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AUTH.NAME AUTHOR AFFILIATION
LLOYD,H. Pennsylvania Power & Light Co.
STANLEY,H.G. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-017-01:on 920709,concluded that conduits & cable trays protected by Thermo-Lag 330 were inoperable based on lack of sufficient documentation.Reasearched & documented test info.W/920924 ltr.

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September 24, 1992

U.S. Nuclear Regulatory Commission
Document Control Desk
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SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 92-012-01
FILE R41-2
PLAS - 536

Docket No. 50-387
License No. NPF-14

Attached is Licensee Event Report 92-012-01. This report is being made as a result of our evaluation of NRC Bulletin 92-01, Supplement 1 concerning Thermo-Lag 330 fire barriers installed at Susquehanna. Additional equipment utilizing Thermo-Lag 330 has been declared inoperable and has been determined to constitute a condition prohibited by Technical Specification per 10CFR50.73(a)(2)(i)(B) and a condition outside our design basis per 10CFR50.73(a)(2)(ii)(B). Appropriate compensatory actions have been implemented. We are researching available test information on our installation and are making preparation for additional testing. Contingency plans will be developed to address any test failures that occur.

H.G. Stanley
Superintendent of Plant - Susquehanna

HL/mjm

cc: Mr. T. T. Martin
Regional Administrator, Region I
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JE22

NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Susquehanna Steam Electric Station - Unit 1	0 5 0 0 0 3 8 7	1 OF 0 3

TITLE (4)

Fire Barrier Installations Inoperable - Condition Outside Design Basis of Plant

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)
0 7	0 9	9 2	9 2	0 1 2	0 1	0 9	2 4	9 2	SSES - Unit 2	0 5 0 0 0 3 8 8
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	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)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	X 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
Harrison Lloyd, Jr. - Power Production Engineer	AREA CODE 7 1 7 5 4 2 - 3 9 1 7

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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 fifteen single-space typewritten lines) (16)

PP&L 's evaluation of NRC Bulletin 92-01, and Supplement 1 of the bulletin led to the conclusion that conduits and cable trays protected by Thermo-Lag 330 were inoperable based on the lack of sufficient documentation to prove the ability of these installations to perform their design function. This condition was determined to be reportable per 10CFR50.73(a)(2)(i)(B) as an operation prohibited by Technical Specification in that fire barrier wrapped equipment containing safe shutdown cables having been determined inoperable and required fire watches not established within the required time frame. In addition, when those installations outlined in NRC Bulletin 92-01 were declared inoperable, the condition was expanded to be reportable per 10CFR50.73(a)(2)(ii)(B) as a condition outside the design basis of the plant. Our compensatory action of establishing appropriate fire watches minimizes the safety impact thus there was no significant degradation in our ability to protect the health and safety of the public and/or plant personnel. PP&L is researching available test information to demonstrate the capability of Thermo-Lag to function in all configurations at Susquehanna and preparations are being made to conduct additional testing as required. Contingency plans are being developed to address any test failures that occur. Compensatory actions currently in place will remain in effect until fire barriers can be demonstrated operable. Issuance of Supplement 1 to the bulletin has changed the scope but not the intent of our corrective actions.

DESCRIPTION OF EVENT

NRC Bulletin 92-01, "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduit Free From Fire Damage", issued 6/24/92, describes NRC concerns with Thermo-Lag 330 fire barrier material. Supplement 1 to the bulletin, issued 8/28/92, describes additional concerns as a result of testing performed at other utilities, as well as testing sponsored by the NRC. Thermo-Lag fire barrier material is utilized at Susquehanna to provide fire protection for safe shutdown cables.

On July 1, 1992 precautionary fire watches were implemented for installations at Susquehanna similar to those outlined in the Bulletin. On July 9, 1992 PP&L completed an initial assessment through our discrepancy management process. The assessment at that time was that 3/4" conduit should be declared inoperable since our configuration is similar to that which failed testing at another utility. The applicable Technical Specification LCO was entered. For other installations, (i.e. - conduit greater than 3/4" and wide cable trays) the initial conclusion was that our installations are capable of providing a sufficient degree of passive fire protection based of dissimilarities between our installation and those where the failures occurred. However, there were still valid quality issues with these installations. This condition was determined to be reportable per 10CFR50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

Evaluation of our installations continued, and on July 17, 1992, PP&L concluded that we lack sufficient documentation to prove the ability of these installations to perform their design function as required and it was judged prudent to declare the barriers inoperable until additional research and testing could be performed. This condition constitutes a condition outside the design basis of the plant per 10CFR50.73(a)(2)(ii)(B) and the required one hour NRC notification was completed per 10CFR50.72(b)(1)(ii)(B) via the ENS. Additional Technical Specification LCO actions were entered for the applicable areas. Firewatches established previously were maintained.

On August 31, 1992, PP&L established additional compensatory actions as a result of Supplement 1 to NRC Bulletin 92-01. This action included entering the Technical Specifications LCO action statement for all remaining areas containing fire barrier wrapped equipment containing safe shutdown cables and required additional firewatches were established.

CAUSE OF EVENT

Installation of Thermo-Lag 330 at Susquehanna was installed per approved procedures and programs using approved material. However, testing at another utility as well as additional NRC sponsored testing, called into question the ability of Thermo-Lag 330 to perform its

intended function resulting in issuance of NRC Bulletin 92-01 and Supplement 1 to the bulletin. PP&L's review of the Bulletin resulted in the condition described above.

REPORTABILITY/ANALYSIS

The condition of fire barrier wrapped equipment containing safe shutdown cables having been determined inoperable since initial installation was determined to be reportable per 10CFR50.73(a)(2)(i)(B) as an operation prohibited by the plant Technical Specifications in that fire watches were not established within the allowed time frame. Upon determination that the remaining components were considered inoperable, this condition was expanded to be reportable per 10CFR50.73(a)(2)(ii)(B) as a condition outside the design basis of the plant. There were no safety consequences as a result of this condition. Fire watches were established and fire detection systems were verified operable in all affected zones. Given this compensatory action to quickly detect a fire, the likelihood of fire damage to both divisions of safety related equipment is minimal, and therefore safety impact is minimal.

This condition would not have been more significant at any other initial operating condition.

In accordance with guidance provided in NUREG 1022, Supplement 1, item 14.1 and 10CFR50.4(d); the required submission date for this supplemental report was determined to be 9/28/92.

CORRECTIVE ACTIONS

PP&L is researching and documenting available test information to demonstrate the capability of Thermo-Lag to function in all specific configurations at Susquehanna. Where such information is found to be deficient, PP&L will conduct appropriate additional testing. It is currently anticipated that testing will be performed during fourth quarter 1992. Contingency plans will be in place to address any test failures that occur. Compensatory actions currently in place will remain in effect until the fire barriers can be demonstrated operable. Issuance of the Bulletin Supplement has changed the scope but not the intent of the above corrective action.

ADDITIONAL INFORMATION

Failed Component Identification: N/A

Previous Similar Events: None