

*The Natural Rights Center*

May 18, 1988

Mr. Stewart D. Ebnetter  
 Director, Office of Special Projects  
 United States Nuclear Regulatory Commission  
 Washington DC 20555

Dear Mr. Ebnetter:

This is in regard to the proceeding under 10 CFR §2.206 instituted by your office pursuant to our letter for relief dated Thursday, March 24, 1988 in the matter of Tennessee Valley Authority's Sequoyah Nuclear Plant, Docket Nos. 50/327-328.

Please address the following points in your consideration of this matter:

1. Load Shedding Activities by Reactor Operators: What is the effect of requiring manual load shedding on the EDG power train by the reactor operators during accident conditions? Would operators in actual likelihood divert attention to dropping additional EDG loads if they were in a TMI-like condition (e.g.: uncovered and degraded core, inability to stabilize)? What potential for human error is introduced by requiring operators to shed EDG loads manually?
  
2. What is the actual effect of diminished frequency across the power train? What are the error boundaries on frequency levels calculated in the EDG power train during the first 3 minutes of emergency startup? What might be the effect of timer drift and other factors on this calculation? If the diminished frequency acknowledged by Kusko, Marinos and the preliminary SER were to have a duration of greater than the one second now predicted, what might be the effect on the power train? What might be the effect of the loss of one or more major components due to failure under frequency variance conditions? What would be the effect of the loss of one or more components on the rest of the power train, on containment integrity, on reactor cooling and on control systems?
  
3. If the loss of offsite power coincided with a core-degraded condition already in progress and the air in containment was heavily admixed with unrecombined hydrogen, what could be the consequence of delaying the CSP

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and CSP fan from 30 seconds to 3 minutes? What would be the effect of the CSP delay if the loss of offsite power coincided with a containment fire in progress? What other worst case scenarios might mitigate against resequencing of CSP startup or other EDG loads?

4. Is it considered good practice in nuclear systems to exceed manufacturers' recommendations regarding voltage and frequency margins because of inherent conservatism in manufacturers' recommendations or because of inherent conservatism in other aspects of plant design and safety margins?
5. Does the determination by NRC that TVA will be allowed to operate the EDG system at above 110 percent of rated voltage for short duration and outside rated frequency for short duration require an amendment to the operating license, because the grant of the license was based upon an application that stated broader margins for both voltage and frequency? If so, when will the license amendment be proposed?
6. When will TVA be required to meet the EDG testing requirements imposed by the January, 1988 license amendment?
7. The correction of the EDG systems to bring them back into line with the original license requirements has been deferred until the first scheduled refueling of Unit 1. The safe operation of Unit 2's EDG system is dependent upon calculations based on Unit 2 operating alone, without Unit 1. TVA now estimates Unit 1 will be restarted in six months. What additional EDG system modifications will be required prior to bringing Unit 1 to power? What EDG testing will be required of all four diesel generators, working together, prior to restart of Unit 1?
8. Mr. Marinos indicated in his affidavit to the Court of Appeals that generators 1A, 1B, 2A and 2B are all wired together in order to share and equalize the emergency loads. What is the effect of this wiring on the frequency and likelihood of common mode failures? Where does TVA's fifth generator fit into this configuration; can it replace any of the four generators, instantly, as needed, or would additional time be required to wire it into the system?



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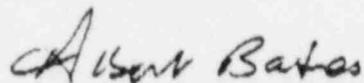
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9. What might be the effect of extreme heat (ambient external temperatures in excess of 105°F) on the EDG capacity and load sequencing margins, and on the ability to operate at greater than or equal to 110 percent of rated voltage for 2 hours?

10. To what voltage and frequency standard will the EDG system at Sequoyah be held after TVA's first scheduled refueling of Unit 1? Will it return to the standard imposed by the original license (industry standard, Regulatory Guide 1.9) or will be held to a lesser standard as modified by the load reduction measures or other variances introduced at Sequoyah subsequent to 1985?

Thank you for your consideration of these matters.

Sincerely yours,



Albert Bates  
Attorney for the petitioners

