



**Entergy
Operations**

Ref: 10CFR50.73(a)(2)(i)

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D. F. Packer
General Manager
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Waterford 3

W3B5-92-0011
A4.05
QA

February 21, 1992

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
Submittal of Licensee Event Report

Gentlemen:

Attached is Licensee Event Report Number LER-92-001-00 for Waterford Steam Electric Station Unit 3. This Licensee Event Report is submitted pursuant to 10CFR50.73 (a)(2)(i).

Very truly yours,

D.F. Packer
General Manager - Plant Operations

DFP/WEF/jrr
Attachment

cc: Messrs. R.D. Martin
G.L. Florreich
J.T. Wheelock - INPO Records Center
E.L. Blake
N.S. Reynolds
NRC Resident Inspectors Office

9202260055 920221
PDR ADOCK 05000382
S PDR

LICENSEE EVENT REPORT (LER)

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&D), U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20546 AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET WASHINGTON DC 20503

FACILITY NAME (1): Waterford Steam Electric Station Unit 3 DOCKET NUMBER (2): 05000382 PAGE (3): 1 OF 018

TITLE (4): Failure To Satisfy Technical Specification Surveillance Requirement due to Inadequate Administrative Controls and Inadequate Attention to Detail

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)										
0	1	2	2	9	2	9	2	9	2	0	0	0	1	0	0	0	0	0	0	0	0
N/A												0	5	0	0	0	0				
N/A												0	5	0	0	0	0				

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

<input type="checkbox"/> 20.402(a)	<input type="checkbox"/> 20.406(a)	<input type="checkbox"/> 60.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 60.30(a)(1)	<input type="checkbox"/> 60.73(a)(2)(iv)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 60.30(a)(2)	<input type="checkbox"/> 60.73(a)(2)(iv)	<input type="checkbox"/> OTHER (Specify in Abstract)
<input type="checkbox"/> 20.406(a)(1)(iv)	<input checked="" type="checkbox"/> 60.73(a)(2)(ii)	<input type="checkbox"/> 60.73(a)(2)(iv)(A)	<input type="checkbox"/> None and in Text NRC Form 308A
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 60.73(a)(2)(iii)	<input type="checkbox"/> 60.73(a)(2)(iv)(B)	
<input type="checkbox"/> 20.406(a)(1)(vi)	<input type="checkbox"/> 60.73(a)(2)(iv)	<input type="checkbox"/> 60.73(a)(2)(iv)	

LICENSEE CONTACT FOR THIS LER (12):

NAME: W.R. Brian, Plant Engineering Superintendent TELEPHONE NUMBER: 504 464-3127

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

CAUSE	SYSTEM	COMPONENT	MANUFAC TURER	REPORTABLE TO NRCDS	CAUSE	SYSTEM	COMPONENT	MANUFAC TURER	REPORTABLE TO NRCDS

SUPPLEMENTAL REPORT EXPECTED (14):

YES (If yes, complete EXPECTED SUBMISSION DATE): NO

EXPECTED SUBMISSION DATE (15): MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces - 2 approximately fifteen single space typewritten lines) (16):

At 0122 hours on January 22, 1992, while reviewing the Plant Monitoring Computer (PMC) point values for Azimuthal Tilt (Aztilt), the Operations Control Room Staff discovered that the Core Operating Limit Supervisory System (COLSS)-Core Protection Calculator (CPC) Aztilt Limit was set lower than the CPC Aztilt Allowance. Due to the inconsistency in Aztilt values, the requirements of the Technical Specification Surveillance 4.2.3.2 were not met.

The cause of this event is a combination of inadequate administrative controls in ensuring that changes in CPC Aztilt Allowance initiated a corresponding change in the COLSS-CPC Aztilt Limit and operator inadequate attention to detail. Waterford 3 is revising procedures to ensure that CPC Aztilt Allowance values are equal to the COLSS Aztilt Limit and Operations personnel involved in this event were counseled.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545 AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Waterford Steam Electric Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 3 8 2	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 2	0 0 1	0 0	0 2	OF 0 8

TEXT (if more space is required, use additional NRC Form 3054's) (17)

Reportable Occurrence:

Technical Specification (TS) surveillance requirement 4.2.3.2a requires that the Azimuthal Power Tilt be determined to be within the Azimuthal Core Protection Calculator (CPC)(EIIIS Identifier-JC-CPU) Limit above 20% of Rated Thermal Power by continuously monitoring the Aztilt with the Core Operating Limit Supervisory System (COLSS)(EIIIS Identifier-ID), when the COLSS is operable. Since the improper value of the COLSS-CPC Azimuthal Tilt was present, TS surveillance requirement 4.2.3.2a was not met during the time period from July 20, 1991 until January 21, 1992. In addition, TS surveillance requirement 4.2.3.2c requires that at least every 31 days the COLSS Aztilt Alarm is actuated at an Aztilt value greater than or equal to the Aztilt Allowance used in CPCs. Nuclear Engineering surveillance procedure NE-005-103, COLSS Verification Alarm, did not require that the COLSS Aztilt Alarm actuate at an Aztilt value greater than the CPC Aztilt Allowance while testing the COLSS Aztilt Alarm; therefore, TS surveillance 4.2.3.2c was not met since the issuance of the operating license on December 18, 1984. This event is reportable under 10 CFR 50.73(a)(2)(i).

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST 51.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F530), 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) Waterford Steam Electric Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 3 8 2 9 2	LER NUMBER (5)			PAGE (3)		
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TEXT (if more space is required, use additional NRC Form 305A's) (17)

Initial Conditions:

Plant Power: 100%

Mode: 1

Procedure Being Performed:

NONE

Technical Specification LCOs in Effect Specific to this Event:

NONE

Major Equipment Out of Service Specific to this Event:

NONE

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-330) U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20545 AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104) OFFICE OF MANAGEMENT AND BUDGET WASHINGTON, DC 20503

FACILITY NAME (1) Waterford Steam Electric Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 3 8 2 9 2	LER NUMBER (6)			PAGE (3)		
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			0 0 1	0 0	0 4	OF	0 8

TEXT: If more space is required, use additional NRC Form 3554 (1) (17)

Event Sequence

The Waterford 3 Plant Monitoring Computer (PMC)(EIIIS Identifier-ID) is a centralized, real-time computer system which integrates traditional computerized balance-of-plant monitoring with nuclear applications software for normal plant operation and emergency conditions. One program run by the PMC is the COLSS. One of the functions of COLSS is to calculate Aztilt. Limitations on Aztilt are provided to ensure that design safety margins are maintained. COLSS calculates Aztilt by utilizing inputs from the incore detector (EIIIS Identifier-IG) system. However, the CPC utilizes a fixed value of Aztilt that can be changed by the operator, via an addressable constant. It is necessary to use an addressable constant because the radial peaking factors used in the CPCs to calculate power distribution are based on an untilted power distribution. In order to make the operator aware of situations when actual Aztilt is greater than the fixed CPC value (i.e. non-conservative), COLSS generates an alarm whenever this occurs. Since there is no direct connection between the COLSS and CPC systems, the operator uses a COLSS addressable constant (K24500) to enable COLSS to know the value of the CPC Aztilt Allowance.

While verifying point values for Aztilt on the PMC, Operations personnel noticed that the COLSS-CPC Aztilt Limit (PID K24500) was set lower than the CPC Aztilt Allowance (PID 063). On July 20, 1991, COLSS-CPC Aztilt Limit (PID K24500) was changed to 0.0178 and CPC Aztilt Allowance (PID 063) was changed to 1.0178, due to a reduction in reactor power for turbine (EIIIS Identifier-TA) maintenance. (Because of the software differences in COLSS and CPCs, the values for COLSS of 0.0178 and CPCs of 1.0178, are actually equal). On July 21, 1991, CPC Aztilt Allowance (PID 063) was changed to 1.0125, as reactor power was returning to 100%, but COLSS-CPC Aztilt Limit (PID K24500) was left at 0.0178. The difference in the values remained until they were discovered on January 22, 1992.

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&SD), 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): Waterford Steam Electric Station Unit 3	DOCKET NUMBER (2): 0 5 0 0 0 3 8 2	LER NUMBER (6):			PAGE (3):		
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TEXT: If more space is required, use additional NRC Form 306A (1-77)

On January 22, 1992, when the discrepancy between the COLSS-CPC Aztilt Limit and CPC Aztilt Allowance was discovered, the COLSS-CPC Aztilt Limit was immediately changed to a value that corresponded with the CPC Aztilt Allowance. Because of the improper COLSS-CPC Aztilt limits, the TS Surveillance requirement was not met during the period from July 21, 1991 to January 22, 1992.

During investigation of the improper COLSS-CPC constants event, it was discovered that the plant procedure NE-005-103, COLSS Verification Alarm, which was intended to implement TS Surveillance Requirement 4.2.3.2c, did not fully implement the TS requirement. The procedure, NE-003-103, used a test value to actuate the COLSS Azimuthal Tilt Alarm, thereby testing the non-qualified alarm circuitry. However, this test value did not correspond to the CPC Azimuthal Tilt Allowance value as required in the TS.

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 (F-330), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (if more space is required, use additional NRC Form 305A's) (17)

Sequence of Events:

7-20-91 COLSS-CPC Aztilt Limit (PID K24500) was changed to 0.0178, and CPC Aztilt Allowance (PID 063) was changed to 1.0178, due to a reduction in reactor power for turbine maintenance.

7-21-91 CPC Aztilt Allowance (PID 063) value was changed to 1.0125, due to an increase in reactor power, but COLSS-CPC Aztilt Limit (PID K24500) value was left at 0.0178. Operations personnel used procedure OP-004-006, Core Protection Calculator System, section 6.2, Changing Addressable Constants, instead of section 8.2, CPC Tilt Allowance Adjustment.

1-22-92 Operations personnel were performing a review of the PMC data, which involved verifying point values for Aztilt. Operations personnel noticed that the COLSS-CPC Aztilt Limit (PID K24500) was set lower than the CPC Aztilt Allowance (PID 063).

1-22-92 When the discrepancy between the COLSS-CPC Aztilt Limit and CPC Aztilt Allowance was discovered, the COLSS-CPC Aztilt Limit was immediately changed to a value that corresponded with the CPC Aztilt Allowance.

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 (F530) U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20545 AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104) OFFICE OF MANAGEMENT AND BUDGET WASHINGTON, DC 20503

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TEXT IF MORE SPACE IS REQUIRED. Use additional NRC Form 306A's (11)

Causal Factors

The cause of the incorrect COLSS constant is a combination of inadequate administrative controls in ensuring that changes in CPC Aztilt Allowance initiated a corresponding change in the COLSS-CPC Aztilt Limit and operator inadequate attention to detail. Waterford 3 is revising procedures to ensure that CPC Aztilt Allowance values are equal to the COLSS Aztilt Limit and Operations personnel involved in this event were counseled.

The cause of the failure to meet TS surveillance requirement 4.2.3.2c was a misinterpretation of the TS Surveillance requirement during procedure development. Guidance was utilized from Combustion Engineering (reference letter C-CE-8075) to develop the procedure to ensure that the intent of the TS was being met. However, this interpretation of the TS does not agree with the letter of the TS Surveillance requirement.

Corrective Measures

1. Immediate corrective actions were to correct the discrepancy between the COLSS-CPC Aztilt Limit and CPC Aztilt Allowance.
2. Waterford 3 is revising OP-004-006, Section 6.2, Core Protection Calculator System, to ensure that when a change is made to the CPC Aztilt Allowance addressable constant (PID 063), a corresponding change will be made to the COLSS Aztilt Limit (PID K24500). The estimated completion date for changes to OP-004-006 is April 4, 1992.
3. Operations personnel involved in this event were counseled.
4. NE-005-103, and associated test software will be revised to fully comply with TS 4.2.3.2c alarm testing requirements. The estimated completion date for changes to NE-005-103 is February 28, 1992.

No other COLSS-CPC related procedures exist which could have a similar error.

LICENSEE EVENT REPORT (LER)
 TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-330), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT IF MORE SPACE IS REQUIRED. USE ADDITIONAL NRC Form 206A's (17)

Safety Significance

Between July 20, 1991 and January 22, 1992, COLSS-CPC Aztilt Limit (PID K24500) had lower values than the CPC Aztilt Allowance (PID 063). During this time period, the Limiting Condition for Operation (LCO) for Azimuthal Power Tilt in excess of Azimuthal Power Tilt Allowance never exceeded the time limit for the LCO action requirement; therefore, the health and safety of the public and plant personnel were not jeopardized during this event.

Previous Events

NONE