NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Callaway Plant Unit 1	0 5 0 0 0 4 8 3	1 OF 0 3

TITLE (4)
Inadvertent Engineered Safety Features Actuations

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)
1 0	2 2	8 4	8 4	0 5 6	0 0	1 1	2 0	8 4		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 2

POWER LEVEL (10): 0 0 4

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

20.402(b)	20.405(c)	X 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)	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	TELEPHONE NUMBER (AREA CODE)
Michael E. Taylor - Superintendent, Operations	3 1 4 6 7 6 - 8 2 0 7

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)

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

EXPECTED SUBMISSION DATE (15): MONTH | DAY | YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On 10/22/84 and 10/23/84, the reactor was tripped and Engineered Safety Features (ESF) actuated while rolling the main turbine. A Feedwater Isolation (FWIS), Auxiliary Feedwater Actuation (AFAS), and Steam Generator Blowdown Isolation (SGBDIS) occurred during both incidents. The ESF equipment performed as designed.

Both incidents occurred as a result of steam generator (S/G) oscillations while attempting to bring the turbine to speed and parallel the generator to the grid. After a turbine trip on 10/22/84, a high S/G level caused a FWIS, AFAS, and SGBDIS. A Reactor Trip then occurred due to a low S/G level. On 10/23/84, S/G level oscillations set up by steam dump cycling during the main turbine roll to speed caused a FWIS, AFAS, and SGBDIS. A subsequent low S/G level caused a Reactor Trip.

Corrective actions included procedure revisions pertinent to each incident. There was no damage to plant equipment or release of radioactivity as a result of these incidents. At no time was the public health or safety threatened.

At 0513 CDT on 10/22/84 and 1527 on 10/23/84, Engineered Safety Features (ESF) were actuated with Reactor Trips occurring shortly thereafter. High/low steam generator (S/G) levels obtained while rolling the main turbine initiated the Feedwater Isolations (FWIS), Auxiliary Feedwater Actuations (AFAS), S/G Blowdown Isolations (SGBDIS), and Reactor Trips. The ESF equipment performed as designed in both cases.

1. At 0054 on 10/22/84 while in Mode 1, the main turbine was rolling at 1800 r.p.m. and the reactor was at a power level of approximately 9.5%. At 0132 the operators began increasing Reactor Power to 15%. While waiting to synchronize to the grid, the turbine exhaust hood temperatures and the turbine vibration were increasing. At 0501 the operator was instructed to select "close valves" to shutdown the turbine. Immediately after he selected "close valves" the turbine tripped from high exhaust hood temperature.

   The operators began reducing Reactor Power and at 0509 broke the condenser vacuum to slow the turbine. The start of both motor-driven Auxiliary Feedwater Pumps caused level variations in the S/Gs and at 0513 a high level in S/G "B" initiated a FWIS, AFAS, and SGBDIS. Reactor Power had been reduced to 4.2% and Mode 2 had been entered when these actuations occurred.

   At 0521, the reactor tripped due to a low S/G "D" level. Reactor Power had been further reduced to 3.5% when the trip occurred. Emergency Operating Procedures E-0, Reactor Trip or Safety Injection, and ES-0.1, Reactor Trip Recovery, were performed and the plant stabilized. The FWIS was reset to restore feed from the condenser. While recovering from the incident, a second Reactor Trip signal and FWIS was received at 0553 due to a low level in S/G "D."

2. At 1510 on 10/23/84 while in Mode 1, the reactor was at approximately 15% power and the operators were in the process of rolling the main turbine. At approximately 400 r.p.m., increasing, the Condenser Available Interlock (C-9) for the steam dump valves began to cycle on and off causing the steam dump valves to cycle.

   When steam was dumped a C-9 signal was initiated and the steam dumps closed. As sufficient vacuum was regained, thus clearing the C-9 interlock, the steam dumps reopened. Continued steam dump cycling caused level oscillations in the S/Gs.

At 1527 a S/G "B" high level initiated a FWIS, AFAS, and SGBDIS. The main turbine, which was at 1400 r.p.m., also tripped. At 1531, the reactor tripped on a low S/G "C" level caused by the drop in feedwater temperature when the FWIS and AFAS occurred. The operators performed Emergency Operating Procedures E-0 and ES-0.1 and stabilized the plant.

The high exhaust hood temperature which caused the Turbine Trip on 10/22/84 was due to running the main turbine unloaded for an excessive period of time. To prevent recurrence of this incident, a precaution regarding running the main turbine unloaded for longer than one hour was added to Normal Operating Procedure OTN-AC-00001, Main Turbine and Generator Systems, on 10/31/84.

The problem experienced with steam dump cycling on 10/23/84 has been corrected by rolling the main turbine up to speed at 5 to 10% Reactor Power rather than 15%, thus reducing the amount of steam being dumped to the condenser. General Operating Procedure OTG-ZZ-00000, Plant Startup Less Than or Equal to 5% to 20% Power, was revised on 11/5/84 to implement this corrective action. No further corrective action for either incident is deemed necessary.

There was no damage to plant equipment or release of radioactivity as a result of these incidents. At no time did these events pose a threat to the public health or safety.

Previous occurrences: none