



U.S. Nuclear Regulatory Commission  
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Washington, DC 20555-0001

DCS-NRC-000427  
04 August 2016


Subject: Docket Number 070-03098  
CB&I AREVA MOX Services  
Mixed Oxide Fuel Fabrication Facility  
PSSC-047 Completion Letter

Reference: DCS-NRC-000405, letter from CB&I AREVA MOX Services to NRC, dated  
December 21, 2015, 10CFR70.23(a)(8) Completion Process

In support of NRC's Principal Structure System and Component (PSSC) verification activities as required by 10CFR70.23(a)(8), and in accordance with the process outlined in our December 21, 2015 letter (Reference), CB&I AREVA MOX Services, LLC (MOX Services) hereby provides notification that PSSC-047 (Sintered Silicon Nitride Barrier) is complete in accordance with the application. Since the PSSC-047 safety functions derived from the Construction Authorization Request (CAR) are not required to be credited in the Integrated Safety Analysis Summary (ISAS) in order to meet 10 CFR 70.61 requirements, there are no IROFS components associated with PSSC-047. The enclosure to this letter provides the completion basis for concluding that PSSC-047 is complete in accordance with the application.

If you have any questions, please feel free to contact me at (803) 442-6485 or our Licensing and Nuclear Safety Manager, Dealis Gwyn, at (803) 819-2780.

Sincerely,



David Del Vecchio  
President and Project Manager

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Enclosure:

Completion Basis

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**Enclosure**

**PSSC-047 Completion Basis**

**Completion of PSSC-047, Sintered Silicon Nitride Barrier**PSSC Description

PSSC-047, Sintered Silicon Nitride Barrier, is associated with the Construction Authorization Request (CAR) Event Group “AP Electrolyzer.” This CAR event is mapped to Integrated Safety Analysis Summary (ISAS) Events F-05a and F-05b.

Summary of Key IROFS Components

There are no IROFS components associated with PSSC-047.

Summary of Completion Basis

The initial submittal of the ISAS (September 2006) credited electrolyzer components (materials of construction) for preventing titanium fires in the electrolyzers. The IROFS electrolyzer components included the sintered silicon nitride barrier. Subsequent analysis determined that the barrier was not necessary to prevent electrical arcing and the resulting titanium fire event. This safety strategy was reviewed and approved by the NRC as documented in Section 11.2.1.3.4 of the *Final Safety Evaluation Report for the License Application To Possess and Use Radioactive Material at the Mixed Oxide Fuel Fabrication Facility in Aiken, SC*. The basis for concluding that PSSC-047 construction is complete is contained in Completion Package DCS01-AAJ-LO-PPK-W-66014-0.