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ComEd

August 26, 1996

JSPLTR #96-0143

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Licensee Event Report 96-004, Revision 1, Docket 50-237 which is being submitted pursuant to 10CFR50.73(a)(2)(i)(b), which requires reporting of any operation or condition prohibited by the plant's Technical Specifications.

This supplemental report provides results of corrective actions included in the original report.

This correspondence does not contain additional regulatory commitments.

Sincerely,

J. Stephen Perry for
Site Vice President
Dresden Station

Enclosure

cc: A. W. Beach, Regional Administrator, Region III
NRC Resident Inspector's Office
Illinois Department of Nuclear Safety

IE22 1/1

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 2	05000237	1 OF 6

TITLE (4)
Main Steam Safety Valve 2-0203-4G As Found Lift Setpoint Outside Tech Spec Limit Due to 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 NAME None	DOCKET NUMBER
10	05	95	96	-- 004 --	01	08	15	96	FACILITY NAME	DOCKET NUMBER

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

OPERATING MODE (9): N							
POWER LEVEL (10): 000							
	20.2201(b)		20.2203(a)(3)(i)		50.73(a)(2)(iii)		73.71(b)
	20.2203(a)(1)		20.2203(a)(3)(ii)		50.73(a)(2)(iv)		73.71(c)
	20.2203(a)(2)(i)		20.2203(a)(4)		50.73(a)(2)(v)		OTHER
	20.2203(a)(2)(ii)		50.36(c)(1)		50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)
	20.2203(a)(2)(iii)		50.36(c)(2)		50.73(a)(2)(viii)(A)		
	20.2203(a)(2)(iv)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(B)		
	20.2203(a)(2)(v)		50.73(a)(2)(ii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
M. Baron, Maintenance Staff Ext.: 2414	(815) 942-2920

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	SB	RV	C568	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 15 single-spaced typewritten lines) (16)

On October 5, 1995 at 1330 with Unit 2 in the Refuel mode with all fuel removed, during the performance of Dresden Maintenance Procedure (DMP) 0200-03, "Main Steam Safety Valve Pre-maintenance Test", Main Steam [SB] Safety Valve 2-0203-4G (Serial Number BK 7160) test opened at a conservative pressure in excess of the Technical Specification 4.6.E. This failure was attributed to setpoint drift. Valve disassembly and refurbishment did not reveal any mechanical reason for the out of tolerance setpoint lift pressure. Corrective actions included valve disassembly, overhaul, setpoint adjustment and retest prior to any reinstallation. The safety significance of this event is minimal based on an evaluation which shows that with the valve setpoint in the "as found" condition, the reactor pressure safety limit would not have been exceeded during any design basis event.

This supplemental report provides results of corrective actions included in the original report. The original event report was submitted beyond the required 30 day due date as a result of inadequate performance by Operators in the proper reportability screening of the event, and a failure of previous corrective actions to adequately institute valve testing procedural controls.

PLANT AND SYSTEM IDENTIFICATION

General Electric - boiling water reactor - 2527 MWt rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

EVENT IDENTIFICATION:

Main Steam Safety Valve 2-0203-4G As Found Lift Setpoint Outside Tech Spec Limit due to setpoint drift.

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2 Event Date: October 5, 1995 Event Time: 1330

Reactor Mode: N Mode Name: Refuel Power Level: 0%

Reactor Coolant System Pressure: 0 psig

B. DESCRIPTION OF EVENT:

This report is submitted in accordance with 10CFR50.73(a)(2)(i)(b), which requires the reporting of any operation or condition prohibited by the plant's Technical Specifications. On October 5, 1995 a Main Steam [SB] Safety Valve was determined during testing to have an as found setpoint outside of Technical Specification limits. The date of discovery for the event is February 28, 1996 when the condition was discovered during test data review. This report is being submitted beyond the required 30 day reporting requirement as a result of an inadequate review and classification by operations during the initial screening of the event.

On October 5, 1995 at 1330 with Unit 2 in the Refuel mode with all fuel removed, during the performance of Dresden Maintenance Procedure (DMP) 0200-03, Unit 2/3 Six Inch Safety Valve Pre-Maintenance Testing, Main Steam [SB] Safety Valve 2-0203-4G (Serial Number BK 7160) opened at a pressure of 1225 psig. This lift setpoint is outside of Technical Specification 4.6.E which requires the safety valve setpoint of 1240 psig +/- 1% (1228 to 1252 psig). This failure is attributed to setpoint drift. No other out of tolerance conditions were identified for the other three safety valves. The condition was reported to the Operations Department shift management and they failed to recognize, the reportability requirements of the event. The Shift Manager (Licensed Senior Reactor Operator) did not recognize that the lift within the Technical Specification plus or minus 1 percent of setpoint was not met and that the condition constituted a reportable event.

On February 28, 1996 during a review of safety valve testing procedures results it was determined by a system engineer that the safety valve testing of 10/5/95 included results outside of Technical Specifications.

Investigation determined that during the performance of the safety valve testing under DMP 0200-03, Maintenance personnel failed to adhere to the valve testing procedure. Step F.m.4 of DMP 0200-03 requires the user to "initiate a LER". This step was not understood by the mechanic as he believed it was a function of management to perform. He should have stopped and questioned supervision of what his role was in completing the step. Maintenance wrote a Performance Improvement Form (PIF) (step F.m.2 of DMP 0200-03) at the request of Engineering, informing shift management of the problem and continued the surveillance to completion without completing step F.m.4. The Station corrective action procedure focuses reportability determinations on shift operating personnel at the time of the event and therefore the maintenance mechanic could not have performed step F.m.4. The Maintenance mechanic and his Supervisor's failure to question their ability to perform the LER initiation was a personnel error which did not cause the event yet removed a procedural barrier intended to create the LER. Operations performed the reportability screening of the PIF provided by Maintenance and failed to identify the LER requirement.

Investigation has identified that on March 3, 1993 during the performance of DMP 0200-03, Safety Valve 2-0203-4C (Serial Number BK 6277) opened at an out of specification high pressure of 1265 psig. This lift setpoint is high out of tolerance outside of Technical Specification 4.6.E which requires the safety valve setpoint of 1240 psig +/- 1% (1228 to 1252 psig). This was an additional historical instance where the Technical Specification tolerance was exceeded during testing and the event was not recognized as reportable pursuant to 10CFR 50.73.

C. CAUSE OF EVENT:

C.1 Main Steam [SB] Safety Valve 2-0203-4G and 2-0203-4C As Found Lift Setpoint Outside Tech Spec Limit

The cause for the low out of tolerance opening setpoint of valve 2-0203-4G Safety valve is attributed to setpoint drift. The valve was successfully rebuilt through DMP-0200, "Reactor Main Steam Safety Valve Repair and Post Maintenance Testing" and station work request number 95006419703. This activity did not identify any mechanical reason for the valve's failure to lift at the required setpoint.

The cause for the high out of tolerance opening setpoint of valve 2-0202-4C is attributed to setpoint drift due to spindle scoring above the bottom spring washer. The valve was successfully rebuilt through DMP-0200 and station work request number D16625.

C.2 Failure to submit LER within 30 day requirement.

The cause for the failure to report the event is primarily attributed to inadequate performance by Operations in the proper reportability screening of the events. The Shift Manager (Licensed SRO) did not recognize that the lift within the Technical Specification plus or minus 1 percent of setpoint was not met. Operations received the documentation regarding the safety valve failure to meet the Technical Specification tolerance for acceptance, as delineated in the DMP and the Technical Specifications. The Shift Manager held a lengthy discussion with the individual reporting the component failure, but was assured that reportability was not an issue since the pressure did not exceed the 3% +/- ASME standard. Additionally DMP 200-03 did not clearly identify guidance to the Maintenance Mechanic and his Supervisor when the Technical Specification limits of +/- 1% of the design setpoint was exceeded during valve setpoint testing. The Shift Manager did not display a questioning attitude and failed to reference the appropriate documents for reportability. In addition, a second review required by the station corrective action process failed to catch the reportability requirement. This second check failed to recognize the components' Equipment Piece Number as the Technical Specification Safety valve.

Inadequate corrective actions from a previous LER 90-021/Docket 50-237 contributed to the incorrect decision by the Shift Manager. This LER included a revision to DMP 200-03 which was designed to clarify the relationship between lift setpoint results and Technical Specification violations. LER 90-21/Docket 50-237 stated:

> "DMP 200-03 will be revised to clarify the step requiring the initiation of a LER if the setpoints exceed the Technical Specification limits of +/- 1% of the design setpoint. The step containing the ASME section XI expansion requirements will also be clarified. These two clarifications will ensure proper action is taken when a safety valve setpoint is outside the Technical Specification limits."

The revision failed to clarify reportability guidance as required by the corrective action. As a result there was a misunderstanding of actions to be taken when the Technical Specification limits of +/- 1% of the design setpoint was exceeded.

D. SAFETY ANALYSIS:

This LER describes two separate instances where a Main Steam Safety Valve was found to not be within the TS specifications. Valve 2-0203-4C was found high out of tolerance in 1993 and valve 2-0203-4G was found low out of tolerance in 1995. The safety valves are designed to relieve steam from the reactor vessel. The four Electromatic Relief valves and the Target Rock Safety/Relief valve are designed to automatically open prior to reactor pressure reaching the safety valve opening setpoints, relieving steam from the reactor vessel to the Torus. This action, for most events, precludes the opening of the subject safety relief valves.

The Dresden Updated FSAR in Section 5.2.2.2.1, "Determination of the Number of Safety Valves" describes analysis performed in determining the minimum safety valve capacity to conform to the ASME Code limits. No credit was allowed for turbine trip scram or for power-operated, pressure-relieving devices. Credit was taken for subsequent protection action such as neutron flux scram or high reactor pressure scram. Sizing was based on a full power turbine trip with bypass system failure, starting from turbine design conditions of operation. The minimum number of safety valves needed for conformance to the above criteria is three. An additional design margin was allowed in choosing eight safety valves. A ninth was essentially added when one of the five original electromatic relief valves was replaced with a Target Rock dual-purpose safety relief valve.

As stated previously, only three valves are required to meet ASME Code requirements. Only one valve was found out of tolerance during the subject out of tolerances. Eight valves provide relief in excess of 50% of turbine design steam flow. The additional valves provide further pressure relief margin and increase the reliability of the safety valve system.

The most limiting over-pressurization transient analysis is a Main Steam [SB] Line Isolation Valve (MSIV) closure at full power, in conjunction with a postulated failure of the MSIV 10% closure scram. With the setpoint for the safety valve drifted in the conservative direction, valve opening would occur earlier in the transient and reactor pressure would not exceed the current analyzed maximum calculated pressure. For this reason, the significance of this event is minimal.

An analysis has shown that the loss of one of the five relief valves (Target Rock safety relief valve included) does not significantly affect the pressure-relieving capacity of the Automatic Depressurization System.

E. CORRECTIVE ACTIONS:

E.1 The valves have been disassembled, and overhauled.

E.2 Concerning the 1995 procedure violation, the Maintenance Mechanic and his Supervisor were coached and now understand their procedural adherence responsibilities, including the need to stop when the procedure can not be completed as written, and to bring any discrepancy to Supervision for resolution.

E.3 Concerning the 1995 procedure violation, the Operations individuals were coached and now understand their responsibilities toward proper usage of the Reportability Manual and attentiveness to screening for significant issues.

E.4 DMP 200-03 has been revised (Revision 10) to clearly identify guidance to the user when the Technical Specification limits of +/- 1% of the design setpoint was exceeded during valve setpoint testing (Ref: 2371809600401).

E.5 A review of safety valve setpoint testing results from 1988 has been performed to identify if additional safety valve out of tolerance events have occurred and were not reported through the LER system. One instance was identified as discussed previously in section B of this LER (Ref: 2371809600402).

E.6 Operations notified Quad Cities Nuclear Station, whose safety valves are tested at Dresden, and made them aware of the missed reportability issue, for potential action at their site. (2371809600403)

E.7 This LER (LER 95-21, Revision 1, Docket 50-237) provides the results of corrective action 2371809600402. (2371809600400S1)

F. PREVIOUS OCCURRENCES:

LER 87-030/Docket 50-249

Main Steam Safety Valve 3-203-4H Setpoints Found Outside Technical Specification Limits Due to Setpoint Drift

The cause of that event was attributed to mishandling of the valves during transport from the drywell to the test boiler. As corrective action, the procedure for overhauling safety valves was substantially improved.

LER 88-10/Docket 50-249

Main Steam Safety Valve [SB] Setpoints Found Outside Technical Specification Limits Due to Setpoint Drift.

Main Steam [SB] Safety Valve 3-203-4H found outside technical specification limits while performing setpoint testing. Corrective actions were to significantly improve the procedure for overhauling the safety valves and to refurbish the valve.

LER 90-21/Docket 50-237

Main Steam Safety Valves 2-203-4E thru 4H setpoints found outside technical specification limits due to setpoint drift.

Main Steam [SB] Safety Valves 2-203-4E thru 4H setpoints found outside technical specification limits while performing setpoint testing. Corrective actions were to clarify the testing procedure and to refurbish the valve.

G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number
Consolidated Valve Corp/Dresser	Main Steam Safety Valve	3777Q