

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

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

/0/2/ / On July 10, 1983, following a reactor trip from 100 percent power, the I-131 Dose/
/0/3/ / Equivalent specific activity exceeded 1.0 microcuries/gram. Samples were taken /
/0/4/ / with a four hour surveillance frequency in accordance with Item 4a of Technical /
/0/5/ / Specification Table 4.4-4. The level returned to less than the limit within 14 /
/0/6/ / hours. The public health and safety were not affected. This event is reportable/
/0/7/ / pursuant to T.S. 6.9.1.9.b and T.S. 6.9.2. /
/0/8/ /

SYSTEM CAUSE CAUSE COMP. VALVE
CODE CODE SUBCODE COMPONENT CODE SUBCODE SUBCODE

/0/9/ /R/C/ (11) /X/ (12) /Z/ (13) /Z/Z/Z/Z/Z/Z/ (14) /Z/ (15) /Z/ (16)
LER/RO EVENT YEAR SEQUENTIAL OCCURRENCE REPORT REVISION
REPORT NUMBER /8/3/ /-/ /0/4/9/ /-/ /0/3/ /L/ /-/ /0/
(17) NUMBER

ACTION FUTURE EFFECT SHUTDOWN ATTACHMENT NPRD-4 PRIME COMP. COMPONENT
TAKEN ACTION ON PLANT METHOD HOURS SUBMITTED FORM SUB. SUPPLIER 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/ / This event was caused by minor fuel element defects, though not specifically /
/1/1/ / identified, in the reactor core. Post trip conditions in the core caused a re- /
/1/2/ / lease of iodine from fuel element defects to the Reactor Coolant System. The /
/1/3/ / accelerated sampling frequency of T.S. 3.4.8 was implemented until RCS specific /
/1/4/ / activity returned to less than the limit of T.S. 3.4.8.a. /

FACILITY METHOD OF
STATUS %POWER OTHER STATUS DISCOVERY DISCOVERY DESCRIPTION (32)
/1/5/ /G/ (28) /0/0/0/ (29) / NA / (30) /C/ (31) / Chemistry Sample /

ACTIVITY CONTENT
RELEASED 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/ /3/0/0/ (40) / NA /

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

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

NRC USE ONLY

NAME OF PREPARER E. Wayne Harrell

PHONE (703) 894-5151

Description of Event

At approximately 1840 on July 10, 1983 Unit 1 was operating at 100 percent of Rated Thermal Power when a significant gland steam condenser tube leak was detected. Gland steam is required to seal the turbine labyrinth seals. The gland steam condenser, which uses condensate flow at 500 to 650 psig on the tube side for cooling, cannot be isolated from the condensate system. Unit 1 had to be taken off line for gland steam condenser repairs. A Unit 1 rampdown at 5 to 10 percent per minute was immediately initiated.

At 1842 both gland steam condenser air removal fans had tripped indicating that the gland steam condenser had filled with water and was filling the fan casing and air duct. The turbine and reactor were manually tripped from approximately 90 percent Rated Thermal Power.

A primary coolant sample taken at 1924 showed that primary coolant I-131 Dose Equivalent specific activity was 1.90 microcurie/gram. T.S. 3.4.8 specifies a primary coolant I-131 Dose Equivalent specific activity limit of 1.0 microcurie/gram.

This event is reportable pursuant to T.S. 6.9.1.9.b and T.S. 6.9.2.

Probable Consequences of Occurrence

Primary coolant I-131 Dose Equivalent specific activity peaked at 2.38 microcurie/gram at 2140 on July 10, 1983 and returned to within T.S. 3.4.8 limits by 0800 on July 11, 1983. The reactor rampdown and trip caused the primary coolant iodine spike. Daily samples taken prior to the trip were consistently less than 0.1 microcurie/gram Dose Equivalent I-131. The primary coolant Dose Equivalent I-131 specific activity exceeded the 1.0 microcurie/gram limit for a time period less than or equal to 13 hours and 18 minutes. The 4 hour sampling surveillance frequency required by T.S. Table 4.4-4 was maintained throughout the event. The Action Statement of the applicable LCO (T.S. 3.4.8) was met. The public health and safety were not affected.

Cause of Event

Iodine spiking occurs when rapid changes in reactor power are made if minor fuel defects are present. Iodine spiking with power changes is a well documented and widely accepted phenomenon.

Immediate Corrective Action

The primary coolant was sampled and analyzed at the frequency required by item 4a of Technical Specifications Table 4.4-4.

Scheduled Corrective Action

No further corrective action is required.

Action Taken To Prevent Recurrence

Iodine spiking from minor fuel defects during sudden power changes is expected. Unit 1 reactor power change rates during normal operation have been administratively limited which reduces the probability of recurrence.

Generic Implications

This event has no generic implications.

Supplemental Information

This event is reportable as a "Thirty-Day Written Report" pursuant to T.S. 6.9.1.9.b. In addition the supplemental information required by T.S. 6.9.2 "Special Report" and by T.S. 3.4.8 is included as follows:

1. Reactor Power History 48 hours prior to the Dose Equivalent I-131 limit being exceeded.
 - July 8, 1983 - 1800 to 2130 hours at 100 RTP
2130 to 0000 from 100% to 93% of RTP for valve freedom test
 - July 9, 1983 - 0039 to 0318 hours ramp up from 93% to 100% RTP
0318 to 2400 hours at 100% RTP
 - July 10, 1983 - 0000 to 1840 hours at 100% RTP
1840 to 1842 hours ramp down from 100% to 90% of RTP
1842 manual reactor trip
2. Fuel Burnup by Core Region - As of July 10, 1983:
 - Fuel Batch 4a - 28,700 MWD/MTU
 - 5a - 19,200 MWD/MTU
 - 6a - 4,700 MWD/MTU
 - Cycle 4 Burnup - 4,190 MWD/MTU
3. Normal mixed bed demineralization operation 48 hours prior to and after the event. Average flowrate of 125 gpm.
4. No de-gassing operations were performed.

5. Duration of spike above 1.0 microcurie/gm Dose Equivalent I-131.

<u>DATE</u>	<u>TIME</u>	<u>DOSE EQUIVALENT I-131 (Microcuries/gm)</u>
July 9, 1983	0054	0.09
July 10, 1983	0047	0.08
Reactor Trip July 10, 1983 1842		
July 10, 1983	1924	1.90
July 10, 1983	2140	2.38
July 10, 1983	2340	2.19
July 11, 1983	0315	1.57
July 11, 1983	0800	0.95
July 11, 1983	1100	0.62

Vepco

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

P. O. BOX 402

MINERAL, VIRGINIA 23117

August 3, 1983

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

Serial No. N-83-109
NO/RC3: 11
Docket No. 50-338
License No. NPF-4

Dear Mr. O'Reilly:

Pursuant to North Anna Power Station Technical Specifications, the Virginia Electric and Power Company hereby submits the following License Event Report applicable to North Anna Unit No. 1.

Report No.

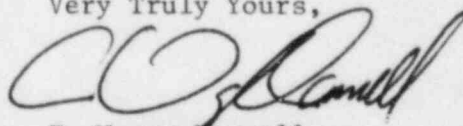
Applicable Technical Specifications

LER 83-049/03L-0

T.S. 6.9.1.9.b and T.S. 6.9.2

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to Safety Evaluation and Control for their review.

Very Truly Yours,



E. Wayne Harrell
Station Manager

Enclosures (3 copies)

cc: Document Control Desk (1 copy)
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U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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