

CATEGORY 10

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9901200320 DOC. DATE: 99/01/14 NOTARIZED: NO
 FACIL: 50-287 Oconee Nuclear Station, Unit 3, Duke Power Co.
 AUTH. NAME AUTHOR AFFILIATION
 BURCHFIELD, J.E. Duke Power Co.
 MCCOLLUM, W.R. Duke Power Co.
 RECIP. NAME RECIPIENT AFFILIATION

DOCKET #
05000287

SUBJECT: LER 98-002-00: on 981215, noted that RCS pressure limit for containment integrity was exceeded. Caused by improper action by operator at controls. Initiated actions to return RCS pressure to less than 300 psig. With 990114 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 / ENCL 1 SIZE: 8
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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W. R. McCollum, Jr.
Vice President

January 14, 1999

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

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Licensee Event Report 287/1998-02, Revision 00
Problem Investigation Process No.: 3-098-5965

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a) (1) and (d), attached is Licensee Event Report 287/1998-02, concerning an inadvertent mode change without verifying containment integrity.

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

9901200320 990114
PDR ADOCK 05000287
S PDR

IE 22/1

Document Control Desk
Date: January 14, 1999
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

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Mr. M. A. Scott
NRC Resident Inspector
Oconee Nuclear Station

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) **Oconee Nuclear Station, Unit Three** DOCKET NUMBER (2) **05000 287** PAGE (3) **1 OF 6**

TITLE (4) **Reactor Coolant System Pressure Limit For Containment Integrity Exceeded Due To Improper Action**

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(S)
12	15	1998	1998	02	00	01	14	1998		05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (Check one or more of the following) (11)									
POWER LEVEL (10) 0		<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
		<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
		<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
		<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
		<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
		<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)							

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
J.E. Burchfield, Regulatory Compliance Manager	AREA CODE (864) 885-3292

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		

SUPPLEMENTAL REPORT EXPECTED (14)

<input checked="" type="checkbox"/> YES (f yes, complete EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

On December 15, 1998, Unit 3 Reactor Coolant System (RCS) was approximately 222 F and 285 psig following a unit shutdown because of high sodium concentration in the secondary side. Steam Generator blowdown was in progress. The RCS temperature and pressure is limited by Technical Specification to less than 200 F or less than 300 psig before establishing Containment Integrity. At approximately 2216 hours, the Operator At The Controls (OATC) started the Pressurizer Heaters to recover RCS pressure which had trended down from 285 psig to approximately 278 psig. The OATC was distracted by a phone call from Operations personnel in the Reactor Building. At 2233 hours, the RCS pressure reached 300 psig. At approximately 2247 hours, the OATC noticed the RCS pressure at 312 psig. The OATC took immediate action to return pressure to less than 300 psig. At 2250 hours, RCS pressure was at 300 psig and continuing to decrease. The root cause is improper action by the OATC not taking action when required. A Contributing cause is deficient supervision. Corrective actions include disciplinary action and training.

The health and safety of the public were not compromised by this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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EVALUATION:

Background

Pressurizer Heaters are provided to heat the water in the Pressurizer, and thus control the Reactor Coolant System [EIIS:AB] pressure. The Heaters are installed in the Pressurizer in three bundles, but are arranged in four banks.

Technical Specification 3.6.1 requires containment integrity to be maintained whenever all three (3) of the following conditions exist:

- a. Reactor coolant pressure is 300 psig or greater
- b. Reactor coolant temperature is 200 F or greater
- c. Nuclear fuel is in the core.

The Unit Supervisor (US) holds an active Senior Reactor Operator (SRO) license and is responsible for the overall operation of the Unit assigned. He/she is the primary contact for manipulations to be performed on the Unit.

The Control Room Senior Reactor Operator (CRSRO) holds an active SRO license and functions to oversee the operation of the unit from the Control Room and supervise the Reactor Operators (RO) in the performance of their duties.

The Operator at the Controls (OATC) is a licensed Operator holding a currently active NRC RO or SRO license. Under the direction of the CRSRO, the OATC has the responsibility of monitoring and operation of the assigned Unit.

Description of Event

On December 15, 1998, at 1839 hours, Unit 3 Reactor Coolant System (RCS) was at approximately 222 F and 285 psig following a unit shutdown because of high sodium concentration in the secondary side. Unit 3 had been started following a refueling outage approximately one week prior to the shutdown for high sodium concentration.

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RCS Pressure was being controlled by the Pressurizer Bank 1 Heaters and if required other Heater Banks were energized manually for short periods of time to recover pressure decays. Pressure was being maintained between approximately 265-285 psig and was not to reach 300 psig (Tech. Spec. limit). The existing RCS conditions had been maintained for approximately a week while the sodium concentration was being reduced by "blowing down" the Steam Generators (SGs). The Operations procedure for SG Secondary Hot Soak, Fill, Drain, and Layup was in progress. Chemistry reported to Operations at 2155 hours, that the sodium was within specification and the shift on duty started making preparations for completing the blowdown and for Unit startup. This portion of the procedure involves securing blowdown of the SG and allowing the SG level to control automatically at 30 inches.

While securing the "blowdown", the feedwater control valve on the 3B SG overfed and blowdown of the SG was re-established to remove the excess water. This resulted in the RCS pressure decreasing from 285 psig to approximately 278 psig.

The makeup of the shift for the control room during this period of time was a CRSRO, OATC, Balance Of Plant RO, Spare RO, and the Unit SRO.

At approximately 2216 hours, the Operator at the Controls (OATC) energized the Pressurizer Bank 2 Heaters to recover RCS pressure. At this time the OATC received a call from a Non-Licensed Operator (NLO) who was in the Reactor Building. The NLO reported about some minor leaks that had been identified on the Reactor Building Cooling units.

At 2233 hours, the RCS pressure reached 300 psig and was not noticed by the OATC. At approximately 2247 hours, the OATC noticed that RCS pressure was 312 psig. The OATC took immediate action to return pressure to less than 300 psig and informed the CRSRO of the problem. At 2250 hours, RCS pressure was at 300 psig and continuing to decrease.

The US, CRSRO, and Spare RO had been reviewing procedures and discussing the steps necessary to continue with the start-up during the pressure transient.

An investigation into the cause of the RCS pressure reaching and exceeding 300 psig was initiated. Interviews with the US, CRSRO, and the OATC were

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conducted. The OATC indicated he was distracted by a phone call from Operations personnel in the RB concerning a Reactor Building Cooling Unit leak.

He stated that it was difficult for him to hear due to a bad phone connection and he asked the NLO to go to another phone and call him back. This was accomplished in about a minute and the conversation lasted for several minutes. At the time, he did not think that the calls were a distraction or that he was outside of his required duties. He also stated that he did not verbally communicate that pressurizer heaters were energized. The CRSRO indicated that it was not an expectation for verbal communication when pressurizer heaters are energized. It was an expectation that the OATC monitor the RCS pressure and temperature.

Conclusion

The root cause of this event is improper action because the OATC did not take action when required. He failed to properly monitor RCS pressure after he had initiated manual action that affected its value. The OATC also failed to verbalize his action of energizing the Pressurizer Heaters. This prevented other team members from providing support in conducting this activity. Contributing causes are deficient supervision in that the CRSRO failed to properly provide oversight of the Control Room activities which led to the OATC being distracted. Also, the CRSRO did not provide expectations for the OATC to verbalize his actions of energizing the Heaters. Also, this event probably could have been prevented had the Operation's crews implemented temporary pressure alarms that were available through the Operator Aid Computer when this plant condition was first established.

A review of LERs over the past two years indicates that there have been events with a root cause of improper action. However, none of the LERs were associated with Operations shift personnel. Therefore, this event is considered to be non-recurring.

There were no personnel injuries, overexposures, or equipment failures associated with this event.

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CORRECTIVE ACTIONS

Immediate

1. The OATC informed the CRSRO and initiated actions to return RCS pressure to less than 300 psig.

Subsequent

1. Temporary Operator Aid Computer alarms were established to alert the OATC of changing RCS pressure, temperature, and NI count rate.
2. The US, CRSRO, and OATC provided training to all the other shifts on the details and lessons learned concerning this event.
3. Appropriate disciplinary actions were taken for the inappropriate actions identified in this event.

Planned

1. Communicate to Operators the benefits of setting Operator Aid Computer alarms for important parameters during unusual operating conditions or during infrequently performed tasks.
2. Re-emphasize to all Operations shifts the requirement to verbalize Unit status activities.

Planned corrective actions 1 and 2 are considered to be NRC Commitment Items. These are the only NRC Commitment items contained in this LER.

SAFETY ANALYSIS:

Unit 3 Reactor Coolant Pressure exceeded the Technical Specification (TS) Limit of 300 psig for approximately 17 minutes, without having verified Containment Integrity. The Reactor Coolant System (RCS) pressure reached approximately 312 psig before the OATC took action to return pressure to less than 300 psig.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

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The TS RCS pressure/temperature curve limits were not exceeded. There was a RCS pressure margin of 279 psig at a temperature of 208 to 230 F.

There were no Design Basis Accidents (DBA) during the short duration RCS pressure was greater than 300 psig. If a DBA had occurred, any release to the atmosphere should not have been significant at the low temperatures of the RCS at the time. Also, systems were available to mitigate the consequences of a DBA. There was a very low probability of a DBA during the short duration RCS pressure was greater than 300 psig.

The health and safety of the public was not compromised by this event.