

CONTROL BLOCK: 

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 (1)

0	1	V	A	S	P	S	1	2	0	0	-	0	0	0	0	0	-	0	0	3	4	1	1	1	1	4			5														
8		9						14						25										26						30						57						CAT 58	
		LICENSEE CODE						LICENSE NUMBER										LICENSE TYPE																									

REPORT SOURCE 0 1 6 0 5 0 0 0 2 8 0 7 1 1 2 2 8 3 8 1 2 2 1 8 3 9

0 2 | On November 22, 1983, following a reactor rampdown and subsequent trip from  
0 3 | subcritical power, activity samples of the reactor coolant system indicated a dose  
0 4 | equivalent I-131 level greater than the T.S.3.1.D.2 limit. Since the activity  
0 5 | remained below the T.S.3.1.D.3 limit, the health and safety of the public would not  
0 6 | have been affected. This event is reportable per T.S.6.6.2.b.(2) and the Special  
0 7 | Reporting requirements of T.S.3.1.D.4.

018 \_\_\_\_\_ 8

SYSTEM CODE 0 9		CAUSE CODE R C		CAUSE SUBCODE C		COMPONENT CODE F U E L X				COMP. SUBCODE Z		VALVE SUBCODE Z					
7	8	9	10	11	12	13	14	15	16	17	18	19	20				
LER/RO REPORT NUMBER 17		EVENT YEAR 8 3		SEQUENTIAL REPORT NO. 0 5 3		OCCURRENCE CODE 0 3		REPORT TYPE L		REVISION NO. 0							
21	22	23	24	25	26	27	28	29	30	31	32						
ACTION TAKEN X		FUTURE ACTION Z		EFFECT ON PLANT Z		SHUTDOWN METHOD Z		HOURS 0 0 0 0		ATTACHMENT SUBMITTED Y		NPRD-4 FORM SUB. N		PRIME COMP. SUPPLIER N		COMPONENT MANUFACTURER W 1 2 0	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

1 0 | The event was caused by known, but not specifically identified fuel element defects

1 1 | in the reactor core. Post rampdown/trip conditions in the core enhanced the release

1 2 | of fission products to the reactor coolant system resulting in an iodine spike.

1 3 | An accelerated sampling frequency was implemented until the RCS specific activity

1 4 | returned to less than the T.S.3.1.D.2 limit.

8 9  
FACILITY STATUS 1 5 D 28  
% POWER 0 0 0 29  
OTHER STATUS 30 N/A  
METHOD OF DISCOVERY C 31  
DISCOVERY DESCRIPTION 32 Post-trip chemistry sample

ACTIVITY CONTENT  
RELEASED OF RELEASE

1 6 2 33 7 34

AMOUNT OF ACTIVITY (35)

N/A

LOCATION OF RELEASE (36)

N/A

PERSONNEL EXPOSURES					
NUMBER	TYPE		DESCRIPTION (39)		
000	(37)	Z	(38)	N/A	

PERSONNEL INJURIES  
NUMBER DESCRIPTION (41) 8401040373 831221

1 2 3 4 5 6 7 8 9 10 11 12 N/A PDR ADOCK 05000280 S PDR

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49		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		81		82		83		84		85		86		87		88		89		90		91		92		93		94		95		96		97		98		99		100	
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49		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		81		82		83		84		85		86		87		88		89		90		91		92		93		94		95		96		97		98		99		100	

8 9 10  
PUBLICITY (45)  
NRC USE ONLY

ISSUED		DESCRIPTION	
2	0	N	44
		N/A	

NAME OF DONOR J. L. Wilson

TELEPHONE: (804) 357-3184

00 94 1-926

ATTACHMENT 1  
SURRY POWER STATION, UNIT NO. 1  
DOCKET NO: 50-280  
REPORT NO: 83-053/03L-0  
EVENT DATE: 11-22-83

TITLE OF THE EVENT: DOSE EQUIVALENT IODINE LIMIT EXCEEDED

1. Description of the Event

On November 22, 1983, at 0620 hours, following unit rampdown from 100% and a reactor trip from subcritical power, the specific activity sample of the reactor coolant showed a peak dose equivalent I-131 level of 2.17 microcuries/cc. This exceeds the dose equivalent I-131 T.S.3.1.D.2 limit of  $\leq 1.0$  microcuries/cc and is reportable per T.S.6.6.2.b.(2) and the special reporting requirements of T.S.3.1.D.4.

2. Probable Consequences and Status of Redundant Equipment

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 10CFR 100 limits following a postulated steam generator tube rupture. Since the dose equivalent I-131 peak was below the Technical Specification upper limit of 10 microcuries/cc, the reactor coolant gross 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

The Iodine Spike was caused by known, yet not specifically identified fuel element defects in the reactor core. Post trip conditions enhanced the release of fission products, specifically I-131 which caused an increase in the coolant specific activity level.

4. Immediate Corrective Action

The immediate corrective action was to implement the actions required by T.S. Table 4.1.2.B. 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 corrective actions will be taken at this time.

6. Action Taken to Prevent Recurrence

The specific activity of the reactor coolant system will continue to be monitored as required by T.S. Table 4.1.2.B.

7. Generic Implications

None.

Report No.

SUPPLEMENTAL INFORMATION

The supplemental information required by T.S.3.1.D.4 "Special Report" is included as follows:

1. Reactor Power History 48 hours prior to the event:

November 20, 1983 - 24 hours at 100%  
November 21, 1983 - 24 hours at 100%  
November 22, 1983 - 0152 - Rampdown from 100%  
November 22, 1983 - 0356 - Reactor < 10% power  
November 22, 1983 - 0433 - Reactor subcritical  
November 22, 1983 - 0445 - Reactor trip from subcritical level

2. Fuel burnup by core region - as of November 22, 1983:

FUEL BATCH	S2/6B:	28553 MWD/MTU
	6C:	29142 MWD/MTU
	4C:	29791 MWD/MTU
	7A:	27001 MWD/MTU
	7B:	34160 MWD/MTU
	8A:	24201 MWD/MTU
	8B:	23290 MWD/MTU
	9 :	5154 MWD/MTU

CYCLE 7 BURNUP: 4518 MWD/MTU

3. Prior to the rampdown, the unit had established a normal letdown rate of 116 GPM.

4. No De-Gassing operations were performed.

5. Duration of I-131 spike:

November 22, 1983 - 0620 hours - Post Trip Sample 2.17 microcuries/cc  
0810 hours - Post Trip Sample 2.60 microcuries/cc  
1010 hours - Post Trip Sample 2.59 microcuries/cc  
1200 hours - Post Trip Sample 2.10 microcuries/cc  
1600 hours - Post Trip Sample 2.08 microcuries/cc  
2000 hours - Post Trip Sample 1.50 microcuries/cc  
November 23, 1983 - 0015 hours - Post Trip Sample 1.31 microcuries/cc  
0355 hours - Post Trip Sample .855 microcuries/cc

Duration approximately 22.5 hours.