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February 22, 1983

Dr. Paul Boehmert  
ACRS  
Nuclear Regulatory Commission  
Washington, D.C. 20555

FEB 22 1983  
FEB 22 1983

Subject: ACRS/ECCS Subcommittee Meeting, February 17-18, 1983,  
San Jose, California

Dear Paul:

The following constitutes my report on the above-referenced meeting:

1. Decay Heat Application: Based on the presented sensitivity studies, I found that the use of a single reference decay heat curve for ECCS limiting bundle is reasonable engineering representation.
2. LOCA Experiments: Key experiments and correlations concern the CCFL, especially at the side entry office. The data and correlations are physically reasonable and consistent with other experimental findings and analytical understandings in the existing literature. I am indeed quite pleased and impressed by the SEO CCFL data correlation. My only complaint is the improper and confusing way in presenting the correlation. The "modified Wallis" correlation should be correctly called the Kutateladze (or Kutateiadze-Tien) correlation which is becoming widely known in open literature. The correlation should be cast in the dimensionless form with the dimensionless constant 4.2 for UTP CCFL data and 3.2 for SEO CCFL data. The present form of the correlation has repeatedly confused many reviewers and experts in the field. I strongly urge that proper changes be made in the form and name of the correlation.
3. TRAC B02: The presented physical models implemented into the code are sound and well thought out, but qualification studies could have been improved a little further. In particular, in the TLTA bundle nodalization study, results from one additional cell division (either coarser or finer than the reported 11 and 26 cells) could have made the case much stronger. Moreover, nodalization qualification for the lower plenum should have included a case of more complex flow conditions.
4. SAFER Application: The presented work of SAFER modeling and assessment appears to be quite satisfactory; however, more refinement in the adder methodology is recommended. Instead

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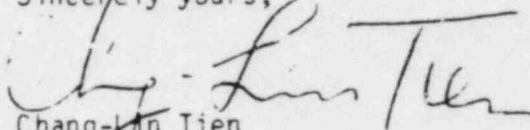
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of injecting Appendix K into consideration at the start, formulation should be first built on purely technical ground, incorporating Appendix K requirements later. Another area for more justification work is the combination of different adders, particularly those contributions due to variances. A sensitivity study is suggested for the adder combination method based on the assumption of the totally independent nature of various contributions.

5. General: The work presented shows a high level of technical competence and up-to-date knowledge in the field.

I hope that the above comments are helpful.

Sincerely yours,



Chang-Lin Tien  
Professor

CLT:LCHD