

LICENSEE EVENT REPORT

Update Report-Previous
Report Date 6-2-76

CONTROL BLOCK: 1 2 3 4 5 6

[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
4	1	1	1	0	0	0	1
0	1						

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	5	7	5	9	6	1	8	1	7	6
0	5	2	1	7	6	0	7	2	7	7	6

EVENT DESCRIPTION

02	With Unit 2 at cold shutdown following a refueling, routine chemistry analysis of the	80
03	primary coolant boron concentration indicated than an unplanned dilution had occurred.	80
04	This event is reportable per T.S.6.6.2.A(4). The immediate operator action was to	80
05	terminate the source of the dilution, which was found to be leakage from the secondary	80
06	side of 2A steam generator, by securing the auxiliary steam generator feed (continued)	80

SYSTEM CODE		CAUSE CODE		COMPONENT CODE		PRIME COMPONENT SUPPLIER		COMPONENT MANUFACTURER		VIOLATION	
07	Z	Z	F	H	T	E	X	C	H	N	W
9	10	11	12	13	14	15	16	17	18	19	20

CAUSE DESCRIPTION

08	Steam Generator "2A" had three tubes which had apparently been cut during the removal	80
09	of a section of the seventh tube support plate. When the S/G level was raised above	80
10	the level of the cuts, water passed into the primary side of loop A, which was (Con't)	80

FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION		
11	G	0	0	0	Z	B	Routine Chemistry Sampling			
9	10	11	12	13	14	15	16	17	18	19

FORM OF ACTIVITY RELEASED		CONTENT OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE	
12	Z	Z	N/A	N/A	N/A		
9	10	11	12	13	14	15	16

PERSONNEL EXPOSURES

NUMBER		TYPE		DESCRIPTION	
13	0	0	0	Z	N/A
9	10	11	12	13	14

PERSONNEL INJURIES

NUMBER		DESCRIPTION	
14	0	0	0
9	10	11	12

OFFSITE CONSEQUENCES

15	N/A	80
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LOSS OR DAMAGE TO FACILITY

TYPE		DESCRIPTION	
16	Z	N/A	80

PUBLICITY

17	N/A	80
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PDR ADOCK 05000281
S PDR

ADDITIONAL FACTORS

18	Any adverse effect from this dilution could have been negated by boration by the use	80
19	of borated makeup, or via the accumulators. Also since the reactor was (Continued)	90

NAME: T. L. Baucom

PHONE: (804) 357-3184

EVENT DESCRIPTION (CONTINUED)

pump. An increased analysis frequency of boron concentration was initiated until the source of the dilution water was terminated. (AO-S2-76-03).

CAUSE DESCRIPTION (CONTINUED)

connected to the reactor vessel through a 2" bypass line.

The boron concentration of the reactor vessel changed from 2396 ppm to a minimum of 1836 ppm. This resulted in a minimum shutdown margin of 11.6% as compared to a required margin of 1%. The shutdown margin prior to the dilution was 18.3%.

Although the dilution was discovered by chemistry analysis, the plant design incorporates features which would have alerted the operator of a dilution had it been of a magnitude such that a significant reduction in shutdown margin occurred. The increasing audio and metered source range counts, and high-flux-at-shutdown alarm would have alerted the operator to the need for primary system boration.

The actual faulty tubes resulted from the grinding operation during the tube support plate removal procedure. It was felt that all suspect tubes were correctly plugged, but the additional leaking tubes were created due to close working quarters and conditions. A visual inspection by Westinghouse personnel failed to pick up the subject leaking tubes prior to the tube plugging operation. The leaking tubes were plugged to eliminate the leak path. To prevent recurrence of an event of this type, the steam generator close out procedure has been modified to assure that an adequate leak check on the tubes has been performed prior to securing the steam generator manways. Even though this occurrence was unique to the tube support plate removal evolution on Unit 2, the procedures for both units were changed.

ADDITIONAL FACTORS (CONTINUED)

maintained in a shutdown condition by over 11% and instrumentation was available to alert the operator of a loss of shutdown margin, there were no adverse safety implications associated with this event. Therefore, this event did not affect the health or safety of the general public.

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VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

July 30, 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. 161
PO&M/ALH:jlf

Docket No. 50-280
License No. DPR-32

Dear Mr. Moseley:

Pursuant to Surry Power Station Technical Specification 6.6.2, the Virginia Electric and Power Company hereby submits a copy of Licensee Event Report Update No. AO-S2-76-03.

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,

C. M. Stallings

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

Enclosure

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

COPY SENT REGION *H*

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