

# NORTHEAST UTILITIES



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Mr. Darrell G. Eisenhut  
Director, Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

October 7, 1982

Re: Proposed SEP Phase III Topic Definitions

Dear Mr. Eisenhut:

In your letter of September 9, 1982, you requested the SEP Owners' Group to provide comments on the proposed scope of Phase III of SEP as reflected in the individual topic definitions appended to your letter. Accordingly, we offer the following observations and comments.

At the outset, we commend the NRC Staff for inviting industry comments at this stage, rather than waiting until the proposed Phase III program is either nearly finalized or issued. Although the limited interval of time available precludes us from conducting a thorough review on each of the individual topics, we acknowledge the ambitious schedule proposed by the Staff and have synthesized the current views of the member utilities in this letter. We have compiled our views focusing more on the Group I Phase II plants for those topics where the Group II units have either not completed the evaluation, or are not considered representative of the newer potential SEP Phase III plants. We are also aware that the Atomic Industrial Forum is providing comments to you which we also believe will be useful input in assessing the merits of proposed SEP Phase III.

Although your letter specifically invited comments on the proposed scope of the program as reflected in the topic definitions, we have elected to provide two types of comments. The first type consists of general observations of the program from a broader perspective; these are provided in this forwarding letter. The second type of comment concerns observations of the appropriateness of including the individual topic within the scope of proposed Phase III; these are provided in the attachment. The comments in the attachment reflect a consensus of the participating SEP Phase II licensees.

Our general comments are identified as follows:

- o Even if there were unilateral agreement on which topics are the most significant in terms of safety based on Phase II findings, the extent to which these findings would be repeated for the Phase III facilities is unclear. As you are well aware, the facilities which have been licensed more recently were designed and built in accordance with a larger percentage of compliance with what are now current criteria. It would therefore be reasonable to expect that fewer topics would yield deviations with any safety significance. Although we prefer not to speculate quantitatively on the impact of this trend, it is quite likely that the significant safety findings of Phase III will be reduced as a result.

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- o Various members of the NRC Staff and several utilities have noted that the degree to which the Phase II facilities meet current criteria exceeded their original expectations. Again, it would be reasonable to expect even fewer deviations with the more recently licensed plants. In recognition of a number of other significant regulatory initiatives including NREP and the severe accident rulemaking, we suggest that the relative merits of a potential Phase III be balanced against both its estimated expenditures and the benefits which will be derived from other NRC and industry programs.
- o Each topic description appended to your September 9 letter includes sections on Review Criteria and Review Guidelines. The narrative within these sections frequently uses the words "acceptance criteria" or "acceptance guidelines." This terminology is potentially misleading for two reasons. First, the regulatory criteria frequently cited include current Regulatory Guides and Standard Review Plan excerpts. By the conclusion of the integrated assessment, we have experienced for two plants and continue to expect for the remainder that deviations from these criteria will be found to be acceptable from a safety standpoint. Therefore, the "acceptance criteria" referenced do not in many instances represent the thresholds which have been accepted as one way to achieve an acceptable level of safety.

Second, we believe that one of the important improvements in the licensee/regulatory interface which has been manifested in Phase II is not accurately reflected by the topic descriptions. There have been instances in which implementation of SRP criteria would have resulted in extremely costly backfits without a commensurate increase in plant safety. Lesser standards have been found acceptable and these could have been reflected more directly in the topic descriptions. For example, proposed topic 7.2, Containment Isolation, references 10CFR50 Appendix A and SRP Section 6.2.4 as the acceptance criteria and acceptance guidelines, respectively. The results of published integrated assessment reports correctly reflect a significantly different acceptance standard.

We understand that the Staff is considering development of a compendium of SER's on Phase II plants for those topics which would be a part of proposed Phase III. We believe that such a compilation, in conjunction with a Staff practice to provide all Phase III correspondence to all Phase III participants, would constitute a worthwhile step towards addressing the above concern.

With respect to comments on individual topics, we have formatted these by identifying the applicable topic by title and number corresponding to your September 9 letter. Our comments generally focus on the paragraph entitled "Safety Significance," and identify potential areas of overlap with other ongoing programs as applicable. We have limited our comments to those topics for which we advance reasons why we recommend changes in scope or elimination.

Your letter notes that the proposed Phase III topic list would be further reduced for a Phase III plant on a plant-specific basis where the licensee can provide justification for the deletion. We believe that, properly conducted, this step represents a significant improvement in the conduct of SEP. We envision that this meeting would involve senior management representation from both organizations and would involve a process similar to the integrated assessment team approach. Decisions should be made based upon reasonable explanations and sound engineering judgment and not upon the thickness of a written justification.

With this backdrop, we have used the term "initial screening" in providing our comments on individual topics. Our review of many of the topics has revealed that the appropriateness of including it within the scope of Phase III depends heavily on readily available plant-specific features. Examples include 1.3, Stability of Slopes; 1.4, Dam Integrity; and 1.6.1, Industrial Hazards. We envision that these topics could be either readily dispositioned or recognized as appropriate during the initial management meeting.

Your letter also requested our views on your estimate that the review effort for the enclosed topics would require no more than \$2 million per plant. We are unable to comment on the reasonableness of your estimate because of some significant unknowns regarding the scope and conduct of the proposed program. For instance, the role of the ACRS and their potential impact is unclear to us. We understand that they are questioning certain staff proposed resolutions which, if they are modified, could substantially change the results of the program. We are unaware of the extent, if any, to which the NRC intends to require PRA studies, systems interaction studies, or other major analysis efforts. It is noted that the NRC staff or their contractors provided significant input into certain topics for Phase II. We are unaware of the extent to which the NRC is planning to provide similar data and evaluations for Phase III.

Another factor which can dramatically affect the cost of the Phase III review effort concerns the unknown impact of the extreme external phenomena topics, especially seismic issues. Specifically, we note that topic 1.4, Ground Motion, proposed to verify that the free field ground motion has been properly defined. Should deviations requiring reanalysis be identified for this topic, virtually the entire site design is called into question. The reanalysis effort alone which may result from such a finding could invalidate any cost estimate by factors of 2 to 5 or more.

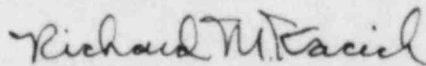
Another point which must be considered regarding the cost estimate concerns the manpower intensive nature of this effort, particularly with regard to licensee manpower. Because the program involves judgments and interpretations of current criteria, in many instances involving issues originally addressed many years previously, in-house resources are often required to ensure that the program is properly conducted. We view these to be premium resources and most utilities have very large backlogs of work which could occupy these in-house resources fully without a Phase III of SEP. Our point here is that it is less desirable and more difficult to hire outside contractors for this type of effort, and that resource estimates for this program should not be compared with others on a one-for-one basis.

At this time, we have elected not to provide a specific recommendation on the merits of proceeding with Phase III. A number of important benefits have been realized in the process of conducting Phase II, largely in the licensee/regulator interface and strong project management, and secondarily with respect to enhancements in safety of less than paramount import. However, the resource expenditures to achieve these benefits have been substantial. A Phase III decision must recognize the existence of other regulatory and industry initiatives, the severe competition for resources, and alternatives to SEP Phase I'. We advocate careful and deliberate evaluation before a decision is reached.

Independent of the Phase III decision, we encourage the Staff to develop and implement means to incorporate the positive attributes of Phase II into more aspects of the licensee/regulator interface. The importance of strong project management with a sphere of vision and influence broader than a narrow technical issue cannot be over emphasized. In conjunction with other ongoing Staff initiatives designed to control and stabilize backfitting and the licensing process in general, we believe these practices will lead to a more mutually acceptable regulatory environment.

We appreciate the opportunity to provide our comments on the proposed program and remain available to provide any clarification you may require.

Very truly yours,



Richard M. Kacich  
Chairman, SEP Owners Group

SEP Owners Group Comments  
on Proposed SEP Phase III  
Topics

<u>Topic No.</u>	<u>Title</u>	<u>Comments</u>
1.1	Settlement of Foundations and Buried Equipment	Recognizing the fact that settlement has been a concern on newer plants, in addition to one of the Group I Phase II plants, selection of this topic for inclusion in the proposed Phase III may be appropriate. However, this topic is a candidate for deletion during the initial screening based on plant-specific considerations.
1.2	Stability of Slopes	In Phase II, several plants were reviewed on this topic even though it was obvious that slope stability was not a concern. Therefore, this topic is an excellent candidate for early resolution during the initial screening based on plant-specific considerations.
1.3	Dam Integrity	Obvious candidate for deletion during the initial screening based on plant-specific considerations.
1.4	Site Seismic Ground Motion	Generally, the results of the Phase II, Group I Plants, showed that the originally defined ground motion for these plants was conservative. Therefore, it is reasonable to expect that later vintage plants were designed using conservative spectra, and this topic should be deleted from the proposed Phase III. If not deleted in its entirety, the results of the LLL study suggest that this topic could be resolved during the initial screening for the plants east of the Rocky Mountains.
1.5.1	Site Hydrologic Characteristics and Capability to Withstand Flooding	One of the lessons learned from SEP Phase II was that the "Probable Maximum" phenomena are overly conservative and too restrictive. Evaluating a specific plant against these criteria is a major effort which does not often result in an substantial increase in safety. The NRC should establish an acceptable level of risk from these events and then evaluate capability of the plant to withstand the site-specific flooding event. During the Phase II reviews, a good deal of time and resources were expended evaluating plants to current criteria yet these plants were required, in the end, to demonstrate the ability to survive a flood level substantially lower.

<u>Topic No.</u>	<u>Title</u>	<u>Comments</u>
1.5.2	Site Severe Weather Characteristics	The intent of this topic is good; however, the scope should be increased to include flooding effects to support backfitting decisions made under Topic 1.5.1. It is also necessary that this topic be evaluated <u>before</u> any structural evaluations are performed so as to utilize resources most effectively.
1.6.1	Industrial Hazards	This topic should be included in the initial screening review. Since most older plants and all newer plants have considered industrial hazards, this topic should be reviewed only if significant changes have occurred since construction.
1.6.3	Internally Generated Missiles	Since the Phase II reviews did not identify any open issues of major safety significance related to this topic, it should be deleted from the proposed Phase III.
1.6.4	Turbine Missiles	This issue is being addressed generically outside of the SEP for all operating reactors. Other motivators including insurance requirements and plant reliability further reduce the incentive to include this topic within the scope of Phase III. Therefore deletion is recommended.
2.5	Seismic Design of Structures, Systems, and Components	Topic 2.3, Design Codes, Criteria, and Load Combinations for Structures, requires that structures be evaluated against various load combinations, including seismic. Since the load combinations in Topic 2.3 are more limiting than seismic loads alone, the structural aspects of Topic 2.5 would be most efficiently evaluated under Topic 2.3.
4.1	Classification and Design of Systems and Components	The results of the SEP Phase II reviews generally showed that code changes have not been significant because other factors such as Section XI testing have adequately addressed any potential concerns. Therefore, it is recommended that this topic be deleted from the proposed Phase III since the potential marginal increases in safety do not justify the effort required to evaluate this topic.

<u>Topic No.</u>	<u>Title</u>	<u>Comments</u>
4.5	Spent Fuel Storage	For reasons given in the topic description, this topic is a candidate for deletion during the initial screening.
5.2	RPS and ESF Testing	Although most Phase II plants did not meet the acceptance criteria for this topic, the actual safety impact of this topic is low given the high reliability of the reactor protection system. This situation was described in NUREGs 0820 and 0821. This topic is a good candidate for deletion during initial screening provided all RPS components are included in periodic testing.
6.1	Organic Materials	Since most Phase II, Group 1 plants met the acceptance criteria for this topic, it is reasonable to assume that later plants would compare favorably. Since the safety significance of this topic is low, it should be deleted from the proposed Phase III.
6.2	RCS Water Purity (BWR)	Although several Phase II plants did not meet all the acceptance criteria for this topic, the deviations were not significant because of the fact that BWRs already closely monitor water purity due to potential for stress corrosion cracking and other deleterious effects. Therefore, since the safety significance of this is low, it should be deleted from the proposed Phase III.
7.2	Containment Isolation	Results of the Phase II reviews identified numerous deviations from the provisions of the General Design Criteria. However, based on PRA considerations and other factors, these were judged to be of low safety significance. Therefore, if it remains in Phase III, the review of this topic should be limited to reviewing types of valves and administrative controls, etc.
7.3.2	MSIV Leakage (BWR)	MSIV leakage in BWRs has been under review for some time due to its impact on LOCA doses and refueling maintenance. This issue is being evaluated by General Electric, EPRI, valve manufacturers, and utilities. It is doubtful that SEP review will contribute substantially towards resolution of this issue. Therefore, it should be handled generically outside of SEP and deleted from Phase III.