



April 28, 1997

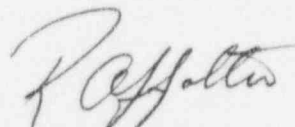
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop P1-137
Washington, DC 20555-0001

ULNRC-3568

Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 97-003-00
TECH SPEC TABLE 3.3-3 VIOLATION DUE TO ERROR IN THE
TECH SPEC DESCRIPTION FOR TURBINE-DRIVEN AUXILIARY
FEEDWATER PUMP START**

The enclosed licensee event report is submitted pursuant to 10 CFR50.73(a) (2) (i) (B) as a condition prohibited by the plant's Technical Specifications.


R. D. Affolter
Manager, Callaway

RDA/HDB/MAH/rjp

Enclosure

9705050003 970428
PDR ADOCK 05000483
S PDR
020087



ULNRC-3568

April 28, 1997

Page 2

cc: Mr. Ellis W. Merschhoff
Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

Senior Resident Inspector
Callaway Resident Office
U.S. Nuclear Regulatory Commission
8201 NRC Road
Steedman, MO 65077

Ms. Kristine M. Thomas (2 copies)
Licensing Project Manager, Callaway Plant
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop 13E16
Washington, DC 20555-2738

Manager, Electric Department
Missouri Public Service Commission
PO Box 360
Jefferson City, MO 65102

Mr. Thomas A. Baxter
Shaw, Pittman, Potts, & Trowbridge
2300 N. Street N.W.
Washington, DC 20037

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Callaway Plant Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 8 3 1 0 4										PAGE (3) 1 OF 0 4																																												
TITLE (4) Tech Spec Table 3.3-3 Violation Due To Error In The Tech Spec Description for Turbine-Driven Auxiliary Feedwater Pump Start Logic																																																																
EVENT DATE (5) 0 3 3 1 9 7										LER NUMBER (6) 9 7 - 0 0 3 - 0 0										REPORT DATE (7) 0 4 2 8 9 7										OTHER FACILITIES INVOLVED (8) FACILITY NAMES: _____ DOCKET NUMBER(S): 0 5 0 0 0																																		
OPERATING MODE (9) 1										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (Check one or more of the following) (11)																																																						
POWER LEVEL (10) 1 0 0										20 402(b)										20 405(c)										50 73(a)(2)(iv)										73 71(b)																								
										20 405(a)(1)(i)										50 36(c)(1)										50 73(a)(2)(v)										73 71(c)																								
										20 405(a)(1)(ii)										50 36(c)(2)										50 73(a)(2)(vii)										OTHER (Specify in Abstract below and in Text, NRC Form 366A)																								
										20 405(a)(1)(iii)										X 50 73(a)(2)(i)										50 73(a)(2)(viii)(A)																																		
										20 405(a)(1)(iv)										50 73(a)(2)(ii)										50 73(a)(2)(viii)(B)																																		
20 405(a)(1)(v)										50 73(a)(2)(iii)										50 73(a)(2)(x)																																												
LICENSEE CONTACT FOR THIS LER (12) NAME: H. D. Bono, Supervising Engineer, Site Licensing																														TELEPHONE NUMBER AREA CODE: 5 7 3 6 7 6 - 4 4 2 8																																		
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																																
CAUSE					SYSTEM					COMPONENT					MANUFACTURER					REPORTABLE TO NPDs					CAUSE					SYSTEM					COMPONENT					MANUFACTURER					REPORTABLE TO NPDs																			
SUPPLEMENTAL REPORT EXPECTED (14) YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO <input type="checkbox"/>																														EXPECTED SUBMISSION DATE (15) MONTH: _____ DAY: _____ YEAR: _____																																		
<p>ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)</p> <p>On 3/31/97, a Utility Quality Assurance audit determined the "Channels to Trip" description in Technical Specification (T/S) Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation" for starting the Turbine-Driven Auxiliary Feedwater Pump (TDAFP) on low-low Steam Generator (S/G) water level did not accurately describe plant design. The error in T/S Table 3.3-3 described the channels to trip as "2/stm. gen. in any operating stm. gen." implying the TDAFP should automatically start on low-low level in any single S/G. The table should read "2/stm. gen. in any 2 operating stm. gen." since the TDAFP automatically starts on low-low level in any <u>two</u> S/Gs.</p> <p>On 3/31/97, at 1500, the TDAFP was declared inoperable and T/S 3.7.1.2, Action a was entered. All S/G level channels and the Motor-Driven AFPs were verified to be operable. The situation was discussed with the NRC and an emergency T/S amendment was requested per 10 CFR 50.91(a)(5) to correct the T/S table. Approval was received on 4/2/97 and the TDAFP was declared operable at 1142 on 4/2/97. The inaccurate T/S table constitutes a condition prohibited by T/S and is reportable per 10 CFR 50.73 (a)(2)(i)(B). The plant was in Mode 1 at 100% power.</p> <p>The error was introduced when the Utility incorporated a design change to the S/G trip circuitry, developed by Westinghouse, into the T/S. The Utility did not identify the error in the updated T/S markups supplied for inclusion into the license amendment. License amendment process improvements have been implemented since the time this error occurred which provide increased assurance this type of error is not repeated.</p>																																																																

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)
Callaway Plant Unit 1	0 5 0 0 0 4 8 3	YEAR	SEQUENTIAL NUMBER
		REV NO	REV NO
	9 7 - 0 0 2 - 0 0	0 0 2	0 2 OF 0 4

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

DESCRIPTION OF EVENT:

On 3/31/97, during a Utility Quality Assurance audit, it was determined the "Channels to Trip" description in Technical Specification (T/S) Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation" for starting the Turbine-Driven Auxiliary Feedwater Pump (TDAFP)⁽¹⁾ on low-low Steam Generator (S/G)⁽²⁾ water level with an adverse or a normal containment environment (items 6.d.2.a and b) did not accurately describe plant design. Each S/G has four level channels. The output of these channels are combined logically with reactor power and containment pressure to produce reactor trip and auxiliary feedwater actuation functions. Coincident with applicable reactor power and containment pressure input, two level channels on any one S/G reaching the appropriate low-low setpoint will send a signal to initiate a reactor trip and actuate the motor driven auxiliary feedwater pumps. A signal for each S/G is also sent to a two out of four conditional logic card. Low-low level conditions on any two S/Gs results in completion of the two out of four logic and subsequent start of the TDAFP.

T/S Table 3.3-3, items 6.d.2.a and b, described the channels to trip as "2/stm. gen. in any operating stm. gen." for the TDAFP. This implies that the TDAFP should automatically start on low-low level in any single S/G, which is erroneous. As described above, the TDAFP automatically starts on low-low level in any two S/Gs. It was determined that the "Channels to Trip" column for the TDAFP should read "2/stm. gen. in any 2 operating stm. gen."

On 3/31/97, at 1500, the TDAFP was declared inoperable and T/S Limiting Condition for Operation 3.7.1.2, Action a was entered. This required the inoperable pump be restored to operable status within 72 hours or the plant be in Mode 3 within the next six hours and in Mode 4 in the following six hours. This situation was discussed with the NRC and an emergency T/S amendment was requested per 10 CFR 50.91(a)(5) to revise the "Channels to Trip" column for Functional Units 6.d.2.a and 6.d.2.b of T/S Table 3.3-3 to correct the error in the logic. Approval was received on 4/2/97 and the TDAFP was declared operable at 1142 on 4/2/97.

BASIS FOR REPORTABILITY:

OL Amendment 43 was approved by the NRC on 4/14/89. The FSAR sections submitted and approved correctly described the plant's design for TDAFP automatic start logic. However, T/S Table 3.3-3 items 6.d.2.a and b did not reflect the accurate FSAR description. Therefore literal implementation of the T/S resulted in the TDAFP being considered administratively inoperable when the plant was in Mode 1, 2, or 3. This constitutes a condition prohibited by T/S and is reportable in accordance with 10 CFR 50.73 (a)(2)(i)(B).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Callaway Plant Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 8 3 9 7 - 0 0 2 - 0 0	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3">LER NUMBER (6)</th> <th colspan="2">PAGE (3)</th> </tr> <tr> <td style="width: 33%;">YEAR</td> <td style="width: 33%;">SEQUENTIAL NUMBER</td> <td style="width: 33%;">REV NO</td> <td style="width: 16.5%;"></td> <td style="width: 16.5%;"></td> </tr> <tr> <td>9 7 -</td> <td>0 0 2 -</td> <td>0 0</td> <td>0 3</td> <td>OF 0 4</td> </tr> </table>	LER NUMBER (6)			PAGE (3)		YEAR	SEQUENTIAL NUMBER	REV NO			9 7 -	0 0 2 -	0 0	0 3	OF 0 4
LER NUMBER (6)			PAGE (3)														
YEAR	SEQUENTIAL NUMBER	REV NO															
9 7 -	0 0 2 -	0 0	0 3	OF 0 4													

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

CONDITION AT TIME OF EVENT:

Mode 1, Power Operation-100% Power

ROOT CAUSE:

As part of the effort to reduce unnecessary reactor trips industry wide, Westinghouse developed a design change to the S/G low-low level trip circuitry to allow a time delay based on reactor power level and a trip point based on containment pressure. No changes were made to the TDAFP start logic with respect to the number of S/Gs with low-low level. To implement the design change, the Utility requested an Operating License (OL) amendment on August 30, 1988 to update applicable T/S and Final Safety Analysis Report (FSAR) sections. Utility personnel prepared changes to the affected FSAR sections which correctly described plant design. However, the submitted T/S markup contained the error. The T/S wording error was introduced when Westinghouse provided updated T/S markups to the Utility for inclusion in the OL amendment request. These markups changed the existing verbiage in the "Channels to Trip" column for the TDAFP from "2/stm. gen. in any 2 operating stm. gen." to "2/stm. gen. in any operating stm. gen." Utility personnel responsible for review did not identify and correct this change when submitting the package.

CORRECTIVE ACTIONS:

Upon determining the T/S was incorrect, all 16 S/G level channels and the MDAFPs were verified to be operable. The TDAFP was declared administratively inoperable and T/S 3.7.1.2 Action a was entered. This situation was discussed with the NRC and the emergency T/S amendment was requested. License amendment process improvements have been implemented since the time this error occurred. These improvements include the closer scrutiny of license amendment requests which provides increased assurance this type of error is not repeated.

SAFETY SIGNIFICANCE:

Though details in T/S Table 3.3-3 were inadequate, the plant was operated in accordance with actual plant design as described and analyzed in the FSAR. The surveillance testing associated with this portion of the TDAFP start logic verifies the logic is correct per plant design and has remained unchanged since initial startup. The TDAFP was operable and would have performed its intended safety function in accordance with the plant design as described and analyzed in the FSAR. This event did not represent a threat to the safety and health of the public.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
Callaway Plant Unit 1	0 5 0 0 0 4 8 3 9 7 - 0 0 2 - 0 0 0 4 OF 0 4	YEAR	SEQUENTIAL NUMBER	REV NO			

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

PREVIOUS OCCURRENCES:

None

FOOTNOTES:

The system and component codes listed below are from IEEE Standards 805-1984 and 803A-1983 respectively:

- 1) System - BA, Component - P
- 2) System - AB, Component - SG