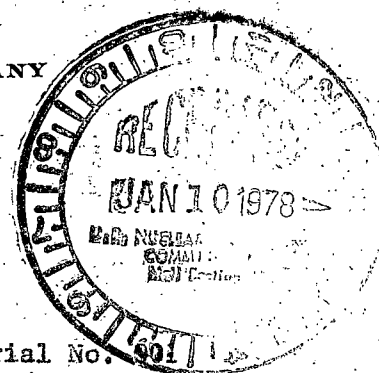


VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

January 5, 1978



Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II - Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303

Serial No. 501
PO&M/DLB:das
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Dear Mr. O'Reilly:

The following Special Reports for Surry Units 1 and 2, respectively, are enclosed for your information.

Special Report S1-77-01, "Surry Unit 1 Hydraulic Shock Supports (Snubbers)"

Special Report S2-77-01, "Missing Steam Generator Tube Plug - Hot Leg, Generator B, Row 1, Column 42"

These reports have been reviewed by the Station Nuclear Safety and Operating Committee and will be placed on the agenda for the next meeting of the System Nuclear Safety and Operating Committee.

Very truly yours,

C. M. Stallings

C. M. Stallings
Vice President - Power Supply
and Production Operations

Enclosures (3 copies)

cc: Dr. Ernst Volgenau, Director 40 Copies
Office of Inspection and Enforcement

Mr. William G. McDonald, Director 3 Copies
Office of Management Information and
Program Control

780100044

SPECIAL REPORT S1-77-01

SURRY UNIT 1 HYDRAULIC SHOCK SUPPORTS (SNUBBERS)

The first functional testing of hydraulic shock suppressors required by Technical Specification 4.17.D was conducted on Surry Unit 2 in the September refueling outage. The extent of failures was reported in LER-77-12 (Docket No. 50-281). At that time, a commitment was made to verify the condition of Unit 1 snubbers.

Activity was initiated on those snubbers outside of containment and concentrated on those snubbers which have not yet been converted to ethylene propylene seals. Prior to commencement of the Unit 1 Steam Generator Evaluation outage in mid-November, thirty-four snubbers were replaced with new or rebuilt snubbers that met functional testing criteria.

During the outage, snubbers were initially screened into three categories (1) those requiring seal replacement and/or those which appeared marginal and that indicated a high probability of failure might occur in testing; (2) those which upon removal and visual examination appeared satisfactory, and (3) those not requiring functional testing only a visual inspection. Seventy-eight snubbers were screened into the first category, and were rebuilt or repaired as necessary. All met functional testing acceptance criteria. Of the snubbers in the second category, one met functional testing acceptance criteria and twenty-nine required only adjustment to meet functional testing acceptance criteria. Thirty-six snubbers in the third category were visually inspected and appeared satisfactory.

Surry Unit 1 was started up on December 7, 1977, with all snubbers operable.

SR-S2-77-01

MISSING STEAM GENERATOR TUBE PLUG-
HOT LEG, GENERATOR B, ROW 1, COLUMN 42.

SURRY POWER STATION
UNIT 2

DOCKET NO. 50-281

LICENSE NO. DPR-37

SEPT. 1977

VIRGINIA ELECTRIC AND POWER COMPANY

INTRODUCTION

During the Surry Unit 2 Outage of July 11, 1977 an explosive plug was discovered to be missing from Row 1 Column 42 in the hot leg of Steam Generator B. It is the intent of this report to discuss the plug lost and possible stopping places.

DISCUSSION

The location, Row 1 Column 42, in the inlet (T_H) side of 2B Steam Generator was plugged on October 20, 1976 as a preventive measure. Plugging was verified by second visual check. On July 11, 1977, a visual inspection determined that no plug was inserted at Row 1 Column 42. Two possibilities present themselves to explain the fate of this plug.

First, in March, 1977 a plug was found in the channel head of Unit 2 Steam Generator B, inlet. By the identification number, Westinghouse concluded that the plug came from one of six tubes (R36/C76, R42/C61, R42/C63, R43/C60, C43/C62, R43/C63) and recommended that all six of those tubes be checked for plugs. However, Vepco Non-Destructive Testing and Quality Assurance efforts verified that the six tubes in question were in fact still plugged.

Westinghouse had further stated that a visual examination of the plug showed it had been only partially expanded and a total detonation was not achieved upon installation. Since R1/C42 was not a leaking tube, it is not unlikely that a plug missing from that location would not be noticed during a subsequent hydrostatic test. It is possible that the plug found in the channel head in March, 1977 came from Row 1, Column 42.

Second, during the same inspection that found the R1/C42 plug missing, a plug was found loosely inserted into R29/C11, a location not in the plugging program and not intended to be plugged. The R29/C11 plug was sent to the Westinghouse Nuclear Service Division Waltz Mill Facility for examination. A

DISCUSSION (CONTINUED)

dimensional check was performed showing no change from fabrication dimension indicating that the plug had not been "fired". Microscopic examination of the plug by Westinghouse determined that the plug came from heat number NX7853, but the identification number was not legible and positive identification of when or where the plug was installed was impossible. It is possible that the R29/C11 plug was inserted into that location by mistake and was never exploded. However, the supposition can be made that the R1/C42 plug may have dropped out and reinserted itself, under flow conditions, into the R29/C11 position.

On the possibility that back flow may have carried the plug into the reactor at some time when RCP "B" was idle, a thorough examination of the reactor vessel above and below the core was carried out by CCTV. No loose material was found by this inspection.

CONCLUSIONS

Two explanations concerning the missing R1/C42 plug have been presented, the first being more credible, but more importantly it must be concluded that no plugs are loose in the loop or unaccounted for. Tubes R1/C42, R29/C11 and those tubes around R29/C11 were all plugged on July 21, 1977. With the recent achievement of a new, more reliable method of photographic verification of plugging maps, speculative explanations of missing plugs should not be necessary.