REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8502070296 DOC.DATE: 85/01/31 NOTARIZED: YES DOCKET #
FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva 05000387
AUTH.NAME AUTHOR AFFILIATION
CURTIS,N.W. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Licensing Branch 2

SUBJECT: Forwards application for amend to License NPF-14,revising Tech Specs to replace magnetic breakers w/thermal-magnetic breakers & to support drywell cooling improvements.

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 3 ENCL 39 SIZE: 5+12
TITLE: OR Submittal: General Distribution

NOTES:1cy NMSS/FCAF/PM. LPDR 2cys Transcripts. 05000387
OL:07/17/82

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	NRR LB2 BC	01	7	7				
INTERNAL:	ACRS	09	6	6	ADM/LFMB		1	0
	ELD/HDS4		1	0	NRR/DE/MTEB		1	1
	NRR/DL DIR		1	1	NRR/DL/ORAB		1	0
	NRR/DL/TSRG		1	1	NRR/DSI/METB		1	1
	NRR/DSI/RAB		1	1	REG FILE	04	1	1
	RGN1		1	1				
EXTERNAL:	LPDR	03	2	2	NRC PDR	02	1	1
	NSIC	05	1	1				
NOTES:			3	3				

Rec'd w/check $150

TOTAL NUMBER OF COPIES REQUIRED: LTTR 30 ENCL 27

PP&L Pennsylvania Power & Light Company
Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

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

JAN 31 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
PROPOSED AMENDMENT NO. 62 TO LICENSE NO. NPF-14
ER 100450 FILE 841-8
PLA-2404 Docket No. 50-387

Reference: Letter, PLA-2157, N. W. Curtis to A. Schwencer, dated June 4, 1984

Dear Mr. Schwencer:

Via item (2) of the referenced letter, PP&L withdrew its request for revised Type 2 molded case circuit breaker settings due to an NRC staff request that certain of our magnetic-only breakers be replaced by thermal-magnetic breakers. In that letter PP&L stated that these replacements would occur on Unit 1 during its first refueling outage.

The purpose of this letter is to propose changes to the Susquehanna SES Unit 1 Technical Specifications in order to support these replacements as well as editorial changes to improve Table 3.8.4.1-1 and changes to support drywell cooling improvements.

Attached to this letter are the proposed changes described below in marked-up form:

A. Specification 3/4.6.6.3

The Limiting Condition for Operation has been editorially revised to reflect the replacement of one unit cooler subsystem (consisting of 2 unit cooler fans) with 2 recirculation fans. The subject unit cooler subsystem will now be serving the general drywell area and the new recirculation fans will be supporting the safety-related function of post-LOCA drywell air mixing governed by this specification. The ACTION and SURVEILLANCE REQUIREMENTS have been altered to reflect these changes in a consistent manner.

A001
3/39

8502070296 850131
PDR ADOCK 05000387
P PDR

Rec'd w/check $150.00

B. Specification 4.8.4.1.a.1

The current issue of Standard Technical Specifications (STS) was slightly modified to achieve a greater level of clarity for this surveillance, which was previously ambiguous in many cases where no trip setpoint nor response time was provided. The difference between the current STS and the proposed revision is in specifying how acceptance criteria shall be met for each type of breaker, i.e., magnetic-only (HFB-M) and thermal-magnetic (HFB-TM, KB-TM). The degree of testing for a given breaker remains unchanged due to this proposed revision.

C. Table 3.8.4.1-1

I. Replacement of magnetic-only with thermal-magnetic circuit breakers.

The as-built system of containment penetration overcurrent protection was designed to provide protection for "bolted" short circuits occurring at the terminals of 480-volt motors or other loads. However, since the as-built distribution system is a 480-volt, solidly grounded system it would be reasonable to assume that "arcing" short circuits could occur. The problem is that the phase to neutral voltage in a 480-volt system is high enough to allow re-striking after the arc extinguishes at a current zero.

This re-striking may result in very low short circuit currents (that is, very high arc resistances) which approach full load currents. Usually, these small magnitude short circuit currents are detected by motor overloads and isolated. However, in this specific case, some overloads are bypassed to insure completion of a safety function, and even if the overloads were not bypassed, redundant protection would not exist since only one overload has been installed.

Changing the containment penetration overcurrent protection from magnetic-only to thermal-magnetic circuit breakers allows detection of substantially lower short circuit currents.

II. Editorial Changes

Based on a review of the current STS and recently licensed plants, it was found that the amount of information in the subject table had been reduced to a minimum and organized in a clearer fashion. Discussions of specific areas follow:

FRAME RATING/UL: Control of frame size and UL rating is ensured by the design change control process, which is governed by 10CFR50.59, and therefore the information need not be listed in the Technical Specifications.

TRIP SETPOINT: Due to the replacement described in I above, the number of adjustable (Type HFB-M, magnetic-only) breakers has decreased by approximately two-thirds. Trip setpoints are not applicable to non-adjustable breakers. The setpoint control of the adjustable breakers is ensured by the setpoint change control process, which is governed by 10CFR50.59, and therefore the information need not be included in the Technical Specifications.

RESPONSE TIME: The response time column is currently "NA" for all entries. This is because, as described in FSAR subsection 4.8.4.1.a.1, manufacturer's data is used to determine acceptable response time. Therefore, the column has been deleted.

OTHER:

- "Circuit Breaker Location" has been changed to "Circuit Breaker Designation".
- "Molded Case Circuit Breaker" headings were deleted. The need for this heading is tied, by the Standard Technical Specifications, to a need to differentiate test methods from those used for metal case circuit breakers. The surveillance is now tied to the types listed in the proposed change, and no metal case breakers are in use, so the deleted information serves no purpose.
- Editorial descriptions of specific equipment have been deleted. System and equipment number is sufficient for this purpose.
- Footnotes referring to vendors have been deleted since they are unnecessary; the type definitions they provided are covered by the revised surveillance.
- Footnote "+" was revised (new footnote *) to drop a reference to A and B, because this is not always the correct designation. Furthermore, such specific information is unnecessary; the key information is that two redundant breakers are to be OPERABLE.
- For Type KB-TM, an informative footnote has been added since the breaker arrangement is atypical from the other types.
- The entire listing has been reorganized to be grouped by system, rather than randomly.

III. Drywell Cooling

Two pairs of Type HFB-TM circuit breakers have been added to the table to support recirculation fans 1V418A and B which are being added as discussed in A above.

NO SIGNIFICANT HAZARDS CONSIDERATIONS

The proposed changes do not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any accident previously evaluated, or

(3) involve a significant reduction in a margin of safety.

Justification for this conclusion is provided below:

A. Specification 3/4.6.6.3

(1) These editorial changes support design improvements to the Drywell Atmosphere Recirculation and Cooling System. The only safety-related aspect of this change is that of post-LOCA air mixing, and the air flow capability of the new recirculation fans is the same as that of the unit cooler fans formerly used for this purpose.

(2) The equipment change is in accordance with existing design criteria and will not adversely affect the function of any system. Electric separation, seismic integrity and all other required design criteria are met.

(3) As discussed in (1), the safety function of post-LOCA mixing will be maintained. Furthermore, drywell cooling requirements specified in the Technical Specifications will be easier to maintain.

B. Specification 4.8.4.1.a.1

Although the degree of testing has not changed for a given breaker, the amount of prescriptiveness required to clarify the acceptance criteria applicable to a given breaker has been added. This change therefore can be classified as editorial (48CFR14870,(i)) but also as additional controls (48CFR14870,(ii)) since more specific test requirements for thermal-magnetic breakers have been included.

C. Table 3.8.4.1-1

I. Replacement of magnetic-only with thermal-magnetic circuit breakers.

Safety is improved due to the addition of this equipment, which can detect lower short circuit currents. As cited in B above, this design improvement provides additional control over penetration protection and is therefore an example as cited in 48FR14870(ii).

II. Editorial Changes

All of the changes, for the reasons described above, are editorial in nature and therefore can be cited as examples per 48FR14870(i).

III. Drywell Cooling

The additional circuit breakers were added to meet design criteria specified for the modifications described in A above, i.e. to provide overcurrent protection for primary containment penetration conductors. Therefore, the justification in A is applicable.

IMPLEMENTATION SCHEDULE

The modifications discussed in this proposal will be performed during the Unit 1 first refueling outage. We therefore request that NRC approval of these changes be conditioned to become effective prior to startup following that outage.

Any questions on this proposal should be directed to Mr. R. Sgarro, (215) 770-7855. Pursuant to 10CFR170.22, the appropriate fee is enclosed.

Very truly yours,

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

Attachments

cc: M. J. Campagnone USNRC
R. H. Jacobs USNRC

T. M. Gerusky, Director
Bureau of Radiation Protection
Pa. Dept. of Environmental Resources
P. O. Box 2063
Harrisburg, PA 17120