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AUTH.NAME AUTHOR AFFILIATION
CURTIS,N.W. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Licensing Branch 2

SUBJECT: Forwards Rev 3 to fire protection review rept.Fee paid.

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Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
215/770-7501

JAN 23 1985

Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
FIRE PROTECTION REVIEW REPORT, REVISION 3
ER 100508/100450 FILE 143 Docket No. 50-387
PLA-2362 50-388

Dear Mr. Schwencer:

Attached for your review and approval is Revision 3 to the Susquehanna Steam Electric Station Fire Protection Review Report. A summary of the changes with appropriate justifications/explanations is provided below:

Change	Justification/Explanation
Section 1.0	A qualifying statement has been added to the text regarding fire protection information provided for areas of the plant not affecting nuclear safety. This information is provided for completeness and does not represent commitments or requirements..
	The last paragraph of the section has been updated to reflect the current status of Unit 2 and the applicability of the FPRR thereto.
Section 3.1, Item No. 54	The method of compliance has been revised to reflect usage of an alternate methodology. An explanation is provided in Section 3.2, Item 54. This item was previously submitted to the NRC as part of Revision 35 to the Susquehanna SES FSAR.
Section 3.1, Item No. 87	The method of compliance has been revised to reflect the usage of an alternative methodology. An explanation is provided in Section 3.2, Item No. 87.
Section 3.2, Item No. 50	SSES design statement has been revised to add clarity and reflect current status of the plant (i.e. fuel load in both units has taken place)

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Change	Justification/Explanation
Section 3.2, Item No. 54	This item describes the methodology utilized to satisfy the requirements of Position D.2.b. This item was previously submitted to the NRC as part of Revision 35 to the Susquehanna SES FSAR.
Section 3.2, Item No. 66	This item describes the installation of fire breaks and states our policy on maintenance of those breaks. Section 4.1.2(6) also relates to this change.
Section 3.2, Item No. 87	This item describes the methodology utilized to satisfy the requirements of Position D.4.h. Our position on this item has changed as a result of the availability of approved one-hour rated breathing air bottles.
Section 3.2, Item No. 132	This item has been revised to reflect current operating policy with respect to the provision of fire protection within containment.
Section 3.2, Item No. 155	Same as Section 3.2, Item No. 132 above.
Section 3.2, Item No. 232	A typographical error has been corrected in this item.
Section 4.0/Table 6-1	As part of an "as-built" updating effort, floor areas for the plant fire areas/zones were recalculated utilizing the latest architectural drawings (accurate within ±5%). Additionally, the quantities of combustibles located within the plant were recalculated based on "as-built" conditions. As a result of the above, both the combustible loadings and equivalent fire severities were recalculated. The methodology utilized to calculate equivalent fire severities was refined. The methodology described in Section 4.1.3 utilizes different severity categories. The new calculations were simplified by assuming the most severe category which results in more conservative severity times than previously given. Figure references have been revised to reflect updated figure enumeration.

Change	Justification/Explanation
Section 4.1.2(6).	This assumption has been revised to reflect our position on intermediate fire breaks (i.e. non-barrier breaks). These fire breaks are not required by the NRC and our analysis does not assume their presence. Installation of these breaks satisfied an insurance carrier requirement which no longer exists.
Section 4.3.18 c)	The steel door leading to Zone 1-4E has been changed from a 3-hour rating to a 1½-hour rating.
Section 4.3.18 e)	Hydrogen from the H_2/O_2 analyzers/gas cylinders has been added to the list of combustibles in Zone 1-4A.
Section 4.3.19 e)	Lubricant from the TIP drives has been deleted from the list of combustibles in Zone 1-4B. The TIP drives are not located in this zone.
Section 4.3.22 c)	The rating of steel door to Zone 1-4A has been changed from 3 hours to 1½ hours.
Section 4.3.28 c)	Doors in this zone are non-rated pressure resistant steel. They are not alarmed as previously stated.
Section 4.3.29 c)	The door connecting to Fire Zone 1-5A is a non-rated, steel door. It is not alarmed as previously stated.
Section 4.3.32 c)	The last entry describing walls was incorrectly typed. The East wall is a 36" reinforced concrete, non-rated wall, not the West wall as previously stated.
Section 4.3.32 e)	Cabling located in this zone is in conduit, not trays as previously stated.
Section 4.3.37 b)	Previous text was in error. Fire protection and detection systems are as described in Table 6-1.
Section 4.3.41 q)	The deluge sprinkler system utilized to protect the charcoal filters has been changed from automatic actuation to manual actuation.
Section 4.3.44	A typographical error has been corrected in the section title.

Change	Justification/Explanation
Section 4.4.7 g)	This section was corrected to reflect the presence of fire detection capability within the fire zone.
Section 4.4.10 h)	A typographical error has been corrected to indicate proper location of referenced stairwell.
Section 4.4.13 c)	Clarification has been added to enhance the description of open hatchways in Unit 2. Addition of this clarification was prompted by NRC generic concerns expressed at industry seminars. The hatchways in Susquehanna SES Unit 2 were considered in our analysis.
Section 4.4.17 c)	See discussion for Section 4.4.13 c) above.
Section 4.4.17 e)	See discussion for Section 4.3.18 e) above.
Section 4.4.17 f)	See discussion for Section 4.4.13 c) above.
Section 4.4.24 c)	See discussion for Section 4.4.13 c) above.
Section 4.4.24 f)	See discussion for Section 4.4.13 c) above.
	The paragraph describing the fire protection for essential raceway in the zone has been revised to reflect the existing configuration for the emergency switchgear cooling equipment. A request for variance was submitted to the NRC under PLA-1985, dated December 13, 1983. Approval for the variance was provided in SER Supplement No. 6.
Section 4.4.27 c)	The doors to Fire Zone 2-5A are not alarmed as previously stated.
Section 4.4.28 c)	The door to Fire Zone 2-5A is not alarmed as previously stated.
Section 4.4.31	The text for Fire Zone 2-5H was revised to reflect the presence of safety-related components in the zone.
Section 4.4.36 b)	The text has been revised to reflect presence of fire protection and detection equipment within the fire zone.

Change	Justification/Explanation
Section 4.4.36 c)	See discussion for Section 4.4.13 c) above.
Section 4.4.36 e)	Text has been revised. Ignition of non-safety related cable is no longer a postulated fire. No fire is postulated for this zone.
Section 4.4.38 g)	See discussion for Section 4.3.41 g).
Section 4.5.3 g)	See discussion for Section 4.3.41 g).
Section 4.5.20	The text for Fire Zone 0-25B was revised to reflect the presence of safety-related components in the zone.
Section 4.5.21	The text for Fire Zone 0-25C was revised to reflect the presence of safety-related components in the zone.
Section 4.5.22	The text for Fire Zone 0-25D was revised to reflect the presence of safety-related components in the zone.
Section 4.5.24 c)	The text was revised to reflect a correct west wall thickness of 36 inches.
Section 4.5.32	Section title was revised to reflect correct zone elevation figures.
Section 4.5.36	Section title was revised to more clearly define the zone.
Section 4.5.39	Section title was revised to more clearly define the zone.
Section 4.5.58	Typographical error corrected in title.
Section 4.5.66	Typographical error corrected in Zone numerical designation. Text was corrected to reflect the presence of safety-related components within the zone.
Section 4.5.74 g)	See discussion for Section 4.3.41 g).
Section 4.5.75 c)	A description of the south and east walls was added to the text.

Change	Justification/Explanation
Section 4.10	Text describing S&A building revised to reflect "as-built" conditions.
Figures	Figures have been revised to reflect the "as-built" configuration.
Appendix A	Appendix A has been revised to reflect latest "as-built" configuration.

In accordance with the requirements of 10CFR170.21, find a check in the amount of $150.00.

Should you have any questions, please direct them to W. W. Williams at (215) 770-7856.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

cc: M. J. Campagnone USNRC
R. H. Jacobs USNRC-Resident Inspector-SSES

Attachments

[illegible]

April 30, 1985

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Mr. Norman W. Curtis, Vice President
Engineering and Construction
Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

The following documents concerning our review of the subject facility are transmitted for your information.

- ☐ Notice of Receipt of Application, dated _____.
- ☐ Draft/Final Environmental Statment, dated _____.
- ☐ Notice of Availability of Draft/Final Environmental Statement, dated _____.
- ☐ Safety Evaluation Report, or Supplement No. _____, dated _____.
- ☐ Notice of Hearing on Application for Construction Permit, dated _____.
- ☐ Notice of Consideration of Issuance of Facility Operating License, dated _____.
- ☒ Monthly Notice; Applications and Amendments to Operating Licenses Involving no Significant Hazards Considerations, dated April 1985.
- ☐ Application and Safety Analysis Report, Volume _____.
- ☐ Amendment No. _____ to Application/SAR dated _____.
- ☐ Construction Permit No. CPPR- _____, Amendment No. _____ dated _____.
- ☐ Facility Operating License No. _____, Amendment No. _____, dated _____.
- ☐ Order Extending Construction Completion Date, dated _____.
- ☐ Other *(Specify)* _____

Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc: See next page

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DATE➤	4-29-85						

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