# LICENSEE EVENT REPORT

U.S. NUCLEAR REGULATORY COMMISSION

CONTROL BLOCK / / / / / (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)	
$\frac{10/11}{10000000000000000000000000000000$	
$\frac{/0/1/}{\text{SOURCF}} \xrightarrow{\text{REPORT}}_{\text{L/}} (6) \qquad \frac{/0/5/0/0/3/3/8/}{\text{DOCKET NUMBER}} (7) \qquad \frac{/0/8/0/1/8/0/}{\text{EVENT DATE}} (8) \qquad \frac{/0'2/2/7/2/0'}{\text{REPORT DATE}} (9)$	
EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)	
/0/2/ / On August 1 and 8, 1980, while operating in Mode 1 at 100% power, sample analy-/	
/0/3/ / sis of "B" SI accumulator indicated a boron concentration in excess of the 2100/	
/0/4/ / ppm Technical Specification limit (2143 and 2138 ppm boron respectively). Be-/	
/0/5/ / cause allowable boron concentrations were restored to the accumulator prior to /	
<pre>/0/6/ / expiration of the specified time interval for the limiting condition for opera-/</pre>	
<pre>/0/7/ / tion, the public health and safety were not affected. Reportable pursuant to /</pre>	
/0/8/     / T.S. 6.9.1.9.b.     /       SYSTEM     CAUSE     CAUSE       CODE     CODE     SUBCODE       CODE     CODE     SUBCODE	
/0/9/ /S/F/ (11) /X/ (12) /Z/ (13) /A/C/C/U/M/U/ (14) /Z/ (15) /Z/ (16)	
LEP/RO EVENT YEAR REPORT NO. CODE TYPE NO. (17) REPORT	
NUMBER /8/0/ /-/ /0/6/9/ /// /0/3/ /L/ /-/ /0/	
ACTION FUTURE EFFECT SHUTDOWN ATTACHMENT NPRD-4 PRIME COMF. COMPONENT TAKEN ACTION ON PLANT METHOD HOURS SUBMITTED FORM SUB. SUPPLIER MANUFACTURES	
/X/ (18) $/Z/$ (19) $/Z/$ (20) $/Z/$ (21) $/0/0/0/0/$ (22) $/Y/$ (23) $/N/$ (24) $/N/$ (25) $/D/1/0/0/$ (3)	.6)
CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)	
/1/0/ / The high sample concentration is believed to have been caused by stratification/	
<pre>/1/1/ / of boric acid in either the accumulator or the makeup source (RWST). Correc-/ /1/2/ / tive action was to drain and makeup to the tank until a satisfactory sample was/</pre>	
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/1/1/       /       of boric acid in either the accumulator or the makeup source (RWST). Correc-/         /1/2/       /       tive action was to drain and makeup to the tank until a satisfactory sample was/         /1/3/       /       obtained.       //         /1/4/       /       //         FACILITY       METHOD OF         STATUS       %POWER       OTHER STATUS (30)         DISCOVERY       DISCOVERY DESCRIPTION (32)         /1/5/       /E/ (28)       /1/0/0/ (29)         ACTIVITY       CONTENT         RELEASED       OF RELEASE         OF RELEASE       AMOUNT OF ACTIVITY (35)       LOCATION OF RELEASE (36)         /1/6/       /Z/ (33)       /Z/ (34)       NA       /	
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/1/1/       /       of boric acid in either the accumulator or the makeup source (RWST). Correc-/         /1/2/       /       tive action was to drain and makeup to the tank until a satisfactory sample was/         /1/3/       /       obtained.       //         /1/3/       /       obtained.       //         /1/4/       /       //       //         FACILITY       METHOD OF       DISCOVERY DESCRIPTION (32)         /1/5/       /E/ (28)       /1/0/0/ (29)       /       NA /       //       Periodic Sampling /         ACTIVITY       CONTENT       RELEASED OF RELEASE AMOUNT OF ACTIVITY (35)       LOCATION OF RELEASE (36)       //         /1/6/       /Z/ (33)       /Z/ (34)       /       NA       /       NA       /	
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/1/1/       /       of boric acid in either the accumulator or the makeup source (RWST). Correc-//         /1/2/       /       tive action was to drain and makeup to the tank until a satisfactory sample was/         /1/2/       /       tive action was to drain and makeup to the tank until a satisfactory sample was/         /1/3/       /       obtained.       //         /1/4/       /       //         FACILITY       METHOD OF         STATUS       %POWER       OTHER STATUS (30)       DISCOVERY DESCRIPTION (32)         /1/5/       /E/ (28)       /1/0/0/ (29)       /       NA /       //         ACTIVITY       CONTENT       RELEASED OF RELEASE AMOUNT OF ACTIVITY (35)       LOCATION OF RELEASE (36)         /1/6/       /Z/ (33)       /Z/ (34)       /       NA       /         PERSONNEL EXPOSURES       NUMBER       TYPE       DESCRIPTION (39)       //         /1/7/       /0/0/0/ (37) /Z/ (38)       /       NA       //         PERSONNEL INJURIES       NUMBER       DESCRIPTION (41)       //         /1/2/       /0/0/0/ (40)       /       NA       //	
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Virginia Electric and Power Company North Anna Power Station, Unit #1 Attachment: Page 1 of 1 Docket No. 50-338 Attachment to LER 80-069/03L-0

#### Description of Event

During steady state operation in Mode 1, sample analysis of "B" safety injection accumulator on August 1 and 8, 1980, indicated a boron concentration in excess of the 2100 ppm Technical Specification limit. Results were 2143 ppm and 2138 ppm boron respectively. Both occurrences are contrary to T.S. 3.5.1.c and reportable pursuant to T.S. 6.9.1.9.b.

## Probable Consequences of Event

The operability of each RCS accumulator ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the accumulators. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures. The concentration of boric acid in the RCS accumulators is maintained within an operating band of 1900 to 2100 ppm boron. This limit ensures that the assumptions used for accumulator injection in the safety analysis are met. Because "A" and "C" accumulators remained operable and acceptable "B" accumulator chemistry was restored prior to expiration of the specified time interval for the limiting condition for operation, the health and safety of the general public were not affected.

#### Cause of Event

The high boron concentrations in the "B" accumulator samples is believed to have been caused by stratification of boric acid in either the accumulator itself or the water makeup source (RWST).

#### Immediate Corrective Action

Correct accumulator boron concentrations were restored by lowering the tank level and refilling from the Unit 2 refueling water storage tank.

# Scheduled Corrective Action

There are no scheduled corrective actions required.

## Actions Taken to Prevent Recurrence

Prior to each accumulator solution volume increase, the refueling water storage tank providing the makeup will be thoroughly recirculated using the quench spray pumps.

# Generic Implications

This problem is generic in nature in that uncirculated tanks containing borated water, such as the accumulators, are always susceptable to stratification.