UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D. C. 20555

May 11, 1982

Honorable Nunzio J. Palladino
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON THE SYSTEMATIC EVALUATION PROGRAM, PHASE II, AND ITS APPLICATION TO THE PALISADES PLANT

During its 265th meeting, May 6-8, 1982, the ACRS reviewed the results of the Systematic Evaluation Program, Phase II, as it has been applied to the Palisades Plant. These matters were discussed also at a subcommittee meeting in Washington, D.C. on April 15, 1982. During our review we had the benefit of discussions with representatives of the Consumers Power Company (Licensee) and the NRC Staff. We also had the benefit of the documents listed below.

The Systematic Evaluation Program (SEP) was initiated in 1977 to review the designs of older operating nuclear power plants in order to provide:

a. an assessment of the significance of differences between current technical positions on safety issues and those that existed when a particular plant was licensed,

b. a basis for deciding how these differences should be resolved in an integrated plant review, and

c. a documented evaluation of plant safety.

The original SEP objectives were:

1. The program should establish documentation that shows how the criteria for each operating plant reviewed compare with current criteria on significant safety issues, and should provide a rationale for acceptable departures from these criteria.

2. The program should provide the capability to make integrated and balanced decisions with respect to any required backfitting.

3. The program should be structured for early identification and resolution of any significant deficiencies.

4. The program should assess the safety adequacy of the design and operation of currently licensed nuclear power plants.

5. The program should efficiently use available resources and minimize requirements for additional resources by NRC or industry.

The program objectives were later interpreted to ensure that the SEP also provide safety assessments adequate for conversion of provisional operating licenses (POLs) to full-term operating licenses (FTOLs).

Ten plants are now included in Phase II of the SEP. The Palisades Plant is the first for which the safety reviews and the Integrated Plant Safety Assessment have been completed.

We believe that the program itself, its scope, and its methodology have been appropriate for providing the information listed in Items a. through c., above, and in meeting the objectives listed as Items 1. through 3., above. As is discussed below, the SEP can only meet objective 4. in part. With regard to objective 5., there has been a learning period. It is our understanding that the interaction between the NRC Staff and licensees is becoming more efficient.

Of the 137 topics to be addressed by the SEP, 23 were not applicable to the Palisades Plant. Twenty-four topics were found to be identical with one or more matters being reviewed by the NRC Staff in connection with the resolution of Unresolved Safety Issues (USI) or TMI Action Plan requirements. The evaluation and resolution of these topics are not included as a part of the SEP for the Palisades Plant. We believe that this was appropriate from a procedural standpoint; any other approach would have required duplication of effort within the NRC Staff or would have extended considerably the completion of Phase II of the SEP. It must be recognized, however, that because of this separation of topics, all of the SEP objectives, as listed above, have not been achieved completely at this stage of the program. For example, the documentation of objective 1 is not yet complete, the integrated and balanced decisions on backfitting did not involve all of the omitted topics (objective 2), and the assessment of safety adequacy (objective 4) is not complete.

Of the 90 topics addressed in the SEP for the Palisades Plant, 57 were found to meet current criteria or were found to be acceptable on other defined bases. In addition, as a result of modifications made by the Licensee during the review, two additional topics and parts of three others were found to meet current criteria. We have reviewed the assessments and conclusions of the NRC Staff in relation to these topics and have found them appropriate.

For all or parts of 31 SEP topics, the Palisades Plant was found not to meet current criteria. These topics were addressed by the Integrated Assessment and have been resolved in various ways: For five topics, addition or modification of equipment was required for resolution; for 12 topics, resolution required only the development or modification of procedures or Technical Specifications; and for five topics, a decision was reached that no backfit was required.

We have reviewed the treatment of these topics, and have found no reason to disagree substantially with the NRC Staff's approach, assessments, and recommended actions for resolution.

There remain nine topics for which the Integrated Assessment has not been completed, chiefly because additional information is to be provided by the Licensee. This information consists of calculations, evaluations, and various other submittals that are required by the NRC Staff as bases for its assessments and decisions. None of these topics is minor in importance to safety and most will not be easier to resolve than topics already considered. The NRC Staff expects to report the resolution of these topics in a supplemental report in the near future. Until this is done, the Integrated Assessment is incomplete by a further increment beyond that resulting from deletion of the USI and TMI topics from the SEP. As a result our endorsement and acceptance of the SEP and its application to the Palisades Plant is limited to what we have learned of the treatment of a representative group of the SEP topics. If the remaining topics are treated in a comparable manner, the objectives of the SEP will have been achieved.

The question of management performance and capability has been considered in relation to the operational history and record of regulatory compliance of the Palisades Plant. This is important because the NRC Staff has recommended changes in procedures as remedial measures for several of the SEP topics. We have noted reports of relatively recent changes in management organization, intentions, and performance. The results are encouraging but not conclusive in view of the limited length of time during which they have been observed. Nevertheless, we are satisfied with those resolutions involving procedural changes, chiefly because we are satisfied that the NRC Staff has exhibited a suitable level of concern about their effective implementation, and we are satisfied that they will continue to monitor management performance at the Palisades Plant.

A plant-specific Probabilistic Risk Assessment (PRA) was not available for the Palisades Plant. The NRC Staff utilized a limited risk assessment in portions of the Integrated Assessment, in a qualitative and subjective manner. We believe that this was done with appropriate caution and with adequate appreciation of the limitations of the analysis and the data as they applied to the Palisades Plant. We note, however, that the draft Calvert Cliffs PRA, which was utilized in the limited risk assessment, has not been available to us for use in connection with our review.

For some plants in Phase II of the SEP, and for additional plants in Phase III, it is expected that more complete plant-specific PRAs will be available. We believe that these will be useful and highly desirable as inputs to the Integrated Assessment portion of the SEP.

The Integrated Plant Safety Assessment portion of the SEP for the Palisades Plant will be documented in NUREG-0820 and its Supplements. However, the safety evaluation reports for each of the 90 topics are included only by

reference. Since these reports are an essential and important part of the SEP and constitute the only documentation of why 57 topics were found to meet current criteria or were acceptable on other defined bases, we believe that these reports should be published or otherwise made more generally available than simply by putting them in the Public Document Room.

It is expected that the results of the SEP evaluations will be among the bases used in considering the conversion of the provisional operating license for the Palisades Plant to a FTOL. We believe that these results will be very useful for this purpose. However, we defer our review of an FTOL for the Palisades Plant until such time as the remaining SEP topics have been assessed and disposed of and the topics related to the USI and TMI items have been addressed appropriately, at least in a manner similar to that being used for new operating licenses.

Our conclusions can be summarized as follows:

1. The SEP has been carried out in such a manner that the stated objectives have been achieved for the most part for the Palisades Plant and should be achieved for the remaining plants in Phase II of the program.

2. The actions taken thus far by the NRC Staff in its SEP assessment of the Palisades Plant are acceptable.

3. The ACRS will defer its review of the FTOL for the Palisades Plant until the NRC Staff has completed its actions on the remaining SEP topics and the USI and TMI items.

Dr. William Kerr did not participate in consideration of this matter.

Sincerely,

P. Shewmon

P. Shewmon
Chairman

References:

1. U.S. NRC Draft Report, "Integrated Plant Safety Assessment, Systematic Evaluation Program" - Palisades Plant, NUREG-0820 dated April 1982.
2. Letter from G. C. Lainas, Division of Licensing, USNRC, to P. G. Shewmon, Chairman, ACRS, dated 4/30/82, Subject: NRC Staff Consultants' Review of Palisades Draft Integrated Plant Safety Assessment Report transmitting Consultant Reports from R. J. Budnitz, S. H. Bush, J. M. Hendrie, H. S. Isbin, and Z. Zudans