



DCS-NRC-000452  
16 March 2017

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Subject: Docket No. 070-03098  
Construction Authorization No CAMOX-001  
CB&I AREVA MOX Services Reply to Notice of Violation 70-3098/2016-004-001

Reference 1: Letter from Michael Ernestes to David Del Vecchio dated 2 February 2017 entitled “Mixed Oxide Fuel Fabrication Facility – NRC Inspection Report 70-3098/2016-004 and Notice of Violation”

On behalf of CB&I AREVA MOX Services, please see the attached reply to the Notice of Violation (VIO) contained in Reference 1. Note a two week extension to 17 Mar 17 for submitting the reply was agreed to in a telephone conversation between Eric Radford of CB&I AREVA MOX Services and Mike Ernestes from NRC Region II on 2 March 2017.

Following the issuance of the referenced violation, MOX Services initiated Non-Conformance Report (NCR) NCR-17-7470, for which Engineering provided a “Rework” disposition of the flange bolts. Work package additional steps (AS) were developed and implemented for Construction Craft to rework bolts to snug-tight, Construction Engineer to witness bolts are snug-tight, and Quality Control to verify the bolts for snug-tight conditions. The ASs were completed and NCR-17-7470 closed. The bolts referenced in the subject violation are snug tight.

It is worth noting that while CB&I AREVA MOX Services strives to follow all NRC regulations in constructing the MOX Fuel Fabrication Facility (MFFF), there were a small number of bolts in question in an area of unfinished ventilation. As we enter the final years of construction, CB&I AREVA MOX Services will continue working closely with NRC inspectors to construct our facility with quality and compliance as keystones of our efforts.


Condition Report (CR) CR-16-396 was written to address the conditions that led up to the NRC issuance of the subject violation. The CR is in process and has identified the Action Items listed below.

1. Walk downs of HVAC flange bolts for snug-tight conditions will be performed to determine if re-inspections are needed. Sampling will be based on the walk down results and management direction.
2. Revise work package template to include work steps that appropriately document adjustment of previously tightened duct flanges and include re-inspection activities.
3. Issue lessons learned with focus on Work Performed without Proper Documentation.

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We are confident that these corrective actions will prevent further recurrence of this condition. If you have any questions, please contact me at (803) 442-6485, or Eric Radford, Regulatory Compliance Manager, at (803) 819-8625.

Sincerely,



David Del Vecchio  
President and Project Manager

Enclosure:

CB&I AREVA MOX Services Reply to a Notice of Violation

cc: (w/ enclosure)

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Enclosure  
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70-3098/2016-004-001

## Notice of Violation (VIO)

- A. Condition 3.A of NRC Construction Authorization (CA) No. CAMOX-001, Revision 2, dated June 12, 2008, authorizes, in part, the applicant to construct a plutonium processing and mixed oxide fuel fabrication plant in accordance with the statements, representations, and conditions of the MOX Project Quality Assurance Plan (MPQAP) dated March 26, 2002, and supplements thereto (MPQAP, Rev. 15).

The MPQAP, Section 5.1, states in part that, “Quality-affecting activities are prescribed by and performed in accordance with documented, approved quality assurance (QA) procedures and other approved implementing documents (drawings, specifications, etc.) appropriate to the MOX Project work scope. MOX Services DCS01-QGA-DS-SPE-V-15890-8, Construction Specification, Ductwork Fabrication and Installation Quality Level 1 (IROFS), Section 3.3.1.22 states in part that, “Fasteners for all ductwork shall be snug tight and provide for even compression of the gaskets. Snug tight shall be defined as the condition that exists when all plies in a connection have been pulled into firm contact by the bolts in the joint, and all the bolts in the joint have been tightened sufficiently to prevent the removal of the nuts without the use of a wrench.”

Contrary to the above, from on or around December 23, 2015 to October 28, 2016, MOX Services failed to adhere to specification DCS01-QGA-DS-SPE-V-15890-8, in that bolts used in assembling HSA ductwork in Room B360 were found to be less than snug tight after final assembly. Specifically, at least one bolt was found to spin freely by hand alone as previously identified in NRC NCV 70-3098/2016-01-02 and documented in the applicant’s corrective action program as condition report CR 16-132 on March 22, 2016.

This is a Severity Level IV violation (VIO), 70-3098/2016-004-001 (Enforcement Policy 6.5.d).

## **Reply to a Notice of Violation**

MOX Services does not dispute NRC Violation (VIO) 70-3098/2016-004-001 addressing the bolts found to be less than “Snug-Tight” following final inspection. CR-16-132 concluded that the bolts would be checked again for snug-tight before pressurizing the system and the CR was closed. This response failed to correct the condition cited in the Non-Cited Violation 70-3098/2016-001-02 or provide adequate assurance that the bolts would be tightened prior to system leak testing.

### ***Reason for the Violation***

The CR investigation deferred tightening the bolts at time of discovery, stating in part “that the bolts would be tightened prior to system testing.” Based on this premise, all bolts in the Emergency Supply Air (HSA) System would be tightened prior to testing, thus eliminating the need to perform an in-depth extent of condition analysis as part of the CR investigation. However, the investigation failed to verify processes were in-place to ensure that the bolts were tightened prior to system testing. Subsequent to the CR closure, it was discovered that a formal process did not exist to provide reasonable assurance that the loose bolts would be tightened prior to system testing.

### ***Corrective Steps That Have Been Taken and the Results Achieved***

- NCR-17-7470 was issued to disposition the loose flange bolts cited in NRC Violation 70-3098/2016-004-001. Bolts were confirmed snug tight by Quality Control Inspector on 13 March 2017.
- CR-16-396 was written to address “Failure to issue a NCR Related to the hardware condition identified in CR-16-132.”

### ***Corrective Steps That Will Be Taken***

- Walk downs of HVAC flange bolts for snug-tight conditions will be performed to determine if re-inspections are needed. Sampling will be based on the walk down results and management direction.
- Revise work package template to include work steps that appropriately document adjustment of previously tightened duct flanges and include re-inspection activities.
- Issue lessons learned with focus on Work Performed without Proper Documentation.

### ***Date When Full Compliance Will Be Achieved***

Actions taken to resolve Violation 70-3098/2016-004-001 will complete on 1 September 2017.