



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

September 24, 2012

Mr. Steven D. Capps  
Vice President  
McGuire Nuclear Station  
Duke Energy Carolinas, LLC  
12700 Hagers Ferry Road  
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNITS 1 AND 2, CORRECTION LETTER FOR APPROVAL LETTER AND SAFETY EVALUATION FOR RELIEF REQUEST 11-MN-002 REGARDING THE EXTENSION OF THE INSERVICE INSPECTION INTERVAL FOR REACTOR VESSEL CATEGORY B-A AND B-D WELDS (TAC NOS. ME7329 AND ME7330)

Dear Mr. Capps:

The U.S. Nuclear Regulatory Commission (NRC), by letter dated September 6, 2012 (Agencywide Documents Access and Management System Accession No. ML12250A401), approved relief request (RR) 11-MN-002 for the McGuire Nuclear Station, Units 1 and 2 (McGuire 1 and 2). Approval of the RR 11-MN-002 allowed the extension of the inservice inspection interval for reactor vessel Category B-A and B-D welds.

The approval letter for RR 11-MN-002 and the associated safety evaluation (SE) contained one error each. These errors, and the correct information, are as follows:

- (1) In the approval letter for RR 11-MN-002, in the subject line the RR identifier "10-MN-002" should be replaced with the proper identifier "11-MN-002."
- (2) In the SE, on page 6, in the first paragraph of Section 4.3, the second sentence should reference "Section 3.2" instead of "Section 2.3."

Enclosed are the corrected pages. If you have any questions, please call me at 301-415-1119.

Sincerely,

A handwritten signature in cursive script that reads "Jon Thompson".

Jon Thompson, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure:  
Correction pages

cc w/encl: Distribution via Listserv

# ENCLOSURE

CORRECTED PAGES FOR THE  
COVER LETTER AND SAFETY EVALUATION  
ASSOCIATED WITH THE APPROVAL OF  
RELIEF REQUEST 11-MN-002 FOR  
MCGUIRE NUCLEAR STATION, UNITS 1 AND 2



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

September 6, 2012

Mr. Steven D. Capps  
Vice President  
McGuire Nuclear Station  
Duke Energy Carolinas, LLC  
12700 Hagers Ferry Road  
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNIT 2, RELIEF 11-MN-002 TO EXTEND THE INSERVICE INSPECTION INTERVAL FOR REACTOR VESSEL CATEGORY B-A AND B-D WELDS (TAC NOS. ME7329 AND ME7330)

Dear Mr. Capps:

By letter dated October 3, 2011, as supplemented by letter dated March 29, 2012, Duke Energy Carolinas, LLC (the licensee) submitted a request, RR 11-MN-002, to the Nuclear Regulatory Commission (NRC) for the use of an alternative to the inservice inspection (ISI) requirements of the American Society of Mechanical Engineers *Boiler and Pressure Vessel Code* (ASME Code), Section XI, for specified ASME Code Class 1, Examination Category B-A and B-D reactor vessel (RV) welds at McGuire Nuclear Station, Unit 2 (McGuire 2).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.55a(a)(3)(i), the licensee requested the use of a proposed alternative to extend the third 10-year ISI interval for ASME Code Class 1, category B-A and B-D, RV welds for McGuire 2 specified in RR 11-MN-002 on the basis that the alternative provides an acceptable level of quality and safety.

The NRC staff has reviewed the subject request and concludes, as set forth in the enclosed safety evaluation, that the proposed alternative would provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the licensee's proposed alternative for the third 10-year ISI interval at McGuire 2.

All other ASME Code, Section XI, requirements for which relief was not specifically requested and authorized herein by the NRC staff remain applicable, including the third party review by the Authorized Nuclear In-service Inspector.

### 4.3 NRC Staff Evaluation

The NRC staff reviewed the information provided in RR 11-MN-002 to determine whether the licensee had adequately demonstrated that the risk-informed criteria of the WCAP are applicable on a plant-specific basis to McGuire 2 (a Westinghouse plant). This determination was made by verifying that the licensee had demonstrated that McGuire 2 is bounded by the Westinghouse pilot plant analysis from the WCAP with respect to the five criteria discussed above in Section 3.2 of this SE. By demonstrating that McGuire 2 is bounded by the Westinghouse pilot plant analysis from the WCAP, with respect to these five criteria, the licensee would have a sufficient technical basis for applying the risk-informed provisions of the WCAP to the McGuire 2 RV, and the Examination Category B-A and B-D RV weld examinations (the subject examinations) could be deferred, in accordance with the provisions of the WCAP and the implementation plan dated October 31, 2006.

For the first criterion specified for plant-specific application of the WCAP methodologies, the NRC staff reviewed the licensee's submittal to determine whether the deferred examination dates for the RV welds identified in RR 11-MN-002 were within plus or minus one refueling cycle of the dates identified in the WCAP implementation plan, or whether any deviations from the implementation plan were clearly discussed in the submittal. In its submittal, the licensee stated that the subject RV weld examinations for the third 10-year interval ISI program are currently scheduled to occur during the 2014 refueling outage at McGuire 2, in accordance with ASME Code, Section XI requirements. The WCAP's implementation plan states that if the licensee for McGuire 2 receives NRC authorization for an alternative to defer the subject RV weld examinations per the criteria of the WCAP, then the subject RV weld examination will be deferred until the 2024 refueling outage. The NRC staff verified that Table 2 of RR 11-MN-002 identifies that the future examinations of the subject welds will be deferred until 2024, consistent with the WCAP implementation plan. Therefore, the NRC staff found that the licensee satisfied the first criterion for plant-specific application of the WCAP methodologies.

For the second criterion specified for plant-specific application of the WCAP methodologies, the NRC staff reviewed the licensee's submittal to determine whether the licensee adequately reported the number of past inspections of the RV welds, the results of the previous ISI for the RV welds, and the methodology used for performing these inspections. The NRC staff also reviewed the licensee's submittal to determine whether any recordable indications discovered in the RV beltline region during the previous ISI are bounded by the limits set in 10 CFR 50.61a. The licensee provided information concerning the inspection methodology, the number of past inspections, and the results of the previous ISI for the McGuire 2 RV in Table 2 of RR 11-MN-002.

The licensee stated that two previous ISI examinations of Examination Category B-A and B-D RV welds have been performed to date. The licensee stated in Table 2 of RR 11-MN-002 that the most recent volumetric examination of the subject welds for the second 10-year interval ISI program was performed using the performance demonstration requirements of the ASME Code, Section XI, Appendix VIII, and future volumetric inspections will be performed in accordance with these same requirements. The licensee also stated that during the most recent ISI, ASME Code Case (CC) N-648-1, "Alternative Requirements for Inner Radius Examinations of Class 1 Reactor Vessel Nozzles, Section XI, Division 1," was invoked as an alternative to the ASME Code, Section XI requirements. ASME CC N-648-1 permits a visual examination in lieu of a

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Sincerely,

*/RA/*

Jon Thompson, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure:  
Correction pages

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ADAMS Accession No. Package ML12264A337 RR 11-MN-002 ML12249A175 Correction Letter ML12264A338

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|--------|---------------|---------------|---------------|---------------|
| OFFICE | NRR/LPL2-1/PM | NRR/LPL2-1/LA | NRR/LPL2-1/BC | NRR/LPL2-1/PM |
| NAME   | JThompson     | SFiguroa      | RPascarelli   | JThompson     |
| DATE   | 09/24/12      | 09/20/12      | 09/24/12      | 09/24/12      |

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