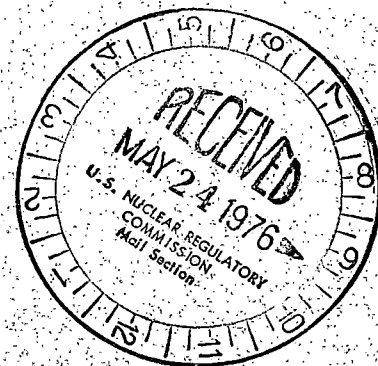


VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

May 21, 1976



Mr. Norman C. Moseley, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II - Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303

Serial No. 046
PO&M/ALH:jlf

Docket No. 50-281
License No. DPR-37

Dear Mr. Moseley:

Pursuant to Surry Power Station Technical Specification 6.6.2, the Virginia Electric and Power Company hereby submits a copy of Reportable Occurrence No. AO-S2-76-02.

The substance of this report has 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,

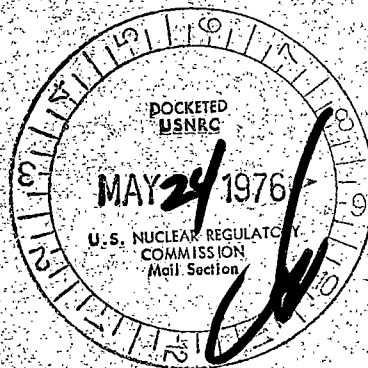
A handwritten signature in cursive script that reads "J. M. Stallings".

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

Enclosure

cc: Mr. Robert W. Reid, Chief (40)
Operating Reactors Branch 4

Regulatory Docket File



LICENSEE EVENT REPORT

CONTROL BLOCK:

[PLEASE PRINT ALL REQUIRED INFORMATION]

	LICENSEE NAME	LICENSE NUMBER	LICENSE TYPE	EVENT TYPE					
01	V A S P S 2	0 0 - 0 0 0 0 0 0 - 0 0	4 1 1 1 0	0 1					
7	8	9	14	15	25	26	30	31	32

	CATEGORY	REPORT TYPE	REPORT SOURCE	DOCKET NUMBER	EVENT DATE	REPORT DATE					
01	CON'T P O	T	L	0 5 0 - 0 2 8 1	0 5 1 1 7 6	0 5 2 0 7 6					
7	8	57	58	59	60	61	68	69	74	75	80

EVENT DESCRIPTION

02 | While removing a "pie" shaped section of the 7th tube support plate in the "2A" steam
 7 8 9 80
 03 | generator during the current refueling outage, small cracks and radial growth were ob-
 7 8 9 80
 04 | served on the periphery of the subject plate. Further investigation is in progress to
 7 8 9 80
 05 | insure that the structural integrity of the support plate is still satisfactory. This
 7 8 9 80
 06 | event is reportable per Technical Specification 6.6.2.a(9). (A0-S2-76-02)
 7 8 9 80

	SYSTEM CODE	CAUSE CODE	COMPONENT CODE	PRIME COMPONENT SUPPLIER	COMPONENT MANUFACTURER	VIOLATION				
07	C C	E	Z Z Z Z Z Z	N	W 1 2 0	N				
7	8	9	10	11	12	17	43	44	47	48

CAUSE DESCRIPTION

08 | The tube denting and apparent support plate distortion are believed to be related to
 7 8 9 80
 09 | the change from phosphate to AVT chemistry. Investigative actions include: a finite
 7 8 9 80
 10 | element stress analysis of the tube support plate including cracks, analysis (Cont'd).
 7 8 9 80

	FACILITY STATUS	% POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION				
11	H	0 0 0	N/A	C	N/A				
7	8	9	10	12	13	44	45	46	80

	FORM OF ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY	LOCATION OF RELEASE			
12	Z	Z	N/A				
7	8	9	10	11	44	45	80

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION			
13	0 0 0	Z	N/A			
7	8	9	11	12	13	80

PERSONNEL INJURIES

	NUMBER	DESCRIPTION			
14	0 0 0	N/A			
7	8	9	11	12	80

OFFSITE CONSEQUENCES

15 | N/A
 7 8 9 80

LOSS OR DAMAGE TO FACILITY

	TYPE	DESCRIPTION		
16	Z	N/A		
7	8	9	10	80

PUBLICITY

17 | N/A
 7 8 9 80

ADDITIONAL FACTORS

18 |
 7 8 9 80

19 |
 7 8 9 80

CAUSE DESCRIPTION (Continued)

of a postulated steam break accident with the potential of loose metal segments in the generator, and analysis of post-LOCA and post-steam break tube integrity under blowdown loads with cracked tube support plates.

The configuration of the tube support plate/tube bundle and the corrosion mechanism leading to denting result in the development of compressive forces on the tubes and the plate itself. These forces tend to lock the tubes and plate firmly together even in the presence of cracking. These compressive forces have been observed during previous tube pulling and support plate segment removal operations when very large forces were required to remove the specimens.

Similar conditions were observed in tube support plates of other Westinghouse PWR's. Therefore this problem is considered generic in nature. The NRC Division of Reactor Licensing will be kept informed on this matter until the issue is closed.

Since the integrity of the steam generator tubes and tube support plate remain intact, the health and safety of the general public are not affected.

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

May 21, 1976

Mr. Norman C. Moseley, Director
Office of Inspection and Enforcement
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Very truly yours,



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

Enclosure

cc: Mr. Robert W. Reid, Chief (40)
Operating Reactors Branch 4

LICENSEE EVENT REPORT

CONTROL BLOCK:

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[PLEASE PRINT ALL REQUIRED INFORMATION]

LICENSEE NAME:

01	V	A	S	P	S	2
----	---	---	---	---	---	---

 LICENSE NUMBER:

0	0	-	0	0	0	0	0	-	0	0
---	---	---	---	---	---	---	---	---	---	---

 LICENSE TYPE:

4	1	1	1	0
---	---	---	---	---

 EVENT TYPE:

0	1
---	---

CON'T CATEGORY:

P	O
---	---

 REPORT TYPE:

T

 REPORT SOURCE:

L

 DOCKET NUMBER:

0	5	0	-	0	2	8	1
---	---	---	---	---	---	---	---

 EVENT DATE:

0	5	1	1	7	6
---	---	---	---	---	---

 REPORT DATE:

0	5	2	0	7	6
---	---	---	---	---	---

EVENT DESCRIPTION

02 While removing a "pie" shaped section of the 7th tube support plate in the "2A" steam generator during the current refueling outage, small cracks and radial growth were observed on the periphery of the subject plate. Further investigation is in progress to insure that the structural integrity of the support plate is still satisfactory. This event is reportable per Technical Specification 6.6.2.a(9). (AO-S2-76-02)

SYSTEM CODE:

C	C
---	---

 CAUSE CODE:

E

 COMPONENT CODE:

Z	Z	Z	Z	Z	Z
---	---	---	---	---	---

 PRIME COMPONENT SUPPLIER:

N

 COMPONENT MANUFACTURER:

W	1	2	0
---	---	---	---

 VIOLATION:

N

CAUSE DESCRIPTION

08 The tube denting and apparent support plate distortion are believed to be related to the change from phosphate to AVT chemistry. Investigative actions include: a finite element stress analysis of the tube support plate including cracks, analysis (Cont'd).

FACILITY STATUS:

H

 % POWER:

0	0	0
---	---	---

 OTHER STATUS:

N/A

 METHOD OF DISCOVERY:

C

 DISCOVERY DESCRIPTION:

N/A

FORM OF ACTIVITY RELEASED:

Z

 CONTENT OF RELEASE:

Z

 AMOUNT OF ACTIVITY:

N/A

 LOCATION OF RELEASE:

--

PERSONNEL EXPOSURES

NUMBER:

0	0	0
---	---	---

 TYPE:

Z

 DESCRIPTION:

N/A

PERSONNEL INJURIES

NUMBER:

0	0	0
---	---	---

 DESCRIPTION:

N/A

OFFSITE CONSEQUENCES

15 N/A

LOSS OR DAMAGE TO FACILITY

TYPE:

Z

 DESCRIPTION:

N/A

PUBLICITY

17 N/A

ADDITIONAL FACTORS

18

19

NAME: E. M. Sweeney, Jr. PHONE: (804) 357-3184

CAUSE DESCRIPTION (Continued)

of a postulated steam break accident with the potential of loose metal segments in the generator, and analysis of post-LOCA and post-steam break tube integrity under blowdown loads with cracked tube support plates.

The configuration of the tube support plate/tube bundle and the corrosion mechanism leading to denting result in the development of compressive forces on the tubes and the plate itself. These forces tend to lock the tubes and plate firmly together even in the presence of cracking. These compressive forces have been observed during previous tube pulling and support plate segment removal operations when very large forces were required to remove the specimens.

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