

April 20, 1998

Mr. James H. Miller
Vice President, Production
U. S. Enrichment Corporation
2 Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: PORTSMOUTH GASEOUS DIFFUSION PLANT (PORTS) - REFEED OF 10.00% TO 19.99% ENRICHED URANIUM TO THE CASCADE (TAC NO. L32063)

Dear Mr. Miller:

This refers to your letter to the Nuclear Regulatory Commission (NRC) dated April 13, 1998, entitled "Feeding of Moderately Enriched Uranium (MEU)." In your letter, you requested NRC concurrence on the United States Enrichment Corporation's (USEC's) plans to refeed to the cascade, cylinders containing enriched uranium with assays between 10 and 19.99% U-235, as part of the Highly Enriched Uranium (HEU) Refeed project. For this proposed activity, you have committed to applying the same safety, safeguards, and security requirements, restrictions and procedures discussed in Section 3.7 of the PORTS Safety Analysis Report and Issue A.4 of the PORTS Compliance Plan.

In addition to the information provided in your letter dated April 13, 1998, Mr. Mark Lombard of your staff, along with Messrs. Dana Mauk and Roy Holliday of PORTS, informed Messrs. Cookie Ong and Yawar Faraz of my staff that: (1) the proposed activity involves fourteen cylinders with a total of about 48 kilograms of U-235; (2) the refeed procedures have been revised to address enrichments between 10 and 19.99% U-235; (3) of the nine available feed stations, only one or two would be used at a time to feed MEU cylinders; (4) a detailed schedule is being developed where the MEU refeed activity will commence about a week after receipt of NRC concurrence and will be completed by about the end of June of this year; (5) NRC Form 741 transfer reports will be prepared prior to moving the material out of non-leased space; i.e., the X-345 facility; and (6) calculations have indicated that based on the anticipated feed rates, refeed of MEU would have a favorable effect on assay levels in cascade Units X-25-7 and X-27-2 with respect to compliance with the limits prescribed in Issue A.4 of the PORTS Compliance Plan.

Please be advised, that based on the information provided by USEC, the NRC staff has no objections regarding the proposed activity at this time. If you have any questions regarding this matter, please contact Yawar Faraz at (301) 415-8113.

Sincerely,

NRC FILE CENTER COPY

Robert C. Pierson, Chief
Special Projects Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

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Docket 70-7002
Certificate GDP-2
cc: Mr. Randall DeVault, DOE
Mr. Morris Brown, PORTS
Mr. Steven Toelle, USEC

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Mr. James H. Miller
 Vice President, Production
 U. S. Enrichment Corporation
 2 Democracy Center
 6903 Rockledge Drive
 Bethesda, MD 20817

SUBJECT: PORTSMOUTH GASEOUS DIFFUSION PLANT (PORTS) - REFEED OF 10.00%
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Please be advised, that based on the information provided by USEC, the NRC staff has no objections regarding the proposed activity at this time. If you have any questions regarding this matter, please contact Yawar Faraz at (301) 415-8113.

Sincerely,

Carl J. Paperiello, Director
 Office of Nuclear Material Safety
 and Safeguards

Docket 70-7002
 Certificate GDP-2

cc: Mr. Randall DeVault, DOE
 Mr. Morris Brown, PORTS
 Mr. Steven Toelle, USEC

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 20, 1998

Mr. James H. Miller
Vice President, Production
U. S. Enrichment Corporation
2 Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: PORTSMOUTH GASEOUS DIFFUSION PLANT (PORTS) - REFEED OF 10.00% TO
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In addition to the information provided in your letter dated April 13, 1998, Mr. Mark Lombard of your staff, along with Messrs. Dana Mauk and Roy Holliday of PORTS, informed Messrs. Cookie Ong and Yawar Faraz of my staff that: (1) the proposed activity involves fourteen cylinders with a total of about 48 kilograms of U-235; (2) the refeed procedures have been revised to address enrichments between 10 and 19.99% U-235; (3) of the nine available feed stations, only one or two would be used at a time to feed MEU cylinders; (4) a detailed schedule is being developed where the MEU refeed activity will commence about a week after receipt of NRC concurrence and will be completed by about the end of June of this year; (5) NRC Form 741 transfer reports will be prepared prior to moving the material out of non-leased space; i.e., the X-345 facility; and (6) calculations have indicated that based on the anticipated feed rates, refeed of MEU would have a favorable effect on assay levels in cascade Units X-25-7 and X-27-2 with respect to compliance with the limits prescribed in Issue A.4 of the PORTS Compliance Plan.

Please be advised, that based on the information provided by USEC, the NRC staff has no objections regarding the proposed activity at this time. If you have any questions regarding this matter, please contact Yawar Faraz at (301) 415-8113.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert C. Pierson".

Robert C. Pierson, Chief
Special Projects Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

Docket 70-7002
Certificate GDP-2

cc: Mr. Randall DeVault, DOE
Mr. Morris Brown, PORTS
Mr. Steven Toelle, USEC



April 13, 1998
GDP 98-0065

Dr. Carl J. Paperiello
Director, Office of Nuclear Material Safety and Safeguards
Attention: Document Control Desk
United States Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Portsmouth Gaseous Diffusion Plant (PORTS)
Docket No. 70-7002
Feeding of Moderately Enriched Uranium (MEU)

Dear Dr. Paperiello:

By letter dated February 2, 1998 (Reference 1), the United States Enrichment Corporation (USEC) provided the Department of Energy (DOE) with a request for authorization to feed MEU (i.e., material enriched to between 10% and 19.99% ²³⁵U) as part of the Highly Enriched Uranium (HEU) Refeed project. The DOE endorsed this activity by letter dated March 31, 1998 (Reference 2). The DOE endorsement is contingent upon obtaining concurrence from the Nuclear Regulatory Commission (NRC).

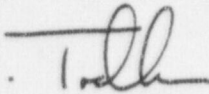
USEC requests NRC concurrence to feed cylinders containing MEU. As described in References 1 and 2, the MEU (in 5, 8, and 12 inch cylinders) will be fed to the cascade in accordance with the same safety, safeguards, and security requirements utilized for HEU as described in References 3 and 4. These requirements include ensuring feed rate is controlled such that no more than 50kg of ²³⁵U contained in uranium enriched from 10 wt-% up to 20 wt-% ²³⁵U is present in Units X-25-7 and X-27-2, interconnecting piping, and the X-326 surge drums during routine operations. This will be achieved without revising the existing controls governing HEU Refeed activities. USEC will not be in possession or control of any material which would cause the NRC Category III possession limits to be exceeded. This will be documented by NRC Form 741s prior to moving the material out of non-leased space (i.e., the X-345 facility). Therefore, this activity does not present any safety concerns. USEC would like to begin this activity as soon as possible so the completion dates for Compliance Plan Issue A.4 actions are not jeopardized.

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Dr. Carl J. Paperiello
April 13, 1998
GDP 98-0065, Page 2

The only new commitment contained in this submittal is that the MEU will be fed in accordance with all requirements currently in place for HEU Refeed. Should you have any questions related to this subject, please contact Mark Lombard at (301) 564-3248.

Sincerely,

S. A. Toelle 

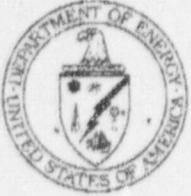
Steven A. Toelle
Nuclear Regulatory Assurance and Policy Manager

cc: Mr. Robert C. Pierson, NRC HQ
NRC Region III Office
NRC Resident Inspector - PGDP
NRC Resident Inspector - PORTS
Mr. Randall M. DeVault (DOE)

Dr. Carl J. Paperiello
April 13, 1998
GDP 98-0065, Page 3

REFERENCES

1. Letter from Steven A. Toelle (USEC) to Randall M. DeVault (DOE), "Authorization to Proceed with Commercial Activities Necessary to Feed USEC Moderately Enriched Uranium (MEU) Cylinders," Portsmouth Gaseous Diffusion Plant, Letter No. GDP 98-0004, February 2, 1998.
2. Letter from Randall M. DeVault (DOE) to Steven A. Toelle (USEC), "Highly Enriched Uranium Refeed - Moderately Enriched Uranium Cylinders," March 31, 1998.
3. PORTS Application for United States Nuclear Regulatory Commission Certification, Safety Analysis Report, Section 3.7
4. Plan for Achieving Compliance with NRC Regulations at the Portsmouth Gaseous Diffusion Plant, Issue A.4.

**Department of Energy**

Oak Ridge Operations
Post Office Box 62
Oak Ridge, Tennessee 37831 -8651

March 31, 1998

Mr. Steven A. Toelle
Nuclear Regulatory Assurance
and Policy Manager
United States Enrichment Corporation
Two Democracy Center
6903 Rockledge Drive
Bethesda, Maryland 20817

Dear Mr. Toelle:

HIGHLY ENRICHED URANIUM REFEED - MODERATELY ENRICHED URANIUM CYLINDERS

By letter dated February 2, 1998, the United States Enrichment Corporation (USEC) requested approval to include fourteen (14) cylinders containing moderately enriched uranium (MEU) into the ongoing highly enriched uranium (HEU) refeed program. The material contained in these cylinders is owned by USEC and is enriched in the U-235 isotope from 10.00 to 19.99 weight percent. The cylinders would be transported from the X-345 Building to the X-326 Exclusion Area for interim storage and refeeding. Upon completion of the refeed activity, the cylinders would be cleaned of any remaining heel material.

705 West Annex?

The Department of Energy (DOE) has evaluated the physical and administrative controls required for the inclusion of this material into the HEU refeed program. The safeguards and security requirements of the HEU cylinders would also apply to the MEU cylinders. Operational requirements, including the Operational Safety Requirements, associated with the HEU cylinders would also apply. Based upon the above discussion, DOE can endorse the inclusion of the MEU cylinders into the HEU refeed program.

The authorization basis documents which approved the current configuration for HEU refeed operations are hereby amended to include the refeeding and cleaning of fourteen (14) MEU cylinders.

Please note this endorsement is contingent upon obtaining a similar concurrence from the Nuclear Regulatory Commission (NRC). It is unclear whether this specific activity is allowed under Issue A.4 of the *Plan for Achieving Compliance with NRC Regulations at the Portsmouth Gaseous Diffusion Plant* (i.e., Compliance Plan). Therefore, any subsequent change to the Compliance Plan would require approval by DOE and NRC. As always, the Department is available to review any subsequent submittal.

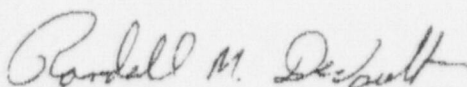
Steven A Toelle

-2-

March 31, 1998

Should there be any questions or comments, please contact Mr. David Mardis at (423) 241-4706.

Sincerely,



Randall M. DeVault
Regulatory Oversight Manager
Office of Assistant Manager
for Enrichment Facilities

cc:

R. C. Pierson, NRC, White Flint
W. S. Schwink, NRC White Flint
P. L. Hiland, NRC, Region III
R. M. George, NE-40, GTN
T. S. Tison, Bechtel Jacobs, MS-7239, K-1550V
J. R. McNeely, Bechtel Jacobs, EF-20/OSTI, MS-8651
R. W. Gaston, MS-1212, PORTS
E. W. Gillespie, EF-21, PORTS
J. C. Orrison, EF-21, PORTS
J. W. Parks, EF-20
T. T. Slack, CC-10
W. M. Yoder, DP-821, 2714-J