

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

September 23, 2009

Attention: Document Control Desk
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Serial No. 09-591
NAPS/MES Rev. 0
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT NOS. 1 AND 2
NOTIFICATION OF PLANNED REMOVAL OF SERVICE WATER EXPANSION JOINTS

In accordance with Atomic Safety and Licensing Appeal Board Decision ALAB-578 (ALAB-578), enclosed are summaries of: (1) Design Change (DC) NA-08-0145, "Service Water (SW) Expansion Joint Eliminations – SW Valve House and SW Tie-In Vault", and (2) revisions to procedures 0-PT-112, "Category I Structures – Settlement Monitoring" and 0-PT-115, "Survey of Settlement Monitoring Points".

Six of the expansion joints currently installed on SW piping are to be removed and replaced with spool pieces in accordance with DC NA-08-0145. A summary of DC NA-08-0145 is contained in Attachment 1. Consequently, allowable settlement limits for the SW Valve House and SW Tie-In Vault must be reduced to ensure accumulated stresses in the piping do not exceed allowable stresses. These settlement limits are contained in procedures 0-PT-112 and 0-PT-115.

ALAB-578 requires notification of revisions to procedures 0-PT-112 and 0-PT-115 within 10 days of final approval. Pursuant to Dominion standards, the procedure revisions associated with DC NA-08-0145 must be implemented as the DC is installed and affected systems are returned to service. Procedures 0-PT-115 and 0-PT-112 will be revised once following the elimination of the expansion joints installed on the A train and again following the elimination of the B train expansion joints. The project schedule is as follows:

- A header joints eliminated: October 4 – 10, 2009
- B header joints eliminated: December 6 – 12, 2009

Specific procedure revisions are contained in Attachment 2 of this letter.

If you have any further questions, please contact Page Kemp at 540-894-2295.

Sincerely,



Daniel G. Stoddard, PE
Site Vice President

A 001
LWR

References: (none)

Attachments:

- (1) Summary of Design Change NA-08-0145, "Service Water (SW) Expansion Joint Eliminations – SW Valve House and SW Tie-In Vault"
- (2) Summary of procedure revisions to procedures 0-PT-112, "Category I Structures – Settlement Monitoring" and 0-PT-115, "Survey of Settlement Monitoring Points"

NRC Commitments made by this letter:

Allowable settlement limits on the SW Valve House and SW Tie-In Vault contained in procedures 0-PT-112 and 0-PT-115 will be reduced in accordance with Design Change NA-08-0145.

cc: US Nuclear Regulatory Commission
Region II
101 Marietta Street, NW
Suite 2900
Atlanta, Georgia 30323

NRC Senior Resident Inspector
North Anna Power Station

ATTACHMENT 1

SUMMARY OF DESIGN CHANGE (DC) NA-08-0145
SERVICE WATER (SW) EXPANSION JOINT ELIMINATIONS –
SW VALVE HOUSE AND SW TIE-IN VAULT

Eight rubber expansion joints are currently installed in the Service Water (SW) System return headers located in the SW Tie-In Vault (SWTV) and the SW Valve House Expansion Joint Pit (SWVH). Of these, there are a total of four (4) 36" rubber expansion joints in the SWTV and two (2) 30" rubber expansion joints in the SWVH that are to be eliminated. The expansion joints are split evenly between the A and B trains.

These rubber expansion joints were installed in the SW System to accommodate potential differential settlement of the buildings, in addition to postulated differential seismic displacement of the pipes at the entrance to the SWTV and SWVH.

Plant Issues N-2005-2225 and N-2005-2299 documented an error in the design of these SW expansion joints and resultant damage to nearby pipe supports. Corrective actions were taken to prevent future damage to the supports. During the subsequent root cause evaluation for the event, it was noted that it appeared feasible to eliminate three of the four expansion joints in each SW train (i.e. replace the expansion joints with rigid piping spool pieces).

A formal review of the installation was performed and documented in Technical Report CE-0140, "A Feasibility Study for Elimination of Certain Expansion Joints in the Service Water System Piping." The report concluded that it was possible to eliminate a total of six of the eight expansion joints, three of the four per train.

The purpose of DC NA-08-0145 is to eliminate the six rubber expansion joints in the SWTV and SWVH as recommended in Technical Report CE-0140.

ATTACHMENT 2

**SUMMARY OF PROCEDURE REVISIONS TO
 0-PT-112, "CATEGORY I STRUCTURES – SETTLEMENT MONITORING" AND
 0-PT-115, "SURVEY OF SETTLEMENT MONITORING POINTS"**

Procedures 0-PT-112 and 0-PT-115 will be revised to reduce the total allowed settlement of all markers in the Service Water Valve House and Service Water Tie-In Vault. The baseline will be reset to those values obtained during the April 2009 survey and only 0.041 [feet] of additional settlement will be allowed.

Table 1 below contains data for the eight survey points affected by these procedure changes. The April 2009 elevations will become the new baseline elevations. Only 0.041 [feet] of settlement beyond this new baseline will be allowed after the expansion joints are removed.

Table 1: Data for the eight survey points affected by procedure changes for 0-PT-115 and 0-PT-112

Location	Marker Number	April 2009 Elevations	Current Baseline Elevation	Current TRM Allowable	Current % of TRM Allowable
		[feet]			
SWVH	25	325.922	325.954	0.320	10.0%
SWVH	26	325.998	326.018	0.320	6.2%
SWVH	27	326.010	326.034	0.320	7.5%
SWVH	28	326.110	326.146	0.320	11.3%
SWTV	29	303.035	303.028	0.120	5.8%
SWTV	30	303.042	303.030	0.120	10.0%
SWTV	31	303.068	303.057	0.120	9.2%
SWTV	32	303.034	303.026	0.120	6.7%