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 SOURCE /L/ (6) /0/5/0/0/0/3/3/9/ (7) /0/8/0/8/8/1/ (8) /0/9/0/4/8/1/ (9)
DOCKET NUMBER — EVENT DATE — REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

/0/2/ / On August 8, 1981, Sample analysis of the unit's boric acid storage system ("C" /
/0/3/ / BAST) identified a low boron concentration of 18,904 ppm. T.S. 3.1.2.8.a.2 re- /
/0/4/ / quires a minimum tank concentration of 20,000 ppm boron in Modes 1 thru 4. The /
/0/5/ / unit was already in hot standby and adequate capability for reactivity control /
/0/6/ / still existed. In addition, the BAST boron concentration was restored to ≧20,000 /
/0/7/ / ppm within 72 hours as required by the action statement. The public health and /
/0/8/ / safety were not affected. This event is reportable pursuant to T.S.6.9.1.9.b. /

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
/0/9/	/R/B/ (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/	/-/ /0/6/1/	/ \ / /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)	/Z/ (19)	/Z/ (20)	/Z/ (21)	/0/0/0/0/ (22)	/Y/ (23)	/N/ (24)	/N/ (25)	/W/1/2/0/ (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

/1/0/ / The decrease in boron concentration in the "C" BAST resulted when the tank was /
/1/1/ / placed on recirc with the BIT which unknowingly had a low concentration as a /
/1/2/ / result of an earlier inadvertent SI. A chemistry sample which was not representa-/
/1/3/ / tive of the entire tank had determined the BIT within spec prior to placing it on/
/1/4/ / recirc. Proper tank chemistry was restored by batching boric acid to "C" BAST. /

	FACILITY STATUS	%POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
/1/5/	/G/ (28)	/0/0/0/ (29)	/ N/A / (30)	/B/ (31)	/ Routine Sample Analysis /

	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 /

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

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PDR ADOCK 05000339
S PDR

NAME OF PREPARER W. R. CARTWRIGHT PHONE (703) 894-5151

Virginia Electric and Power Company
North Anna Power Station, Unit 2 Attachment: Page 1 of 2
Docket No. 50-339
Report No. LER 81-061/03L-0

Description of Event

On August 8, 1981, while operating in Mode 3, the unit's boric acid storage system ("C" Boric Acid Storage Tank) was sampled and found to contain a boron concentration of 18,904 ppm. This value is contrary to T.S. 3.1.2.8.a.2 which requires the borated water source to contain a minimum of 20,000 ppm boron in Modes 1 thru 4. This event is reportable pursuant to T.S. 6.9.1.9.b.

Probable Consequences of Occurrence

Proper boric acid storage system chemistry ensures that sufficient negative reactivity control is available during each mode of facility operation. Because the boron concentration in the storage tank was returned to ≥20,000 ppm within 72 hours (10 hours and 15 minutes) as required by the action statement and adequate capability for chemical shim reactivity control was still available, the health and safety of the general public were not affected.

Cause of Event

The boron concentration in the "C" Boric Acid Storage Tank decreased when the tank was placed on recirculation with the Boron Injection Tank (BIT) which unknowingly contained a low concentration of boron as a result of an inadvertant SI earlier in the day. The chemistry sample which determined the BIT within spec prior to placing it on recirc was not representative of the entire tank. The sample which was drawn from the bottom of the tank was only representative of what was in the bottom because the tank was stagnant. This particular solution was not affected by the SI because the injection was secured before all of the contents of BIT were flushed out. Therefore, the sample indicated an acceptable concentration when in fact the rest of the tank was low in boron.

Immediate Corrective Action

Boric acid was batched to "C" Boric Acid Storage Tank until proper boron concentration was regained.

Scheduled Corrective Action

No scheduled corrective action is required.

Actions Taken to Prevent Reccurrence

This is an isolated occurrence and therefore no further actions are required.

Generic Implications

There are no generic implications associated with this event.