

PR 50
(72FR16731)

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DOCKETED
USNRC

June 26, 2007 (10:11am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF



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NL-07-1232

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June 22, 2007

Docket Nos.: 50-321 50-348 50-424
50-366 50-364 50-425

Secretary, U. S. Nuclear Regulatory Commission
ATTN: Rulemakings and Adjudications Staff
Washington, DC 20555-0001

Southern Nuclear Operating Company
Comments on NRC Proposed Rulemaking RIN 3150-AH76, Dated April 5, 2007
Proposed Rules, Federal Register, Vol. 72, No. 65, PP. 16731-16741

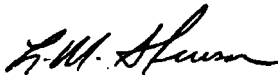
Ladies and Gentlemen:

Southern Nuclear Operating Company (SNC) is pleased to have the opportunity to provide comments on proposed changes to 10 CFR 50.55a as described in RIN 3150-AH76, published in the Federal Register, Vol. 72, No. 65, April 5, 2007, PP. 16731-16741.

SNC's comments are provided in the enclosure to this letter. Additionally, SNC also endorses the comments provided by NEI in their letter of June 19, 2007, from James H. Riley, Director Engineering, regarding this subject rulemaking.

If you have any questions, please advise.

Sincerely,



L. M. Stinson
Vice President Fleet Operations Support

LMS/PAH/daj

Enclosure: Comments on NRC Proposed Rulemaking RIN 3150-AH76, Dated
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Template = SECY-067

SECY-02

U. S. Nuclear Regulatory Commission

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cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. J. R. Johnson, Vice President – Farley
Mr. D. R. Madison., Vice President – Hatch
Mr. T. E. Tynan, Vice President – Vogtle
Mr. D. H. Jones, Vice President – Engineering
RType: CFA04.054; CHA02.004; CVC7000; LC# 14597

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
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Mr. E. L. Crowe, Senior Resident Inspector – Farley
Mr. J. A. Hickey, Senior Resident Inspector – Hatch
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

Nuclear Energy Institute
Mr. A. Marion, Senior Director – Engineering

Enclosure

**Comments on NRC Proposed Rulemaking RIN 3150-AH76, Dated April 5, 2007
Proposed Rules, Federal Register, Vol. 72, No. 65, PP. 16731-16741**

Enclosure

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10 CFR 50.55a(g)(6)(ii)(D)-Augmented Inspection of PWR RPV Heads:

ASME was requested by the NRC to develop Code Case N-729-1 and worked over several years utilizing volunteer resources to complete this effort as a top priority task. Also, ASME has made special effort to interface with NRC staff, including meetings at NRC headquarters, to address concerns related to cracking in Alloy 600 materials. In this proposed rulemaking, the NRC has discounted these efforts by proposing additional conditions. The results would make Code Case N-729-1 more burdensome than the existing NRC Order EA-03-09. In our view, the technical rationale for imposing the additional conditions does not support their imposition. Southern Nuclear Operating Company (SNC) is disappointed that the NRC has taken this position, given that Code Case N-729-1 was developed and approved using the latest available technical information via an ANSI-approved consensus process (ASME Code Committees) of which the NRC is a participant and voting member.

Accelerated PWSCC test results for Alloy 690, 52, and 152 were publicly presented at the Electric Power Research Institute's (EPRI's) 2007 International PWSCC of Alloy 600 Conference in Atlanta, Georgia on June 11 - 14, 2007. Presentations on Alloy 690, 52, and 152 corrosion tests were given by Mitsubishi Heavy Industries, Pacific Northwest National Laboratory, and GE Global Research. NRC representatives were also in attendance at this presentation.

The Mitsubishi Heavy Industries PWSCC test results show no cracks have initiated in Alloy 690, 52, and 152 materials in a high temperature simulated PWR environment over periods ranging from approximately 73,000 hrs, 84,000 hrs, and 85,000 hours, respectively. All testing was performed at 360 °C (680 °F). When adjusted for temperature, the test times completed to date are equivalent to over 50 years for base material and over 140 years for the weld materials. No crack initiation has occurred in the Alloy 690, 52, and 152 materials. Alloy 600, 82, and 182 materials included in the test matrix initiated cracks consistent with industry experience. Mitsubishi is evaluating the need to continue testing of these Alloy 690, 52, and 152 specimens that continue to show no crack initiation. The materials tested apply to the entire replacement reactor vessel head population supplied by Mitsubishi Heavy Industries to the USA market from 2003 to date.

In addition, Nuclear Management Company provided Alloy 690, 52, and 152 materials fabricated by Mitsubishi Heavy Industries to the EPRI. Accelerated crack growth rate testing of these materials has been performed by Pacific Northwest National Laboratory and GE Global Research. Crack growth rates of highly cold worked material are so low (10^{-9} mm/s) that they have no engineering significance.

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Corrosion tests performed by multiple laboratories demonstrate Alloy 690, 52, and 152 materials are highly resistant to PWSCC. Based on these test results, the proposed initial inspection and re-inspection intervals of 10 and 7 years, respectively, are overly conservative. At the 2007 International PWSCC of Alloy 600 Conference, it was stated that all high susceptibility reactor vessel heads in the USA have been replaced. Therefore, requiring such a conservative inspection interval and inspection requirements for replacement heads will cause significant unnecessary radiation exposure in the performance of these inspections.

Consequently, Code Case N-729-1 should not be included in 10CFR50.55a rulemaking.

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10 CFR 50.55a(g)(6)(ii)(E)-Augmented Inspection of Class 1 Alloy-600 Components:

This paragraph would implement a requirement to perform a bare metal visual examination of Alloy-600 welds on PWR Class 1 components. In this case, the NRC does not reference the industry efforts, especially those made through the EPRI Materials and Reliability Program (MRP) to address this issue. Every PWR in the United States has agreed to the implementation of MRP-139, which requires an augmented program to perform bare metal visual examinations on the large diameter Alloy-600 welds on a frequency that is almost identical to the schedule mandated in ASME Code Case N-722. Typically, utilities are allowed the option to assess each code case and determine if that code case should be adopted for use. By mandating the use of the Case the NRC is, in effect, writing their own Code and deviating from using guidance from an international consensus standard body (ASME Code Committees, of which the NRC is a participant and voting member). The NRC and the industry have been working on this issue, and industry programs are in place to cover these examinations. Additional time should be provided to allow the MRP and ASME to develop the necessary enhancements.

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10 CFR50.55a(b)(2)(xx)-System Leakage Tests:

Regardless of the edition or addenda of Section XI by which repair/replacement activities are performed, NDE following welding or brazing would be performed immediately following the welding or brazing activity and prior to the system leakage test, rather than following the system leakage test.

In accordance with IWA-4520 of the 2003 Addenda through 2004 Edition of Section XI, NDE following welding or brazing is required to be performed per the Construction Code noted within the repair/replacement plan in order to assure structural integrity of the respective system boundary, and consequently public safety. Additional NDE requirements previously imposed in order to justify not performing a hydrostatic pressure test were removed when it was seen that the additional requirements did not provide increased verification of structural integrity. Likewise, since the performance of a system leakage test and hydrostatic test provided the equivalent verification of leak tightness, requirements related to the performance of elevated pressure hydrostatic testing were similarly addressed. Therefore, reinstating the requirement to perform NDE per the 1992 Edition of Section III or later edition of Section III, when the Construction Code was not Section III, is not commensurate with the increased burden and resource restraints (manpower, dose, outage scheduling) the requirements would cause, with no increased assurance of structural integrity.

Since some plants have already updated to the 2003 Addenda of Section XI, to impose NDE per the 1992 Edition of Section III or later edition of Section III for those plants would constitute a backfit based upon adding a new requirement which does not presently exist per the 2003 Addenda. The endorsement of IWA-4520(a) and IWA-4540(a) of the 2003 Addenda without any similar limitation provides further basis on which to consider this NDE imposition as a backfit.