

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387  
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388  
 AUTH. NAME AUTHOR AFFILIATION  
 CURTIS, N. W. Pennsylvania Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Submits info re condensate storage tank freeze protection.

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June 29, 1982

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION  
CONDENSATE STORAGE TANK FREEZE PROTECTION  
ER 100450 FILE 841-2  
PLA-1149

Docket Nos. 50-387  
50-388

Dear Mr. Schwencer:

PP&L provides freeze protection to the Condensate Storage Tank as follows:

1. During normal plant operation ice formation is unlikely to occur since there is a constant reject and makeup of water between the Condenser Hotwell and the Condensate Storage Tank, with the Hotwell water temperature being considerably above (greater than 100°F) Condensate Storage Tank ambient temperature. This will assure that initial suction of HPCI, RCIC and Core Spray will not have a chance of encountering ice formation.
2. The Condensate Transfer pumps will normally be running and supplying the ECCS "keep fill" system. The means of flow control is a recirculation line back to the Condensate Storage Tank. This will provide a continual movement of water in the Condensate Storage Tank, helping to reduce any ice formation. In addition, the ECCS pump suction nozzle on the Condensate Storage Tank will be protected from ice blockage by the vortex breaker cage installed inside the tank.
3. Should both Units 1 and 2 be on line, a cross-tie between Unit 1 and Unit 2 Condensate Storage Tanks exists enabling the exchange of warmer water from the active Unit to the Unit with the accident condition.
4. During a LOCA condition, control logic allows restart of one condensate pump. Hotwell water can be transferred to the Condensate Storage Tank, if necessary, via this pump.

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5. The ECCS pump suction nozzle and Condensate Transfer pump suction nozzle have heat tracing on their respective suction pipes.

Based on the above, the likelihood of Condensate Storage Tank water freezing is extremely low. The above information will be incorporated into a future FSAR amendment.

Very truly yours,



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

RJS

cc: R. L. Perch - NRC

