NRC FORM 366 (7 77)

U. S. NUCLEAR REGULATORY COMMISSION

(7.77)	LICENSEE EVENT REPORT	EXHIBIT A
	CONTROL BLOCK	ION)
	$ \begin{array}{                                    $	CAT SE
	AREPORT L 60 50 0 0 3 6 8 7 1 1 0 7 7 8 0 13 2 2 7 SOURCE 60 61 DOCKET NUMBER 50 60 EVENT DATE 74 75 REPORT DATE	19 0 80
0 2	During testing of the Main Steam line code safety valves, executi	ng a
03	[ controlled steam lift, it was discovered that the warn ring lockp	in had
0 4	broken on four separate occasions. 2PSV1002 lockpin broke on 11/	7/78 and
0 5	1 L11/20/78. 2PSV1052 lockpin broke twice on 11/21/78. The relievi	ng
0 6	[ capacity of the remaining safety valves exceeded that required fo	r safe
07	operation, as dictated by T.S. Table 3.7.1. Reportable per T.S.6	.9.1.8.(j).
08	No similar occurrences.	
	SYSTEM CODE CODE SUBCODE S	BU EVISION
		<u>ب</u>
	ACTION FUTURE CALL SHUTDOWN HOURS 22 ATTACHMENT FORMUSUB PRIME COMP ACTION ACTION ON PLANT METHOD HOURS 22 ATTACHMENT FORMUSUB SUPPLIER METHOD SUPPLIER METHO	COMPONENT ANUFACTURER 2 2 5 2 47
10	[] Failure was determined to be a result of the lockpin's fragility.	The
	] [lockpins on all Main Steam safety valves were replaced with one c	fa
12	stronger and more reliable design (see Sketch 1 of Attachment).	
13		
14		
7 8	PACILITY X POWER OTHER STATUS 30 METHOD OF DISCOVERY DESCRIPTION 32	06 
1 C 7 8	ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY 35 2 33 Z 34 NA LOCATION OF RELEASE 36 NA 45	80
1 / 7 B	PERSONNEL EXPOSIBLES TUMBER 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Bo
110	LOSS OF OR DAMAGE TO FACILITY (43)	PR I
2 B	9 10 PUBLICITY ISSUED DESCRIPTION (45) NRC US	E CNLY
2 O 7 B		
	NAME OF PREPAREP Chris N. Shively 501/968-25	519

7903270485

- 1. Reportable Occurrence Report No. 50-368/79-020
- 2. Report Date: 03/22/79

3. Occurrence Date: 11/7/78

 Facility: Arkansas Nuclear One - Unit Two Russellville, Arkansas 72801

5. Identification of Occurrence:

Performance of Main Steam Line Code Safety Valves that required remedial action and corrective measures to prevent operation in a manner less conservative than that assumed in the accident analysis in the SAR or T.S. bases. Occurrence is reportable per T.S.6.9.1.8(i).

6. Conditions Prior to Occurrence:

Steady-State Power		Reactor Power	0	MWth		
Hot Standby	<u>x</u>	Net Output	0	MWe		
Cold Shutdown		Percent of Full	Power	0 %		
Refueling Shutdown	Load Changes During Routine					
Routine Startup Operation		Power Operation				
Routine Shutdown Operation						
Other (specify)						

#### 7. Description of Occurrence:

The Main Steam Line Code Safety Valves were being treated by increasing the Main Steam pressure to the valve lift setpoint, thus verifying proper adjustment and blowback. On four separate occasions, it was discovered that the warn ring lockpin had broken. On 11/7/78 and 11/20/78, the lockpin broke on 2PSV1002. The lockpin in 2PSV1052 broke twice on 11/21/78. Reportable Occurrence Report No. 50-368/79-020

8.	Designa	ation	of	Apparent	Cause	of	Occurrence:
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Design .	X	Procedure
Manufacture		Unusual Service Condition
Installation/ Construction		Component Failure
Operator		(See Failure Data)
Other (specify)		

Failure was determined to be a result of the lockpin's fragility.

## 9. Analysis of Occurrence:

The lockpin function is to maintain the warn ring adjustment. With the lockpin broken, the relief setpoint for each valve could not be assured. The failure occurred during Mode 3 operation, prior to initial criticality. The relieving capacity of the remaining safety valves always exceeded that required for safe operation, as dictated by T.S. Table 3.7.-1. Reportable Occurrence Report No. 50-368/79-020

### 10. Corrective Action:

Upon discovery of the failure, the lockpin was replaced with one of similar design until 11/21/78. At the end of testing, 2PSV1052, 2PSV1055 and 2PSV1056 were gagged because lockpins had been used for replacements in other valves. On 11/28/78, the lockpins were replaced in all of the Main Steam Line Code Safety Valves with one of a stronger and more reliable design (see Sketch 1).

11. Failure Data:

Other occurrences involving the Main Steam Safety Valves are 50-368/79-019 and 50-368/78-010; however, they are not similar.

Sketch 1

# NEW LOCKPINS

New lockpins were installed under JO-5027-2 & tested by lifting 2PSV-1002 under JO-5030-2.

The new lockpins are a beeted up, new design which are stronger and will be more reliable.

OLD DESIGN

NEW DESIGN



