

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) /0/4/0/1/8/2/ (8) /0/4/2/0/8/2/ (9)
 SOURCE DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

/0/2/ / On April 1, 1982, the post reactor trip specific activity samples of the reactor /
 /0/3/ / coolant system indicated a Dose Equivalent I-131 level greater than the limit /
 /0/4/ / specified by T.S. 3.4.8. Since the high iodine level existed for only a short /
 /0/5/ / time and the specific activity returned to within the limit of T.S. 3.4.8, the /
 /0/6/ / health and safety of the public were not affected. This event is reportable /
 /0/7/ / pursuant to T.S. 6.9.1.9.d and the special reporting requirements of T.S. 6.9.2. /
 /0/8/ /

SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
/0/9/ /R/C/ (11)	/X/ (12)	/Z/ (13)	/Z/Z/Z/Z/Z/Z/ (14)	/Z/ (15)	/Z/ (16)
LER/RO REPORT NUMBER	EVENT YEAR	SEQUENTIAL REPORT NO.	OCCURRENCE CODE	REPORT TYPE	REVISION NO.
(17)	/8/2/	/-/ /0/1/3/	/ \ /	/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/ / This event was caused by a known fuel element defect in the reactor core. Post /
 /1/1/ / trip conditions in the core enhanced the release of fission fragments to the /
 /1/2/ / reactor coolant system which caused the iodine spike. The accelerated sampling /
 /1/3/ / frequency of T.S. 3.4.8 was implemented until the RCS specific activity returned /
 /1/4/ / to less than the limit of T.S. 3.4.8.a. /

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

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

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

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Virginia Electric and Power Company
North Anna Power Station, Unit #1
Docket No. 50-338
Report No. LER 82-013/03L-0

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Description of Event

On April 1, 1982, following a reactor trip from 100% power, the specific activity sample of the reactor coolant showed a Dose Equivalent I-131 level of 1.15 microcuries/gm. In this event, the T.S. 3.4.8 limit of ≤ 1.0 microcuries/gm was exceeded. The I-131 level and duration of the spike are included in this report.

Probable Consequences of Occurrence

The limitations on the specific activity of the primary coolant ensure that the resulting 2 hour doses at the site boundary will not exceed an appropriately small fraction of the Part 100 limits following a postulated accident. Since the Dose Equivalent I-131 limit was exceeded for a short period of time and the Iodine level was monitored by sampling every 4 hours until the level returned to less than the T.S. 3.4.8 limit as required by the action statement, the health and safety of the public were not affected.

Cause of Event

The iodine spike was caused by known, yet not specifically located, fuel element defects in the reactor core. Post trip conditions enhanced the release of fission fragments, specifically I-131, to the reactor coolant system which caused an increase in the coolant specific activity level.

Immediate Corrective Action

The immediate corrective action was to implement the actions required by T.S. 3.4.8. Specifically, the level of Dose Equivalent I-131 was monitored every 4 hours until the level returned to less than the limit.

Scheduled Corrective Action

No further corrective actions will be taken at this time.

Actions Taken to Prevent Recurrence

The specific activity of the reactor coolant system will continue to be monitored as required by T.S. 4.4.8.

Generic Implications

There are no generic implications associated with this event.

Supplemental Information

This event is reportable as a "Thirty-Day Written Report" pursuant to T.S. 6.9.1.9.d. 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 these events
March 30, 1982 - 24 hours at 100% RTP
March 31, 1982 - 24 hours at 100% RTP
April 1, 1982 - 1538 Reactor Trip
April 1, 1982 - 0130 Reactor Startup
2. Fuel Burnup by Core Region - As of April 1, 1982:
Fuel Batch 1A3 - 26,107 MWD/MTU
3A2 - 31,099 MWD/MTU
4 - 23,812 MWD/MTU
5 - 13,417 MWD/MTU
Cycle 3 Burnup - 12,098 MWD/MTU
3. Normal mixed bed demineralization 48 hours prior to and after each spike. Average flowrate of 76 gpm.
4. No de-gassing operations were performed.
5. Duration of I-131 spike:
April 1, 1982 - Post trip sample (1935) 1.15 microcuries/gm
2335 - 1.16 microcuries/gm
April 2, 1982 - 0156 - 1.02 microcuries/gm
0338 - 1.11 microcuries/gm
0730 - 0.94 microcuries/gm
Duration approximately 11.9 hours