

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
500C Chestnut Street Tower II

JAN 12 1979

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Denton:

In the Matter of the Application of  
Tennessee Valley Authority

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Docket Nos. STN 50-518  
STN 50-519  
STN 50-520  
STN 50-521

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We are submitting herewith 60 copies of Amendment 29 to the Hartsville Nuclear Plants Preliminary Safety Analysis Report. As specified by 10 CFR Part 170 the remittance for \$4000 is being wired to the NRC, Attention: Licensing Fee Management Branch.

This amendment contains changes to the essential service water system (section 9.2), changes to the ultimate heat sink (Appendix 9.2A), changes to the ASME Section III code cases being utilized by TVA (section 3.2), details of the oriented spray cooling system developed by Ecolaire Condensor, Inc. (ECI), and miscellaneous minor changes.

The revision to Appendix 9.2A references a proprietary topical report, IR LOOP, which was submitted to you by Ingersoll-Rand before the company sold this part of its operations to ECI. The report contains the experimental data used to develop the analytical model used for design of the oriented spray cooling system.

The changes to the ESW system and ultimate heat sink are substantial and are an improvement to the system. The oriented spray cooling system in particular is based on extensive test data and will provide better and more reliable performance than the previously reviewed system. The previous review did not result in a requirement to perform preoperational thermal testing, and the thermal performance model is based on extensive experimental data previously submitted to NRC. We feel that this submittal together with proprietary report IR LOOP provides adequate validation of the design performance without preoperational thermal testing, and therefore, we presently have no plans to perform preoperational thermal testing of the oriented spray system.

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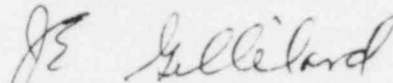
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Mr. Harold R. Denton

JAN 19 1979

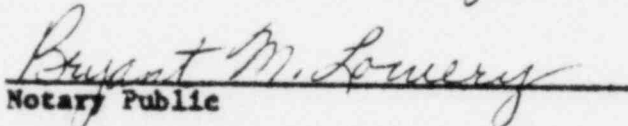
Conducting confirmatory thermal tests on the spray ponds would require designing the test facilities, procuring additional equipment, constructing the facilities, and writing the necessary procedures. In order to preclude impacting the plant startup schedule, please inform us by May 1, 1979, if you agree with our position not to perform confirmatory thermal testing of the Hartsville spray ponds.

Very truly yours,



J. E. Gilleland  
Assistant Manager of Power

Subscribed and sworn to before  
me this 12<sup>th</sup> day of January 1979.

  
Notary Public

My Commission Expires 4/4/82