



Department of Energy
Washington, DC 20585

February 27, 2017

71-9330

Attention: Document Control Desk
Mark Lombard, Director
Division of Spent Fuel Storage and Transportation,
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mark Lombard:

The U.S. Department of Energy (DOE) requests an amendment of U. S. Nuclear Regulatory Commission Certificate of Compliance (CoC) Number 9330, for the Model ATR-FFSC package (NRC Docket 71-9330) in order to increase the quantity of packages that can be shipped on a single conveyance. This application includes changes to the criticality analysis to evaluate "Conversion of BR-2 Alternative" (COBRA) fuel element plates as intact and arranged in the most reactive configuration. This was the same approach as was used for the MIT and MURR fuel types which are in the current ATR certificate. The Idaho National Laboratory has subcontracted AREVA Federal Services (AFS) to prepare a revision to the Safety Analysis Report (SAR) in support of this request. AFS will express mail a paper copy of the ATR FFSC SAR, Revision 13, including one copy on compact disk (CD) media to the Document Control Desk, and one paper copy and six CDs to Project Manager Pierre Saverot. Enclosed to this letter is a table describing each of the changes made to the SAR in support of this request.

This proposed amendment to the CoC supports the DOE/National Nuclear Security Administration, Office of Material Management and Minimization in their European Reactor Conversion work. The amendment is critical path to making shipments of Low Enriched Uranium experiments to the Belgium Rector as early as August of 2017; therefore, DOE requests an expedited review by NRC to support these shipments.

DOE also requests NRC, for the benefit of the package users, to include on the CoC in the References section the "SAR document number and revision" corresponding to the application date in block 3.b., page 1, of the CoC.

If you have any questions or need more details please call at 301-903-5513 or james.shuler@em.doe.gov.

James M. Shuler

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NM5524

Enclosure:
ATR FFSC SAR Revision 13
Table of changes for ATR FFSC SAR Revision 13

ATR FFSC Cobra 10-Pack SAR Amendment

Table of changes for ATR FFSC SAR Revision 13 (Cobra Fuel)

Section or page no. of change	Material changed	Reason for change
Table 1.1-1, Page 1-2	Updated criticality safety index and U-235 mass limits for Cobra fuel.	The criticality safety index for Cobra fuel has been changed to 4.0, and the U-235 mass limits have been updated to reflect the actual HEU and LEU Cobra fuel designs.
Section 1.2.1.1.9	Updated language on the Cobra fuel handling enclosure.	Revised for clarity.
Section 1.2.2.6	Updated U-235 mass limits for Cobra fuel.	The U-235 mass limits have been updated to reflect the actual HEU and LEU Cobra fuel designs.
Table 6.1-6, Page 6-5	Updated Cobra summary of criticality evaluation.	Analysis has been revised.
Table 6.1-7, Page 6-6	Updated Cobra criticality safety index.	Criticality safety index has been lowered from 31.3 to 4.0.
Section 6.13	Deleted previous Cobra criticality analysis using the homogenized fuel assumption and replaced with a new analysis with an explicit Cobra fuel element representation.	The homogenized fuel representation resulted in a criticality safety index of 31.3. Using an explicit fuel element model, the criticality safety index for Cobra fuel has been reduced to 4.0, consistent with ATR, MURR, and MIT fuels.