

## NOTICE OF VIOLATION

United States Enrichment Corporation  
Paducah Gaseous Diffusion Plant

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

During an NRC inspection conducted from April 22 to June 2, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

1. Technical Safety Requirement 2.4.4.2b, Action Statement A.1.2 requires, in part, that in areas without an audible criticality accident alarm and where the maximum foreseeable absorbed dose in free air exceeds 12 rad, the certificatee shall immediately [begin to] monitor temperatures and pressures hourly in cascade cells containing uranium hexafluoride, enriched to 1.0 weight percent or greater.

Safety Analysis Report, Chapter 4, Appendix A, Table 2.5-1, "Criticality Clusters and Building Alarms," specifies, in part, that criticality accident alarm system local clusters G and H and building horns provide the criticality detection and accident alarms for Building C-310.

Technical Safety Requirement 1.2.8 defines "immediately" as: "required action shall be pursued without delay and in a controlled manner."

Contrary to the above, on May 8, 1997, the certificatee did not immediately begin to monitor temperatures and pressures hourly for Building C-310 cascade cells containing uranium hexafluoride, enriched to 1.0 weight percent or greater, when the area did not have an audible criticality accident alarm because clusters G and H had been removed from service. Specifically, Building C-310 cluster G was declared inoperable at 9:00 a.m., and cluster H was declared inoperable at 10:20 a.m., and the initial rounds to monitor temperatures and pressures in the cells were not initiated until 12:00 noon, a period of time exceeding Technical Safety Requirement 2.4.4.2b, Action Statement A.1.2 surveillance requirement.

This is a Severity Level IV violation (Supplement VI).

2. Technical Safety Requirement 2.3.4.7, Action Statements A.2.1, A.2.2, and A.3, and Technical Safety Requirement 2.4.4.2, Action Statements A.2.1, A.2.2, and A.3 require for areas not covered by criticality accident detection, that: 1) the area be evacuated immediately; 2) access to the evacuated area be restricted; and 3) personnel, allowed into the restricted area, be provided with an alternate means of criticality alarm notification, such as a device that will alarm on sensing a 10 millirem per hour dose rate.

Procedure CP2-CO-CA1030, Revision 0, "OPERATION OF THE CRITICALITY ACCIDENT ALARM SYSTEM (CAAS)," dated March 3, 1997, step 6.2.3B states that upon loss of CAAS coverage: "Access control consists of posting signs, traffic cones, or other type barriers around the perimeter of the affected area that informs personnel of the LCO [Limiting Condition of Operation] boundary and that access is not allowed unless authorized by the PSS/MIC [plant shift superintendent or manager in charge] and proper dosimetry (for detection and audibility) or a radio (for audibility only) is worn."

Contrary to the above, on April 28, May 8, and May 14, 1997, seven personnel, on six separate occasions, entered evacuated, restricted, and posted areas, around Buildings C-310 and C-337, which were not covered by criticality accident detection: 1) without authorization by the plant shift superintendent or manager in charge; and 2) without proper dosimetry or a radio.

This is a Severity Level IV violation (Supplement VI).

3. Technical Safety Requirements 2.3.4.7b and 2.4.4.2b require that the criticality accident alarm shall be operable (audible) in areas where the maximum foreseeable absorbed dose in free air exceeds 12 rad.

Safety Analysis Report, Chapter 4, Appendix A, Table 2.5-1, "Criticality Clusters and Building Alarms," specifies, in part, that criticality accident alarm system local clusters G and H and building horns provide the criticality accident alarms for Building C-310.

Contrary to the above, on May 18, 1997, between 6:25 and 7:50 p.m., the Building C-310 criticality accident alarm system building horns were not operable in the areas where the maximum foreseeable dose in free air exceeds 12 rad.

This is a Severity Level IV violation (Supplement VI).

4. Technical Safety Requirement 2.2.4.12, "Scales," requires that the scales (scale identification numbers 19 and 21) used for verification of cylinder weight per Technical Safety Requirement 2.2.4.4., "Cylinder Heating - Cylinder Accountability Weight," shall be operable.

Technical Safety Requirement 2.2.4.4, "Cylinder Heating - Cylinder Accountability Weight," Surveillance Requirement 2.2.4.4-1 requires that the cylinder accountability weight is verified prior to first entry into Mode 5 [heating] of each operating cycle [in Buildings 333A and 337A].

Contrary to the above, from March 3 through May 21, 1997, the certificatee did not verify the cylinder accountability weight, using scales 19 and 21, prior to first entry into Mode 5 of each operating cycle initiated in Buildings 333A and 337A.

This is a Severity Level IV violation (Supplement VI).

5. 10 CFR 76.93, "Quality Assurance," requires, in part, that the certificatee shall establish and execute a quality assurance program.

The Quality Assurance Program, Section 2.5, states, in part, that: 1) "Q" activities affecting safety or quality are prescribed and performed in accordance with documented instructions, procedures, or drawings of a type appropriate to the circumstances; and 2) these documents include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities are satisfactorily performed.

Safety Analysis Report, Section 3.15, "Q AND AQ STRUCTURES, SYSTEMS, AND COMPONENTS," specifies the criticality accident alarm system as a "Q" system, including building/slave lights and horns for Buildings C-333, C-333A, C-337, and C-337A.

Procedure CP4-GP-IM6209, "CRITICALITY ACCIDENT ALARM SYSTEM FUNCTIONAL TESTS," Revisions 1 and 2, stated purpose was to: "provide instructions to functionally check the criticality accident alarm system (CAAS)."

Contrary to the above, from March 3 through April 23, 1997, the certificatee performed post maintenance functional tests of the criticality accident alarm systems for Buildings C-333, C-333A, C-337, and C-337A using a procedure which did not include appropriate acceptance criteria for determining that the prescribed activities were satisfactorily performed. Specifically, Procedure CP4-GP-IM6209 did not include acceptance criteria to ensure that all of the slave horns associated with Buildings C-333, C-333A, C-337, and C-337A criticality accident alarm system clusters sounded upon an actuation signal.

This is a Severity Level IV violation (Supplement VI).

6. 10 CFR 76.93, "Quality Assurance," requires, in part, that the certificatee shall establish and execute a quality assurance program.

The Quality Assurance Program, Section 2.16, "Corrective Action," requires, in part, that for significant conditions adverse to quality, the cause of the condition is determined and corrective action is taken to preclude recurrence.

Procedure UE2-HR-CI1031, Revision 0, dated August 31, 1996, "CORRECTIVE ACTIONS," defined, in part, that a significant condition adverse to quality included: 1) unauthorized changes to attributes of a procedure that implements nuclear criticality safety requirements; and 2) problem trends that have a strong potential to lead to issues of significance.

Contrary to the above, from March 3 through May 6, 1997, the certificatee did not determine the cause for or take corrective action to preclude recurrence of a significant condition adverse to quality. Specifically, the certificatee did not: 1) identify that a March 3, 1997, internal memorandum made an unauthorized change to a procedure which implemented nuclear criticality safety approval, GEN-27; and 2) determine the root cause for and take corrective actions to preclude the recurrence of violations of nuclear criticality safety approval GEN-27 in Building C-720.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, United State Enrichment Corporation is hereby required to submit a written statement or explanation for violations 1,2,3,5 and 6 to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector at Paducah, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the Certificate should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (for example, explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(h) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois  
this 2nd day of July 1997