



Pennsylvania Power & Light Company

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Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
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September 2, 1983

50-387

Dr. Thomas Murley
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION
INTERIM REPORT OF A DEFICIENCY INVOLVING
SIPHONING OF SPRAY POND
ERs 100450/100508 FILE 821-10
PLA-1816

Dear Dr. Murley:

This letter serves to provide the Commission with an interim report on a deficiency involving the potential of siphoning a portion of the minimum Spray Pond inventory needed for two (2) unit operation. This deficiency was originally reported by telephone to Mr. Bill Bateman of NRC Region I on August 5, 1983, by Mr. J. Saranga of PP&L as reportable under the provisions of 10CFR50.55(e) for Unit 2.

The attachment to this letter contains a description of the deficiency, its cause, safety impact, and corrective action plan. PP&L anticipates providing the Commission with a final report in October, 1983.

Due to the reduced cooling requirements resulting from having only one unit operational, PP&L does not believe that any adverse safety impact currently exists. However, to assure that there is adequate cooling margin, PP&L is rerunning the Spray Pond computer model to confirm our conclusion. This analysis will be available when the final report is submitted to the Commission.

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September 2, 1983

- 2 -

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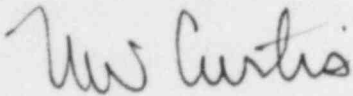
FILE 821-10

Dr. Thomas Murley

Since the details of this report provide information relevant to the reporting requirements of 10CFR21 for Unit 2, this correspondence is considered to also discharge any formal responsibility PP&L may have in compliance thereto.

We trust the Commission will find this report to be satisfactory.

Very truly yours,



N. W. Curtis

Vice President-Engineering & Construction-Nuclear

JS:po

Attachment

September 2, 1983

- 3 -

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PLA- 1816

ER 100450/

File 821-10

100508

Dr. Thomas Murley

Copy to:

Mr. Richard C. DeYoung (15)
Director-Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. McDonald, Director
Office of Management Information & Program Control
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Gary Rhoads
U.S. Nuclear Regulatory Commission
P.O. Box 52
Shickshinny, PA 18655

Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, GA 30339

Interim Report

Subject: Spray Pond Siphoning through Makeup/Deicing Line

Description of Deficiency:

A possibility exists that the Spray Pond can be siphoned through 4" makeup/deicing line HCD 3041 in the event of a failure in the makeup system. Should the Spray Pond be at minimum Tech Spec level, this siphoning could drain a portion of the Spray Pond inventory required for cooling.

The maximum siphoning rate is expected to be 35-60 gpm (when Spray Pond level is at EL 677 ft.).

Cause of Deficiency:

The minimum Tech Spec limit for Spray Pond level (EL 677 ft.) corresponds to the minimum level required for cooling needs during a LOCA in one unit and the safe shutdown of the other for 30 days (without makeup). Therefore, if a) the Spray Pond is being depended upon for cooling during a LOCA in one unit and the safe shutdown of the other and b) the Spray Pond level is at the minimum Tech Spec limit when the LOCA and safe shutdown begin and c) siphoning exists, the Spray Pond inventory will not be sufficient to provide the cooling needed for 30 days.

FSAR section 9.2.7 describes the Ultimate Heat Sink (Spray Pond). This section states that the Spray Pond makeup lines are arranged to preclude the possibility of siphoning from the Spray Pond. Although this is true for 18-inch makeup line HBD 3033 (because of its physical arrangement), the possibility remains for siphoning through 4-inch line HCD 3041.

Although siphon breakers currently exist that prevent siphoning through line HCD 3041, these components are not (nor are any other components in the makeup system) quality related. Therefore, it has been assumed that makeup system components can fail in such a way as to cause siphoning.

Safety Impact:

Siphoning will ultimately prevent the Spray Pond from performing its safety function by causing inadequate cooling for RHR Service Water and Emergency Service Water. This will prevent sufficient cooling of ECCS equipment and the Diesel Generators and will thus have an adverse effect on plant safety. This condition is therefore considered to be reportable under the provisions of 10CFR50.55 (e).

Corrective Action:

Corrective action has not yet been established. PP&L is considering the following as remedies for this condition:

1. Raising the minimum Tech Spec level so that siphoning could be tolerated over a 30-day period under the most severe demands on the Spray Pond.
2. The use of redundant quality related siphon breakers (vacuum breakers) that would protect line HCD 3041 against siphoning.
3. The use of redundant quality related check valves to be installed directly in line HCD 3041.
4. The drilling of venting holes in line HCD 3041 that would be arranged so that siphoning is prevented.