



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

February 5, 2018

Mr. Dealis W. Gwyn
Licensing Manager
CB&I AREVA MOX Services
P.O. Box 7097
Aiken, SC 29804-7097

**SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO AMENDMENT
NUMBER MPQAP-2017-0001 OF THE CB&I AREVA MOX SERVICES
PROJECT QUALITY ASSURANCE PLAN FOR THE MIXED OXIDE FUEL
FABRICATION FACILITY, UNDER CONSTRUCTION IN AIKEN, SOUTH
CAROLINA**

Dear Mr. Gwyn:

By letter dated December 20, 2017, (Agencywide Documents Access and Management System [ADAMS] Accession Number ML17355A100), CB&I AREVA MOX Services submitted amendment number MPQAP-2017-0001 to the MOX project quality assurance plan to the U.S. Nuclear Regulatory Commission (NRC) for review and approval.

As described in the enclosure to this letter, the NRC needs additional information in order to complete its review. Please provide responses to the request for additional information within 30 days of receipt of this letter.

In accordance with Title 10 of the *Code of Federal Regulations* Section 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter 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).

D. Gwyn

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If you have any questions, please contact me by telephone at (301) 415-8740, or via e-mail at David.Tiktinsky@nrc.gov.

Sincerely,

/RA/

David H. Tiktinsky, Senior Project Manager
Fuel Manufacturing Branch
Division of Fuel Cycle Safety, Safeguards,
and Environmental Review
Office of Nuclear Material Safety
and Safeguards

Docket No. 70-3098

Enclosure:
Request for Additional Information

cc: See next page

REQUEST FOR ADDITIONAL INFORMATION RELATED TO AMENDMENT NUMBER
MPQAP-2017-0001 OF THE CB&I AREVA MOX SERVICES PROJECT QUALITY
ASSURANCE PLAN FOR THE MIXED OXIDE FUEL FABRICATION FACILITY, UNDER
CONSTRUCTION IN AIKEN, SOUTH CAROLINA

DATED: February 5, 2018

DISTRIBUTION: FCSE r/f

ADAMS Package Accession Number: ML18025A882

OFC	FCSE/FMB	FCSE/FMB	FCSE	FCSE/FMB	FCSE/FMB
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DATE	1/25/2018	2/2/2018	2/1/2018	2/2/2018	2/5/2018

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REQUEST FOR ADDITIONAL INFORMATION
CB&I AREVA MOX SERVICES PROJECT QUALITY ASSURANCE PLAN
LICENSE AMENDMENT NUMBER MPQAP-2017-0001

Background:

By letter dated December 20, 2017 (Agencywide Documents Access and Management System [ADAMS] Accession Number ML17355A100), CB&I AREVA MOX Services (MOX Services) submitted Amendment Number: MPQAP-2017-0001 of the MOX Project Quality Assurance Plan (MPQAP) to the U.S. Nuclear Regulatory Commission for review and approval in accordance with Paragraph 70.23(b) of Title 10 of the *Code of Federal Regulations* (10 CFR). MOX Services proposes making revisions to sections 19.2.3, 4.5.3, 6.4.2, 6.5, and 3.2.1 MPQAP.

Regulatory Evaluation:

Paragraph 70.23(b) of 10 CFR identifies that the criteria in Appendix B, "Quality Assurance Criteria For Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," (Appendix B) will be used by the Commission in determining the adequacy of the Mixed Oxide Fuel Fabrication Facility quality assurance (QA) program. NUREG-1718, "Standard Review Plan for the Review of an Application for a Mixed Oxide Fuel Fabrication Facility," states that an acceptable means for meeting the requirements of Appendix B is to follow the 1994 edition of the ASME NQA-1, with the 1995 addenda (NQA-1-1994/1995a). Basic Requirement 13, "Handling, Storage and Shipping," of NQA-1 1994/1995a states, in part, handling, storage; cleaning, packaging; shipping and preservation of items shall be controlled to prevent damage or loss and to minimize deterioration. MOX Services has committed to comply with the guidance contained in NQA-1-1994/1995a. The predominant criterion of Appendix B and NQA-1-1994/1995a that is related to the proposed MPQAP changes and which may be affected is Criterion XIII, "Handling, Storage and Shipping" of the MOX Services MPQAP describes the Preventive Maintenance. Specifically, MOX Services QA Program described in this section and associated QA procedures implement the committed requirements of 10 CFR Part 50, Appendix B; NQA-1-1994 as revised by NQA-1a-1995 addenda; including Subpart 2.18 applicable to Option 2 (Operations) and Regulatory Guide 1.33 (Rev.2), *Quality Assurance Program Requirements (Operation)*.

RAI-1: By Amendment No.: MPQAP-2017-0001, MOX proposes new text be inserted into Section 6.4.2 Subparagraph (h) stating "MOX Project will follow either vendor recommendations for preventive maintenance, an engineering evaluation, or engineering requirements documents delineating appropriate maintenance requirements, for items in storage. Engineering evaluations and engineering requirements documents will consider vendor recommendations." Later in the amendment MOX describes potential cause of failures caused by following vendor recommended preventive maintenance. Please provide clarification of the engineering evaluation process, engineering evaluation, and engineering requirements by answering these questions:

- a) Describe the key elements used to perform and document engineering evaluations and determine adequate preventive maintenance for equipment in storage and layup areas.

Enclosure

- b) Are the key elements used in engineering evaluations, requirements, and evaluation process different for items in storage and in layup? If yes, please describe the differences?

RAI-2: As part of the justification for the changes MOX provides a description of the three aging categories that the preventive maintenance addresses. MOX states, that, “[c]omplex assemblies comprise a multitude of different components. Each assembly and each component within the assembly is subject to different aging mechanisms that determine whether the assembly falls under one of the following three aging categories.” They define these categories as infinite lifetime, finite lifetime with periodic renewal, and finite lifetime with no effective renewal process. Do these aging mechanisms take into consideration the shelf life of the component? If no, how is shelf life of the component considered?

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OXIDE FUEL FABRICATION FACILITY, UNDER CONSTRUCTION IN AIKEN, SOUTH
CAROLINA

cc w/enclosure:

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