## VIRGINIA ELECTRIC AND POWER COMPANY RICHMOND, VIRGINIA 23261

W. L. STEWART VICE PRESIDENT NUCLEAR OPERATIONS

October 26, 1987

United States Nuclear Regulatory Commission Attention: Document Control Desk Washington, D. C. 20555

Serial No. 87

87-474E

NO/FPB

Docket No. License No. 50-338 NPF-4

Gentlemen:

Virginia Electric and Power Company
North Anna Power Station Unit 1
Steam Generator Tube Plugging Report Supplement

As requested by the NRC Project Manager, the attached information regarding preventive plugging of Unit 1 steam generator tubes is provided.

If you require further information, please feel free to contact me.

Very truly yours,

W. L. Stewart

Attachment

cc: U.S. Nuclear Regulatory Commisssion 101 Marietta Street, N.W. Suite 2900 Atlanta, GA 30323

> Mr. J. L. Caldwell NRC Senior Resident Inspector North Anna Power Station

A001

8711020048 871026 PDR ADDCK 05000338 PDR

## Steam Generator "A"

The following table lists those tubes which were preventively plugged with a Sentinel plug on the cold leg side and a solid mechanical plug on the hot leg side.

9	Row	Column	Row	Column
8       3       9       46         10       3       10       46         11       3       11       46         12       3       9       47         13       3       10       47         8       4       11       47         10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       32       9       59         10       32       10       59         10       35       11       60         10       35       11       60         10       35       11       61         11       37       10       61         11       37       11       61         10       38		2		
10       3       10       46         11       3       11       46         12       3       9       47         13       3       10       47         10       4       11       47         10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         11       7       12       53         11       7       12       53         11       8       10       54         9       14       11       54         9       14       11       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       36       9       61         10       37       10       61         11       37				
10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         11       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       39       10       76         11       39       <		3		
10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         11       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       39       10       76         11       39       <		3		46
10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         11       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       39       10       76         11       39       <		3		46
10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         11       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       39       10       76         11       39       <	12	3	9	47
10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         11       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       39       10       76         11       39       <	13	3		47
10       4       9       48         11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       32       10       59         10       33       11       60         10       35       11       60         10       35       11       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       39       10       76         11       39	8		11	47
11       4       10       52         10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       14       11       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40	10	4		48
10       5       11       52         11       5       12       52         10       7       10       53         11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40			10	52
11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         11       37       11       61         10       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41		5	11	52
11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         11       37       11       61         10       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41		5	12	52
11       7       12       53         10       8       9       54         11       8       10       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         11       37       11       61         10       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41		7	10	53
10       8       9       54         11       8       10       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         11       37       11       61         11       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41		7	12	53
11       8       10       54         9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       72         11       39       10       76         11       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         10       41       10       79         10       41       11       79         11       41       12       79         9       42			9	54
9       14       11       54         9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         11       41       12       79         9       42		8	10	54
9       24       12       54         9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         11       41       12       79         9       42       10       93         9       43       11       93			11	54
9       32       9       59         10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         11       41       12       79         9       42       10       93         9       43       11       93	9	24		54
10       32       10       59         10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         11       41       12       79         9       42       10       93         9       43       11       93	9		9	59
10       33       11       59         9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         11       41       12       79         9       42       10       93         9       43       11       93		32		59
9       35       9       60         10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         11       41       12       79         9       42       10       93         9       43       11       93		33		
10       35       11       60         10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         10       41       11       79         11       41       12       79         9       42       10       93         9       43       11       93	9			
10       36       9       61         10       37       10       61         11       37       11       61         9       38       9       66         10       38       10       72         11       38       10       73         10       39       10       76         11       39       10       77         9       40       10       78         10       40       11       78         11       40       12       78         9       41       10       79         10       41       11       79         11       41       12       79         9       42       10       93         9       43       11       93		35		
10     37     10     61       11     37     11     61       9     38     9     66       10     38     10     72       11     38     10     73       10     39     10     76       11     39     10     77       9     40     10     78       10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93		36		
11     37     11     61       9     38     9     66       10     38     10     72       11     38     10     73       10     39     10     76       11     39     10     77       9     40     10     78       10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				61
9     38     9     66       10     38     10     72       11     38     10     73       10     39     10     76       11     39     10     77       9     40     10     78       10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				
10     38     10     72       11     38     10     73       10     39     10     76       11     39     10     77       9     40     10     78       10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93			11	66
11     38     10     73       10     39     10     76       11     39     10     77       9     40     10     78       10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				
10     39     10     76       11     39     10     77       9     40     10     78       10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				7.2
11     39     10     77       9     40     10     78       10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				
9 40 10 78 10 40 11 78 11 40 12 78 9 41 10 79 10 41 11 79 11 41 12 79 9 42 10 93 9 43 11 93				
10     40     11     78       11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				77
11     40     12     78       9     41     10     79       10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				
9 41 10 79 10 41 11 79 11 41 12 79 9 42 10 93 9 43 11 93				
10     41     11     79       11     41     12     79       9     42     10     93       9     43     11     93				
9 42 10 93 9 43 11 93	9		10	
9 42 10 93 9 43 11 93			11	79
9 43 11 93		41	12	
9 43 11 93 10 44 12 93	9	42		
10 44 12 93		43	11	
	10	44	12	93

## Steam Generator "B"

The following table lists those tubes which were preventively plugged with a Sentinel plug on the cold leg side and a solid mechanical plug on the hot leg side.

Row	Column	
10	2	
11	2	
11	3	
12	3	
13	3	
9	23	
9	30	
9	34	
9	44	
10	93	
11	93	
12	93	

The following table lists those tubes which were preventively plugged with a Sentinel plug on the cold leg side and a solid mechanical plug on the hot leg side.

Row	Column	Row	Column
10	2	11	30
11	2 2 2 3 4	9	31
12	2	10	31
10	3	11	31
10	4	10	32
10	5	11	32
10	6	9	37
9	15	9	42
9	17	9	44
10	18	9	45
9	19	10	45
10	19	9	46
10	20	10	46
10	2.2	9	47
10	23	10	47
9	24	10	48
10	24	9	49
11	24	9	56
9	25	9	61
10	25	9	63
11	25	9	64
10	26	9	65
11	26	9	66
10	27	9	67
9	28	9	68
10	28	9	75
10	29	10	93
9	30	11	93
10	30	12	93

## Steam Generator "C"

The tubes listed in the following table were preventively plugged (Sentinel plug on cold leg side and solid mechanical plug on hot leg side) in association with the stabilization of the failed tube in Steam Generator C (Row 9 Column 51). Two tubes in addition to the failed tube (Row 10, Column 51 and Row 11, Column 51) were plugged with solid mechanical plugs due to eddy current indications.

			Row	Column
	Sentinel	Plug	8	50
	Sentine1	PRINCIPLE PRINCIPLE	9	50
	Sentinel		10	50
	Sentine1		11	50
	Sentinel		12	50
	Sentinel		8	51
	Sentinel	MANDE STATE OF STATE	12	51
	Sentinel	교 레이트 라이크 관광 다 되니다	8	52
	Sentinel		9	52
	Sentine1	A CONTRACTOR OF THE PARTY OF TH	10	52
	Sentinel		11	52
	Sentinel		12	52
Solid	Mechanical	Plug	9	51
	Mechanical		10	51
	Mechanical		11	51