

U.S. NUCLEAR REGULATORY COMMISSION  
LICENSEE EVENT REPORT

CONTROL BLOCK / / / / / / / (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)  
 /0/1/ /V/A/N/A/S/2/ (2) /0/0/-/0/0/0/0/0/-/0/0/ (3) /4/1/1/1/1/ (4) / / / (5)  
 LICENSEE CODE LICENSE NUMBER LICENSE TYPE CAT  
 /0/1/ REPORT /L/ (6) /0/5/0/0/0/3/3/9/ (7) /1/0/0/8/8/1/ (8) /1/1/0/4/8/1/ (9)  
 SOURCE DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

/0/2/ / During the period from October 8, 1981 through October 29, 1981 while in Mode 1 /  
 /0/3/ / operation, the boron concentration in the Safety Injection accumulators went /  
 /0/4/ / higher than the maximum limit specified by T.S.3.5.1. Since the concentration /  
 /0/5/ / was returned to within the limit in accordance with the action statement, the /  
 /0/6/ / health and safety of the public were not affected. These events are reportable /  
 /0/7/ / pursuant to T.S. 6.9.1.9.b. /  
 /0/8/ /

SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
/0/9/ /S/F/ (11)	/X/ (12)	/Z/ (13)	/A/C/C/U/M/U/ (14)	/Z/ (15)	/Z/ (16)
LER/RO	EVENT YEAR	SEQUENTIAL REPORT NO.	OCCURRENCE CODE	REPORT TYPE	REVISION NO.
(17) REPORT NUMBER	/8/1/	/-/ /0/7/8/ / \ /	/0/3/	/L/	/-/ /0/

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
/X/ (18)	/X/ (19)	/B/ (20)	/Z/ (21)	/0/0/1/0/ (22)	/Y/ (23)	/N/ (24)	/N/ (25)	/D/1/0/0/ (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

/1/0/ / The high boron concentration in the accumulators was due to inleakage into the /  
 /1/1/ / make-up supply header from the Spent Fuel Pit. The accumulator boron /  
 /1/2/ / concentration was restored by recirculation with the RWST. /  
 /1/3/ / /  
 /1/4/ /

FACILITY STATUS	%POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
/1/5/ /E/ (28)	/0/9/7/ (29)	/ NA / (30)	/B/ (31)	/ ROUTINE SAMPLE /

ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
/1/6/ /Z/ (33)	/Z/ (34)	/ NA /	/ NA /

PERSONNEL EXPOSURES NUMBER	TYPE	DESCRIPTION (39)
/1/7/ /0/0/0/ (37)	/Z/ (38)	/ NA /

PERSONNEL INJURIES NUMBER	DESCRIPTION (41)
/1/8/ /0/0/0/ (40)	/ NA /

LOSS OF OR DAMAGE TO FACILITY TYPE	DESCRIPTION (43)
/1/9/ /Z/ (42)	/ NA /

ISSUED	DESCRIPTION (45)	NRC USE ONLY
/2/0/ /N/ (44)	/ NA /	/ / / / / / / / / / / / /

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PDR ADCK 05000339  
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Virginia Electric and Power Company  
North Anna Power Station, Unit #2  
Docket No. 50-339  
Report No. LER 81-078/03L-0

Attachment: Page 1 of 2

#### Description of Event

The safety injection accumulator boron concentration exceeded the maximum T.S. 3.5.1 limit of 2100 ppm as follows

<u>ACCUMULATOR</u>	<u>DATE</u>	<u>SAMPLE RESULTS (ppm)</u>
1C	10-08-81	2172
1A	10-15-81	2129
1B	10-22-81	2108
1C	10-29-81	2129

During the events of October 8, 1981, a unit rampdown was initiated in anticipation of reaching the Action Statement time frame. However, the boron concentration was restored an the rampdown stopped at 38% of full power. These events are reportable pursuant to T.S. 6.9.1.9.b.

#### Probable Consequences of Occurrence

The accumulators are installed to provide a large volume of cooling water onto the core following a postulated Loss of Coolant Accident. The maximum limit on boron concentration ensures that the chemical conditions (specifically pH) within the containment sump following this accident are met.

Since the concentrations obtained were only slightly above the maximum limit and the proper concentration was obtained within the requirements of the Action Statement, the health and safety of the public were not affected.

#### Cause of Event

The cause of the increasing boron concentration is apparently due to inleakage to the suction header of the hydrostatic test pump from the Spent Fuel Pit. The current boron concentration in the Spent Fuel Pit is 2380 ppm. The hydrostatic test pump is the normal fill path used to maintain the fluid level in the accumulators. As the level in the accumulator was raised, the fluid that was added was from the large standing volume suction in the header rather than from the Refueling Water Storage Tank (RWST). Over the time period between sampling, these additions were enough to cause the boron concentration in the accumulators to exceed the T.S.3.5.1 limit.

Immediate Corrective Action

When the accumulator boron concentration was found to be higher than the T.S.3.5.1 limit, the accumulator was declared inoperable and the action statement implemented. The boron concentration was lowered by partially draining and refilling the accumulator.

The intersystem leakage path from the spent fuel pit purification system has been isolated by closing the suction and discharge valves on the idle purification pumps.

Scheduled Corrective Action

A change to the operating procedures will be made to ensure the make-up suction header boron concentration is acceptable.

The leakage path from the spent fuel pit purification system will be further investigated and proper maintenance action taken.

A request to change the maximum limit specified by T.S.3.5.1.c has been initiated.

Actions Taken to Prevent Recurrence

The actions described above should preclude recurrence of these events.

Generic Implications

These events are generic to North Anna Units 1 and 2.