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 1	05000266	1 OF 5

TITLE (4)
Inadequate Technical Specifications Surveillance of Containment Spray Logic

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
									PBNP Unit 2	05000301
02	13	98	98	- 010 -	00	03	16	98	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)	075		20.2201(b)		20.2203(a)(2)(v)	X	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)		50.73(a)(2)( )		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)
Curtis A. Castell, Licensing Engineer	(414) 221-2019

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)

As a result of ongoing GL 96-01 reviews, a condition report was initiated on February 13, 1998, to document that circuit testing of the containment spray logic was potentially inadequate. At 1345 hours on February 13, 1998, the determination was made that this situation constituted a missed Technical Specifications surveillance, Unit 1 was at 75% power and Unit 2 was at 100% power. The test discrepancy is based on a potentially undetectable safety logic switch failure associated with containment spray actuation logic. This is considered a missed Technical Specifications surveillance required by Technical Specifications table 15.4.1-1 item 27 for channel functional test. Special testing of the containment spray actuation circuitry to verify proper continuity of the bistable trip switches was performed on February 14, 1998, prior to expiration of the 24-hour allowance for the missed surveillance, which is contained in Technical Specification 15.4.0.3. This proved that the switches are in the proper position and fully operable. Corrective actions are being implemented to perform the bistable trip switch continuity verification during each required quarterly functional test per Technical Specifications Table 15.4.1-1 item 27.

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

Event Description:

Nuclear Regulatory Commission Generic Letter 96-01 requires licensees to verify that logic circuit testing is being performed in accordance with Technical Specifications requirements. As a result of ongoing GL 96-01 reviews, a condition report (CR 98-0572) was initiated on February 13, 1998, to document that circuit testing of the containment spray logic was potentially inadequate. At 1345 hours on February 13, 1998, the determination was made that this situation constituted a missed Technical Specifications surveillance, Unit 1 was at 75% power and Unit 2 was at 100% power.

The test discrepancy is based on a potentially undetectable safety logic switch failure associated with containment spray actuation logic. The automatic containment spray actuation logic is based on completion of two, two out of three bistable logic combinations. During performance of analog testing of the high containment pressure containment spray actuation logic bistables in accordance with Technical Specifications Table 15.4.1-1 item 27, the bistable switch is placed in the "Trip" position. Placing the bistable switch in "Trip" position causes the actuation logic relay to be connected to an external power source through the bistable trip switch. This causes the logic relay to be in the tripped position which is the energized state for this relay.

After the bistable trip switch is returned to normal, the external power source is disconnected, but the test does not include verification that the logic relay is reconnected to the bistable. The failure to verify the continuity of this switch was caused by this circuitry being different than other similar circuitry. The containment spray actuation circuitry requires energization to initiate the actions, other circuitry of this type requires deenergization to initiate actions. Therefore, if continuity of the bistable trip switches is not reestablished after testing the other types of circuitry (that are deenergize-to-trip), the affected channel would remain in the tripped state.

A review of the outage transmitter calibrations and quarterly analog rack calibrations for the containment spray actuation circuitry revealed that these tests do not verify the bistable to logic relay connection is intact through the bistable trip switch. The quarterly testing required per Technical Specifications Table 15.4.1-1 item 27 is performed in accordance with the FSAR description for analog testing. Although, the bistable trip switch contact is returned to the normal position after the functional test is complete, the channel functional test for high containment pressure containment spray actuation is considered to be not fully met because of the failure to verify continuity of the switch after it is placed back in the normal position. This is considered a missed Technical Specification surveillance required by Technical Specifications Table 15.4.1-1 item 27 for channel functional test (quarterly).

Special testing of the containment spray actuation circuitry to verify proper continuity of the bistable trip switches was performed on February 14, 1998, prior to expiration of the 24-hour allowance for the missed surveillance contained in Technical Specification 15.4.0.3. This proved that the switches are in the proper position and fully operable.

Corrective actions are being implemented to perform the bistable trip switch continuity verification during each required quarterly functional test per Technical Specifications Table 15.4.1-1 item 27.

Component and System Description:

The containment spray system is actuated by the coincidence of two sets of two out of three "hi-hi" containment pressure signals. Technical Specifications Table 15.3.5-1 item 2(a) lists the setting limit for containment spray as </=30 psig. The bistables are identified as PC-945B, PC-946B, PC-947B, PC-948B, PC-949B and PC-950B.

Cause:

This event was caused by the failure to adequately verify the bistable trip switch position after it is placed back in the "normal" position after quarterly functional testing of the containment pressure containment spray actuation bistables.

Corrective Actions:

The bistable trip switch continuity was verified within 24 hours of the determination that this testing was not adequate and was considered a missed surveillance in accordance with the Point Beach Technical Specifications.

The appropriate test procedures will be changed to verify the trip switch continuity during or after the applicable Technical Specifications surveillance tests as necessary to properly verify circuit operability.

Reportability:

This event is being reported in accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition prohibited by the plant's Technical Specifications."

Safety Assessment:

The potential exists that containment spray was, at some time in the past, unknowingly inoperable because the trip switches could have been inoperable and the bistables may not have been connected to the logic relays. This condition is highly improbable because it would require at least two switches to be inoperable or one switch and another independent failure (of a containment pressure channel) to occur to prevent spray operation. The switches are known to be highly reliable with gold contacts. Additionally, verification of switch continuity on February 14, 1998, showed that all six (6) channels in each Unit are operable.

System and Component Identifiers

The Energy Industry Identification System component function identifier for each component/system referred to in this report are as follows:

Component/System	Identifier
Plant Protection System	JC
Relay	RLY
Hand Switch	HS
Containment Spray System	BE

Similar Occurrences:

A search of previously submitted licensee event reports (within the past two years) similar to this situation for PBNP was conducted. The specific criterion used was based on a search for licensee event reports that were submitted due to inadequately implemented Technical Specifications surveillance/sampling requirements:

266/97-043-00 Inadequate Technical Specification Surveillance of Reactor Trip System Interlocks

266/97-016-00 Steam Generator Level Logic Not Tested in Accordance with the Technical Specifications

266/97-012-00 Diesel-Driven Fire Pump Day Tank Not Sampled In Accordance With Technical Specifications

266/97-011-00 Containment Fan Cooler Accident Fans Not Tested In Accordance With Technical Specifications

266/97-005-00 1SI-852A Not Tested In Accordance With Technical Specifications

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

266/97-003-00 Spare Containment Penetrations Not Leak Tested In Accordance With Technical Specifications

266/96-014-00 Steam Generator Blowdown Sample Not Performed In Accordance With Technical Specifications

266/96-012-00 EDG Fuel Oil System Tests Not Performed In Accordance With Technical Specifications

266/96-008-00 Missed Full Pressure Test Of Containment Airlock