



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

August 28, 2018

MEMORANDUM TO: Robert K. Johnson, Chief  
Fuel Manufacturing Branch  
Division of Fuel Cycle Safety, Safeguards,  
and Environmental Review  
Office of Nuclear Material Safety  
and Safeguards

FROM: David H. Tiktinsky, Sr. Project Manager **/RA/**  
Fuel Manufacturing Branch  
Division of Fuel Cycle Safety, Safeguards,  
and Environmental Review  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: PRINCIPAL STRUCTURE, SYSTEM AND COMPONENT 011  
"ELECTROLYSER STRUCTURE"; 014 "EMERGENCY  
CONTROL SYSTEM"; 015, "EMERGENCY DC POWER  
SYSTEM", 033 "MATERIAL MAINTENANCE AND  
SURVEILLANCE PROGRAMS" 039 "PTFE INSULATOR" AND  
PSSC 040 "PRESSURE VESSEL CONTROLS" COMPLETION  
VERIFICATION REPORTS FOR MIXED OXIDE FUEL  
FABRICATION FACILITY UNDER CONSTRUCTION IN AIKEN,  
SOUTH CAROLINA (DOCKET NUMBER 70-3098)

The regulatory requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Paragraph 70.23(a)(8) states that an application for a license will be approved if the Commission determines that, where the proposed activity is the operation of a plutonium processing and fuel fabrication plant, construction of the Principal Structures, Systems and Components (PSSCs) approved pursuant to 10 CFR 70.23(b) has been completed in accordance with the application. PSSCs are safety controls that are identified in the design bases as providing protection against the consequences of accidents or natural phenomena.

As stated in the Final Safety Evaluation Report for the License Application to Possess and Use Radioactive Material at the Mixed Oxide Fuel Fabrication Facility (MFFF) in Aiken, South Carolina issued in December 2010, "As applicable to the specific type of PSSC, NRC construction inspection and/or the technical review programs will verify that the construction of each PSSC listed in Table 5.6-1 of the MFFF Construction Authorization Request (CAR) has been completed and the design basis safety function can be met".

On December 5, 2017, May 9, 2018, and May 17, 2018, CB&I AREVA MOX Services submitted letters notifying the U.S. Nuclear Regulatory Commission (NRC) that PSSC-011 (Electrolyser Structure) (Agencywide Documents Access and Management System (ADAMS) Accession Number ML17339A183); PSSC-015 (Emergency DC Power System)

ML17339A186; PSSC-039 (PTFE Insulator) ML17339A291; PSSC-033 (Material Maintenance) ML18129A099; PSSC-014 (Emergency Control System) ML18137A464; and PSSC-040 (Pressure Vessel Controls) ML18129A091 are complete in accordance with the application in support of the regulatory requirements in 10 CFR 70.23(a)(8).

As stated in the enclosed PSSC closure reports, the staff has completed its verification of PSSC-011, 014, 015, 033, 039 and 040 and has concluded that, as per 10 CFR 70.23(a)(8), that it is completed in accordance with the application.

In accordance with 10 CFR Section 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this Memorandum will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If you have any questions or comments, please contact me at (301) 415-8740 or via e-mail at [David.Tiktinsky@nrc.gov](mailto:David.Tiktinsky@nrc.gov).

Enclosure:  
PSSC Completion Verification Reports

cc: see next page

SUBJECT: PRINCIPAL STRUCTURE, SYSTEM AND COMPONENT 011 "ELECTROLYSER STRUCTURE"; 014 "EMERGENCY CONTROL SYSTEM"; 015, "EMERGENCY DC POWER SYSTEM", 033 "MATERIAL MAINTENANCE AND SURVEILLANCE PROGRAMS" 039 "PTFE INSULATOR" AND PSSC 040 "PRESSURE VESSEL CONTROLS" COMPLETION VERIFICATION REPORTS FOR MIXED OXIDE FUEL FABRICATION FACILITY UNDER CONSTRUCTION IN AIKEN, SOUTH CAROLINA (DOCKET NUMBER 70-3098)

**DISTRIBUTION:** MDiaz, NMSS

**ADAMS Accession Number: ML18204A212**

**(\*via e-mail)**

<b>OFC</b>	FSCE/FMB	FSCE/ERB	Region II	FCSE/FMB	*Region II	FCSE/FMB
<b>NAME</b>	DTiktinsky	TBrockington	*JEargle	<b>DTiktinsky for RJohnson</b>	MErnstes	DTiktinsky
<b>DATE</b>	08/08/18	08/08/18	08/20/18	08/27/18	8/27/18	08/28/18

**OFFICIAL RECORD COPY**

R. Johnson  
cc:

3

Mr. Scott Cannon, Federal Project Director  
NA-262.1  
P.O. Box A  
Aiken, SC 29802

Mr. Joseph Olencz, NNSA/HQ  
1000 Independence Ave., SW  
Washington, DC 20585

Ms. Joyce Connery, Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Ave., NW, Suite 700  
Washington, DC 20004

Ms. Susan Jenkins  
Division of Radioactive Waste Management  
Bureau of Health and Environmental Control  
2600 Bull Street  
Columbia, SC 29201

Ms. Kathryn M. Sutton  
Morgan, Lewis, & Bockius  
1111 Penn. Ave., NW  
Washington, DC 20004

Mr. Glenn Carroll  
Nuclear Watch South  
P.O. Box 8574  
Atlanta, GA 30306

Mr. Louis Zeller  
Blue Ridge Environmental Defense League  
P.O. Box 88  
Glendale Springs, NC 28629

Mr. Dealis Gwyn  
Licensing Manager  
Shaw AREVA MOX Services  
Savannah River Site  
P.O. Box 7097  
Aiken, SC 29804-7097