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W3A90-0169 A4.05 QA

June 27, 1990

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

Subject: Waterford 3 SES Docket No. 50-382 License No. NPF-38 Reporting of Licensee Event Report

Gentlemen:

Attached is Licensee Event Report Number LER-90-006-00 for Waterford Steam Electric Station Unit 3. This Licensee Event Report is submitted pursuant to 10CFR50.73(a)(2)(i).

Very truly yours,

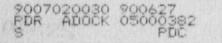
- for JR McGaha

J.R. McGaha Plant Manager - Nuclear

JRM/LDC/glp

cc:

(w/Attachment) Messrs. R.D. Martin J.T. Wheelock - INPO Records Center E.L. Blake W.M. Stevenson D.L. Wigginton NRC Resident Inspectors Office



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allowed setpoint pressure (430 psia) which allowed the TS maximum setpoint to be exceeded. Plant operation with SDC system reliefs set 2% above 430 psia would still have ensured that reactor coolant system (RCS) pressure limits were met during the limiting pressure transient; therefore, this event did not result in an increased risk to the health and safety of the public or plant personnel.

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FACILITY NAME (1)	DOCKET NUMBER (2)	T	LE	RNUN	ABER (6			PAGE (3)		
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On May 31, 1990, plant operating in Mode 1, a review of technical specification (TS) surveillances revealed that the setpoint lift pressure for the shutdown cooling (SDC) (EIIS Identifier BP) system relief valve SI-406A (EIIS Identifier RV) was set at 438 psia, exceeding the maximum TS allowable setpoint pressure of 430 psia. TS limiting condition for operation (LCO) 3.4.8.3 requires low temperature overpressure protection be provided by either of the following:

- Both operable SDC relief valves (SI-406A & SI-406B) with a lift set pressure less than or equal to 430 psia aligned to the reactor coolant system (RCS) (EIIS Identifier AB).
- RCS depressurized with a RCS vent path greater than or equal to 5.6 square inches.

TS 3.4.8.3 is applicable in mode 4 (when either RCS cold leg temperature is less than or equal to 285 °F), mode 5, and mode 6 with the reactor vessel head on.

A further review of TS surveillances revealed that the following lift pressures were incorrectly set on the dates listed:

relief valve	set press (psia)	dates
406A	433	07/26/83
406B	435	07/18/83
406A	437	03/15/86
406B	433	03/14/86
406A	438	10/15/89

	PORT (LER) TEXT CONTINU	JATION		S NUCLEAR REGULATORY COMMISSION APPROVED OMB NO 3150-0104 EXPINES 6/31/88					
FACILITY NAME (1)	DOCKET NUMBER (3)	1	LER NUMBER (6)	PAGE (3)					
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The SDC System Relief values are tested in accordance with Mechanical Maintenance (MM) procedure (MM-007-006) on a 30 month interval. MM-007-006 revision 0 was approved on June 4, 1982 and incorrectly listed the setpoint pressure as 415 psig $\pm 2\%$ (407-423 p-ig) which converts to a band of (422-438) psia. This $\pm 2\%$ tolerance allowed the maximum allowed set pressure to be exceeded by as much as 8 psi. The two subsequent revisions to procedure MM-007-006 contained the same error and were approved on December 24, 1985 and January 21, 1987 respectively.

From December 1984 through February 1990, the plant was operated in violation of TS LCO 3.4.8.3 on sixteen different occasions for a total of 277 days.

The root cause of this event is an inadequate maintenance procedure. MM-007-006, Maintenance Procedure Safety Injection Relief Valve Test, incorrectly allowed a lift pressure in excess of TS limits. The $\pm 2\%$ setpoint tolerance is established in accordance with ASME performance test code 25.3, but the lift setpoint tolerance was incorrectly applied to the maximum allowed setpoint pressure (430 psia) as specified by TS LCO 3.4.8.3.

Contributing to this event was an inadequate technical review in verifying conformance of procedure MM-007-006 to TS requirements. Technical reviews are required by administrative procedure UNT-001-003 for development, revision, changes, and bi-annual review of work procedures. UNT-001-003 specifically requires the technical reviewer to address the following: "Does this procedure, revision, change, or deletion adequately address and/or reference technical specifications and other matters that may affect nuclear safety?" The MM-007-006 procedural review and revision process failed to adequately ensure compliance with TS 3.4.8.3, allowing this condition to exist intermittently since issuance of the operating license (December 18, 1984).

LICENSEE EVENT REPO		U.S. NUCLEAR REGULATORY COMMISSION APPROVED OME NO 3150-0104 EXPIRES 8/31/88					
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To prevent recurrence of this event, procedure MM-007-006 is being revised to include a lower setpoint pressure tolerance of 415 psig +0% - 2% (421-430 psia). The revision will be completed by October 15, 1990. SDC System Relief valve SI-406A will be adjusted to the correct setpoint pressure within the allowed 7 days after entering TS 3.4.8.3 applicability. A review of other work procedures involving relief valves was conducted to identify any other misapplications of setpoint tolerances. No discrepancies wer, found. A sampling of other TS surveillance procedures will be reviewed to ensure that acceptance criteria meets TS requirements. This review 's expected to be complete by October 1, 1990 and will include any TS surveillance procedures not previously reviewed by the plant TS coordination group.

The design basis of SI 406A and 406B is to provide overpressure protection of the RCS at low temperatures during heatup, cooldown, and cold shutdown. The limiting pressure transient includes simultaneous, inadvertent operation of three high pressure safety injection (HPSI) pumps (EIIS Identifier BQ-P), three charging pumps (EIIS Identifier CB-P), with all pressurizer backup heaters (EIIS Identifier AB-PZR-EHTR) in operation. A 20% margin is realized because only two HPSI pumps are started by Safety Injection Actuation Signal (SIAS) (EIIS Identifier JE). Plant operation with both setpoints for the SDC system reliefs set 2% above the maximum set pressure would not have allowed any plant pressure limits to be exceeded during the limiting pressure transient; therefore, this event did not result in an increased risk to the health and safety of the public or plant personnel.

Similar Events

None

Plant Contact

T.H. Smith, Plant Engineering Superintendent, 504/464-3127.