



**MITSUBISHI HEAVY INDUSTRIES, LTD.**  
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TOKYO, JAPAN

September 15, 2011

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

Attention: Mr. Jeffrey A. Ciocco

Docket No. 52-021  
MHI Ref: UAP-HF-11299

**Subject: Reply to Notice of Violation No. 05200021/2011-201**

**Reference:** 1) "NRC INSPECTION REPORT NO. 05200021/2011-201 AND NOTICE OF VIOLATION" dated August 9, 2011

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") the responses to Notice of Violation No. 05200021/2011-201 (Reference 1).

Please contact Dr. C. Keith Paulson, Senior Technical Manager, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of the submittals. His contact information is below.

Sincerely,

Yoshiki Ogata,  
General Manager- APWR Promoting Department  
Mitsubishi Heavy Industries, LTD.

Enclosures:

1. MHI Action Plan to Notice of Violation (NOV) for ECCS Sump Strainer Test at Alden Research Laboratory (ARL)

CC: J. A. Ciocco  
C. K. Paulson

Contact Information

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Docket No. 52-021  
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Enclosure 1

UAP-HF-11299  
Docket No. 52-021

MHI Action Plan to Notice of Violation (NOV)  
for ECCS Sump Strainer Test  
at Alden Research Laboratory (ARL)

September 2011

**MHI Action Plan to Notice of Violation (NOV) for ECCS Sump Strainer Test  
at Alden Research Laboratory(ARL)**

**NOV-A** (NRC Identification No. 05200021/2011-201-01)

**1. Content of NOV**

Criterion II, "Quality Assurance Program," of Appendix B to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, states, in part that, "the program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained."

AREVA Document No. 56-9141754-000, "Quality Assurance Program," Revision 0, dated August 15, 2010, Section 2.6, "QAP Indoctrination and Training," states that, "Personnel performing or managing activities affecting quality shall receive indoctrination in their job responsibilities and authority that includes general criteria, technical objectives, requirements of applicable codes and standards, regulatory commitments, company procedures, and quality assurance program requirements."

Contrary to the above, as of June 17, 2011, MHI, which has the overall responsibility for design certification testing activities, failed to verify that Alden Research Laboratory (ARL) personnel performing test activities in support of the US-APWR ECCS strainer performance testing for AREVA received all of the required training in accordance with AREVA Document No. 56-9141754-000. Specifically, three ARL employees were not trained to procedures AP 1302-01, "Document Control of Printed Hard Copies from the Electronic Document Control," and AP 1703-01, "Restraint Order," as required by AREVA AP

**2. Reason for the violation, or, if contested, the basis for disputing the violation or severity level**

Contrary to the requirements of Criterion II, "Quality Assurance Program", and AREVA procedure AP 1702-22, "Employee Training", AREVA failed to provide training for ALDEN employees to AREVA procedures AP 1302-01, "Document Control of Printed Hard Copies from the Electronic Document Control," and AP 1703-01, "Restraint Order".

**3. Corrective action steps that have been taken and the result achieved, and the corrective steps that will be taken to avoid further violations**

AREVA implemented CR 2011-4301 (closed 7/27/2011) to address training for affected Alden employees to AREVA procedures AP 1302-01, "Document Control of Printed Hard Copies from the Electronic Document Control," and AP 1703-01, "Restraint Order", fulfilling the requirements of AP-1702-22, "Employee Training".

AREVA verified that all affected ARL personnel performing test activities in support of the US-APWR ECCS strainer performance testing have received all of the required training in accordance with the requirements of AP-1702-22.

Impact on the strainer test resulting from lack of training to AP-1302-01 and AP-1703-01 was evaluated, and it was identified that there is no impact.

PCI:

Immediately prior to conducting the next QA testing, PCI will review the AREVA records to confirm that Alden personnel are trained to applicable procedures. If compliant, PCI will consider future review prior to QA tests optional.

MHI:

MHI will verify by review of objective evidence that AREVA CR 2011 4301 is closed.

**4. Date when full compliance will be achieved**

Full completion will be achieved by October 31<sup>st</sup>, 2011 when AREVA CR 2011-4301 is reviewed and accepted by PCI and MHI.

## **1. Content of NOV**

Criterion XI, "Test Control," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," states, in part, that "a test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents."

Criterion VI, "Document Control," of Appendix B to 10 CFR Part 50, states, in part, that "Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless the applicant designates another responsible organization."

Criterion V, "Instructions, Procedures, and Drawings," of Appendix B, to 10 CFR Part 50, states, in part, that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Section 5.1, "General," of AREVA Document 56-9141754, "Quality Assurance Program," Revision 0, dated August 15, 2010, states, in part, that "measures are established and documented to assure that activities affecting the quality of items are established in instructions, procedures, or drawings, and accomplished in accordance with these documents. Instructions, procedures, and drawings shall be prepared, reviewed, approved, and distributed before beginning the activity."

Section 6.2.2, "Document Change Control," of AREVA Document 56-9141754 states, in part, that "Changes and revisions to the documents listed in Section 6.1 shall have at least the same review and approval as the original document."

Section 6.1, "General," of AREVA Document 56-9141754 states, in part, that "Company procedures and instruction detail the methods for preparation, review, approval, revision, distribution, and use of documents. The following types of documents are controlled within the document control system: Technical Documents includes inspection, field, test, and special process procedures and documents..."

Contrary to the above, as of June 17, 2011, MHI, which has the overall responsibility for design certification testing activities, failed to verify that an activity affecting quality (i.e., testing) was accomplished using an approved procedure. Specifically, testing was performed in accordance with unapproved changes to Technical Document 63-9160802-000, "US-APWR Test Plan for ECCS Strainer Performance Testing 2011," Revision 0, dated June 3, 2011. These unapproved changes were made in the field by the AREVA test engineer and did not have the same review and approval as the original document as required by AREVA Document 56-9141754.

**2. Reason for the violation, or, if contested, the basis for disputing the violation or severity level**

Tests were performed at Alden lab on prototype equipment with the need for changes to the test plan while performing the test. These changes to the test plan (AREVA Technical Document 63-9160802-000) were not made in accordance with AREVA procedure 0504-10. The cause was due to a lack of understanding concerning the requirements of the AREVA procedure for review and approval of changes to the test plan..

**3. Corrective action steps that have been taken and the result achieved, and The corrective steps that will be taken to avoid further violations**

The Test Plan (AREVA document 63-9160802-000) was prepared, reviewed and approved prior to strainer performance testing that was performed at Alden Laboratories.

Though the intent of the test plan was not changed, the step modifications were changes warranting the required review and approval process per AREVA procedure 0504-14, "Prepared Site Documents", which is the procedure used to prepare the test plan and document testing. Strainer testing will use the Advance Change Notice (ACN) form or other approved means to document, review and approve changes to the test plan as the test is in process. This form and procedural use of the form are described in Section 7.7 of procedure 0504-14 and allows the test engineer to make changes, gain review and approval without the requirement of document re-issue. This form or other approved means will be used in future strainer tests to ensure the correct review and approval process is performed.

AREVA has generated CR 2011-6389 to correct this issue. The CR requires the following Corrective Action:

1. Test engineers responsible for strainer testing will be re-trained to ensure all changes are documented, reviewed, and approved using Advanced Change Notice sheet that is part of the 0504-14 procedure or other approved means in accordance with the AREVA QA program.

**IMPACT**

There is no impact to the results in strainer testing, nor was the intent of the test changed. Although the review and approval process of modifications within the test was not performed, all changes were documented within the test plan, reviewed, approved, and re-issued as revision 1 of the test plan.

PCI will track the closure of AREVA CR 2011-6389 for acceptance, and notify MHI of the results.

**4. Date when full compliance will be achieved**

Full completion will be achieved by October 31<sup>st</sup>, 2011 when AREVA CR 2011-6389 is reviewed and accepted by PCI and MHI.