

October 7, 2013

Mr. George Harper, Vice President  
Engineering and Licensing  
AREVA Enrichment Services, LLC  
400 Donald Lynch Boulevard  
Marlborough, MA 01752

SUBJECT: LICENSE AMENDMENT REQUEST LAR 13-01 FOR ADDITIONAL INFORMATION  
REGARDING AREVA ENRICHMENT SERVICES REQUEST TO ELIMINATE A  
SOLE ITEM RELIED ON FOR SAFETY – IROFS 52 – DATED MARCH 26, 2013

Dear Mr. Harper:

On March 26, 2013, AREVA Enrichment Services (AES), LLC submitted a license amendment request to eliminate a sole item relied on for safety (IROFS) – IROFS 52.

During a review of the proposed amendment request, the U.S. Nuclear Regulatory Commission (NRC) staff identified issues requiring additional information prior to approval.

Issues:

1. **Action Needed**

The AREVA analysis of hydrogen fluoride concentrations as a function of distance involves multiple assumptions that AREVA has characterized as conservative, but the assumption of pure UF<sub>6</sub> release directly to the environment results in a buoyant plume. A buoyant plume appears to be non-conservative given that the UF<sub>6</sub> will have reacted and the reaction products diluted before they exit the separations building. Explain the basis for AREVA belief that the RASCAL results are applicable for this analysis or provide a revised analysis that does not involve a buoyant plume effect (e.g., use RASCAL to calculate downwind concentrations following release through the building assuming an appropriate air change per hour value).

The regulatory basis for the request

70.65(b)(4) requires the Integrated Safety Analysis (ISA) Summary to provide “information that demonstrates the licensee’s compliance with the performance requirements of 70.61.”

2. **Action Needed**

The AREVA analysis of consequences following a seismically-induced failure of the cascade equipment or piping is based in part on the expected performance of the TC-12 centrifuge during a crash, specifically its ability to retain some of the UF<sub>6</sub> and UF<sub>6</sub> hydrolysis products. Provide the design and operational characteristics of the centrifuge that are necessary to assure its performance in the event of a crash and the methods AREVA will use to verify the characteristics are present in the Eagle Rock Enrichment Facility.

The regulatory basis for the request

70.65(b)(2) requires the ISA Summary to provide “a description of the facility with emphasis on those areas that could affect safety.”

Please provide a response to the above issues within 30 days of the date of this letter.

If you have any questions concerning this letter, please contact James Smith at 301-287-9138, or via e-mail to [James.Smith@nrc.gov](mailto:James.Smith@nrc.gov).

Sincerely,

*/RA/*

Brian W. Smith, Chief  
Uranium Enrichment Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 70-7015

cc: Mr. James Kay,  
AREVA Enrichment Services, LLC

The regulatory basis for the request

70.65(b)(2) requires the ISA Summary to provide “a description of the facility with emphasis on those areas that could affect safety.”

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If you have any questions concerning this letter, please contact James Smith at 301-287-9138, or via e-mail to [James.Smith@nrc.gov](mailto:James.Smith@nrc.gov).

Sincerely,

*/RA/*

Brian W. Smith, Chief  
 Uranium Enrichment Branch  
 Division of Fuel Cycle Safety  
 and Safeguards  
 Office of Nuclear Material Safety  
 and Safeguards

Docket No. 70-7015

cc: Mr. James Kay,  
 AREVA Enrichment Services, LLC

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