

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) /0/7/1/0/8/1/ (8) /0/7/2/8/8/1/ (9)
 SOURCE DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

/0/2/ / On July 10, 1981 and July 12, 1981, the post reactor trip specific activity samp-/
 /0/3/ / ples of the reactor coolant system indicated a Dose Equivalent I-131 level great-/
 /0/4/ / than the limit specified by T.S. 3.4.8. Since the high iodine level existed for /
 /0/5/ / only a short period of time and the specific activity level returned to within /
 /0/6/ / the T.S. 3.4.8 limit, the health and safety of the public were not affected. /
 /0/7/ / This event is reportable pursuant to T.S. 6.9.1.9.d and the special reporting /
 /0/8/ / requirements of T. 6.9.2. /

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	EVENT YEAR	SEQUENTIAL REPORT NO.	OCCURRENCE CODE	REPORT TYPE	REVISION NO.
(17) REPORT NUMBER	/8/1/	/-/	/0/5/3/	/ \ /	/0/3/
	/L/	/-/	/0/		

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLAN	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/ /E/ (28)	/1/0/0/ (29)	/ NA /	/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 /	/ / / / / / / / / / / / / / / /

Description of Event

On July 10, 1981, following a reactor trip from 100% power, the specific activity sample of the reactor coolant showed a Dose Equivalent I-131 level of 1.34 microcuries/gm. On July 12, 1981, following another reactor trip from 100% power, the Dose Equivalent I-131 level reached 1.17 microcuries/gm. In both of these events, the T.S. 3.4.8 limit of ≤ 1.0 microcuries/gm was exceeded. The I-131 levels and duration of the spikes 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 spikes were 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

July 8, 1981 - 24 hours at 100% RfP

July 9, 1981 - 24 hours at 100% RTP

July 10, 1981 - 0025 Reactor Trip

0200-0800 Reactor Startup 2% to 9% RTP

0900 - 33% RTP

1000 - 64% RTP

1100 - 75% RTP

1200 - 86% RTP

1300 - 91% RTP

1400 - 98% RTP

1500-2400 - 100% RTP

July 11, 1981 - 24 hours at 100% RTP

July 12, 1981 - 0000-1300 - 100% RTP

1323 - Reactor Trip

1400-1900 - 0% RTP

2000 - 7.6% RTP

2100 - 5.6% RTP

2200 - 11.6% RTP

2300 - 32% RTP

2400 - 24% RTP

Supplemental Information (cont.)

2. Fuel Burnup by Core Region - As of June 30, 1981:

Fuel Batch 1A3 - 16,790 MWD/MTU

3A2 - 25,179 MWD/MTU

4 - 13,286 MWD/MTU

5 - 3,278 MWD/MTU

Cycle 3 Burnup - 2,947 MWD/MTU

3. Normal mixed bed demineralization 48 hours prior to and after each spike. Average flowrate of 82 gpm.
4. No de-gassing operations were performed.
5. Duration of I-131 spike:

July 10, 1981 - Post trip sample (0140) 1.34 microcuries/gm

0440 - 1.35 microcuries/gm

0737 - 1.08 microcuries/gm

1122 - 7.46×10^{-1} microcuries/gm

Duration approximately 10 hours

July 12, 1981 - Post trip sample (1435) 1.17 microcuries/gm

1830 - 1.04 microcuries/gm

2235 - 0.678 microcuries/gm

Duration approximately 11 hours