



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 6, 2010

Mr. Robert Van Namen
Senior Vice President, Uranium Enrichment
United States Enrichment Corporation
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR UNITED STATES
ENRICHMENT CORPORATION REGARDING THE PADUCAH GASEOUS
DIFFUSION PLANT [TAC NO. L32752, GDP NOED NO.10-02-002]

Dear Mr. Van Namen:

By letter dated May 2, 2010 (Enclosure 1), United States Enrichment Corporation (USEC), the certificate holder for the Paducah Gaseous Diffusion Plant (PGDP) confirmed a May 1, 2010, verbal request that the NRC exercise discretion and not enforce compliance with the actions required in the current Technical Safety Requirements (TSR) Limiting Condition for Operations (LCO) 2.4.3.4, "Action A, Completion Time for the R-114 Coolant Overpressure Control System." The nature of the request was further clarified in a letter from USEC dated May 4, 2010 (Enclosure 2). The required action specified in the TSR in response to an inoperable R-114 cell coolant overpressure relief system is to immediately assign an operator to continuously monitor the R-114 system pressure in order to take action to lower pressure, and within 24 hours, place the affected equipment (cell) in Mode Cascade 1 with process motors de-energized. In Mode Cascade 1, the affected equipment pressure is below atmospheric pressure.

USEC requested that a Notice of Enforcement Discretion (NOED) be granted pursuant to the NRC's policy regarding the exercise of discretion for an operating facility, described in Section VII.C of the NRC's Enforcement Policy. This NOED would be effective for ten days to extend the action time for Action A.2 of LCO 2.4.3.4 to May 10, 2010, at 4:42 p.m. (all times discussed in this letter refer to Central Daylight Time).

This letter documents our telephone conversation of May 1, 2010, at 3:00 p.m., during which we verbally granted discretion. The basis for our decision to exercise discretion is provided in the following discussion.

Your letters documented the information previously discussed with the NRC during a telephone conference that occurred on May 1, 2010. The principal NRC staff members who participated in that telephone conference included: Joseph Shea, Director, Division of Fuel Facility Inspection (DFFI), Region II; Gene Cobey, Deputy Director, DFFI; Marissa Bailey, Deputy Director, Special Projects and Technical Support Directorate, Division of Fuel Cycle Safety and Safeguards (FCSS), Office of Nuclear Material Safety and Safeguards (NMSS); Jay Henson, Chief, Fuel Facilities Inspection Branch 2, DFFI; Thomas G. Hiltz, Chief, Advanced Fuel Cycle, Enrichment,

and Uranium Conversion Branch, FCSS, NMSS; Tilda Y. Liu, Senior Project Manager, Advanced Fuel Cycle, Enrichment, and Uranium Conversion Branch, FCSS, NMSS; and Michael Miller, Paducah Gaseous Diffusion Plant Senior Resident Inspector.

Your staff requested enforcement discretion to avoid having to shut down, what was believed to be at the time, 27 cells at 4:42 p.m., on April 30, 2010, based on the determination that the plant would not be in compliance with LCO 2.4.3.4. This LCO requires cell shutdown within 24 hours of the R-114 Coolant Overpressure Control system being declared inoperable. USEC staff stated that action to shutdown 27 cells within 24 hours would require that the shutdown be performed in a manner different from the planned, controlled evolution normally used for individual cell shutdowns.

USEC staff stated that the shutdown of numerous cells within a short period of time would increase the likelihood of process upsets such as increased seal failures, uranium hexafluoride leakage, wet air in-leakage, and plant pressure transients. The number and nature of these operational challenges increases the need for operator actions, which impacts the operators' ability to make timely and effective responses to process upsets and alarms.

USEC staff further stated that the potential increase in risk due to the impact of the shutdown of numerous cells in a short period of time exceeded the minimal risks posed by continued operation with degraded rupture discs in place. Accordingly, your staff requested that a Notice of Enforcement Discretion (NOED) be issued pursuant to the NRC's policy regarding exercise of discretion for an operating facility, set out in Section VII.C, of the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600.

Initially you requested that the NOED be effective for 14 days. During discussion with NRC staff, you stated that due to the amount of cell equipment available in each process building to achieve the removal of the uranium hexafluoride from a cell, you estimated that it would take up to 10 days to place the number of affected cells in "mode Cascade 1 with process motors de-energized" in a planned and safe manner, which exceeded the 24-hour action time statement in TSR 2.4.3.4. You subsequently agreed that you could meet the requirements of TSR 2.4.3.4 in 10 days. This letter documents our telephone conversation on May 1, 2010, at 3:00 p.m., when we orally issued this NOED.

On April 30, 2010, while performing an R-114 leak repair, Paducah Gaseous Diffusion Plant (PGDP) personnel discovered roofing tar on the downstream (outboard) side of the R-114 rupture disc on C-337, Unit 2, Cell 4. During subsequent extent of condition inspections, PGDP personnel further discovered tar on 13 rupture discs and that protective plastic covers were left in place on 28 other rupture discs, that affected a total of 27 cells. Plant personnel eventually found that the rupture discs on 32 cells were affected by these conditions and declared the affected systems to be inoperable. The increase in the actual number of affected rupture discs from 27 to 32 cells did not change the NRC's assessment of USEC's justification for the NOED request and subsequent decision to grant the NOED or on the 10-day authorized duration of the NOED.

Based on the information provided during the telephone conversation of May 1, 2010, and in your letters dated May 2, 2010, and May 4, 2010, the NRC has determined that Criterion B.2.1 of NRC Inspection Manual Part 9900, "Notice of Enforcement Discretion for Gaseous Diffusion

Plants," is met. The NRC has reviewed your written requests for enforcement discretion dated May 2, 2010, and May 4, 2010, and verified that it is consistent with the oral requests made on May 1, 2010.

In making this decision, NRC considered: (1) the impact on the integrity and stability on plant systems if the affected cells were taken off line in accordance with the applicable LCO; (2) the safety advantages to be gained by evacuating uranium hexafluoride from the individual cells that would not have been otherwise possible if the cells were required to be shutdown within 24 hours; (3) the safety basis of the request along with a review of the significance and potential consequences of permitting cell operation to continue; (4) review of the analysis supporting USEC's determination that continued operation would not be detrimental to occupational or public safety, the environment, or security; taking into account that in 60 years of continuous operations, there has not been an instance of a coolant system overpressure sufficient enough to result in a disc rupture; (5) the implementation of compensatory measures including the continuous monitoring of coolant system pressures by plant personnel and taking actions, as necessary, to mitigate any pressure excursion until affected rupture discs are replaced; (6) the requested duration of the discretion given the scope of work required to safely put the equipment into a mode not requiring the R-114 cell coolant system to be operable; (7) the representation that the request for enforcement discretion was reviewed and approved by the Plant Operations Review Committee; (8) satisfaction of NRC Inspection Manual Part 9900 criteria for the exercise of enforcement discretion; and, (9) USEC's determination that the Certificate does not need to be amended.

On the basis of the staff's evaluation of your request, we have concluded that a NOED is warranted because we have determined that this action involves minimal or no safety impact, is consistent with the Enforcement Policy and staff guidance, and has no adverse impact on public health and safety. Therefore, it is our intention to exercise discretion not to enforce compliance with LCO 2.4.3.4, "Action A, Completion Time for the R-114 Coolant Overpressure Control System" for a period of 10 days from 4:42 p.m., on April 30, 2010, until 4:42 p.m., on May 10, 2010. After expiration of this NOED, similar circumstances involving rupture discs on the R-114 Coolant Overpressure Control system, or other safety systems will require compliance with TSR requirements.

As stated above, the NRC staff noted USEC's determination that the Certificate does not need to be amended. However, during the telephone conversation, USEC indicated that it had completed a preliminary analysis indicating that the rupture discs did not have a safety function, that TSR LCO 2.4.3.4 may not be necessary, and that the transient associated with the shutdown of the associated equipment may, on balance, be adverse to safety. The NRC staff requests that within 60 days of the date of this letter, USEC provide to NRC its final determination regarding the appropriateness of this TSR LCO and, if needed, the associated Certificate amendment request.

As stated in the Enforcement Policy, action will be taken, to the extent that violations were involved, for the root cause that led to the noncompliance for which this NOED was necessary.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be made available electronically for public inspection in the NRC Public document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> <http://www.nrc.gov/reading-rm/adams.html>.

If you should have any questions, please contact Mr. Jay Henson, Chief, Fuel Facility Inspection Branch 2, at 404-997-4731 or by email at jay.henson@nrc.gov.

Sincerely,

/RA/

Victor M. McCree
Deputy Regional Administrator for Operations

Docket No. 70-7001
Certificate No. GDP-1

Enclosures:

1. Request for Enforcement Discretion
R-114 Coolant System Rupture Discs
2. Revision 1, Request for Enforcement Discretion
R-114 Coolant System Rupture Discs

cc w/encls:

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Letter to Robert Van Namen from Victor M. McCree, dated May 6, 2010

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If you should have any questions, please contact Mr. Jay Henson, Chief, Fuel Facility Inspection Branch 2, at 404-997-4731 or by email at jay.henson@nrc.gov.

Sincerely,

/RA/

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Deputy Regional Administrator for Operations

Docket No. 70-7001

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2. Revision 1, Request for Enforcement Discretion
R-114 Coolant System Rupture Discs

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*see previous concurrence

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ADAMS: X Yes ACCESSION NUMBER ML101260041 X SUNSI REVIEW COMPLETE

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