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POWER SYSTEMS

November 27, 1984
LD-84-067

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

Subject: SECY-84-370, Severe Accident Policy

Dear Chairman Palladino:

Combustion Engineering (C-E) has been committed to the NRC's standardization program since its inception in the early 1970's. We were one of the early vendors to submit a standard design application and to receive a Preliminary Design Approval (PDA) from the NRC under its 1973 Standardization Policy. When the NRC revised its Standardization Policy in 1978, C-E was the first vendor to apply for a Final Design Approval. Our System 80™ standard design, described in the Combustion Engineering Standard Safety Analysis Report - FSAR (CESSAR-F), was submitted to the NRC in October 1978, only two months after the 1978 Standardization Policy was established.

Combustion Engineering received a Final Design Approval (FDA) for our System 80 design on December 21, 1983. The System 80 FDA is currently referenced in the Operating License (OL) applications of Palo Verde Units 1, 2 and 3, and Washington Nuclear Project 3 (WNP-3). In fact, we believe CESSAR is unique in that a unit referencing the CESSAR application should begin commercial operation next year. Combustion Engineering has expended well over one hundred million dollars developing and licensing the System 80 design. We feel that this places C-E on the vanguard of the standardization program and that our actions today will set precedents for future standard designs.

Combustion Engineering is actively following the NRC's activities in the standardization program and is anxious to see the establishment of a policy for future reactor designs. We have, therefore, been closely following the related NRC activities on the Severe Accident Policy. C-E has provided written comments to the Staff on earlier versions of the severe accident policy statement, as written in SECY-82-1 and in the 1983 Federal Register notice. In SECY-84-370 (issued only two months ago), the NRC Staff presented to the Commissioners a proposed "NRC Policy on Future Reactor Designs: Decisions on Severe Accident Issues in Nuclear Power Plant Regulations". That proposal includes new, detailed sections on implementation of the policy with respect to standard designs without an existing FDA, standard designs with an existing FDA, re-activated Construction Permit (CP) applications and new custom CP applications. C-E would like to offer comments, in particular, on Section

B.3.b of the policy, "Certification of Reference Designs Previously Granted an FDA". Since the System 80 standard design has an FDA, it falls into this category.

As part of the FDA process, the System 80 design has, of course, been thoroughly reviewed by the NRC Staff and found to comply with NRC regulations. In Section B.3.b of the policy, however, the Staff proposes that reference designs previously granted a FDA should submit an evaluation of the design against the Standard Review Plan (SRP) before the Staff would allow interim referenceability for new CP and OL applications. Since the System 80 design has already been found to meet all of the current regulations, a review against the SRP's should be unnecessary. To perform an evaluation against the SRPs would clearly cost significant resources (millions of dollars) to be expended by both the applicant and the Staff, and produce no measurable improvement in safety.

The Staff's proposal also seems inconsistent with the section on "Certification of Reference Designs with No Previous FDA". This section allows referencing of a preliminary design in new CP applications after the PDA application is merely docketed. A PDA application can be docketed after only a review for completeness of material and may provide very little detail on the design. A NRC approved final design should be considered far more useful in new CP applications than a preliminary design.

Combustion Engineering requests, therefore, that the existence of a valid FDA, in and of itself, should be considered sufficient basis to grant referenceability for new applications.

Our second comment under Section B.3.b of the policy concerns the statement that, "Failure to support the rulemaking in a timely manner can be cause for the Staff to revoke the applicant's FDA". Based on our previous discussions with the NRC Staff, we understand that their intent was to revoke referenceability for future plants and not the FDA itself. Unfortunately, however, we believe the proposed wording would create an unintended policy which could potentially be disruptive of OL applications already referencing the FDA (e.g., Palo Verde Units 1, 2 and 3). We therefore recommend that the above sentence be deleted.

Our final comment is that the Staff has not produced the parallel modification to the Standardization Policy. Thus, in effect, the Severe Accident Policy lays out the technical issues to be resolved for certifying a standard design without describing the procedures for the certification process or the end product of that process. Until the Standardization Policy is finalized, an applicant is being asked to commit significant resources to begin certification of a standard design without knowing the process or results that they are committing to. A finalized Standardization Policy must, therefore, be implemented in parallel.

In summary, we suggest the following modifications to the Severe Accident Policy:

(1) Any reference design with a valid FDA should be automatically granted referenceability for new applications.

(2) The misleading sentence on revocation of a FDA should be deleted or, as a minimum, clarified.

(3) The NRC should in parallel modify the Standardization Policy so as to specify the procedure and end-product of certifying a standard design.

If you have questions about our recommendations or would like to discuss them further, please feel free to call on me.

Very truly yours,

COMBUSTION ENGINEERING, INC.

A. E. Scherer
Director
Nuclear Licensing

AES:las
cc: Commissioner T. Roberts
Commissioner J. Asselstine
Commissioner F. Bernthal
Commissioner L. Zech, Jr.
Executive Director of Operations W. Dircks

DEC 2 8 1984

Mr. A. E. Scherer, Director
Nuclear Licensing
C-E Power Systems
Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, Connecticut 06095

Dear Mr. Scherer:

Subject: SECY-84-370, Severe Accident Policy (Your Ref.: LD-84-067)

This letter is in reply to your letter of November 27, 1984, to the Chairman on the Severe Accident Policy Statement (SECY-84-370) in which you suggested the following modifications to this Policy Statement:

(1) Any reference design with a valid Final Design Approval (FDA) should be automatically granted referenceability for new applications.

(2) The misleading sentence on revocation of a FDA should be deleted or, as a minimum, clarified.

(3) The NRC should in parallel modify the Standardization Policy so as to specify the procedure and end-product of certifying a standard design.

We met with you on December 12, 1984 to discuss your suggestions and your reasons for them. At that meeting, we agreed that item (2) has been resolved in the version of the proposed Severe Accident Policy Statement forwarded to the Commission as Enclosure 1 to Mr. Dircks' November 23, 1984 memorandum, copies of which were made publicly available at the December 3, 1984 Commission meeting. In discussing item (3), we indicated that the staff is currently preparing, on a priority basis, revisions to the 1978 Standardization Policy Statement to reflect the applicable provisions of the proposed Severe Accident Policy Statement and current standardization policy. Within a few months of the issuance of the Severe Accident Policy Statement, we expect to forward to the Commission for their review our proposed revision of the Standardization Policy. Accordingly, the major thrust of our discussions focused on our difference of views on item (1) and how these might best be resolved.

In both your letter and at the meeting you expressed concern over the resource requirements for Combustion Engineering in complying with item (1). We note, if (to obtain a forward-referenceable FDA) CE elected the approach under the November 23, 1984 version of the Severe Accident Policy that would involve the least expenditure of CE's resources, this would require that you submit an evaluation of the CESSAR-F System 80 design against the Standard Review Plan (SRP) in accordance with 10 CFR 50.34(g). Other procedural requirements of Section B.2 (p. 6 of the Policy Statement) can later be met by the Construction Permit (CP) or Operating License (OL) applicant.

In developing a Policy Statement to deal with severe accident issues, the staff desires to avoid imposing unnecessary or unreasonable additional resource requirements on either vendors of standardized plant designs or CP or OL applicarts. In reaching a decision on what should constitute a reasonable set of procedural requirements for a staff-approved forward referenceable design or for a design certification issued by the Commission through rulemaking, the following principles served to guide our deliberations:

(1) In view of the large uncertainties surrounding methods of assessing severe accident risk, the level of assurance (or confidence) of no undue risk to the public is regarded as no less important than the estimated level of risk itself; and

(2) Although the Standard Review Plan is directed toward safety analysis that focuses on design basis events, its linkage to Severe Accident Policy is that many potential types of severe accidents would be advanced stages of a sequence of events which started as one or more design basis events(s).

Until now, the staff under Commission direction has thought it to be imprudent because of the TMI accident to grant a forward-referenceable FDA until there is assurance that severe accident issues have been adequately analyzed and resolved. Since current regulations have not addressed severe accident issues, no presently approved FDA is deemed adequate by the staff in providing this assurance unless certain minimum procedural requirements are met as set forth in the Severe Accident Policy Statement. We agree that when the Final Design Approval (which authorizes CESSAR-F to be referenced in Operating License applications for those plants which referenced CESSAR at the Construction Permit stage) was issued in December 1983, we found that CESSAR-F was not required at that time to be evaluated against the Standard Review Plan and, in fact, it was not. Our concern lies not with the use of CESSAR-F in those applications which are presently authorized to reference it, but with its use in future applications for Construction Permits and Operating Licenses.

As you know, future applicants for Construction Permits and Operating Licenses are required by 10 CFR 50.34(g) to include an evaluation of their applications against the revision of the Standard Review Plan in effect six months prior to the date their applications are docketed. Since standard designs incorporated by reference in those applications will constitute substantial portions of those applications, it is necessary for us to know how those standard designs conform to the Standard Review Plan in order for us to be able to assess the conformance of the integrated applications with the Standard Review Plan and, hence, achieve the safety assurance provided for in these regulations.

The staff believes that the resources required to meet the minimal option as outlined above for an amendment to the CESSAR-F FDA to confer forward referenceability would not be unduly large and would spare an expenditure of possibly greater resources by a future CP or OL applicant to meet the safety assurance requirements for treating severe accident issues as set forth in the Policy Statement. What is needed for a forward-referenceable

FDA is a balanced or complementary evaluation of the conventional review that you already have achieved in the present FDA for CESSAR-F with the minimum procedural requirements for a severe accident review. Since much of the latter can be subsequently provided by the CP or OL applicant, CE would only have to commit at this time the small resources needed to capture the essential elements of the SRP (NUREG-0800) that constitute the more notable differences from the conventional safety review that CE has already achieved.

We also note that the requirement to evaluate each existing reference design against the current revision of the Standard Review Plan has been included in all of the various drafts of the proposed Severe Accident Policy Statement and has been addressed by both General Electric and Westinghouse in their reference design applications. Eleven months ago the staff had already considered your suggestion in item (1) in the context of all public comments received on the proposed Severe Accident Policy Statement. The staff's documented response is found on pages 69-72 of NUREG-1070, an earlier draft of which was provided to you by letter dated January 13, 1984. Moreover, the present content of the Severe Accident Policy Statement was achieved through a consensus process in numerous discussions with the ACRS and other parties. To make further substantive changes in the Policy Statement at this juncture would destabilize the early attainment of our regulatory objectives in issuing this statement, since it would threaten a loss of confidence that severe accident issues will have been adequately analyzed.

We appreciate this opportunity to clarify our views on Severe Accident Policy. We believe that the indicated revisions to the Policy Statement in the memorandum to the Commission on November 23, 1984, plus the procedures set forth in this letter to amend the present CESSAR-F to permit the design to be referenced in a new CP or OL application constitute a reasonable resolution of your and our concerns. This resolution is based on our desire to reflect the guiding principles stated above affecting the relative merits of different standardization and licensing options and our objectives of being as equitable as possible in dealing with the variety of vendor preferences regarding present or future applications for forward referenceable PDAs, FDAs or Design Certifications and in minimizing resource requirements to achieve an acceptable level of safety assurance in identifying and treating severe accident risk issues.

Sincerely,

Original Signed by
H. R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

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