



DHIAA M. JAMIL
Group VP, Nuclear Support
Nuclear Generation

526 South Church St.
Charlotte, NC 28202

Mailing Address:
EC07H / PO Box 1006
Charlotte, NC 28201-1006

704 382 6191

704 382 6056 fax

dmjamil@duke-energy.com

November 16, 2006

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

**SUBJECT: Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC
(Duke)
McGuire Nuclear Station Unit 2
Docket Number 50-50-370
Catawba Nuclear Station Unit 1
Docket Numbers 50-413
Revision to Relief Request 06-GO-001**

On July 27, 2006 Duke submitted Relief Request 06-GO-001 pursuant to 10 CFR 50.55a(a)(3)(i), requesting NRC approval to use alternatives to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI inservice inspection (ISI) requirements for the McGuire and Catawba Nuclear Stations, Units 1 & 2. This proposed alternative approach is to support application of full structural weld overlays on various pressurizer nozzle-to-safe end welds and will provide an acceptable level of quality and safety.

On August 30, 2006, the NRC Staff electronically requested additional information regarding several issues contained within the relief request. Duke submitted a response to this request on September 11, 2006.

The NRC requested further clarification to the relief request during a conference call on September 20, 2006. On September 27, 2006 Duke submitted a revised relief request 06-GO-001 that incorporated all previous correspondence as well as the clarifications requested during the September 20, 2006 conference call. This revised relief request further stated that Duke was withdrawing relief request 06-GO-001 for McGuire Unit 1 and Catawba Unit 2 making the revised relief request applicable to only McGuire Unit 2 and Catawba Unit 1.

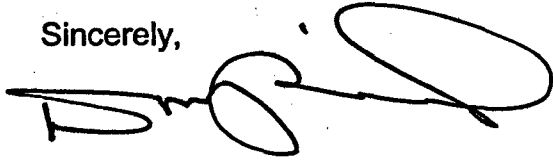
The NRC granted temporary verbal approval for McGuire Unit 2 for relief request 06-GO-001 on September 28, 2006.

On November 3, 2006 Duke determined that a statement in Table A3, Modifications to Code Case N-638-1, of the September 27, 2006 submittal could be misinterpreted. Duke notified the NRC by phone and is sending Enclosure 1 to this letter as follow-up clarification of the issue.

Nuclear Regulatory Commission
November 16, 2006
Page 2

If you have any questions or require additional information, please contact Mary Shipley at (704) 382-5880.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dhiam Jamil', with a large, stylized flourish at the end.

Dhiaa M. Jamil

Enclosure

**Nuclear Regulatory Commission
November 16, 2006
Page 3**

**W. D. Travers, Region II Administrator
U.S. Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center, 23 T85
61 Forsyth St., SW
Atlanta, GA 30303-8931**

**J. F. Stang, Jr., Senior Project Manager (CNS & MNS)
U. S. Nuclear Regulatory Commission
11555 Rockville Pike
Mail Stop 0-8 H 4A
Rockville, MD 20852-2738**

**J. B. Brady
NRC Senior Resident Inspector
McGuire Nuclear Station**

**A. T. Sabisch
NRC Senior Resident Inspector
Catawba Nuclear Station**

Duke has determined that Table A3 "Modifications to Code Case N-638-1" of the subject relief request, the reference to modification of section 1.0(a) could be interpreted in a way not intended by the author or original internal Duke reviewers. The phrase "and the depth of the WOL shall not be greater than one-half of the ferritic base metal thickness" could be interpreted to mean that the thickness of the weld overlay would not exceed one-half the thickness of the ferritic substrate. The words in the original submittal were copied from N-638-1 with no intent to apply such a limit to the overlay thickness. The reasons for not applying this limit to the overlay thickness are more fully described below.

In the context of Code Case N-638-1, paragraph 1, the term depth refers to a depth of preparation for a repair weld that will be implemented using the temperbead process described in the code case. Since no analysis is required by the code case, it is our understanding that the one-half thickness limit was included in the code case as a conservative measure to assure that there would be sufficient material to support the weld shrinkage stresses that would be generated by the constraint of a deep cavity in a component. The code case was not written for overlay type applications and is not specific enough to be used without modification for this type application.

In the context of the current Duke application, depth of preparation is not applicable because the overlay requires no preparation other than surface clean-up prior to application of the overlay. In the case of the pressurizer overlays at all the Duke units, the overlay configuration has been modeled and the residual stresses in the weld calculated. These calculations show that stresses generated by the overlay will not have any detrimental effect on the performance of the component for the life of the overlay. The temperbead process was qualified in accordance with the requirements of the code case and tested to show there would not be detrimental effects on the strength and toughness of the material. Therefore the qualification and analysis have demonstrated the acceptability of the overlay for the intended pressure retaining service.

To clarify the intent of the relief request, Table A3 has been modified as shown on the next page.

Table A3
Modifications to Code Case N-638-1

Code Case N-638-1	Modification/Basis
<p>Weld Area 1.0(a) The maximum area of an individual weld based on the finished surface shall be 100 sq. inch, and the depth of the weld shall not be greater than one-half of the ferritic base metal thickness.</p>	<p>Modification: The maximum area of an individual weld based on the finished surface <i>over the ferritic material</i> will not exceed 500 square inches. The depth of the weld is not applicable to the WOL configuration and is not addressed in this request.</p> <p>Basis: <i>The maximum area of the WOL for the surge line nozzle will be approximately 120 sq-in over the ferritic material. An ASME white paper providing technical justification for extending the area limitation to 500 sq. inch was published by the ASME Code Committees. As previously noted in the text, this white paper has been submitted to the NRC for their use.</i></p> <p><i>In the context of Code Case N-638-1, paragraph 1.0 (a), the term depth refers to a depth of preparation for a repair weld that will be implemented using the temperbead process described in the code case. Depth of preparation is not applicable because the WOL process requires no preparation other than surface clean-up prior to application of the overlay. It is our understanding that the one-half thickness limit was included in the code case as a conservative measure to assure that there would be sufficient material to support the weld shrinkage stresses that would be generated by the constraint of a deep cavity in a component. The code case was not written for overlay type applications and is not specific enough to be used without modification for this type application</i></p>