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March 25, 1980

MEMORANDUM FOR: E. C. Wenzinger, Chief Reactor Systems Standards Branch Division of Engineering Standards Office of Standards Development

FROM:

D. F. Sullivan Reactor Systems Standards Branch Division of Engineering Standards Office of Standards Development

SUBJECT: MEETING WITH OFFICIALS OF IEEE NUCLEAR POWER ENGINEERING COMMITTEE (NPEC)

On March 19, 1980, a meeting was held at the N. L. Offices between officials of IEEE/NPEC and several members of the NRC staff. The meeting was requested by IEEE/NPEC to discuss with us several aspects of their standards development program. In attendance for all, or select portions, of the meeting were:

- J. T. Boettger, Cnairman, IEEE/NPEC
- B. M. Rice, Vice Chairman IEEE/NPEC
- H. K. Stolt. Chairman. IEEE/NPEC Ad Hoc Classification Committee
- V. A. Moore, NRR
- F. Rosa, NRR
- M. Srinivasan, NRR
- E. Wetss. OSD
- M. S. Medeiros, Jr., OSD
- E. C. Wenzinger, OSD
- D. F. Sullivan, OSD

In Mr. Boettger's opening remarks, he stated that their purpose in requesting the meeting was twofold:

- To discuss overall NPEC planning, and
 To discuss the formation of a special NPEC working group on classification.

ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEMS IMPORTANT TO SAFETY NOT A. DESIGNATED 1E

Boettger's view is that NPEC should write a document that establishes bases for gradations of importance to safety, and then establishes the commensurate requirements for equipment in the various gradations. He has already discussed this approach with the Administrative Committee (ADCOM) of the IEEE Standards Board and believes that ADCOM is in general agreement.

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All present agreed to this approach, bearing in mind that the end product would not necessarily be a system of discrete classes of equipment.

During the discussion, Mr. Medeiros made the point that the document should address systems that could cause transfents or challenges to the protection system and not just equipment or systems for accident mitigation. Voss Moore emphasized the need to include the operator in the overall design scheme related to accident mitigation. (In the past, we have emphasized protection system initiation and not what actions the operator must take later in the accident, although this subject is now covered by IEEE 603). Sullivan suggested that we consider an ad hoc approach, much like what we (NRC and NPEC) are already doing, i.e., developing guides and standards addressing specific non-lE equipment (e.g., R.G. 1.97, IEEE 466 (Surveillance Instrumentation) as the need arises. There was no support for this idea.

Ed Wenzinger mentioned that IAEA had tried to develop a rigorous approach to classification similar to the proposed NPEC approach but had so far not been successful. IAEA had considered various factors to determine gradations of safety importance such as the time available after an event to take required action, and the consequences of not taking proper action. Additional details of IAEA's considerations on this topic were also mentioned and draft IAEA material was given to the IEEE representatives. Wenzinger requested NPEC to develop the Bocument on an accelerated schedule, much like ANS 4.5.

Agreements:

- IEEE/NPEC will develop a document on an accelerated basis that will (a) provide a methodology to determine the levels of importance to safety of equipment and systems not heretofore so designated and (2) include the design, test, qualification, etc., requirements for the various levels.
- (2) The Ad Hoc Group will develop the Scope and Purpose in about two weeks. A copy will be sent to us by April 2, 1980.
- (3) The schedule for the effort will be determined at the first meeting of a working group on this subject, in mid-April, at which time the proposed Scope and Purpose will be considered and a detailed plan of action prepared.
- (4) An NRC/IEEE agreement needs to be developed relating to the endorsement of the draft standard by NRC. Ed Wenzinger will send a written request to Boettger immediately after the mid-April meeting requesting permission to use the unpublished draft as the basis for the "For Comment" guide.

Wenzinger reminded all present that we will cooperate fully with NPEC, but will write our own document if NPEC is not responsive to our needs.

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3. CONTROL ROOM

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Ed Wenzinger emphasized the need to develop "control Room" standards. The current TMI-2 action plan calls for regulatory guides endorsing revisions to IEEE 566 (Displays) and 567 (Control Room Complex) by July 1981. He also stated that Leo Seltracchi, NRR, is being nominated for membership in IEEE Working Group SC-1.2 which is revising IEEE 566. J. Wiebe, SD, will be the SD task leader developing the reg. guide.

In response to Sullivan's question, Boettger stated that NPEC has the lead in IEEE for all "Post TMI" electrical standards including control room standards, and will coordinate the efforts of the Power Generation Committee in the development of a revised IEEE 567.

Wenzinger pointed out that, in addition to the control room, the overall task involves considerations that include the onsite technical support center, data link, safety state vector, regulatory guides 1.47 and 1.97, and disturbance analysis systems. Boettger acknowledged this and stated that they will be considered in NPEC's effort; however, how all of this will be handled by NPEC has yet to be determined. Some or all may be incorporated into the revised IEEE 566.

Agreements:

- NPEC will take a broad overview of the control room question; i.e., beyond the current scopes of IEEE 566 and 567.
- (2) NPEC will schedule for a smooth draft suitable for regulatory guide endorsement by May 1, 1981. This is consistent with our "For Comment" guide publication date of July 1981.
- (3) The next meeting of IEEE SC-1.2 (IEEE 566) will be held on March 26 at the Sargent and Lundy Offices in Chicago.

REGULATORY GUIDE 1.97

Boettger stated that there is now a joint responsibility between ANS and IEEE for developing the standards suitable for endorsement by Reg. Guide 1.97. Specifically, ANS is developing ANS 4.5 which will carry only the functional requirements. IEEE is developing Rev. 1 to IEEE 497 which will carry only equipment (design, test, etc.) requirements.

Further discussion indicated that NPEC's schedule for developing the revised IEEE 497 (to be considered for approval by NPEC in late June) will result in slippage of the final guide's schedule if we wait until a published IEEE 497 is available. Also, Al Hintze stated that if we endorse IEEE Std. 497, we may have to go out for comment again since IEEE 497 was not included in the R.G. 1.97 endorsement that was originally sent out for comment.

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There were no final agreements on this matter: All parties, however, recognized the conflict between the IEEE and NRC schedules. Also, the IEEE representatives stated that there is no way IEEE can accelerate its schedule on publishing IEEE 497.

Original Signed by D: F. Sullivan Reactor Systems Standards Branch Division of Engineering Standards Office of Standards Development

cc: J. T. Boettger B. M. Rice H. K. Stolt

bcc: R. B. Minoque G. A. Arlotto W. M. Morrison E. C. Wenzinger S. Hanauer, NRR R. Mattson, NRR D. Eisenhut, NRR V. Moore, NRR .R. Satterfield, NRR F. Rosa, NRR, L. Beltracchi, NRR M. Srinivasan, NRR D. Tondi, NRR M. Medeiros, SD J. Wiebe, SD E. Weiss, SD D. Sullivan SD All IEEE Representatives. (J. T. Boettger)

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