

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)

Point Beach Nuclear Plant, Unit 1

DOCKET NUMBER (2)

05000266

PAGE (3)

1 of 4

TITLE (4)

Cable Tray Fire Stops Do Not Meet Appendix R Exemption Requirements

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
08	31	1999	1999	- 007	- 00	09	30	1999	FACILITY NAME	DOCKET NUMBER 05000
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)							
POWER LEVEL (10)		100	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)(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

Charles Wm. Krause, Senior Regulatory Compliance Engineer

TELEPHONE NUMBER (Include Area Code)

(920) 755-6809

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)

YES

(If yes, complete EXPECTED SUBMISSION DATE).

X

NO

EXPECTED
SUBMISSION
DATE (15)

MONTH DAY YEAR

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

While conducting a review of Appendix R alternate and dedicated safe shutdown exemption requirements, the Licensee for the Point Beach Nuclear Plant (PBNP) determined that cable tray fire stops intended to preclude a single fire from engaging the power cables for all three charging pumps were installed in the wrong location. The exemption was granted on July 3, 1985 to Section III.G.2.b of Appendix R due to the presence of intervening combustibles between redundant charging pump cables. The fire stops were installed in 1986; however, the post modification validation and verification during the modification close out process were not adequate to identify the installation error. A similar installation for a PBNP Unit 2 exemption was verified to be correct. A new modification has been initiated to provide a three hour rated fire barrier between the redundant charging pump power cables. Compensatory measures, including hourly fire rounds, have been initiated until the permanent corrective actions are complete. A safety assessment of this condition has determined that an alternate means of reactor coolant inventory control is available using a safety injection pump; however, this source would not satisfy the Appendix R performance goals which makes this event reportable as a condition outside the plant's Appendix R design basis.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	YEAR	LER NUMBER (6) SEQUENTIAL NUMBER	REVISIO N NUMBER	PAGE (3)
Point Beach Nuclear Plant, Unit 1	0500266	1999	- 007	- 00	2 OF 4

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

Event Description:

Wisconsin Electric, licensee for the Point Beach Nuclear Plant (PBNP), is conducting a reaseling project to verify and revalidate conformance with the plant's 10 CFR 50 Appendix R programs. This project includes reviews and revalidation of the bases and assumptions for the Appendix R Safe Shutdown analyses, including verification of assumptions for any exemptions granted by the NRC as described in the PBNP Fire Protection Evaluation Report (FPER). During this effort, we discovered that three cable tray fire stops installed in the PBNP Unit 1 Motor Control Center (MCC) Room (Fire Zone 156) did not meet requirements for the NRC granted Appendix R Exemption for this location. Under the existing conditions, a fire could be postulated that could propagate through the cable trays such that all three charging pumps could become unavailable to assist in performing a safe plant shutdown under Appendix R conditions. At the time of this discovery, PBNP Unit 1 was operating at 100% power. A one hour non-emergency event notification was made to the NRC at 1107 CDT on August 31, 1999, pursuant to 10 CFR 50.72(b)(1)(ii)(B) for a condition discovered while operating which was outside the Appendix R design basis for the plant.

Component and System Description:

The PBNP Appendix R design basis requires that at least one Charging Pump must be available for a postulated fire event in order to safely shut down the Unit. In order to accomplish this, at least one train of charging pumps must remain free of fire damage in order to meet the Appendix R Alternate and Dedicated Shutdown Capability performance goals specified in 10 CFR 50, Appendix R, Section III.L.1(b) to maintain reactor coolant inventory. The PBNP Unit 1 MCC room contains redundant trains of Charging Pump cables with intervening combustibles in the form of other cable trays. Since Section II.G.2.b of Appendix R requires that redundant cables within the same area be separated by a 20 foot space with no intervening combustibles, an exemption to the Appendix R requirements was requested for this location. An exemption to Section III.G.2.b was granted by the NRC, dated July 3, 1985, which allowed alternatives to the requirements of 20 foot separation and total area coverage automatic fire suppression for the U1 MCC Room (then called Fire Zone 1). The alternative approved was to install area suppression with the exception of the area surrounding the MCC and to install fire stops in the east-west cable trays which traversed the area between the redundant train charging pump cables. The area already contained area detection. With these required elements in place, there was reasonable assurance that one charging pump would remain available for a postulated fire event in the area.

Cause:

The cause of this event was the improper installation of an approved plant modification. The modification paperwork for the installation of the cable tray fire stops properly directed that the fire stops be installed at or west of column line J. However, the fire stops were actually found to be installed west of column line H which positioned them such that they are not between the redundant charging pump cables. This modification was installed in 1986. The apparent cause of this event was the inadequate verification and validation inspection of the completed modification. A more specific explanation for why the fire stops were not installed in accordance with the work plan can not be established. PBNP Unit 2 was granted a similar exemption.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Point Beach Nuclear Plant, Unit 1	0500266	YEAR	SEQUENTIAL NUMBER	REVISIO N NUMBER	3 OF 4
		1999	- 007	- 00	

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

The Unit 2 fire stops were confirmed to have been properly installed in the correct locations.

Corrective Actions:

Following a comprehensive assessment of the modification and design engineering processes in 1997, substantial changes were made to the administrative and process control for the implementation and verification of modifications to plant systems, structures and components. These changes provide reasonable assurance that the modification process inadequacies which lead to this event are unlikely to recur.

In accordance with the provisions of procedure OM 3.27, "Control of Fire Protection and Appendix R Safe Shutdown Equipment," hourly fire rounds were immediately initiated as a compensatory measure.

In consideration of overall concerns for a fire in this area, it has been concluded that a wall will be built just west of column line J instead of installing additional fire stops. The wall will separate the redundant train cables with a 3 Hr rated barrier. This will meet the full requirements of 10CFR50 Appendix R for separation of redundant train cables. A modification request (MR 99-046) has been initiated to perform the modification and is currently being prioritized and planned for implementation.

Safety Assessment:

At PBNP the Fire Protection Program is based on a defense-in-depth philosophy. The fire protection provisions in this fire zone include both smoke and heat detectors for fire detection and automatically initiated fire suppression provisions. In addition, hose reels and portable fire extinguishers are located near the entrance to this area to provided fire brigade personnel quick access to manual fire suppression equipment. These provisions, and the existing strict procedural transient combustible controls in this fire zone, provide reasonable assurance that a postulated fire in this zone would be unlikely to engage all trains of charging pumps.

As a compensatory measure for this event, hourly fire rounds have been initiated in this fire zone and will be maintained until permanent corrective modifications have been completed. This measure provides additional assurance that, in the unlikely event that conditior, develop that could lead to a possible fire in this area, those conditions would be promptly identified and corrected.

We have also confirmed that both redundant train SI pumps will remain fully functional for a fire in this area to provide any needed make-up water for the Reactor Coolant System should normal charging capability actually be lost. Although the use of the SI pumps for reactor coolant inventory control does not satisfy the Appendix R performance goals, the unit can be shutdown and maintained in a safe shutdown condition using this alternate water injection system. Accordingly, we believe the safety significance of this event, and the potential for impact on the health and safety of the public and plant staff, is minimal.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Point Beach Nuclear Plant, Unit 1	0500266	YEAR	SEQUENTIAL NUMBER	REVISIO N NUMBER	4 OF 4
		1999	- 007	- 00	

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

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/SystemIdentifier

Fire Detection System	IC
Chemical and Volume Control Makeup System	CB
High Pressure Safety Injection System	BQ
Auxiliary Building	NF
Control Center, Motor	MCC
Cable, Medium-Voltage Power	CBL5
Breaker	BKP
Tray, Cable	TY
Pump	P

Similar Occurrences:

A review of recent LERs (past two years) identified the following events which involved the Appendix R safe shutdown equipment design basis. These events have been identified during the licensee's Appendix R rebaselining program:

LER NUMBERTitle

266/1999-006-00	Postulated Fire and Inability to Isolate PORV Outside Appendix R Design Basis
266/1999-004-00	Fuel Oil Transfer Pump Cable in the AFW Pump Room Outside Appendix R Design Basis
301/1999-002-00	Red Channel of Steam Generator Pressure Indication Passes Through Fire Zone
266/98-030-00	Assumptions for Equipment Necessary To Maintain Hot Safe Shutdown Outside Appendix R Design Basis
266/97-020-01	Conditions Outside 10 CFR 50 Appendix R Safe Shutdown Analysis
266/97-022-00	Electrical Short Circuits During A Control Room Fire Could Affect Safe Shutdown Capability