June 29, 2009

Mr. Steven A. Toelle
Director, Nuclear Regulatory Affairs
U. S. Enrichment Corporation
2 Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING CERTIFICATE AMENDMENT REQUEST TO ALLOW A FLY OVER RADIOLOGICAL SURVEY, PADUCAH GASEOUS DIFFUSION PLANT (TAC NO. L32721)

Dear Mr. Toelle:

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the April 17, 2009, certificate amendment request (CAR), submitted by United States Enrichment Corporation (USEC), Paducah Gaseous Diffusion Plant (PGDP or certificate holder), concerning USEC-PGDP's proposed temporary revision to its plant operation, by allowing a helicopter fly over of process buildings and hazardous material storage areas in support of a Department of Energy radiological survey. The staff's review of the CAR request has identified that additional information is needed before a final decision can be taken on the submittal.

Your response to the request for additional information, specified in the enclosure, should be provided to the NRC within 15 business days from the date of this letter. This time frame has been agreed upon between NRC staff and USEC-PGDP representatives during the telephone conference held on June 24, 2009.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390 of the NRC's Rules of Practice, a copy of this letter will be available electronically from the Publicly Available Records component of NRC Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html.

If there are any questions regarding this action, please contact me at (301) 492-3217 or via e-mail at tilda.liu@nrc.gov.

Sincerely,

/RA/

Tilda Y. Liu, Senior Project Manager
Advanced Fuel Cycle, Enrichment,
and Uranium Conversion Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

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

cc w/enclosure: Vernon Shanks, USEC-Paducah, KY
Randall DeVault, DOE-Oak Ridge, TN

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PADUCAH GASEOUS DIFFUSION PLANT

APRIL 17, 2009, CERTIFICATE AMENDMENT REQUEST
DEPARTMENT OF ENERGY FLY OVER RADIOLOGICAL SURVEY
(TAC NO. L32721)

REQUEST FOR ADDITIONAL INFORMATION

RAI 1

The certificate holder stated that the radiological survey will be performed from the air using a helicopter. The helicopter will be flying at an altitude of approximately 150 feet and traversing a 25 square mile area at 250-foot intervals for approximately 8 hours. To ensure that the aerial survey does not inadvertently initiate an emergency response, the certificate holder is requested to discuss how the scheduling and execution of the proposed aerial survey will be coordinated with the U.S. Nuclear Regulatory Commission Operations Center, the Federal Aviation Administration, and other relevant Federal and State authorities. In addition, the certificate holder is requested to address its notification and coordination with local law enforcement and emergency services of the proposed aerial survey so that they will be on standby in case of an emergency.

RAI 2

The certificate holder stated that in the highly unlikely event that an aircraft accident does occur during the survey, the overall risk from a release of uranium hexafluoride or hazardous material remains very low. It further stated that the probability of a crash of the helicopter into a large enrichment process building is less than 10^{-6}. The certificate holder is requested to provide a reference discussing how crash sequences are defined and how the probability of a helicopter crash threshold, 10^{-6}, is to be applied to screening sequences.

RAI 3

In its letter dated April 17, 2009, the certificate holder cited flight statistics from U.S. Civil Helicopter Safety Statistics - Summary Report (1997-2006) where flight hours and crashes are tabulated for specific years. The reference lists crashes of multi-turbine helicopters for each year of a ten year period. During the period between 1997 and 2006, 145 crashes were recorded during 4,291,000 flights hours of multi-turbine helicopter operation. The certificate holder also discusses crashes of the Bell 412 helicopter, which is a type of multi-turbine helicopter, proposed for the aerial survey. The number of crash events and the flight hours are used to determine an estimate of the crash probability.

The certificate holder is requested to clarify how the reported events helicopter events were used to determine the probability of a helicopter crashing. Discuss how the events of the Bell helicopter were used in the calculations and how parameters of the probability calculation were determined.

RAI 4

In reviewing the certificate holder's submittal dated April 17, 2009, the staff noted that uncertainties were taken into account by doubling the flight time of the aerial survey. Doubling

the flight time has the effect of doubling the estimated crash probability. The aerial survey is expected to take approximately 8 hours, and the crash probability was estimated using a survey flight time of 16 hours. However, the extent to which uncertainties are taken into account by simply doubling the flight time is unclear. Discuss the extent to which uncertainties in the crash probabilities are taken into account.