Bird Peter S3261

From: Bird Peter S3261
Sent: Thursday, November 13, 2003 1:30 PM
To: 'BJB@nrc.gov'
Cc: Auman Jim S3261
Subject: Safety Evaluation - Correction of Error

Reference: Safety Evaluation for Acceptance of Referencing the Siemen Westinghouse Topical Report, "Missile Analysis Methodology for GE Nuclear Steam Turbine Rotors by the SWPC", (TAC NO. MB5679), July 2003.

Brian,

In reviewing the above referenced Safety Evaluation for an upcoming customer audit, we noticed what appears to be an error in the Safety Evaluation, Section 3.1.1. In the last sentence of this section, the statement is made ... "SWPC resolved this issue by revising PDBURST in setting the crack branching factor equal to zero for cracks growing beyond three inches."

The correct wording should be ... "SWPC resolved this issue by revising PDBURST in setting the crack branching factor equal to 1.0 for cracks growing beyond three inches." Setting the crack branching factor equal to 1.0 indicates that we are taking no credit for crack branching in calculating the critical crack size.

Refer to SWPC Topical Report TR-03142-P-A, page 11. The equation for critical crack size, acr, has the crack branching factor, k/K, in the denominator. If k/K were equal to zero, it would result in division by zero. Instead, a value of k/K equal to 1.0 leaves the critical crack size unchanged when greater than 3 inches.

Would you please have this request reviewed by your technical people by November 18, 2003. Our customer audit is November 20, 2003 and they have indicated that they will accept an NRC confirmation of the error by letter or e-mail.

Thanks,
Pete Bird

SIEMENS

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Peter W. Bird
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Post-it® Fax Note 7671	Date 11/13/03 # of pages ▶ 1
To BRIAN BENNEY	From PETER BIRD
Co./Dept. NRC	Co. SWPC
Phone #	Phone # 407-736-4686
Fax # 301-415-3313	Fax # 407-736-4961

From: Brian Benney
To: Bird Peter S3261
Date: 11/17/03 12:00PM
Subject: Re: Safety Evaluation - Correction of Error

Pete,

Simon Sheng and I agree that the crack branching factor (k/K) should be set to 1.0 for all cracks greater than 3 inches, so that NO credit is given for crack branching beyond 3 inches. "Zero" is a typographical error.

Brian

>>> Bird Peter S3261 <peter.bird@siemens.com> 11/13/03 01:29PM >>>
Reference: Safety Evaluation for Acceptance of Referencing the Siemen Westinghouse Topical Report, "Missile Analysis Methodology for GE Nuclear Steam Turbine Rotors by the SWPC", (TAC NO. MB5679), July 2003.

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CC: Chia-Fu Sheng