

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8805260368 DOC. DATE: 88/05/12 NOTARIZED: NO DOCKET #
 FACIL: 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
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SUBJECT: LER 88-004-00: on 880420, discovered six of twenty main steam
 safety valves lift setpoints out of specification during
 surveillance testing. Caused by testing method & setpoint
 drift. Safety valves setpoints reset. W/880512 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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	AEOD/DOA	1 1	AEOD/DSP/NAS	1 1
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	NRR/DEST/PSB 8D	1 1	NRR/DEST/RSB 8E	1 1
	NRR/DEST/SGB 8D	1 1	NRR/DLPQ/HFB 10	1 1
	NRR/DLPQ/QAB 10	1 1	NRR/DOEA/EAB 11	1 1
	NRR/DREP/RAB 10	1 1	NRR/DREP/RPB 10	2 2
	NRR/DRIS/SIB 9A	1 1	NRR/PMAS/ILRB12	1 1
	NUDOCS-ABSTRACT	1 1	REG FILE 02	1 1
	RES TELFORD, J	1 1	RES/DE/EIB	1 1
	RES/DRPS DEPY	1 1	RGN3 FILE 01	1 1
EXTERNAL:	EG&G WILLIAMS, S	4 4	FORD BLDG HOY, A	1 1
	H ST LOBBY WARD	1 1	LPDR	1 1
	NRC PDR	1 1	NSIC HARRIS, J	1 1
	NSIC MAYS, G	1 1		

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) D. C. Cook Nuclear Plant - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 1 6					PAGE (3) 1 OF 0 4								
TITLE (4) Main Steam Safety Valves Out of Specification Due to Apparent Setpoint Drift																							
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)													
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)										
0	4	2	0	8	8	8	8	0	0	4	0	0	0	5	1	2	8	8	0	5	0	0	0
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																					
1		20.402(b)				20.405(e)				50.73(a)(2)(iv)				73.71(b)									
POWER LEVEL (10)		0 8 0				20.405(a)(1)(i)				50.73(a)(2)(v)				73.71(c)									
		20.405(a)(1)(R)				50.38(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 368A)									
		20.405(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(viii)(A)													
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)													
		20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(x)													
LICENSEE CONTACT FOR THIS LER (12)																							
NAME J. B. Droste - Maintenance Superintendent										TELEPHONE NUMBER 6 1 1 6 4 1 6 1 5 - 1 5 1 9 1 0 1													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																							
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS													
X	S	B	I	R	V	D	2	4	3	Y													
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR							
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO											

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

Between April 19 at 1610 hours and April 20 at 1811 hours, 1988, with the Unit 2 reactor in Mode 1 (power operation) at 77 percent thermal power, six of the twenty Main Steam Safety Valves (MSSV) lift setpoints were found to be out of specification during surveillance testing. The MSSV lift setpoints ranged from 16 psi below to 6 psi above the Technical Specification required range. In each case the MSSVs' lift setpoints were corrected and the safety valves left operable prior to completion of the surveillance test procedure (STP).

The apparent MSSV setpoint drift could have been attributable to two factors, 1) testing method, and; 2) setpoint drift due to valve design/application. The investigation concluded that the old testing method had a high probability of contributing to the apparent MSSV setpoint drift.

The immediate corrective action, as required by the Surveillance Test Procedure, was to reset the safety valves setpoints to within their specified ranges utilizing an improved testing method. To prevent recurrence, future MSSV setpoints will be tested with the improved testing method. This will more accurately reflect the MSSV setpoints.

8805260368 880512
PDR ADOCK 05000316
S PDR

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Conditions Prior to Occurance

Unit Two - 77 Percent Reactor Thermal Power

Description of Event

Between April 19 at 1610 hours and April 20 at 1811 hours, 1988, six of the twenty Unit 2 Main Steam Safety Valves (MSSV) (EIIS/SB-RV) lift setpoints were found out of specification during surveillance testing. The MSSV's lift setpoints ranged from 16 psi below to 6 psi above the Technical Specification required setpoints. In each case the MSSV was declared inoperable prior to performance of the surveillance test procedure. Upon discovery of the low setpoint values the MSSV setpoint was immediately adjusted to bring the value within the Technical Specification required range. The action statement for Technical Specification 3.7.1.1 was complied with during the performance of the testing.

The main steam header of each of the four steam generators (EIIS/SB-SG) in Unit 2 are equipped with 5 safety valves for a total of 20 valves per unit.

The required relief pressure setpoint ranges and their as-found conditions for MSSV's are listed below for the valves found out of specification:

<u>Date</u>	<u>Valve Serial No.</u>	<u>Valve Identification No.</u>	<u>Steam Generator</u>	<u>Technical Specification Required Range (psig)</u>	<u>As-Found Setpoint (psig)</u>
4/19/88	BN#6341	SV-3-2	2	1074-1096	1066
4/19/88	BN#6324	SV-1A-3	3	1054-1076	1082
4/20/88	BN#6335	SV-2B-3	3	1064-1086	1062
4/20/88	BN#6340	SV-3-3	3	1074-1096	1058
4/20/88	BN#6326	SV-1A-4	4	1054-1076	1045
4/20/88	BN#6339	SV-2B-4	4	1064-1086	1060

With the exception of the MSSV's there were no inoperative structures, components, or systems that contributed to this event.

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

Cause of Event

The apparent MSSV setpoint drift could have been attributed to two factors, 1) testing method, and; 2) setpoint drift due to valve design/application. The investigation concluded that the old testing method was inherently less accurate and had a high probability of contributing to the apparent MSSV setpoint drift.

Analysis of Event

The safety valve setpoints discovered in this event were found to be out of compliance with the Technical Specification (T/S) 3.7.1.1 requirements and therefore reportable per 10CFR50-73 (a) (2) (i) (B).

The following FSAR Chapter 14 accident analyses consider secondary-side pressure relief:

1. Loss of External Electrical Load (Appendix 14C.3.6)
2. Loss of Normal Feedwater (Appendix 14C.3.7)
3. Loss of All A.C. Power to the Station Auxiliaries
4. Steam Generator Tube Rupture (14.2.4)
5. Loss of Reactor Coolant from Small Ruptured Pipes or from Cracks in Large Pipes which Actuates the ECCS (Appendix 14E.1)

The low as-found setpoints would not have affected the capacity to relieve the Steam Generator pressures during any analyzed event. Since the low "as-found" lift setpoints would have resulted in the early opening of the MSSV's, and the deviation from the T/S setpoints was small, this situation would not have adversely affected plant safety. The lowest "as-found" lift setpoint found during this event was 1045 psi. This value is higher than the lowest as-found lift setpoint found during a similar event on November 2, 1985 in Units 1 and 2 and is bounded by the safety analysis submitted for that event. The only foreseeable ramification (of the low setpoint deviation) would be a potential actuation of the safety valve prior to the actuation of the steam generator power relief valve which is usually set to actuate at 1025 psi. This foreseeable ramification should not have occurred in the present case, since the lowest lift setpoint found was 1045 psi. Two MSSV's in the train where one valve failed high were within the acceptable range. Since their operability conforms with the design criteria for over pressure protection and since the setpoint deviation was small (6 psi) the as-found setpoint would not have affected the capacity to relieve the steam generator pressure during any analyzed event.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Corrective Action

The immediate corrective action, as required by the Surveillance Test Procedure, was to reset the safety valves setpoints to within their specified ranges. The lift setpoints were adjusted and tested utilizing the improved testing method. To prevent recurrence, future MSSV setpoints will be tested with the improved testing method. This will provide a more accurate determination of the MSSV setpoints.

Failed Component Identification

Main Steam Safety Valve

Plant Designation: SV-1A-3 & 4; SV-2B-3 & 4; SV-3-2 & 3

Manufacturer: Dresser Consolidated Valves

Model: 3707RA-RT22

EIIS Code: SB-RV

Previous Similar Events

LER 50-315/86-020-00

LER 50-315/87-011-00

Indiana Michigan
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PO Box 458
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616 465 5901



May 12, 1988

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Operating License DPR-58
Docket No. 50-316

Document Control Manager:

In accordance with the criteria established by 10 CFR 50.73
entitled Licensee Event Reporting System, the following
report is being submitted:

88-004-00

Sincerely,


W. G. Smith, Jr.
Plant Manager

WGS:clw

Attachment

cc: D. H. Williams, Jr.
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