

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH 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.

FACILITY NAME (1)

Susquehanna Steam Electric Station - Unit 1

DOCKET NUMBER(2)

0 5 0 0 0 3 8 7 1 OF 0 3

PAGE (3)

TITLE (4)

Non-compliance with License Condition 2.C(6) on Fire Protection

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	0	3	9	5	9	5	0	1	1	0	0	1	1	0	2	9	5	Susquehanna SES Unit 1	0	5	0	0	0	3	8	8
												0	5	0	0	0											

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § : (Check one or more of the following) (11)										
1		20.402(b)	20.405(c)	50.73(a)(2)(v)	73.71(b)							
POWER LEVEL (10)	1 0 0	20.405(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)							
		20.405(a)(1)(j)	50.38(c)(2)	50.73(a)(2)(vi)	X OTHER (Specify in Abstract below and in Text, NRC Form 366A)							
		20.405(a)(1)(k)	50.73(a)(2)(i)	50.73(a)(2)(vii)(A)								
		20.405(a)(1)(l)	50.73(a)(2)(ii)	50.73(1)(2)(vii)(B)								
		20.405(a)(1)(m)	50.73(a)(2)(iii)	50.73(a)(2)(viii)								

NAME		TELEPHONE NUMBER	
Cornelius T. Coddington - Sr. Project Engineer, Nuclear Licensing		AREA CODE	
		7 1 7	5 4 2 - 3 2 8 9

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS		

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO							

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

On October 3, 1995, it was determined that the condition discovered on September 28, 1995, was reportable pursuant to the requirements of License Condition 2.G of Operating Licenses NPF-14 and NPF-22.

On September 28, 1995, with Unit 1 in Condition 1 (Power Operation) at 100% power and Unit 2 in Condition 5 (Refueling) at 0% power, during the preparation of an internal calculation, it was discovered that the test report from BRAND (seal vendor) used for penetration seal qualification did not utilize the hose stream test of ASTM E-119 as specified in the Fire Protection Review Report (FPRR). Instead, the qualification report utilized the hose stream test specified in IEEE-634. The hose stream testing performed in accordance with IEEE-634 is similar to the requirements of ASTM E-119. Based on the testing similarity, an engineering evaluation determined that fire barriers are operable. Additionally, other vendor test reports exist that successfully document ASTM E-119 hose stream testing for penetration seal configurations with the same material as the IEEE-634 based test; however, the sealant depths are less. Therefore, the qualification of any penetration seal qualified per the IEEE-634 testing is not considered to be degraded; and the penetration seals are considered operable.

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**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH 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.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER						
Unit 1										
Susquehanna Steam Electric Station	0 5 0 0 0 3 8 7	9 5	— 0 1 1	— 0 0	2	OF	3			

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

EVENT DESCRIPTION

On September 28, 1995, with Unit 1 in Condition 1 (Power Operation) at 100% power and Unit 2 in Condition 5 (Refueling) at 0% power during the preparation of an internal calculation, it was discovered that the original test report used for qualification of penetration seals did not utilize the hose stream testing of ASTM E-119 as specified in the Fire Protection Review Report (FPRR), Table 5.0-1, Section D.3.d. Instead, the qualification report utilized the hose stream testing specified in IEEE-634. This is a failure to comply with a regulatory commitment as specified in the FPRR and License Conditions 2.C.(6) and 2.C.(3) of Operating License Nos. NPF-14 and NPF-22, respectively.

ASTM E-119 and IEEE-634 were reviewed to identify the differences in the hose stream test requirements. ASTM E-119 specifies that the hose stream shall be delivered through a 2-1/2" hose discharging through a National Standard Playpipe with a 1-1/8" discharge tip. The nozzle shall be 20 feet from the center of the test specimen with water pressure of 30 psi. The duration of the test is 2-1/2 minute per 100 ft² of test specimen. IEEE-634 specifies a 1-1/2" hose discharging through a nozzle set at a 30° angle at a distance of 10 ft. The water pressure shall be 75 psi at a flow of 75 gpm. The duration of the test is 2-1/2 minutes per 100 ft² of test specimen.

An engineering evaluation determined that fire barriers are operable and that the hose stream testing performed in accordance with IEEE-634 is similar to the requirements of ASTM E-119. Additionally, other vendor test reports exist that successfully document ASTM E-119 hose stream testing for penetration seal configurations with the same material as the IEEE-634 based test and lesser sealant depths. Therefore, the qualification of any penetration seal qualified per the IEEE-634 testing is not considered to be degraded; and the penetration seals are considered operable.

CAUSE OF EVENT

Based upon the investigation of this condition, it was determined that the Fire Protection Review Report commitment to qualify all fire rated seals to the requirements of ASTM E-119, including the hose stream test, was not clearly reflected in the latest revision to the PP&L penetration seal specification. ASTM E-119 is listed as a reference and is referred to in the discussion of quality control measures; however, it is not included in the testing requirements section. The initial issue and Revision 1 of this specification did require that fire seals meet the requirements of BTP 9.5-1 Appendix A and insure compliance with the FPRR; however, this section was deleted from the specification in a subsequent revision. The deletion is attributed to not performing an adequate review of the revision to the specification.



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**LICENSEE EVENT REPORT (LER)
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

In addition, an adequate review of the penetration seal qualification testing was not performed in that the review of the testing should have identified the differences with the FPRR commitment and should have resulted in either a revision to the FPRR or not accepting the qualification test.

REPORTABILITY/ANALYSIS

On October 3, 1995, this condition was deemed reportable per License Condition 2.G of Operating License Nos. NPF-14 and NPF-22 in that the License Conditions 2.C (6) and 2.C (3) to operate the plant in accordance with the approved Fire Protection Review Report were not explicitly met. Since there is no guidance on what constitutes not meeting the fire protection license condition, a report was made. Guidance on what constitutes not meeting the license condition is being developed.

License Condition 2.G requires that the LER format be used to document reportable conditions of this nature.

CORRECTIVE ACTIONS

Upon discovery of the deviation, a review of the applicable industry and regulatory standards regarding penetration seal testing was performed. The review concluded that alternate testing to requirements to other than ASTM E-119 had been accepted by the NRC. Also, an initial operability determination was performed and concluded that the penetration seals were operable. Further actions include the following:

- The penetration vendor will prepare a Technical Evaluation formally documenting the acceptability of the seals qualified using IEEE-634. This Technical Evaluation will be incorporated into the design calculation on penetration seals.
- Issue change to Fire Protection Review Report (FPRR) clarifying that penetration seals may be qualified based on other appropriate NRC guidance.
- Revise PP&L's specification to incorporate the revised FPRR commitment.

ADDITIONAL INFORMATION

Past Similar Events: None

Failed Component: None