

FEB 23 1990

MEMORANDUM FOR: S. H. Hanauer  
FROM: M. B. Agcock  
SUBJECT: COMMENTS ON VOLUME 4, NUREG90460

I have reviewed the draft final form NUREG-0460 and have the following comments:

General Comments

1. The report is in need of a good bit of editing to make it a good report. In many places it is too cryptic to give the reader a good understanding of the work that was done and the bases for decisions proposed.
2. The main body of the report refers often to other work performed by the staff or the industry but many times does not make a specific reference that the reader could go to get the details, if he wanted.

Specific Comments

3. At page 16 the bases for requiring ATWS prevention design modifications in Westinghouse scram systems are presented. The discussion there is extremely weak for what appears to be a significant ratchet from our previous position. The reasoning seems to be that in the name of "defense-in-depth" and "lets prevent accident's", we will require these additional modifications. However, we could require almost anything using this ~~same~~ rationale. Pros and cons are presented, but aren't analyzed. I have no feel for the cost of these additional modifications and none are given in the report. If they are very cheap, then perhaps they are worthwhile if they really buy something in safety. In Volume 3 we stated bluntly "the staff does not believe that this is necessary for safety".
4. The discussion at page 18 providing the bases for rapid containment isolation for PWR plants is poorly written. I think I understand the bases but it is confused by the wording and perhaps a few typos.
5. At page 9 the rationale for establishing the set of requirements described in Volume 4 includes a rather broad policy statement regarding the lessons learned from TMI. I don't disagree with the thrust of this statement, but I think we should be careful in how we state it. The broad statement that we need to minimize the potential occurrence of any accident should be qualified in some way. There are obviously some accidents whose predicted frequency

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of occurrence is low enough that we would never take actions to reduce it further. We will always base such decisions on reasonable analyses, I hope. Further the same sort of reasoned approach should be utilized in deciding which low probability accidents we will require mitigation capability for, i.e., which accidents should be in the design basis envelope.

6. The rationale and bases for requiring Alternative 4A on virtually all plants is discussed at page 32. Once again I don't believe the bases are presented in a way that the reader can come to the same conclusion as the staff. Several other sections and volumes of the report are relied on. Pros and cons are presented, but again aren't analyzed. Further, because Alternative 4A requirements will vary greatly from vendor to vendor, the pros and cons don't universally apply. A better presentation of the bases should be made so the reader can understand the logic of the decision without having to refer to several other sections and volumes of the report.
7. With the problems described in 6. above that I had with the bases for Alternative 4A, I don't know what I agree with the imposition of this alternative on all plants. For operating plants, which under the previous position were required to implement Alternative 3 only, this is a major ratchet. Because of the difficulties experienced in verifying that Alternative 3 is adequate, it may very well be justified. It appears to me, however, that ~~that~~ operating plants (with the exception of W plants) will not be able to meet all of Alternative 4A and therefore will file an optimization study for our review. In other words we will be right back to a case-by-case review of plants. The difference between this and the early verification approach will be, however, these proposed modifications and accompanying analyses could be much more plant specific (akin to Alternative 2) and therefore could require a significant amount of NRR manpower to review. I wonder whether we are not walking right into another several years of costly reviews and arguments with the utilities. It might be cheaper to go ahead and finish the early verification process, as painful as that might appear to be. This needs some serious consideration.
8. The time frame for implementing Alternative 3A may not be reasonable. To implement Alternative 3A, it could require extending two refueling outages as much as 6-8 weeks (an estimate from a utility I contacted). If, for example, a utility has just returned to power from a refueling outage, there may not be any way it can make the July 1982 end date. I think we should investigate what is reasonable and build in some flexibility to the time requirements. I still don't believe we have anyone that is ready to conclude that we need to shut plants down until ATWS modifications have been made.

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9. One final comment. I think it is quite clear that from the industry's view point we are pushing them to the wall and are arbitrarily renigging on our previous agreements despite the discussion in Appendix A of Volume 4. I don't think we should walk into this without understanding that they are not likely to accept these ATWS requirements with anything like the willingness that they accepted the TMI lessons learned modifications. I think this especially applies to Alternative 4A. They may take us to court on that one (I've heard it whispered). Perhaps we should give more consideration to taking Alternative 4A the rulemaking route so they will have a better opportunity to present their side to this new position.

Original Signed by  
Stephen H. Hanauer

M. B. Aycock

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