

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Callaway Plant Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 8 3										PAGE (3) 1 C/F 0 3																																		
TITLE (4) Inadvertent Actuation of the Engineered Safety Features Actuation System Due to 'A' Steam Generator High Level During Refuel 9																																																						
EVENT DATE (5)										LER NUMBER (6)										REPORT DATE (7)										OTHER FACILITIES INVOLVED (8)																								
MONTH			DAY			YEAR			YEAR			SEQUENTIAL NUMBER			REV. NO.			MONTH			DAY			YEAR			FACILITY NAMES										DOCKET NUMBER(S)																	
0 4			0 4			9 8			9 8			- 0 0 3			- 0 1			0 5			1 2			9 9													0 5 0 0 0 0 0 0																	
OPERATING MODE (9) 5										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (Check one or more of the following) (11)																																												
POWER LEVEL (10) 0										20.2201(b)										20.2203(a)(2)(v)										50.73(a)(2)(i)										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)										7.71														
										20.2203(a)(2)(ii)										20.2203(a)(4)										<input checked="" type="checkbox"/> 50.73(a)(2)(iv)										7.71 (Specify in)														
										20.2203(a)(2)(iii)										50.36(c)(1)										50.73(a)(2)(v)										Extract below or in														
20.2203(a)(2)(iv)										50.36(c)(2)										50.73(a)(2)(vii)										ext. NRC Form 306A)																								
NAME H. D. Bono, Supervising Engineer, QA Regulatory Support																				TICKET NUMBER 5 7 3 6 7 0 - 4 4 2 8																																		
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																								
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)																				<input checked="" type="checkbox"/> NO																																		
ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)																																																						
<p>On 4/4/98, at approximately 1701 CST, with the plant in Mode 5, for a refueling outage, Callaway Plant received an inadvertent automatic actuation of the Engineered Safety Features Actuation System (ESFAS)¹. This event was an actuation of the 'B' train Feedwater Isolation Signal (FWIS) due to a high water level in Steam Generator (S/G)² 'A' during the performance of Operations Surveillance Procedure, OSP-AE-V003B, "Feedwater Supply Check Valve Closure Test". At the time of this event, the 'A' train FWIS was in the TEST mode for integrated ESFAS testing. During the performance of this surveillance, utility personnel were adding nitrogen to the 'A' and 'D' Steam Generators. This nitrogen addition caused the level of 'A' S/G to rise from 69% to 78% (the S/G high level trip setpoint), thus causing a FWIS. The nitrogen addition was subsequently suspended, the S/G level stabilized, and the FWIS reset.</p> <p>OSP-AE-V003B has been revised to provide additional guidance for initiation and control of nitrogen addition to the steam generators. The revision incorporates a lower initial steam generator level condition for nitrogen addition to reduce the potential for FWIS actuation.</p>																																																						

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 308A's)(17)

DESCRIPTION OF EVENT:

On 4/4/98, at approximately 1701 CST, with the plant in Mode 5, for a refueling outage, Callaway Plant received an inadvertent automatic actuation of the Engineered Safety Features Actuation System (ESFAS). This event was an actuation of the 'B' train Feedwater Isolation Signal (FWIS) due to a high water level in Steam Generator (S/G) 'A' during the performance of Operations Surveillance Procedure, OSP-AE-V003B "Feedwater Supply Check Valve Closure Test". At the time of this event, the 'A' train FWIS was in the TEST mode for integrated ESFAS testing. During the performance of this surveillance, utility personnel were adding nitrogen to the 'A' and 'D' Steam Generators. This nitrogen addition caused the level of 'A' S/G to rise from 69% to 78% (the S/G high level trip setpoint), thus causing a FWIS. The nitrogen addition was subsequently suspended, the S/G level stabilized and the FWIS reset.

BASIS FOR REPORTABILITY:

This is reportable per 10CFR50.73(a)(2)(iv) as an event that resulted in an automatic actuation of an Engineered Safety Feature.

CONDITION AT TIME OF EVENT:

Mode 5, Cold Shutdown.

ROOT CAUSE:

Nitrogen addition to S/G 'A' resulted in a level swell above the high level trip setpoint of the S/G and subsequently a FWIS actuation. The potential of S/G level swell and a resultant FWIS was recognized and addressed in OSP-AE-V003B by a note preceding the step where the nitrogen is added warning of the potential level swell. This procedure also specified a maximum initial S/G level of approximately 70 percent prior to the nitrogen addition; however, the level swell was greater than expected during this surveillance. Revision 1 to NUREG-1022, Event Reporting Guidelines, 10CFR50.72 and 50.73, was recently issued (January, 1998) which changed the reporting criteria of Engineered Safety Features (ESF) actuations. Section 6.0 of NUREG-1022 Revision 0 stated that an ESF actuation is not reportable if it is 'an expected result of a controlled procedure'; however, Section 3.3.2 of NUREG-1022 Revision 1 states that an ESF actuation is not reportable if the event were described in appropriate documentation as DEFINITELY expected to occur'.

CORRECTIVE ACTIONS:

OSP-AE-V003B has been revised to provide additional guidance for initiation and control of nitrogen addition to the steam generators. The revision incorporates a lower initial steam generator level condition for nitrogen addition to reduce the potential for FWIS actuation.

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SAFETY SIGNIFICANCE:

The ESFAS system performed as designed in response to a high Steam Generator level. All of the components actuated by a FWIS were in their safety related closed position except for the 'A' and 'D' Feedwater Regulating Valves³ and the 'B' and 'C' Feedwater Isolation Valves⁴, which were open as part of the testing configuration. All four of these valves closed on the FWIS per design. The operability of the FWIS is only applicable in Modes 1-4 and this event occurred in Mode 5; therefore, this actuation had no impact on plant safety and did not pose a threat to the public health or safety.

PREVIOUS OCCURRENCES:

None.

FOOTNOTES:

The system and component codes listed below are from IEEE Standard 805-1984 and 803A-1984, respectively.

1. System - JE
2. System - AB, Component - SG
3. System - SJ, Component - FCV
4. System - SJ, Component - ISV