



Duke Energy
Oconee Nuclear Station
7800 Rochester Highway
Seneca, SC 29672
(864) 885-3107 OFFICE
(864) 885-3564 FAX

W. R. McCollum, Jr.
Vice President

January 11, 2001

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

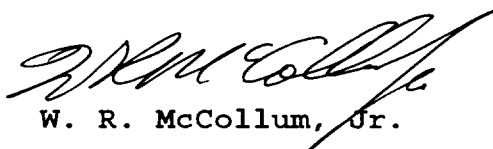
Subject: Oconee Nuclear Station
Docket Nos. 50-269
Licensee Event Report 269/2000-08, Revision 0
Problem Investigation Process No.: O-00-04563

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 269/2000-08, Revision 0, concerning a pressurizer relief valve setpoint found outside of tolerance during testing.

This report is being submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B). This event is considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



W. R. McCollum, Jr.

Attachment

IED2

Document Control Desk
Date: January 11, 2001
Page 2

cc: Mr. Luis A. Reyes
Administrator, Region II
U.S. Nuclear Regulatory Commission
61 Forsyth Street, S. W., Suite 23T85
Atlanta, GA 30303

Mr. D. E. LaBarge
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Mr. M. C. Shannon
NRC Senior Resident Inspector
Oconee Nuclear Station

INPO (via E-mail)

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001
 Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1) Oconee Nuclear Station, Unit 1	DOCKET NUMBER (2) 05000 - 269	PAGE (3) 1 OF 5
--	---	---------------------------

TITLE (4)
Pressurizer Relief Valve Setpoint Found Out-of-Tolerance

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	DOCKET NUMBER
12	14	00	2000	08	00	01	11	01		05000
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9) 6	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10) 0%	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)(B)	50.73(a)(2)(viii)					
	20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(ii)	50.73(a)(2)(x)					
	20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)	73.71					
	20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)						
	20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)						
	20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)	OTHER Specify in Abstract below or in NRC Form 366A					

LICENSEE CONTACT FOR THIS LER (12)

NAME L.E. Nicholson, Regulatory Compliance Manager	TELEPHONE NUMBER (Include Area Code) (864) 885-3292
--	---

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).		<input checked="" type="checkbox"/> NO					

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On December 14, 2000, with Oconee Unit 1 in refueling (mode 6), notification was received from an off-site testing facility that the as-found lift pressure (2602 psig) of one Reactor Coolant System (RCS) pressurizer relief valve, during testing, was greater than Technical Specification limits of 2500 psig +/- 75 psi.

This pressurizer relief valve was tested as required by Technical Specification surveillance. The cause is believed to be set point drift. This valve was replaced with a certified spare. Corrective action taken for the pressurizer relief valve included disassembly, inspection, and refurbishment.

This event is considered to have no significance with respect to the health and safety of the public.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		OF	
Oconee Nuclear Station, Unit 1	05000-269	2000	08	00	2	OF	5

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

EVALUATION:

BACKGROUND

The Reactor Coolant System (RCS) [EIIS:AB] serves as a barrier which prevents release of radionuclides contained in the reactor coolant from reaching the atmosphere. System pressure limits have been established to assure the integrity of the RCS. The design pressure of the RCS is 2500 psig. The maximum transient pressure as specified by American Society of Mechanical Engineers (ASME) Code, Section III, Summer 1967, is 110 percent of design pressure. Thus, the safety limit for RCS pressure is 2750 psig. The pressurizer code safety relief valves (PCSRV) [EIIS:RV] prevent overpressurization of the RCS during transients and accidents that involve a mismatch between the primary heat source(s) and the secondary heat sink. Technical Specification 3.4.10 requires both PCSRVs to be operable (with lift settings greater than 2425 psig and less than 2575 psig, i.e. within +/-3% of setpoint) whenever the reactor [EIIS:RCT] is in Modes 1, 2 and Mode 3 with all RCS cold leg temperatures > 325 degrees F. One PCSRV is required by Technical Specifications to be tested every refueling outage; Oconee typically tests both PCSRVs during each refueling outage.

The PCSRVs were manufactured by Dresser Industries. Since equipment to test and establish setpoints for these valves is not present on site, the valves are removed during scheduled refueling outages, shipped to a vendor, tested and adjusted as necessary, and returned to Oconee. Meanwhile, spare PCSRVs are installed to replace those being tested. When the tested valves are returned to Oconee, they become the spares. In this manner, each pair of PCSRVs is rotated between the three Oconee units.

EVENT DESCRIPTION

During the Unit 1 cycle 19 refueling outage (1EOC19), PCSRVs Serial Numbers (S/N) BL-8896 (1RC-67) and (S/N) BL-8890 (1RC-68) were removed and sent to an off-site vendor for testing.

The vendor tested these PCSRVs on November 30, 2000. PCSRV 1RC-68 (S/N BL-8890) as-found lift pressure was 2519 psig which met the Technical Specification. PCSRV 1RC-67 (S/N BL-8896) as-found lift pressure test

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		OF	
Oconee Nuclear Station, Unit 1	05000-269	2000	08	00	3	OF	5

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

was 2602 psig, which is approximately 4% above setpoint and 1% above the Technical Specification 3.4.10 limit.

On December 14, 2000, Duke engineering evaluated the results of the vender tests and concluded that the as found lift pressure of 1RC-67 was outside the Technical Specification limit

CAUSAL FACTORS

The cause is believed to be set point drift. There are certain mechanical conditions for pressurizer relief valves that could cause the as-found set point pressure to be out of tolerance. Examples of these conditions include the valve internals being out of alignment, binding, wearing, the valve disk bonding to the seat, testing/calibration of instruments and not being able to reproduce the as-left test conditions repeatedly and accurately.

The final test report from the off-site vendors, describing the test results and mechanical condition of the PCSRVs had not been received when this report was prepared. An LER supplement will be submitted should significant new information become available.

CORRECTIVE ACTIONS

Immediate:

1. Unit 1 pressurizer code safety relief valves were replaced with certified spares.

Subsequent:

1. After initial testing was performed at the off-site testing facility, field representatives from Dresser Industries disassembled the valve and inspected the internals. Preliminary discussion with the valve vendor indicated that no mechanical conditions existed which could have caused this failure.
2. The PCSRV 1RC-67 (S/N BL-8896) has been reworked, calibrated and tested for certification.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		OF	
Oconee Nuclear Station, Unit 1	05000-269	2000	08	00	4	OF	5

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

Planned:

- The vendor procedure that controls the test conditions at the off-site testing facility has been revised for the Unit 2 PCSRVs as-left testing in 1999. The procedure change will attempt to better match the calibration and test environmental conditions for the as-found and the as-left setpoint testing. This change should provide more consistent set point testing, calibration and increase test repeatability. Oconee will evaluate the results from this vendor procedure revision after the as-left setpoint and the as-found set point has been tested using this revised procedure. This should take place when Unit 2 PCSRVs as-found setpoint have been tested during 2EOC18 refueling outage in 2001.

There are no NRC Commitment items contained in this LER.

SAFETY ANALYSIS

The primary function of the pressurizer code safety relief valves (PCSRV) is to maintain the Reactor Coolant System (RCS) pressure below the transient pressure safety limit of 2750 psig during normal operation or anticipated operational occurrences. During normal operation and most plant transients, the PCSRV setpoint is not challenged because of the normal pressure control mechanisms. The pressurizer spray valve opens at approximately 2205 psig, introducing a cooler RCS water spray, which quenches pressurizer steam and reduces RCS pressure. If the pressure reaches approximately 2355 psig, the Reactor Protection System (RPS) [EIIS:JC] receives a trip signal which shuts down the reactor and reduces heat input to the RCS. The PCSRVs alone can not prevent overpressure; they act in conjunction with the RPS to prevent overpressure. If pressure increases to 2450 psig, the pilot operated relief valve would open and relieve RCS pressure. The PCSRVs are necessary only during plant transients in which the normal pressure control functions are insufficient.

The startup accident is the limiting design basis event with respect to peak RCS pressure. A reanalysis using the as-found PCSRV settings predicted that pressure would peak at 2736 psig, below the ASME Code acceptance criteria of 2750 psig. Therefore, the PCSRV would have performed its intended safety function and prevented overpressurization of the RCS.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		OF	
Oconee Nuclear Station, Unit 1	05000-269	2000	08	00	5	OF	5

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

There was no actual impact on the health and safety of the public due to this event. There were no releases of radioactive materials, radiation exposures or personnel injuries associated with this event.

ADDITIONAL INFORMATION

There were two LERs reporting pressurizer code safety relief valves (PCSRV) setpoints being out of tolerance in the past two years. LER 269/99-04, Unit 1 pressurizer relief valve was found out-of-tolerance, by 3% above Technical Specification. LER 270/00-01, Unit 2 pressurizer relief valve was found out-of-tolerance, by 1% above Technical Specification.