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 AUTH. NAME AUTHOR AFFILIATION
 DROSTE, J.B. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 BLIND, A.A. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-013-00: on 901017, failure of main steam safety valve
 to meet Tech Spec lift setpoint requirements. W/901114 ltr.

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November 14, 1990

United States Nuclear Regulatory Commission
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Operating Licenses DPR-58
Docket No. 50-315

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:

90-013-00

Sincerely,

A.A. Blind
Plant Manager

AAB:clj

Attachment

cc: D.H. Williams, Jr.
A.B. Davis, Region III
M.P. Alexich
P.A. Barrett
J.E. Borggren
R.F. Kroeger
B. Walters - Ft. Wayne
NRC Resident Inspector
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LE22
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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) D. C. COOK NUCLEAR PLANT - UNIT 1										DOCKET NUMBER (2) 0 5 0 0 0 3 1 5 1 OF 0 3					PAGE (3) 1 OF 0 3											
TITLE (4) Failure of the Unit One Main Steam Safety Valves to Meet Technical Specification Lift Setpoint Requirements.																										
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)													
1	0	1	7	9	0	9	0	0	1	3	0	0	1	1	1	4	9	0	0	5	0	0	0	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(c)				50.73(a)(2)(iv)				73.71(b)												
POWER LEVEL (10)		0 6 8				20.405(a)(1)(i)				50.73(a)(2)(v)				73.71(c)												
		20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)												
		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)(ix)																
LICENSEE CONTACT FOR THIS LER (12)																										
NAME J. B. Droste - Plant Engineering										TELEPHONE NUMBER																
										AREA CODE 6 1 6 4 6 5 - 5 9 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	I	V	D	2	4	3	Y															
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR										
X YES (If yes, complete EXPECTED SUBMISSION DATE)												NO		1	2	3	1	9	0							

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

On October 17, 18, and 19, 1990, with the Unit 1 Reactor in Mode 1 (power operation) at 68 percent thermal power, eleven of the twenty Main Steam Safety Valves' (MSSV) lift setpoints were outside of the Technical Specification specified range. One MSSV lift setpoint was 5 psi below the specified range. Nine MSSV lift setpoints ranged from 4 psi to 31 psi above the required range. These out of range safety valves were immediately reset to within their specified range. One Safety Valve had a lift setpoint in excess of 1144 psig. This was the maximum lifting force available, with existing system parameters and using the current test method. This valve is being sent off site for additional testing.

This condition was the result of the incompatibility of the required one percent Technical Specification setpoint tolerance and the setpoint repeatability inherent to the Dresser 3707 RA safety valves which are installed. Based on ANSI OM-1 Committee Safety Valve Test Requirements which allow a three percent tolerance, steps are currently being taken to obtain a change to Technical Specification 3.7.1.1.

This is an interim report, an updated report is expected to be submitted by December 31, 1990.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

YEAR SEQUENTIAL REVISION
NUMBER NUMBER

D. C. COOK NUCLEAR PLANT-UNIT 1 0 5 0 0 0 3 1 5 9 0 - 0 1 3 - 0 0 0 2 OF 0 3

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

Conditions Prior to Occurrence

Unit One - 68 Percent Reactor Thermal Power.

Description of Event

On October 17, 18, and 19, 1990, eleven of the twenty Unit 1 Main Steam Safety Valves (MSSV) (EIIS/SB-RV) lift setpoints were outside of the criteria required by plant Technical Specifications. One of the MSSV's lift setpoints was 5 psi below the Technical Specification setpoint. Nine MSSV lift setpoints ranged from 4 psi to 31 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 out of tolerance setpoint values, each MSSV setpoint was immediately adjusted to bring the value within the Technical Specification required range. One safety valve had a lift setpoint in excess of 1144 psig. This was the maximum lifting force available, with existing system parameters and using the current test method. 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 1 are equipped with 5 safety valves for a total of 20 valves per unit.

The required relief pressure setpoint ranges and the as-found setpoints for MSSVs found out of specification are listed below:

Date	Valve I.D. No.	Steam Gen.	T/S Range (PSIG)	As Found (PSIG)
10-17-90	1-SV-1B-4	4	1054-1076	1049 -5
10-17-90	1-SV-1A-1	1	1054-1076	1080 +4
10-17-90	1-SV-1B-1	1	1054-1076	1080 +4
10-18-90	1-SV-2A-1	1	1064-1086	1093 +7
10-18-90	1-SV-2B-1	1	1064-1086	1091 +5
10-18-90	1-SV-3-1	1	1075-1096	1115 +19
10-18-90	1-SV-1B-2	2	1054-1076	1083 +7
10-18-90	1-SV-2A-2	2	1064-1086	1117 +31
10-19-90	1-SV-3-3	3	1074-1096	1108 +14
10-19-90	1-SV-2B-2	2	1064-1086	1091 +5
10-19-90	1-SV-3-2	2	1074-1096	*

- * This Safety Valve did not lift with a force equivalent to 1144 psig. This is the maximum lifting force available with current test methods. This Safety Valve is being removed to complete As-Found Testing at an independent laboratory. An up updated report is expected to be submitted by December 31, 1990, to include the As-Found lift pressure of this Safety Valve and the Event Analysis.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) D. C. COOK NUCLEAR PLANT-UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 5 9 0 - 0 1 3 - 0 0 0 3 OF 0 3	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

Description of Event Continued

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

Cause of Event

This condition is the result of the incompatibility of the required Technical Specification setpoint tolerance and the setpoint repeatability inherent to the valve's design.

The updated report will include a cause description for the failure of 1-SV-3-2 to lift.

Analysis of Event

An Analysis will be provided with an updated report following completion of As-Found Testing of the Safety Valves.

Corrective Action

The ten Safety Valves found with lift setpoints slightly outside their setpoint ranges were reset to acceptable values and retested. The Safety Valve which could not be lifted with our test method is being sent to an independent laboratory to determine the As-Found lift setpoint.

Based on ANSI OM-1 Committee Safety Valve Test Requirements, steps are currently being taken to change Technical Specification 3.7.1.1 MSSV lift setpoint tolerance from one percent to three percent.

Failed Component Identification

Main Steam Safety Valve
Manufacturer: Dresser Consolidated Valves
Model: 3707RA-RT22
EIIIS Code: SB-RV

Previous Similar Events

50-315/89-02	50-316/90-06
50-315/87-11	50-316/88-04
50-315/86-20	



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