



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

DCS-NRC-000413  
07 January 2016

Subject: Docket Number 070-03098  
CB&I AREVA MOX Services  
Mixed Oxide Fuel Fabrication Facility  
Part 21 Report Notification

This letter provides information concerning an evaluation performed by CB&I AREVA MOX Services, LLC (MOX Services) regarding a defect identified by MOX Services. The defect pertains to the adequacy of structural welds due to the presence of contaminants near structural weld heat affected zones for two gloveboxes. MOX Services has concluded that this is a reportable condition in accordance with the requirements of 10CFR 21.21(d).

The information required for a Report Notification per §21.21(d)(4) is provided in the Enclosure.

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:

Report Notification Information per §21.21(d)(4)

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**Enclosure**

**Report Notification Information per §21.21(d)(4)**

**Report Notification Information per §21.21(d)(4)**

- (i) Name and address of the individual or individuals informing the Commission.

David Del Vecchio  
President and Project Manager  
CB&I AREVA MOX Services  
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P.O. Box 7097  
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- (ii) Identification of the facility, the activity, or the basic component supplied for such facility which fails to comply or contains a defect.

The Mixed Oxide Fuel Fabrication Facility is addressing the discovery of foreign liquid within the structural tube steel frames of ball milling gloveboxes NBX\*GB1000 and NBY\*GB1000.

- (iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Ball milling gloveboxes NBX\*GB1000 and NBY\*GB1000 were being supplied to MOX Services as a basic component by Flanders CSC.

- (iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

Ball milling gloveboxes NBX\*GB1000 and NBY\*GB1000 were two of the seventeen additional gloveboxes that were identified in a December 14, 2012 Part 21 Report issued by MOX Services due to use of an incorrect welding process (Gas Metal Arc Welding) for certain welded connections during glovebox fabrication.

During weld repairs associated with the earlier Part 21 report, MOX Services' third party vendor discovered foreign liquid trapped within a portion of the tube steel frames of the NBX and NBY gloveboxes. The foreign liquid and dried substances (remnants of the original fabrication processes) were determined to contain contaminants not allowed to be present during welding operations. Due to the presence of contaminants potentially in the vicinity of most of the structural weld heat affected zones, MOX Engineering determined it necessary to metallurgically examine, through additional sampling, some of these welds in order to obtain reasonable assurance the welds can perform their design function. However, MOX Services has concluded that removal of these welds as part of the sampling process would damage the structure of these GBs beyond practical repair. Therefore the decision was made to rebuild these gloveboxes rather than sample the welds to determine their adequacy.

Although the NBX and NBY gloveboxes were part of the earlier 2012 Part 21 report, they are being reported as a defect herein because of the indeterminate nature of the glovebox welds and associated potential degradation of the gloveboxes confinement function. This functional degradation would not result from use of an improper weld process as identified in the earlier report but instead would result from the lack of maintaining cleanliness controls during fabrication.

- (v) The date on which the information of such defect or failure to comply was obtained.

Information related to the foreign liquid sampling was provided to MOX Services on November 12, 2015.

- (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

MOX Services does not possess information as to whether other facilities have been supplied a similar basic component by Flanders CSC.

- (vii) The corrective action, which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

It is anticipated that ball milling gloveboxes NBX\*GB1000 and NBY\*GB1000 will be rebuilt rather than continuing with repairs by MOX Services' third party vendor. MOX Services anticipates that rebuild of the NBX and NBY gloveboxes will be completed during fiscal year 2018.

- (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

None at this time.

- (ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

Not applicable.