

November 13, 2014

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

SUBJECT: MIXED OXIDE FUEL FABRICATION FACILITY – ORDER FOR EXTENSION OF
CONSTRUCTION AUTHORIZATION AND ADMINISTRATIVE CHANGES

Dear Mr. Gwyn:

The U.S. Nuclear Regulatory Commission (NRC) has issued an Order extending the construction expiration date of Construction Authorization CAMOX-001 for the Mixed Oxide Fuel Fabrication Facility from March 30, 2015, to March 30, 2025. This extension is in response to your request in a letter dated May 12, 2014 (Agencywide Documents Access and Management System Accession No. ML14132A342).

Additionally, the staff has made two administrative changes to the Construction Authorization (CA). The first change consists of the removal of the list of submittals incorporated by reference in Attachment A of the CA. This change is being made as a administrative change to avoid any potential confusion regarding licensing commitments. All of the commitments, representations and statements made in the referenced documents were incorporated into the construction authorization request, environmental report and the license application to possess and use radioactive material. Therefore, the conditions in Sections 3A and 3C of the CA supersede the references included in Attachment A and the attachment is no longer needed. As a result, the attachment to the CA has been deleted

The second change updates the company name on the CA from Shaw AREVA MOX Services to CB&I AREVA MOX Services. This change was made based on a letter dated August 15, 2014 (ML14227A556) requesting this update. The request stated that there was no direct or indirect changes in ownership of the company.

Copies of the Order, the NRC staff's safety evaluation of your request, and the revised Construction Authorization are enclosed for your information. The Order has been sent to the Office of the *Federal Register* for publication.

D. Gywn

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In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter and the enclosures 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 Document Room).

Sincerely,

/RA/ RJohnson for

David 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

Enclosures:

1. Safety Evaluation Report
2. Revised Construction Authorization
3. Order

cc: See next page

D. Gywn

2

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ADAMS Accession No. ML14225A705 Package No. ML14225A938

OFFICE	FCSE/FMB	FCSE	OGC	FCSE	FCSE	NMSS
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DATE	8/1/14	8/21 /14	10/15/14	10/27/14	10/30/2014	11/13/14

OFFICIAL RECORD COPY

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SAFETY EVALUATION REPORT
RELATING TO REQUEST FOR EXTENSION AND ADMINISTRATIVE CHANGES TO
CONSTRUCTION AUTHORIZATION NO. CAMOX-001
MIXED OXIDE FUEL FABRICATION FACILITY
DOCKET NO. 70-3098

1.0 INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) issued a Construction Authorization (CA) to Duke, Cogema, Stone and Webster (subsequently known as Shaw AREVA MOX Services and now known as CB&I AREVA MOX Services or MOX Services) in March 2005 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML050660390), authorizing construction of the Mixed Oxide Fuel Fabrication Facility (MFFF) on the Savannah River Site in Aiken, South Carolina. Currently, CA CAMOX-001 specifies March 30, 2015, as the expiration date for the CA.

In a May 12, 2014, letter (ADAMS Accession No. ML14132A342), MOX Services submitted a CA extension request. In that letter, MOX Services requested that the CA be extended from March 30, 2015 to March 30, 2025. In addition, the staff has made two administrative changes to the CA. This first change consists of the removal of the list of submittals incorporated by reference in Attachment A of the CA. This change is being made as a housekeeping item to avoid any potential confusion regarding licensing commitments. The second change that was made was a revision in company name from Shaw AREVA MOX Services to CB&I AREVA MOX Services. This change was made based on a letter dated August 15, 2014 (ML14227A556). The request stated that there was no direct or indirect changes in ownership of the company.

2.0 EVALUATION

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70, "Domestic Licensing of Special Nuclear Material", the NRC issued CA No. CAMOX-001 for construction of a plutonium processing and fuel fabrication plant in March 2005.

At that time, the Commission made the following findings as required by the Atomic Energy Act of 1954, as amended (the Act), the Commission's rules and regulations, and by the requirements of Section 102(2)(A) and (C) of the National Environmental Policy Act (NEPA), as set forth in Construction Authorization No. CAMOX-001 (CA):

- a) The Construction Authorization complies with the requirements of the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission, and there is reasonable assurance that the activities authorized by this construction authorization, will be conducted in compliance with those rules and regulations,
- b) The design bases of the principal structures, systems, and components (PSSCs) for the MFFF, and the quality assurance program, provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents;

- c) After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs, and considering available alternatives, the issuance of a construction authorization, as revised, is in accordance with 10 CFR 70.23(a)(7), 10 CFR Part 51, and the requirements of Sections 102(2)(A) and (C) of the National Environmental Policy Act; and
- d) The issuance of the construction authorization will not be inimical to the common defense and security, and will not constitute an unreasonable risk to the health and safety of the public.

The Final Safety Evaluation Report (NUREG-1821) for the Construction Authorization Request (CAR), dated March 2005 relied, in part, on information provided in the applicant's CAR, dated October 31, 2002 (as subsequently revised). The results of the staff's environmental review are contained in NUREG-1767, "Environmental Impact Statement on the Construction and Operation of a Proposed Mixed Oxide Fuel Fabrication Facility at the Savannah River Site, South Carolina," dated January 2005 (ADAMS Accession Nos. ML050240233 and ML050240250).

MOX Services also submitted a License Application (LA) to possess and use radioactive material on September 26, 2006, with supplement thereto. The results of the NRC staff's review were documented in the Final Safety Evaluation Report for the License Application to Possess and Use Radioactive Material at the Mixed Oxide Fuel Fabrication Facility in December 2010 (ADAMS Accession No. ML103340354).

2.1 Request for Extension of the Expiration Date of the CA

Under the authorization within CAMOX-001 Rev. 3, MOX Services has made substantial progress in the construction of the MFFF with overall construction status in excess of 60 percent complete. Significant progress has been made in construction of Principal Structures, Systems, and Components (PSSCs) and other non-PSSCs. For example, the MOX Fuel Fabrication Building (PSSC-036) is substantially complete, including roof and exterior structure, with only Temporary Construction Openings remaining. More than 200,000 pounds of HVAC ductwork (PSSC-004, -005, -006, -041, -050) have been installed. Seventy of 73 tanks have been installed (PSSC-003, -009, -010, -023, -041, 043, -045). Approximately 20 gloveboxes (PSSC-024) have been installed. Installation of approximately 1000 fire dampers (PSSC-021) has commenced. These PSSC activities have been completed in accordance with MOX Services' NRC-approved Quality Assurance Plan (MPQAP). Construction activities that are not related to PSSCs include completion of the Administration Building, Technical Support Building, Craft Support Building, and Secured Warehouse, as well as the installation of more than 70,000 linear feet of non-PSSC electrical cable. In addition, MOX Services has completed in-advance testing of 27 process units.

While significant progress has been made on construction of the MFFF, additional time is required for completion of construction. Key structures remaining to be constructed include the Emergency Generator Building (PSSC-016) and the Reagents Processing Building (non-PSSC). Other key PSSC-related construction activities remaining include completing installation of ventilation systems (PSSC-004, -005, -006, -041, -050), including fire dampers (PSSC-021), fire detection and suppression system (PSSC-022), diesel generator and support systems (PSSC-012, -017, -018), process units (various PSSCs), and gloveboxes (PSSC-024). These activities are authorized under CAMOX-001 Rev 3 and will be constructed in accordance with the MPQAP.

MOX Services stated in their May 12, 2014, request that various factors contributed to the need for an extension of the CA. The factors include: (a) the MFFF is a unique first of a kind facility of this type to be licensed in the United States under 10 CFR Part 70; (b) annual funding/appropriations supporting construction activities have been less than the projected expected funding profile for several years; (c) requirements of nuclear procurements coupled with a shortage of qualified vendors have resulted in delayed delivery of components; (d) a shortage of qualified construction workers have resulted in longer durations for key construction activities, and (e) a 2-year delay between issuance of the CA and the start of nuclear construction.

As conditioned in the CA, the Director of the Office of Nuclear Material Safety and Safeguards may, in writing and for good cause shown by MOX Services, and not less than 90 days before the date of expiration, extend the authorization.

The staff has reviewed the request in order to evaluate whether MOX Services has shown "good cause" for the CA extension. The extension increases the amount of time to complete construction and does not alter any other aspect of the construction authorization. Further, MOX Services has demonstrated that: a) the proposed extension will not expand the scope of any work to be performed that is not already allowed by the existing construction authorization; b) the factors for requiring an extension to the CA were beyond MOX Services control and are logical; and c) the time requested is reasonable based on the uncertainty of funding for construction. Ultimately, the extension will grant MOX Services additional time to complete construction in accordance with the previously approved CA. Therefore, the staff has found that MOX Services has demonstrated the requisite "good cause" for the CA extension.

Additionally the requested extension does not impact the staffs' previous findings for 10 CFR 70.23(b) that the design basis of the Principal Structures, Systems and Components and the quality assurance program provide reasonable assurance against natural phenomena and the consequences of potential accidents. The staff has reasonable assurance that the requirements stated in 10 CFR 70.23(b) will continue to be met since the extension request does not impact the scope of construction activities that were approved in the CA. Therefore, the NRC staff finds that the requested extension is acceptable.

2.2 Administrative Changes to the Construction Authorization.

2.2.1 Removal of Attachment A from the CA

The NRC staff is removing the list of submittals incorporated by reference in Attachment A of the CA. This change is being made as a housekeeping item to avoid any potential confusion regarding commitments in the CA. All of the commitments, representations and statements made in the referenced documents from the attachment were incorporated into the construction authorization request, environmental report and the license application to possess and use radioactive material. Therefore, the conditions in Sections 3A and 3C of the CA supersede the references included in Attachment A, and the attachment is no longer needed. The attachment to the CA has therefore been deleted. This administrative change does not impact the staffs' previous finding that the design basis of the Principal Structures, Systems and Components and the quality assurance program provide reasonable assurance against natural phenomena and the consequences of potential accidents.

2.2.2 Change in Company Name on the Construction Authorization

The CA holder requested a name change based in a letter dated August 15, 2014, (ML14227A556). The name change does not reflect any change of direct or indirect control of the company or any other change in management, operation or security. The name of the company will now be known as CB&I AREVA MOX Services instead of Shaw AREVA MOX Services.

3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, "Criteria for and Identification of Licensing and Regulatory Actions Requiring Environmental Assessments," the NRC staff determined that an environmental assessment was required for the extension of the CA.. Accordingly, the NRC staff prepared an environmental assessment pursuant to 10 CFR 51.30. Based on the environmental assessment, the NRC staff prepared, under 10 CFR 51.32, a finding of no significant impact for the proposed action. Pursuant to 10 CFR 51.35, "Requirement to Publish Finding of No Significant Impact; Limitation on Commission Action," the NRC published the final finding of no significant impact, which incorporated the environmental assessment, in the *Federal Register* on October 23, 2014 (79 FR 63442).

With respect to the name change and the removal of the references in Attachment A, these changes are administrative in nature and do not have a significant effect on the environment. These changes have been categorically excluded from environmental review pursuant to 10 CFR 51.22(c)(10).

4.0 CONCLUSION

The NRC staff finds that MOX Services has shown good cause to extend the completion date for construction to March 30, 2025. The requested extension does not impact the staffs' previous finding that the design basis of the Principal Structures, Systems and Components and the quality assurance program provide reasonable assurance against natural phenomena and the consequences of potential accidents.

The staff has also made two administrative changes to the CA. This first change consists of the removal of the list of submittals incorporated by reference in Attachment A of the CA. All of the commitments, representations and statements made in the referenced documents were incorporated into the CAR, ER, and the LA MFFF to possess and use radioactive material. Therefore, the conditions in Sections 3A and 3C of the CA supersede the references included in Attachment 3 and the attachment is no longer needed. The second changes consists of a Corporate name change on the CA. The name change does not reflect any change of direct or indirect control of the company or any other change in management, operation or security. The name of the company will now be known as CB&I AREVA MOX Services instead of Shaw AREVA MOX Services.

Principal contributor: David Tiktinsky