

## LICENSEE EVENT REPORT

CONTROL BLOCK

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

V A S I P S 1 0 0 - 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5  
LICENSEE CODE 14 15 LICENSE NUMBER 23 24 LICENSE TYPE 30 31 32 33 34 35

REPORT SOURCE L 6 0 5 0 0 0 2 8 0 7 0 4 2 5 8 2 8 0 5 1 4 8 2 6  
DOCKET NUMBER 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80  
EVENT DATE 68 69 70 71 72 73 74 75 76 77 78 79 80  
REPORT DATE 74 75 76 77 78 79 80

## EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

On April 25 and 26, post reactor trip specific activity samples of the reactor coolant system indicated a dose equivalent I-131 level greater than the T.S. 3.1.D.2 limit. Since the integrity of the steam generator tubes was maintained and the activity remained below the T.S.3.1.D.3 limit, the health and safety of the public were not affected. This event is reportable per T.S.6.6.2.b(2) and the specific reporting requirements of T.S.-3.1.D.4.

SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP SUBCODE VALVE SUBCODE  
R C 11 E 12 C 13 F U E L X X 14 Z 15 Z 16

LER/RO REPORT NUMBER 17 8 2 1 0 5 1 1 0 3 L 0  
EVENT YEAR 21 22 SEQUENTIAL REPORT NO. 24 25 OCCURRENCE CODE 26 27 REPORT TYPE 30 31 REVISION NO. 32  
ACTION TAKEN 33 X 18 Z 19 EFFECT ON PLANT 35 Z 20 SHUTDOWN METHOD 36 Z 21 HOURS 37 0 0 0 0 40 ATTACHMENT SUBMITTED 41 Y 23 NPD-4 FORM SUB 42 N 24 PRIME COMP. SUPPLIER 43 N 25 COMPONENT MANUFACTURER 44 W 1 2 1 0 47 25

## CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

This event was caused by fuel defects in the reactor core. Post trip condition in the core enhanced the release of fission products to the reactor coolant system resulting in an iodine spike. An accelerated sampling frequency was implemented until RCS specific activity returned to less than the limit of T.S.3.1.D.2.

FACILITY STATUS 15 G 28 % POWER 10 0 0 0 29 OTHER STATUS 30 N/A METHOD OF DISCOVERY 31 C 31 DISCOVERY DESCRIPTION 32 Post Trip Chemistry Sample

ACTIVITY CONTENT RELEASED OF RELEASE 16 Z 33 Z 34 AMOUNT OF ACTIVITY 35 N/A LOCATION OF RELEASE 36 N/A

PERSONNEL EXPOSURES NUMBER 17 0 0 0 37 Z 38 DESCRIPTION 39 N/A

PERSONNEL INJURIES NUMBER 18 0 0 0 40 DESCRIPTION 41 N/A

LOSS OF OR DAMAGE TO FACILITY TYPE 19 Z 42 DESCRIPTION 43 N/A

PUBLIC 8205210095 820514  
ISSUED PDR ADOCK 05000280  
N S PER

NRC USE ONLY

NAME OF PREPARED J. L. Wilson

PHONE (804) 357-3184

ATTACHMENT 1

SURRY POWER STATION, UNIT NO. 1

DOCKET NO: 50-280

REPORT NO: 82-051/03L-0

EVENT DATE: 04-25-82

TITLE OF THE EVENT: High I-131 in RCS

1. DESCRIPTION OF EVENT:

At 0925, on April 25, 1982, following a reactor trip from 100% power, the specific activity sample of the reactor coolant showed a peak dose equivalent I-131 activity of 4.86 microcuries/cc, exceeding the T.S. 3.1.D.2 limit of  $\leq 1.0$  microcuries/cc. The dose equivalent I-131 returned to within the T.S. limit at 0830 on April 26, 1982. This event is reportable per T.S.3.1.D.4 and T.S.6.6.2.b(2).

2. PROBABLE CONSEQUENCES:

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 10 CFR 100 limits following a postulated steam generator rupture. Since the dose equivalent I-131 peak was below the technical specification upper limit of 10 microcuries/cc, the reactor coolant activity was below the value analyzed in the FSAR for a tube rupture and 1% failed fuel. Therefore the health and safety of the public were not affected.

3. CAUSE OF THE EVENT:

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

4. IMMEDIATE CORRECTIVE ACTION:

The immediate corrective action was to implement the actions required by T.S. Table 4.1-2B. Specifically, the level of dose equivalent I-131 was monitored every 4 hours until the level returned to less than 1.0 microcuries/cc.

5. SUBSEQUENT CORRECTIVE ACTION:

No further actions will be taken at this time.

6. ACTIONS TAKEN TO PREVENT RECURRENCE:

The specific activity of the reactor coolant system will continue to be monitored as required by T.S. Table 4.1-2B. The faulted fuel will be replaced at the next scheduled refueling.

7. GENERIC IMPLICATIONS:

There are no generic implications associated with this event.

Supplemental Information

This supplemental information as required by T.S.3.1.D.4

"Special Report" is included as follows:

1. Reactor Power History 48 hours prior to these events:

April 23 to April 25th: Unit 1 at 100%  
Unit trip at 0655 on April 25, 1982

2. Fuel burnup by region as of 0655 April 25, 1982:

Fuel Batch	4A:	19,406 MWD/MTU
	6B:	18,770 MWD/MTU
	4C:	28,247 MWD/MTU
	6C:	28,708 MWD/MTU
	7A:	21,310 MWD/MTU
	8A:	9,446 MWD/MTU
	8B:	7,995 MWD/MTU
Cycle 6 Burnup:		7,669 MWD/MTU

3. Prior to the trip, the letdown flowrate had been established at 108 gpm.
4. Degassing operations were not being performed.
5. Duration of I-131 dose equivalent spike:

April 25, 1982: 0445 hours - Pre Trip Sample 0.191 microcuries/cc  
0925 hours - Post Trip Sample 4.86 microcuries/cc  
1230 hours - Post Trip Sample 4.04 microcuries/cc  
1535 hours - Post Trip Sample 4.14 microcuries/cc  
2000 hours - Post Trip Sample 3.59 microcuries/cc

April 26, 1982: 0035 hours - Post Trip Sample 2.10 microcuries/cc  
0440 hours - Post Trip Sample 1.33 microcuries/cc  
0830 hours - Post Trip Sample 0.89 microcuries/cc

The duration of the event was approximately 23 hours.