



Savannah River Site Watch

**Savannah River Site Watch
Media Alert
For Immediate Release
July 29, 2016**

CB&I AREVA MOX Services Issued Two Violations by U.S. Nuclear Regulatory Commission for Improper Documentation for Safety-Related Components to Support Floor Panels in MOX Plant

NRC's Office of Investigations Reviews Allegation of False Welding Documentation, Determines no "Willful Misconduct" by MOX Contractor (Specialty Maintenance Construction, Inc.)

NRC's MOX Plant Violation Report and Office of Investigations Report Linked in "Notes" Below

Columbia, SC – The U.S. Department of Energy's problem-plagued plutonium fuel (MOX) project has been hit with two "apparent violations" by the U.S. Nuclear Regulatory commission, which is monitoring construction of the facility.

Both violations issued to CB&I AREVA MOX Services, in a letter and report dated July 25, 2016, involve quality control matters related to "ledger assemblies" used to support floor panels in the part of the MOX facility that would be used to purify plutonium. The violations issued to MOX Services involve quality of components provided by the contractor Specialty Maintenance and Construction, Inc. (SMCI) and associated associated audits of that company:

The inspectors reviewed URI 70-3098/2015-002-001, Potentially Inadequate Welds on the Precast Floor Panel Ledgers in the Aqueous Polishing Building (BAP). Based on the results of the review, URI 70-3098/2015-002-001 was closed and the following two apparent violations (AVs) were identified:

1. AV 70-3098/2016-005-001: Failure to Adequately Perform Measures to Verify the Validity of Certificates of Conformance (CoCs) for Quality Level-1 Welded Ledger Assemblies. The ledgers were purchased from Specialty Maintenance and Construction, Inc. (SMCI) between November 2008 and June 2010. Specifically, MOX Services failed to verify that the CoCs identified MOX Services' specific procurement requirements for the ledgers and that the purchased ledgers met the requirements (Section 2.a).
2. AV 70-3098/2016-005-002: Failure to Conduct Adequate Audits of SMCI. Specifically, the audit reports for the ledger assembly supplier (SMCI) did not document objective evidence of inspections or surveillances related to manual welding during their audits (Section 2.a).

The NRC report goes on to state that the violations indicate a "breakdown" in the Quality Assurance (QA) program of CB&I AREVA MOX Services:

The two apparent violations appear to represent a breakdown in MOX Services' QA program for construction related to a single work activity (structural welding), and involved MOX Services' failure to provide adequate oversight to this activity, and entails multiple examples (approximately 100 ledgers) of deficient construction as the result of inadequate program implementation. No actual personnel safety nuclear safety consequences resulted from the deficient ledger assembly welds.

Further, the NRC stated in the violation report that if uncorrected the faulty ledgers could have safety implications during MOX plant operation: "Without correction of the ledger deficiencies, any failures during future operations of the facility could have affected worker safety for workers in the rooms, and could have caused the failure of safety-related equipment in the impacted rooms, as well as cause other potential consequences."

The NRC has given CB&I AREVA MOX Services the opportunity to respond to the violations, including a description of "the potential consequences of ledger failures during operations" and the corrective actions to be taken to address the cited problems.

"Given the complexity of the MOX plant construction and indications of safety-related construction problems, it is incumbent upon the NRC to conduct in-depth investigations," said Tom Clements, director of Savannah River Site Watch. "I hope that the issuance of these violations is an indication that the NRC is properly performing its duties but given the size of the task at hand it remains unclear if the NRC is up to the task at hand. It is of highest concern that the NRC cited a breakdown in the Quality Assurance program of CB&I AREVA MOX Services, a matter that must be immediately addressed and corrected," added Clements.

In another matter, the NRC issued a report, dated July 26, concerning an Office of Investigations review of an allegation concerning falsification of quality-control documents for ledger assemblies. The allegations, made by unknown entities, concerned false documentation of welds by a quality-control inspector with Specialty Maintenance Construction, Incorporated (SMCI), a contractor for CB&I AREVA MOX Services at the MOX project.

The NRC's report finds no evidence to support the allegation, due to passage of time, but notes a "high failure rate" of SMSI components:

In this case, the NRC investigation and subsequent NRC staff review concluded that there was no evidence to support that any kind of deliberate or willful misconduct occurred and no signs or indications that SMCI falsified any records or documents during the course of the MFFF work, even though they failed to meet the technical specifications of the ledger assemblies. The passage of a lengthy amount of time and the lack of evidence in this case resulted in the inability to identify any willful misconduct, despite the high failure rate of the SMCI components.

The NRC's Office of investigations went on to say in the report that "The findings point to inadequate training, a vendor going through a learning curve for nuclear work, and vague work instruction packages. Since this situation was identified, SMCI has made improvements and changes to their nuclear program to meet the higher specifications of nuclear work."

On July 26, staffers from the Senate's Energy and Water Subcommittee – funds DOE programs – and staff from Senator Graham's office toured SRS, including the MOX construction site and plutonium storage and downblending facilities in K-Area. It is believed that construction problems at the MOX facility were discussed with Senate staff.

Notes:

1. MIXED OXIDE FUEL FABRICATION FACILITY- NRC INSPECTION REPORT NUMBER 70-3098/2016-005 AND APPARENT VIOLATIONS – from NRC, July 25, 2016:

<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML16207A604>

2. NRC report, July 25, 2016 - CB&I AREVA MOX SERVICES: OFFICE OF INVESTIGATIONS REPORT NO. 2-2015-036:

<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML16209A058>

3. MIXED OXIDE FUEL FABRICATION FACILITY- NRC INSPECTION REPORT NUMBER 70-3098/2015-002, July 23, 2015 – discusses NRC inspection, including this on “ledger assemblies”: The inspectors observed completed welding and installation of supporting structures in the Aqueous Polishing Building (BAP). Observations included the completed welding and installation of ledger assemblies that support pre-cast floor panels in the BAP. An unresolved item (URI) associated with potentially inadequate welds on the pre-cast floor panel ledgers in the BAP was identified (Section 3.a).”

<http://www.nrc.gov/docs/ML1520/ML15204A252.pdf>

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(Note: I will be in Japan from August 1-11, speaking on proliferation issues, including US plutonium disposition and the mismanaged MOX project.)