2093

Lake, Louis

From: Lake, Louis
Sent: Thursday, December 10, 2009 2:49 PM
To: Thomas, George
Subject: Emailing: Request 29 Question 23 Response (3).docx
Attachments: Request 29 Question 23 Response (3).docx

Here is the latest response to Question #29 for your review.

Lou
The message is ready to be sent with the following file or link attachments:

Request 29 Question 23 Response (3).docx

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

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NRC SIT Request #29 Question#23 Information

Q. 23: How were the forces acting on the buttress analyzed when the horizontal tendons were released and the forces became unbalanced?

Response:

The unbalanced force(s) and moments from detensioning hoop tendons were evaluated for Buttress numbers 2, 3, 4 and 5 (Ref. 1, Pages 90 thru 95) and these forces and moments were applied to the appropriate nodes along the centerline of each buttress. Note that the forces and moments shown on pages 90 thru 95 of Ref. 1 are in the direction of the tensioned tendon. When these tendons are detensioned the signs reverse (Ref. 1, Attachment 2, load cases 6 and 10 and load combinations 102 and 104). The unbalanced forces are derived from the original lock-off stress – tendon losses at the time of the steam generator replacement outage (Ref. 2, Section 4.2.1.2).

References:

1. Calculation S06-0005, Revision 1, Containment Shell Analysis for SGR – Shell Evaluation During Replacement Activities.
2. Calculation S06-0004, Revision 0, Containment Shell Analysis for SGR –Properties of new Concrete for Access Opening and Number of Hoop and Vertical Tendons to be Detensioned.