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AUTH.NAME AUTHOR AFFILIATION
BYRAM,R.G. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
MILLER,C.L. Project Directorate I-2

SUBJECT: Forwards rept entitled, "PP&L Response to NRC Concerns re Loss of Spent Fuel Pool Cooling Following LOCA,SSES,Units 1 & 2," per 930708 meeting.

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PP&L Pennsylvania Power & Light Company
Two North Ninth Street • Allentown, PA 18101-1179 • 215/774-5151

Robert G. Byram
Senior Vice President-Nuclear
215/774-7502

AUG 16 1993

Director of Nuclear Reactor Regulation
Attention: Mr. C. L. Miller, Project Director
Project Directorate I-2
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
INFORMATION ON SPENT FUEL POOL COOLING **Docket Nos. 50-387**
PLA-4012 **FILE A17-8** **and 50-388**

References: 1. *PLA-3978, R.G. Byram to C.L. Miller, "Request for Additional Information on the Effects of a Loss of Spent Fuel Pool Cooling Event Following a Loss of Coolant Accident", dated May 24, 1993.*

2. *PLA-3996, R.G. Byram to C.L. Miller, "Information on Licensing Basis of Spent Fuel Pool Cooling System", dated July 6, 1993.*

Dear Mr. Miller:

On July 8, 1993, PP&L met with the NRC to discuss the design and operation of the Spent Fuel Pool Cooling systems installed in Susquehanna SES Units 1 and 2. During the course of this presentation, we provided updated technical information since the Reference 1 submittal, and discussed PP&L's position on the SSES licensing basis as documented in Reference 2. Our major conclusions regarding the postulated accident scenario (design basis LOCA coupled with an extended loss of Spent Fuel Pool Cooling) were as follows:

- Time to boil is much greater than 25 hours at any point when the conditions presented by the accident scenario become a concern. Immediate operator actions are not required to restore spent fuel pool cooling. Sufficient time will be available to take appropriate operator actions to restore spent fuel pool cooling and prevent boiling.

- Cooling can be restored prior to boiling by either restoration of the normal Spent Fuel Pool Cooling system, or the safety-related, diesel-backed RHR system in Fuel Pool Cooling Mode.

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- The Emergency Service Water valves that support makeup to the Spent Fuel Pool have been determined to be accessible (i.e. < 5 Rem), even if a Regulatory Guide 1.3 source term is assumed.

- Emergency Service Water makeup to one Spent Fuel Pool will eventually fill both pools. Therefore, access to the accident unit is not required to provide makeup water to its Spent Fuel Pool.

- Access to the non-LOCA unit is always assured due to the capability to isolate its ventilation system from the accident unit using controls that exist in the main control room.

- Removing the cask storage pit gates will provide capability to utilize the non-LOCA unit Spent Fuel Pool Cooling system if available, or the RHR Fuel Pool Cooling Mode if it is not.

- Even if the Spent Fuel Pool is assumed to boil and no operator action to restore cooling occurs for 30 days, the resultant environmental impacts will not prevent adequate long term core cooling from being maintained.

- Procedures have been improved and operators have been trained to assure the proper response to a loss of Spent Fuel Pool Cooling. Modifications to install improved level and temperature indication to the Spent Fuel Pools, although not required to meet the Licensing Basis of Susquehanna SES, are being pursued in order to further strengthen the operator response to this event. These modifications also address previous recommendations made by our internal assessment group to add level and temperature indication to assist the operators in daily operation of the fuel pool cooling system.

- The Licensing Basis of Susquehanna SES considers loss of spent fuel pool cooling resulting in pool boiling to be initiated from a seismic event, not a LOCA, and this is in compliance with regulatory requirements.

- The SSES Licensing Basis is acceptable due to the lack of a need for immediate operator action to restore spent fuel pool cooling, the extremely low probability of a DBA LOCA coupled with an extended loss of pool cooling (per the SSES IPE this is on the order of 10E-15), and the fact that ensuring that the spent fuel is kept water covered is an operator priority.

The attached report provides further documentation of the details behind the above conclusions, and is provided in response to your request at the July 8 meeting. If you should have any questions on this material, please contact us.

Very truly yours,

R. G. Byram

Attachment

cc: NRC Document Control Desk (original)
NRC Region I
Mr. G. S. Barber, NRC Sr. Resident Inspector - SSES
Mr. R. J. Clark, NRC Sr. Project Manager - Rockville