copy Nos. 24
	C. Voth, DOE	USEC-02, Copy Nos. 25

Enclosure 1
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Oath and Affirmation

OATH AND AFFIRMATION

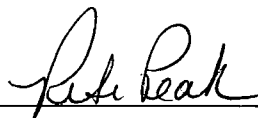
I, Steven A. Toelle, swear and affirm that I am the Director, Regulatory Affairs of the United States Enrichment Corporation (USEC), that I am authorized by USEC to sign and file with the Nuclear Regulatory Commission Revision 90 (May 22, 2008) to the USEC Application for United States Nuclear Regulatory Commission Certification, Portsmouth Gaseous Diffusion Plant (USEC-02) 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.



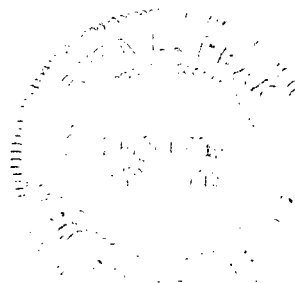
Steven A. Toelle

On this 6th day of June 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 acknowledged 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



Enclosure 2
GDP 08-0018

USEC-02
Application for United States
Nuclear Regulatory Commission Certification
Portsmouth Gaseous Diffusion Plant, Revision 90

**NUCLEAR REGULATORY COMMISSION CERTIFICATION
PORTSMOUTH GASEOUS DIFFUSION PLANT
USEC-02**

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**REVISION 90
Effective 5/22/08**

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VOLUME 4

Technical Safety Requirements (TSR)

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SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring

APPLICABILITY: Cascade Operational Mode IV

LCO: Cell treatments shall be monitored with an Infrared Analyzer.

ACTIONS: Note: TSR 1.6.2.2(d) does not apply

Condition	Required Actions	Completion Time
A. Infrared Analyzer inoperable during running cell treatment or during first 24 hours of static (LTLT) cell treatment	A.1 Initiate sampling for free ClF_3 and the presence of hydrocarbons	30 Minutes
B. Above condition required actions and/or completion time are not accomplished	B.1 Evacuate cell contents	30 Minutes

SURVEILLANCE:

Frequency	Surveillance
Each cell treatment	SR 2.7.3.5.1 Verify and document the installation of an Infrared Analyzer prior to the initial charge of treatment gas
Once per day during LTLT or Static Cell Treatment	SR 2.7.3.5.2 Collect sample from cell and analyze using Infrared Analyzer

BASIS:

Deposit removal can be conducted on cascade equipment that is operating or on equipment that is shutdown. The rate of oxidant gas consumption, especially ClF_3 , is dependant on whether the treatment being performed is a running or static treatment. In either type of treatment, the treatment gas mixture is monitored to assure that no hydrocarbons or fluorocarbons are present and that free ClF_3 is always present to prevent the formation of ClO_2 and Cl_2 which can damage cascade equipment and can pose hazards during subsequent processing to recover UF_6 recovered by the chemical treatments. A specialized type of static chemical treatment, called Long-Term, Low-Temperature (LTLT), is used for shutdown equipment.

During cell treatments with process equipment running, failure to maintain an adequate amount of ClF_3 within the cell can lead to the formation of reaction products that will result in highly exothermic reactions upon the re-introduction of ClF_3/F_2 . In addition, the Infrared Analyzer is used to detect the presence of hydrocarbon materials that could also react violently with ClF_3/F_2

SECTION 2.7 SPECIFIC TSRS FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring (continued)

under the right conditions. Replacing an inoperable analyzer can take up to three hours. For this reason sampling is initiated within thirty minutes and continued until an operable analyzer is hooked up and operating properly.

Static cascade equipment treatments are those performed where the cell (or other cascade equipment) is not running. Higher concentrations of oxidant gases are used and the pressure of the cell (or equipment) is maintained below atmospheric pressure. Because of the lower temperatures, absence of running equipment and additional measures to prevent the presence of coolant, static (LTLT) cell treatments do not progress rapidly or have the potential for rapid changes of conditions that could result in an exothermic or explosive reaction. Operator presence and frequent monitoring of the cell temperatures, pressures and infrared monitor readings occur during the initial addition of treatment gas increments and for twenty four hours after the last increment is added. After the initial treatment monitoring period, an operator will monitor the cell (or equipment) temperatures, pressures at least once each shift and will collect a gas sample from the cell at least once every day to verify that free ClF_3 is present and that no unexpected reactions are occurring.

**NUCLEAR REGULATORY COMMISSION CERTIFICATION
PORTSMOUTH GASEOUS DIFFUSION PLANT
USEC-02**

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SECTION 2.7 SPECIFIC TSRS FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

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SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring

APPLICABILITY: Cascade Operational Mode IV

LCO: Cell treatments shall be monitored with an Infrared Analyzer.

ACTIONS: Note: TSR 1.6.2.2(d) does not apply

Condition	Required Actions	Completion Time
A. Infrared Analyzer inoperable during running cell treatment or during first 24 hours of static (LTLT) cell treatment	A.1 Initiate sampling for free ClF_3 and the presence of hydrocarbons	30 Minutes
B. Above condition required actions and/or completion time are not accomplished	B.1 Evacuate cell contents	30 Minutes

SURVEILLANCE:

Frequency	Surveillance
Each cell treatment	SR 2.7.3.5.1 Verify and document the installation of an Infrared Analyzer prior to the initial charge of treatment gas
Once per day during LTLT or Static Cell Treatment	SR 2.7.3.5.2 Collect sample from cell and analyze using Infrared Analyzer

BASIS:

Deposit removal can be conducted on cascade equipment that is operating or on equipment that is shutdown. The rate of oxidant gas consumption, especially ClF_3 , is dependant on whether the treatment being performed is a running or static treatment. In either type of treatment, the treatment gas mixture is monitored to assure that no hydrocarbons or fluorocarbons are present and that free ClF_3 is always present to prevent the formation of ClO_2 and Cl_2 which can damage cascade equipment and can pose hazards during subsequent processing to recover UF_6 recovered by the chemical treatments. A specialized type of static chemical treatment, called Long-Term, Low-Temperature (LTLT), is used for shutdown equipment.

During cell treatments with process equipment running, failure to maintain an adequate amount of ClF_3 within the cell can lead to the formation of reaction products that will result in highly exothermic reactions upon the re-introduction of ClF_3/F_2 . In addition, the Infrared Analyzer is used to detect the presence of hydrocarbon materials that could also react violently with ClF_3/F_2

SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring (continued)

under the right conditions. Replacing an inoperable analyzer can take up to three hours. For this reason sampling is initiated within thirty minutes and continued until an operable analyzer is hooked up and operating properly.

Static cascade equipment treatments are those performed where the cell (or other cascade equipment) is not running. Higher concentrations of oxidant gases are used and the pressure of the cell (or equipment) is maintained below atmospheric pressure. Because of the lower temperatures, absence of running equipment and additional measures to prevent the presence of coolant, static (LTLT) cell treatments do not progress rapidly or have the potential for rapid changes of conditions that could result in an exothermic or explosive reaction. Operator presence and frequent monitoring of the cell temperatures, pressures and infrared monitor readings occur during the initial addition of treatment gas increments and for twenty four hours after the last increment is added. After the initial treatment monitoring period, an operator will monitor the cell (or equipment) temperatures, pressures at least once each shift and will collect a gas sample from the cell at least once every day to verify that free ClF_3 is present and that no unexpected reactions are occurring.

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PORTSMOUTH GASEOUS DIFFUSION PLANT
USEC-02**

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Effective 5/22/08**

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2.7-6a	67	3.0-9	52
2.7-7	6	3.0-10	57
2.7-8	6	3.0-11	5
2.7-8a	67	3.0-12	5
2.7-9	67	3.0-13	5
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SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring

APPLICABILITY: Cascade Operational Mode IV

LCO: Cell treatments shall be monitored with an Infrared Analyzer.

ACTIONS: Note: TSR 1.6.2.2(d) does not apply

Condition	Required Actions	Completion Time
A. Infrared Analyzer inoperable during running cell treatment or during first 24 hours of static (LTLT) cell treatment	A.1 Initiate sampling for free ClF_3 and the presence of hydrocarbons	30 Minutes
B. Above condition required actions and/or completion time are not accomplished	B.1 Evacuate cell contents	30 Minutes

SURVEILLANCE:

Frequency	Surveillance
Each cell treatment	SR 2.7.3.5.1 Verify and document the installation of an Infrared Analyzer prior to the initial charge of treatment gas
Once per day during LTLT or Static Cell Treatment	SR 2.7.3.5.2 Collect sample from cell and analyze using Infrared Analyzer

BASIS:

Deposit removal can be conducted on cascade equipment that is operating or on equipment that is shutdown. The rate of oxidant gas consumption, especially ClF_3 , is dependant on whether the treatment being performed is a running or static treatment. In either type of treatment, the treatment gas mixture is monitored to assure that no hydrocarbons or fluorocarbons are present and that free ClF_3 is always present to prevent the formation of ClO_2 and Cl_2 which can damage cascade equipment and can pose hazards during subsequent processing to recover UF_6 recovered by the chemical treatments. A specialized type of static chemical treatment, called Long-Term, Low-Temperature (LTLT), is used for shutdown equipment.

During cell treatments with process equipment running, failure to maintain an adequate amount of ClF_3 within the cell can lead to the formation of reaction products that will result in highly exothermic reactions upon the re-introduction of ClF_3/F_2 . In addition, the Infrared Analyzer is used to detect the presence of hydrocarbon materials that could also react violently with ClF_3/F_2

SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring (continued)

under the right conditions. Replacing an inoperable analyzer can take up to three hours. For this reason sampling is initiated within thirty minutes and continued until an operable analyzer is hooked up and operating properly.

Static cascade equipment treatments are those performed where the cell (or other cascade equipment) is not running. Higher concentrations of oxidant gases are used and the pressure of the cell (or equipment) is maintained below atmospheric pressure. Because of the lower temperatures, absence of running equipment and additional measures to prevent the presence of coolant, static (LTLT) cell treatments do not progress rapidly or have the potential for rapid changes of conditions that could result in an exothermic or explosive reaction. Operator presence and frequent monitoring of the cell temperatures, pressures and infrared monitor readings occur during the initial addition of treatment gas increments and for twenty four hours after the last increment is added. After the initial treatment monitoring period, an operator will monitor the cell (or equipment) temperatures, pressures at least once each shift and will collect a gas sample from the cell at least once every day to verify that free ClF_3 is present and that no unexpected reactions are occurring.

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SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring

APPLICABILITY: Cascade Operational Mode IV

LCO: Cell treatments shall be monitored with an Infrared Analyzer.

ACTIONS: Note: TSR 1.6.2.2(d) does not apply

Condition	Required Actions	Completion Time
A. Infrared Analyzer inoperable during running cell treatment or during first 24 hours of static (LTLT) cell treatment	A.1 Initiate sampling for free ClF_3 and the presence of hydrocarbons	30 Minutes
B. Above condition required actions and/or completion time are not accomplished	B.1 Evacuate cell contents	30 Minutes

SURVEILLANCE:

Frequency	Surveillance
Each cell treatment	SR 2.7.3.5.1 Verify and document the installation of an Infrared Analyzer prior to the initial charge of treatment gas
Once per day during LTLT or Static Cell Treatment	SR 2.7.3.5.2 Collect sample from cell and analyze using Infrared Analyzer

BASIS:

Deposit removal can be conducted on cascade equipment that is operating or on equipment that is shutdown. The rate of oxidant gas consumption, especially ClF_3 , is dependant on whether the treatment being performed is a running or static treatment. In either type of treatment, the treatment gas mixture is monitored to assure that no hydrocarbons or fluorocarbons are present and that free ClF_3 is always present to prevent the formation of ClO_2 and Cl_2 which can damage cascade equipment and can pose hazards during subsequent processing to recover UF_6 recovered by the chemical treatments. A specialized type of static chemical treatment, called Long-Term, Low-Temperature (LTLT), is used for shutdown equipment.

During cell treatments with process equipment running, failure to maintain an adequate amount of ClF_3 within the cell can lead to the formation of reaction products that will result in highly exothermic reactions upon the re-introduction of ClF_3/F_2 . In addition, the Infrared Analyzer is used to detect the presence of hydrocarbon materials that could also react violently with ClF_3/F_2

SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring (continued)

under the right conditions. Replacing an inoperable analyzer can take up to three hours. For this reason sampling is initiated within thirty minutes and continued until an operable analyzer is hooked up and operating properly.

Static cascade equipment treatments are those performed where the cell (or other cascade equipment) is not running. Higher concentrations of oxidant gases are used and the pressure of the cell (or equipment) is maintained below atmospheric pressure. Because of the lower temperatures, absence of running equipment and additional measures to prevent the presence of coolant, static (LTLT) cell treatments do not progress rapidly or have the potential for rapid changes of conditions that could result in an exothermic or explosive reaction. Operator presence and frequent monitoring of the cell temperatures, pressures and infrared monitor readings occur during the initial addition of treatment gas increments and for twenty four hours after the last increment is added. After the initial treatment monitoring period, an operator will monitor the cell (or equipment) temperatures, pressures at least once each shift and will collect a gas sample from the cell at least once every day to verify that free ClF_3 is present and that no unexpected reactions are occurring.

**NUCLEAR REGULATORY COMMISSION CERTIFICATION
PORTSMOUTH GASEOUS DIFFUSION PLANT
USEC-02**

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**REVISION 90
Effective 5/22/08**

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SECTION 2.7 SPECIFIC TSRs FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring

APPLICABILITY: Cascade Operational Mode IV

LCO: Cell treatments shall be monitored with an Infrared Analyzer.

ACTIONS: Note: TSR 1.6.2.2(d) does not apply

Condition	Required Actions	Completion Time
A. Infrared Analyzer inoperable during running cell treatment or during first 24 hours of static (LTLT) cell treatment	A.1 Initiate sampling for free ClF_3 and the presence of hydrocarbons	30 Minutes
B. Above condition required actions and/or completion time are not accomplished	B.1 Evacuate cell contents	30 Minutes

SURVEILLANCE:

Frequency	Surveillance
Each cell treatment	SR 2.7.3.5.1 Verify and document the installation of an Infrared Analyzer prior to the initial charge of treatment gas
Once per day during LTLT or Static Cell Treatment	SR 2.7.3.5.2 Collect sample from cell and analyze using Infrared Analyzer

BASIS:

Deposit removal can be conducted on cascade equipment that is operating or on equipment that is shutdown. The rate of oxidant gas consumption, especially ClF_3 , is dependant on whether the treatment being performed is a running or static treatment. In either type of treatment, the treatment gas mixture is monitored to assure that no hydrocarbons or fluorocarbons are present and that free ClF_3 is always present to prevent the formation of ClO_2 and Cl_2 which can damage cascade equipment and can pose hazards during subsequent processing to recover UF_6 recovered by the chemical treatments. A specialized type of static chemical treatment, called Long-Term, Low-Temperature (LTLT), is used for shutdown equipment.

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SECTION 2.7 SPECIFIC TSRS FOR X-326 CASCADE FACILITY

2.7.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.7.3.5 Cell Treatment Monitoring (continued)

under the right conditions. Replacing an inoperable analyzer can take up to three hours. For this reason sampling is initiated within thirty minutes and continued until an operable analyzer is hooked up and operating properly.

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