



GARY R. PETERSON
Vice President
McGuire Nuclear Station

Duke Power
MGO1VP / 12700 Hagers Ferry Rd.
Huntersville, NC 28078-9340

704 875 5333
704 875 4809 fax
grpeters@duke-energy.com

February 9, 2007

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

Subject: Duke Power Company LLC d/b/a Duke Energy Carolinas,
LLC (Duke)
McGuire Nuclear Station, Units 1 and 2
Docket Numbers 50-369 and 50-370
Inspection and Mitigation of Alloy 82/182 Pressurizer
Butt Welds

In October of 2006, while performing inspections of its pressurizer Alloy 82/182 butt welds in accordance with MRP-139, "Primary System Piping Butt Weld Inspection and Evaluation Guideline," a pressurized water reactor licensee discovered several circumferential indications in its pressurizer surge, safety, and relief nozzles. Because of the potential importance of this issue, Duke is submitting this letter to notify the NRC regarding McGuire's actions taken or planned for inspecting or mitigating Alloy 600/82/182 butt welds on pressurizer spray, surge, and relief lines.

This letter contains two attachments. Attachment 1 is a description of the current Reactor Coolant System (RCS) leakage monitoring program for McGuire Units 1 and 2. Attachment 2 is a compilation of the inspection and mitigation effort for pressurizer Alloy 600/82/182 butt welds for McGuire Units 1 and 2. Details concerning the locations inspected and mitigated are provided in Attachment 2. Future inspections of pressurizer butt welds at McGuire Units 1 and 2 will be performed in accordance with the ASME Code and MRP-139.

The NRC will be informed if McGuire revises any of the information contained in this letter.

U.S. Nuclear Regulatory Commission

February 9, 2007

Page 2

Our staff is available to meet with the NRC to discuss any of the information contained in this letter. If there are any questions, please contact P.T. Vu at (704) 875-4302.

Very truly yours,

A handwritten signature in black ink, appearing to read "Gary R. Peterson". The signature is fluid and cursive, with a large initial "G" and "P".

Gary R. Peterson

Attachments

U.S. Nuclear Regulatory Commission
February 9, 2007
Page 3

xc (with attachments):

W.D. Travers, Regional Administrator
U.S. Nuclear Regulatory Commission, Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303

J.B. Brady, Senior Resident Inspector
U.S. Nuclear Regulatory Commission
McGuire Nuclear Station

J.F. Stang, Jr., Senior Project Manager
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Mail Stop O-8 H4A
Rockville, MD 20852-2738

Attachment 1

RCS Leakage Monitoring Information for McGuire Units 1 and 2

A water inventory balance program monitors reactor coolant leakage with established limits for continued operation specified in the technical specifications. This program will measure any leakage from components and small diameter nozzles as unidentified system leakage, which has an established operational limit of less than 1.0 gallon per minute. More restrictive plant procedures require an assessment of potential leak sources whenever unidentified leakage exceeds 0.15 gallon per minute (unidentified leakage calculations are typically performed every 24 hours). If leakage exceeds the more restrictive limit and the leak source remains unidentified, plant management would assess what additional leak investigation activities are required, or if plant shutdown is necessary.

If leakage increases based on the mass balance, limited walk downs at power would be performed to identify the source of the leakage. Evidence of leakage is evaluated and resolved through the corrective action program and Fluid Leak Management Program.

Attachment 2

McGuire Unit 1 Inspection and Mitigation Summary for Alloy 600/82/182 Pressurizer Butt Welds

Nozzle		MRP-139 Volumetric Inspection Requirement Met or to be Met		Mitigation to be Completed	Comments
Function / Designation	Susceptible Material Description	Outage Designation	Start Date	Outage Designation	
Spray 1PZR-W2SE	Nozzle to safe-end weld	NA ¹	NA ¹	1EOC18 3/2007	Bare Metal Visual ² per NRC Bulletin 2004-01: 1EOC17, 9/2005.
Surge 1PZR-W1SE	Nozzle to safe-end weld	NA ¹	NA ¹	1EOC18 3/2007	Bare Metal Visual ² per NRC Bulletin 2004-01: 1EOC 17, 9/2005.
Safety 1PZR-W4CSE	Nozzle to safe-end weld	NA ¹	NA ¹	1EOC18 3/2007	Bare Metal Visual ² per NRC Bulletin 2004-01: 1EOC17, 9/2005.
Safety 1PZR-W4BSE	Nozzle to safe-end weld	NA ¹	NA ¹	1EOC18 3/2007	Bare Metal Visual ² per NRC Bulletin 2004-01: 1EOC17, 9/2005.
Safety 1PZR-W4ASE	Nozzle to safe-end weld	NA ¹	NA ¹	1EOC18 3/2007	Bare Metal Visual ² per NRC Bulletin 2004-01: 1EOC17, 9/2005.
Relief 1PZR-W3SE	Nozzle to safe-end weld	NA ¹	NA ¹	1EOC18 3/2007	Bare Metal Visual ² per NRC Bulletin 2004-01: 1EOC17, 9/2005.

Note 1: Welds are not inspectable using PDI qualified methods.

Note 2: Bare Metal Visual inspections detected no evidence of cracking or leakage.

McGuire Unit 2 Inspection and Mitigation Summary for Alloy 600/82/182 Pressurizer Butt Welds

Nozzle		MRP-139 Volumetric Inspection Requirement Met or to be Met		Mitigation Completed	Comments
Function / Designation	Susceptible Material Description	Outage Designation	Start Date	Outage Designation	
Spray 2PZR-W2SE	Nozzle to safe-end weld	NA ¹	NA ¹	2EOC17 ³ 9/2006	Bare Metal Visual ² per NRC Bulletin 2004-01: 2EOC16, 3/2005.
Surge 2PZR-W1SE	Nozzle to safe-end weld	NA ¹	NA ¹	2EOC17 ³ 9/2006	Bare Metal Visual ² per NRC Bulletin 2004-01: 2EOC16, 3/2005.
Safety 2PZR-W4ASE	Nozzle to safe-end weld	NA ¹	NA ¹	2EOC17 ³ 9/2006	Bare Metal Visual ² per NRC Bulletin 2004-01: 2EOC16, 3/2005.
Safety 2PZR-W4BSE	Nozzle to safe-end weld	NA ¹	NA ¹	2EOC17 ³ 9/2006	Bare Metal Visual ² per NRC Bulletin 2004-01: 2EOC16, 3/2005.
Safety 2PZR-W4CSE	Nozzle to safe-end weld	NA ¹	NA ¹	2EOC17 ³ 9/2006	Bare Metal Visual ² per NRC Bulletin 2004-01: 2EOC16, 3/2005.
Relief 2PZR-W3SE	Nozzle to safe-end weld	NA ¹	NA ¹	2EOC17 ³ 9/2006	Bare Metal Visual ² per NRC Bulletin 2004-01: 2EOC16, 3/2005.

Note 1: Prior to 2EOC17, welds were not inspectable using PDI qualified methods.

Note 2: Bare Metal Visual inspections detected no evidence of cracking or leakage.

Note 3: A full structural weld overlay was applied during 2EOC17 to mitigate the effects of PWSCC. (Reference Relief Request 06-GO-001, Revision 1, dated September 27, 2006).