NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Point Beach Nuclear Plant, Unit 2	05000301	1 OF 4

TITLE (4)

Steam Generator Vent Mispositioned During Plant Heatup

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 NAME	DOCKET NUMBER
										05000
02	02	98	98	-- 001 --	00	03	04	98	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N
POWER LEVEL (10)	000

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

	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)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)	X	50.73(a)(2)(v)		Specify in Abstract below
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		or in NRC Form 366A

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Glenn D. Adams, Licensing Engineer	(414) 221-4691

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)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On February 2, 1998, with Unit 2 in a hot shutdown condition, plant operators discovered a steam plume in the Unit 2 reactor containment facade in the vicinity of the main steam vent lines. The plant was heating up from 200 degrees F to 350 degrees F following a maintenance outage. Within eight minutes of the discovery, the cause was identified as an open vent valve (designated 2MS-223) on the "A" steam generator. The vent valve was shut immediately. The vent valve had been opened during a steam generator draining procedure (OI-124) that did not specifically require closure of the vent after the draindown. Rather, the procedure relied on the startup checklist to restore the main steam system lineup. In this instance, the checklist item for closure of 2MS-223 had already been signed off (on January 19, 1998), so the checklist did not prompt closure of 2MS-223. Operating Instruction OI-124 has been changed to specifically require that the valves manipulated during the draining operation are restored to the lineup required by the startup checklist.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Point Beach Nuclear Plant, Unit 2	05000301	98	- 001 -	00	2 OF 4

TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

Event Description:

At 0920 hours CST on February 2, 1998, with Unit 2 in a hot shutdown condition, plant operators discovered the "A" steam generator [SB:SG] vent valve [VTV] designated 2MS-223 in the open position. The plant was heating up from 200 degrees F to 350 degrees F following a maintenance outage. As discussed below, the vent valve was mispositioned due to inadequate coordination of procedures.

On or about January 19, 1998, in preparation for plant startup, a main steam valve lineup was commenced in accordance with checklist CL-13A, "Main Steam Valve Lineup, Unit 2." In accordance with this checklist, steam generator vent valve 2MS-223 was shut on January 19, 1998 (at approximately 2215 hours CST). The checklist item for 2MS-223 was initialed and dated at this time; however, the checklist remained open for several more days, pending completion of the remaining main steam lineup verification.

On January 24, 1998 (at approximately 0710 hours CST), the Unit 2 "A" steam generator vent 2MS-223 was opened and the Unit 2 "A" steam generator was drained to the 64 percent level (narrow range), in accordance with operating instruction 124, "Draining Steam Generators." The procedure did not specifically direct closure of the vent valve upon completion of the procedure, so 2MS-223 was left open. The note at the end of the procedure states that "system restoration will be per CL-13A prior to plant startup."

On January 25, 1998, the remaining main steam lineup was verified and checklist CL-13A was completed in its entirety. Since the checklist item for closure of 2MS-223 had already been signed off (on January 19, 1998), the checklist did not prompt the closure of 2MS-223.

At approximately 0920 hours CST on February 2, 1998, as the plant was heating up above 200 degrees Fahrenheit, the main control room personnel received a handheld radio report of a steam plume on the Unit 2 "A" main steam line. Upon further inspection, it was determined that 2MS-223 was open. The valve was closed at approximately 0928 hours on February 2, 1998.

System and Component Description:

The subject steam generator vent valve (designated 2MS-223) is a manual valve located upstream of the main steam isolation valve for steam generator "A." During shutdown conditions, this valve is opened to vent the steam generator when required. Prior to plant startup, this valve is shut to provide steam generator and main steam system pressure integrity. During normal plant operation, this valve provides the pressure boundary integrity of the steam generator vent line. This

valve is located in series with another manual valve (2MS-211), which is normally open.

Valve 2MS-223 is physically located on the 85-foot elevation of the Unit 2 containment facade. The associated vent line discharges into the Unit 2 facade; a generally unoccupied area which is passively vented to the environment.

Cause:

A preliminary investigation concluded that the event was caused by inadequate procedure coordination. The steam generator draining procedure OI-124 relied on subsequent performance of the main steam lineup checklist to restore the system for startup. The procedure did not specifically direct closure of the vent valve upon completion of the procedure. This procedure fault, in combination with the prolonged execution of the main steam lineup (more than 5 days) led to the loss of configuration control.

Corrective Actions:

1. The subject vent valve was closed at approximately 0928 on February 2, 1998.

2. Operating Instruction OI-124 was changed to specifically require that the valves manipulated during the draining operation are restored to the lineup required by CL-13A. This change ensures that steam generator draining per OI-124 may be conducted independent of CL-13A.

3. *A root cause evaluation of this event is in progress. Related corrective actions will be addressed via the corrective action program.*

Reportability:

A four-hour non-emergency report was made to the NRC duty officer at 1314 hours CST on February 2, 1998. The NRC resident inspectors were also notified. This Licensee Event Report is being submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(v), "any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident."

Safety Assessment:

If a steam generator tube rupture event were to occur with the vent valve open, there would have been a direct, unisolated path of radioactivity from the reactor coolant system to the environment. Therefore, the radiological consequences of a steam generator tube rupture event would

have been greater than that described by the Final Safety Analysis Report.

It is highly improbable that the open steam generator vent valve would have gone undiscovered for a significant period of time. The visible plume the noise, and the loss of water inventory would have led to its discovery long before power operation was achieved.

Similar Occurrences:

The following reports also identify recent events involving mispositioned equipment:

LER	Description
266/97-030-00	Unanalyzed Service Water System Alignment
301/97-003-00	Reactor Vessel Head Installed Without An Operable Pressurizer Safety Valve
266/96-002-00	Auxiliary Feedwater Pump Discharge Valves Found Shut When Critical
266/95-003-00	Inadvertent Emergency Diesel Generator Start - An EDG was inadvertently fast-started due to an error made by an engineer using a multimeter to verify that G-04 would not start during testing of G-03.
266/95-002-00	Inadvertent Emergency Diesel Generator Start - The undervoltage relays for bus 1A05 were inadvertently actuated during modification work associated with the installation of additional EDGs.

System and Component Identifiers

The Energy Industry Identification System component function identifier for each component or system referred to in this Licensee Event Report are as follows:

System	Identifier
Main Reheat Steam System	SB
Reactor Coolant System	AB

Component	Identifier
Steam Generator	SG
Vent Valve	VTV