

May 14, 2013
REL:13:024



U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Director, Division of Spent Fuel Storage
and Transportation
Office of Nuclear Material Safety and Safeguards
Washington, D.C. 20555-0001

Gentlemen:

Subject: Report of Non-Compliance with Conditions in Certificate of Compliance 9248 for the Model SP-1, SP-2, and SP-3 Licensed Shipping Containers; AREVA NP Inc. Richland, WA Facility

Attached please find information as required by 10 CFR 71.95(c) pursuant to shipments of fresh fuel assemblies in Model SP-1, SP-2, and SP-3 licensed shipping containers that did not technically comply with a dimensional requirement set forth in Revisions 19 and 20 of NRC Certificate of Compliance (COC) 9248 for those containers. An error was inadvertently introduced into Revision 19 of the certificate relative to description of the fuel assembly cross-sectional area (substitution of the term "square inches" for the correct term "inches square"). The changes had not been requested by AREVA nor were the changes highlighted as having been made in the revised COC. The errors were not caught in Revision 19, were carried over into Revision 20, and were not caught until Revision 21 was in progress.

The result of this editorial error was that all fuel assembly shipments made under Revisions 19 and 20 of COC 9248 were non-compliant with the erroneous fuel assembly cross-sectional area description in the certificate. This technical non-compliance had no safety impact in that the fuel assemblies were fully compliant with the correct cross-sectional criteria as set forth in the Model SP container Safety Analysis Report. The current COC 9248 certificate holder, Transnuclear, Inc., is aware of the past errors and has engaged with the NRC in their correction within Revision 21 of the COC.

If you have questions, please feel free to contact me at 509-375-8409.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Robert Link', with a stylized flourish at the end.

R. E. Link, Manager
Environmental, Health, Safety, & Licensing

AREVA NP INC.

NHSS01

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/mah

Attachment

Event Information Required by 10 CFR 71.95(c) Relative to Shipments of SP-1, SP-2 and SP-3 Packages That Did Not Meet the Content Requirements of NRC CoC 9248 Revisions 19 or 20 Sections 5(b)(1)(vi) or 5(b)(1)(ix)

(1) A brief abstract describing the major occurrences during the event, including all component or system failures that contributed to the event and significant corrective action taken or planned to prevent recurrence.

On March 27, 2013 an engineer in the AREVA NP BWR Neutronics group noted that in several locations in Section 5(b)(1) in NRC CoC 9248 Revision 20 (and also in Revision 19) for the Model SP-1, SP-2, and SP-3 packagings, the maximum fuel assembly cross section was described as 5.0 or 5.022 square inches when in reality it should have read 5.0 or 5.022 inches square (i.e 5" x 5"). A review of NRC CoC 9248 Revision 18 determined that the cross section dimensions in Revision 18 were correctly identified as inches square.

On January 20, 2009, AREVA NP requested a five year extension of NRC CoC 9248, with no changes to the Safety Analysis Report. On April 16, 2009, the NRC issued CoC 9248 Revision 19 stating that any changes in the certificate were indicated by vertical lines in the margin. The only sections in CoC 9248 Revision 19 marked with vertical lines in the right margin were sections 11, 12, 13, and 14. But, as stated above, the phrase "inches square" was erroneously changed to "square inches" in Sections 5(b)(1)(iii), 5(b)(1)(v), 5(b)(1)(vi), 5(b)(1)(vii), 5(b)(1)(ix), and 5(b)(1)(x) but were not noted as changes with vertical lines in the right margin, so the errors were not discovered by AREVA personnel when Revision 19 of the certificate was reviewed.

On June 28, 2012, AREVA requested an amendment to NRC CoC 9248 due to six minor changes to the SP-1, SP-2, and SP-3 Safety Analysis Report (SAR), EMF-1563 Revision 13. On November 20, 2012 the NRC issued Revision 20 of CoC 9248 that accepted the changes to the SAR. The previously cited errors in Section 5(1)(b) were continued in Revision 20.

In a letter dated March 26, 2013, AREVA NP Inc. requested the transfer of ownership of CoC 9248 to Transnuclear, Inc. (TN). As noted above, on March 27, 2013, AREVA NP personnel discovered errors in Section 5(b)(1) of the CoC. Also on March 27, 2013, AREVA NP personnel contacted Bernie White of the NRC Division of Spent Fuel Storage and Transportation, informing him of the errors found in Section 5(b)(1) of the CoC and requesting that the errors be corrected before issuing Revision 21 of the certificate.

On April 5, 2013, the NRC issued Revision 21 of CoC 9248 which corrected the phrase "square inches" to "inches squared" in Sections 5(b)(1)(iii), 5(b)(1)(v), 5(b)(1)(vi), 5(b)(1)(vii), 5(b)(1)(ix), and 5(b)(1)(x). It should also be noted that Revision 21 incorrectly changed Section 5(b)(1)(viii) from "25 square inches" (which was correct) to "25 inches squared" (which is not correct); but this fuel design is no longer shipped in the SP packagings.

As a result of the errors in Revisions 19 and 20 of CoC 9248, all domestic and international fuel assembly shipments made using the Model SP-1, SP-2, and SP-3 packages from April 16, 2009 to February 15, 2013 were in technical violation of the certificates because the fuel assembly cross sections exceeded the 5.0 square inches requirement in either Section 5(b)(1)(vi) (all domestic fuel assembly shipments using the packagings) or Section 5(b)(1)(ix) (all international fuel assembly shipments using the packagings).

There was no safety impact due to the non-conforming conditions since the fuel assemblies were actually compliant with the fuel assembly descriptions in the SP Safety Analysis Report.

For further discussion of corrective actions resulting from this event, see discussion under (4), below.

(2) A clear, specific, narrative description of the event that occurred so that knowledgeable readers conversant with the requirements of Part 71, but not familiar with the design of the packaging, can understand the complete event. The narrative description must include the following specific information as appropriate for the particular event.

A narrative of the event was provided under (1), above. NRC Certificate of Compliance (COC) 9248 Revision 19 and 20 for the Model Numbers SP-1, SP-2, and SP-3, Sections 5(b)(1)(vi) and 5(b)(1)(ix) state that the maximum fuel cross section is 5.0 square inches and as described above the actual fuel assemblies have a maximum fuel cross section of 5.0 inches square (or 25 square inches), thus all of the fuel assembly shipments were in violation of COC 9248 R19 and R20.

(i) Status of components that were inoperable at the start of the event and that contributed to the event;

As described above, the event involved errors in Revisions 19 and 20 of the certificate and not actual component problems.

(ii) Dates and approximate times of occurrences;

All fuel assembly shipments made from April 16, 2009 to February 15, 2013 using the Model SP-1, SP-2, and SP-3 packagings.

(iii) The cause of each component or system failure or personnel error, if known;

The NRC erroneously changed the phrase "inches square" to "square inches" before issuing Revision 19 of CoC 9248 and the errors were not caught by either NRC or AREVA personnel until March 27, 2013.

(iv) The failure mode, mechanism, and effect of each failed component, if known;

No failed components were involved in this event.

(v) A list of systems or secondary functions that were also affected for failures of components with multiple functions;

There were no component failures associated with this event.

- (vi) The method of discovery of each component failure or procedural error.

The conditions were found during a review of NRC CoC 9248 Revision 20.

- (vii) For each human performance-related root cause, a discussion of the causes and circumstances;

It is unknown to AREVA NP how the errors were introduced into Revision 19 of NRC CoC 9248.

- (viii) The manufacturer and model number (or other identification) of each component that failed during the event;

There were no component failures associated with this event.

- (ix) For events during the use of a packaging, the quantities and chemical and physical forms(s) of the package contents;

For each shipment, the contents consisted of BWR 10x10 fuel assemblies, containing a maximum of 203 kg of ≤ 5 weight percent ^{235}U solid uranium oxide pellets.

- (3) An assessment of the safety consequences and implications of the event. This assessment must include the availability of other systems or components that could have performed the same function as the components and systems that failed during the event.

There were no safety consequences as a result of this event.

- (4) A description of any corrective actions planned as a result of the event, including the means employed to repair any defects, actions taken to reduce the probability of similar events occurring in the future;

All new revisions to NRC and DOT certificates will be thoroughly reviewed by AREVA personnel to assure that any errors introduced into the certificate prior to issuance are caught as soon as possible and that the certificate owner is notified of any errors identified.

- (5) Reference to any previous similar events involving the same packaging that are known to the licensee or certificate holder.

AREVA NP is unaware of any previous similar events involving the SP-1, SP-2, and SP-3 packagings.

- (6) The name and telephone number of the person within the licensee's organization who is knowledgeable about the event and can provide additional information.

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(7) The extent of exposure to individuals to radiation or radioactive materials without identification of individuals by name.

This event did not involve the exposure of individuals to radiation or radioactive materials.